Professional Systems Integration Proposal

Courtroom AV Technology Replacement
Peoria, AZ

Submitted To

Sandra Garcia
Court Administrator

Submitted By

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REVISION HISTORY		
Version	**Date**	**Notes**
1.0	09/29/2023	First Submittal – Budgetary
2.0	07/26/2024	Second Submittal – Updated Pricing and Converted to Design Build Proposal
2.1	08/13/2024	Updated

1.0 EXECUTIVE SUMMARY

1.1. The proposal being presented to the City of Peoria by Level 3 Audiovisual focuses on comprehensive audiovisual (AV) upgrades for multiple areas within the courthouse. In the courtrooms, the project includes installing ceiling speakers, cameras to capture various individuals in the room, and hearing-impaired headsets and pods. Additionally, table or pod microphones will be provided for the judge, two lawyers' tables, the witness stand, and the holding cell.

The Jury Deliberation Rooms will receive upgrades such as projector enhancements, upgraded TV displays in their current locations, and server racks to support digital evidence display using AV/IP. Existing TVs and projectors will be replaced as needed, and additional digital items will be installed to support AV/IP evidence display. The Judges' Meeting Room needs an easy-to-use device solution, potentially Zoom or Teams-enabled, for its small pre-wired space. These enhancements aim to improve functionality and efficiency across all specified areas, ensuring a modern and effective AV system for the City of Peoria's courthouse operations.

Additionally, our proposal includes a comprehensive support and maintenance plan to ensure long-term stability and customer satisfaction. Thank you for this opportunity, and we look forward to being your trusted AV integrator.

The AV technology system(s) cost, along with all of the components to be included in the solution(s) appear on the following pages. You can be assured that the installed AV technology systems will meet the highest quality standards in the industry. Level 3 Audiovisual utilizes and is compliant as an AV9000 systems integrator. The exhaustive and elite AV9000 integrator system ensures only the highest quality products, installation procedures, systems testing, and systems commissioning are part of your AV technology systems.

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2.0 AV System Project Cost

Equipment	$ 330,624.54
Materials	$ 38,261.45
Labor	$ 233,552.49
Travel	$ 4,723.40
Shipping & Handling	$ 12,909.86
CSMA	$ 48,195.08
Tax	$ 31,689.06
Grand Total	$ 699,955.88

**See Acceptance of Proposal Section for additional CSMA durations*

3.0 Description of System – Courtrooms (Typical of 4)

3.1. Functional Description and Narrative:

1.1.1. Four existing courtrooms for the City of Peoria require an AV refresh.
1.1.2. The existing AV devices will be removed and handed over to the client.
1.1.3. The main display system consists of dual 75" flat panel monitors, wall mounted near the witness stand and the other near the court clerk position.
  1.1.3.1. Each display will be equipped with a network-based power distribution surge protector, to provide a degree of remote troubleshooting in the event of a device malfunction.
1.1.4. The video system consists of an AV-over-IP encoder/decoder system, capable of delivering any source to any display. The AV-over-IP encoder/decoder system functions much like a matrix switch.
  1.1.4.1. This AV-over-IP is critical to the design in the courthouse, in the sense that decoders in adjacent rooms such as Judges Conference or Jury Deliberation will easily be able to reference evidence being displayed in the courtroom.
1.1.5. Users will have access to several presentation devices in each courtroom, including a document camera, PC at the judges' position, as well as 3 HDMI laptop inputs located in cable cubbies at the defense table, prosecution table, and court clerk position.
1.1.6. The audio system consists of a digital signal processor (DSP) to handle all audio routing, mixing and control.
1.1.7. Hardwired Dante tabletop boundary microphone arrays will be installed at the defense table, prosecution table, witness stand, and judges' bench. These mics will support local speech reinforcement, court recording and audio conferencing.
  1.1.7.1. Each microphone features a status LED which will intelligently report its status.
1.1.8. Two Dante ceiling microphone arrays will be installed in each courtroom to support court recording and audio conferencing.

1.1.8.1. Ceiling microphones will not provide voice lift to the room.

1.1.9. Flush mounted speakers will reproduce local program and far-end audio during conference applications.

1.1.9.1. The speakers will be deployed across four discreet zones, providing the ability to designate mix-minus areas – this will increase the amount of gain before feedback for room microphones.

1.1.9.2. This format also would allow the ability to introduce white noise into the gallery or Jury zones during judges' bench conferences.

1.1.10. An existing For The Record (FTR) system will be integrated into each courtroom with similar functionality provided in the current system.

1.1.10.1. This PC is understood to be a discreet PC, apart from court clerk or judge PC's, and suitable for ingesting a USB audio feed and an HDMI video input.

1.1.11. An IR-based assisted listening system (ALS) will be provided for each courtroom, with each system including 4 Intelligent DSP IR Receivers that can be paired with a either an Intelligent Earphone/Neck Loop Lanyard or Universal Ear Speaker.

1.1.11.1. A charging base is included for the IR receivers.

1.1.12. Video conferencing will be supported using owner provided PC and/or laptops running video conference applications (Teams, Zoom, Google, etc.). USB connections will be provided to make installed room audio devices available as USB devices for conferencing applications.

1.1.12.1. This USB connection will be provided by way of a connection at the court clerk position.

1.1.12.2. Please note: While this system has been designed in a BYOB format suitable for multiple web-conferencing platforms, it should be noted that the holding cell arraignment system is configured for Zoom.

1.1.13. An HD resolution PTZ camera will be ceiling mounted to capture the courtroom as a whole and provide an audience perspective.

1.1.14. An HD resolution PTZ camera will be ceiling mounted to capture the judge and witness position.

1.1.15. An HD resolution PTZ camera will be ceiling mounted, to capture the prosecution and defense tables, as well as the area in front of the judges' bench.

1.1.15.1. This camera features AI presenter tracking, providing the ability to automatically follow a presenter as they move around the presentation area.

1.1.16. PTZ camera control will be accomplished from the touch panels installed at the judge and clerk positions.

1.1.17. A 10" tabletop touch screen will be installed at the judges' bench and court clerk position for control over this AV system.

1.1.17.1. A rack mounted control panel will also be installed for local admin control of the system.

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1.1.17.2. Note These courtroom AV systems share the same control processor, which is listed in the Judges Conference Room bill of materials.

1.1.18. A 10” wall mounted room scheduler will be installed outside each courtroom.

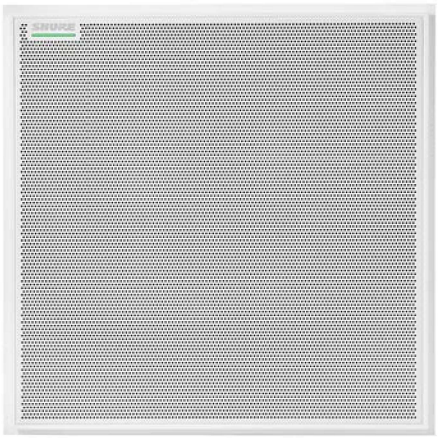
1.1.19. Newly installed equipment racks will house the equipment for the AV systems.

1.1.19.1. Old equipment racks will be decommissioned and handed over to the client.

1.1.19.2. The rack will be equipped with new network-based power distribution surge protectors, to provide a degree of remote troubleshooting in the event of a device malfunction.

AVER PATR313V2 High Definition PTZ Camera with AI Tracking

Listen Technologies IR-Based Assisted Listening System



Shure MXA920 Microphone Array

Shure MXA310B Dante Table Array Boundary Microphone

3.2. User Experience:

1.1.20. The judge or court clerk enters the courtroom and activates the system using the touch panel. The system powers on, displays turn on and the system is ready to use. A user can select which source to display using the touch panel and can adjust room volume and microphone levels using the touch panel. Once use of the system is complete, the system can be powered down using the same touch panel.

4.0 DESCRIPTION OF SYSTEM – JUDGES CONFERENCE ROOM

4.1. Functional Description and Narrative:

1.1.21. An existing judges' conference room for the City of Peoria requires an AV refresh.
1.1.22. The existing AV devices will be removed and handed over to the client for disposal.
1.1.23. The main display in the judges' conference room consists of a wall mounted 75" flat panel monitor.
  1.1.23.1. The display will be equipped with a network-based power distribution surge protector, to provide a degree of remote troubleshooting in the event of a device malfunction.
1.1.24. The video system consists of an AV-over-IP encoder/decoder system, capable of delivering any source to any display. The AV-over-IP encoder/decoder system functions much like a matrix switch.
  1.1.24.1. This AV-over-IP is critical to the design in the courthouse, in the sense that decoders in this room will easily be able to reference evidence being displayed in the courtroom.
1.1.25. Users will have access to the video sources available in the courtrooms, as well as a local HDMI input.
  1.1.25.1. The HDMI input for this room will utilize an encoder which will allow it to be viewed from any of the rooms connected to this AV system.
  1.1.25.2. This HDMI input is assumed to be a Judges PC.
    1.1.25.2.1. The Encoder for the PC will be installed at the PC location.
1.1.26. An integrated Poly Studio X52 system will be installed and configured for Zoom conferencing.
  1.1.26.1. It should be noted that Level 3 AV has no control over the Zoom Room feature set or control interface. This is managed by Zoom exclusively.
  1.1.26.2. The integrated speaker/video bar will be installed above the display.
  1.1.26.3. The speaker/ video bar features an integrated camera and microphones to capture video and audio for far end participants.

1.1.26.4. A 10” TC10 tabletop user interface will be installed on a client furnished conference table. This user interface will provide a surface from which calls can be managed.

1.1.26.5. A LAN connection is required at the display and the TC10 location for the Poly system components to connect to the client network.

1.1.27. A 10” wall mounted touch panel will be installed in the conference room for control over the AV system.

1.1.27.1. Note: The control processor listed in the bill of materials for this room will be installed in the main AV rack for the Jury Assembly rooms and will control the AV systems in this proposal which are located on the second floor.

1.1.27.2. A second rack-mounted 10” touch screen will be installed in the AV rack, providing the ability to configure rooms remotely. This may be useful for admins who wish to prep a jury room, power down rooms at end of day, or route video to a jury room during deliberations.

1.1.27.3. The Judges Conference Room bill of materials also contains a network switch designed to support the second floor AV systems. This switch will become part of the same “stack” of switches for the AV systems contained in this proposal.

1.1.28. A 10” wall mounted room scheduler will be installed outside the judges’ conference room.

Poly X52 videobar and TC10 control panel

4.2. User Experience:

1.1.29. A user enters the room and activates the system using the wall mounted touch panel. The user can then select the source they would like to display, and the presentation can begin. Once the use of the room is completed the system can be powered down using the same touch panel.

5.0 DESCRIPTION OF SYSTEM – JURY ASSEMBLY ROOMS

5.1. Functional Description and Narrative:

1.1.30. Three existing jury assembly/deliberations rooms for the City of Peoria require an AV refresh.
1.1.31. The existing AV devices will be removed and handed over to the client for disposal.
1.1.32. The main display in Jury Assembly Room A consists of a ceiling mounted projector displaying an image on a 109” diagonal motorized projection screen.
    1.1.32.1. The projector will be equipped with a network-based power distribution surge protector, to provide a degree of remote troubleshooting in the event of a device malfunction.
    1.1.32.2. A wall mounted 75” flat panel monitor will be installed as well as a secondary display in the room.
1.1.33. The main display system in rooms B and C consists of a wall mounted 75” flat panel monitor.
    1.1.33.1. Each display will be equipped with a network-based power distribution surge protector, to provide a degree of remote troubleshooting in the event of a device malfunction.
1.1.34. The video system consists of an AV-over-IP encoder/decoder system, capable of delivering any source to any display. The AV-over-IP encoder/decoder system functions much like a matrix switch.
    1.1.34.1. This AV-over-IP is critical to the design in the courthouse, in the sense that decoders in these rooms will easily be able to reference evidence being displayed in the courtroom.
1.1.35. Users will have access to the video source designated by the court clerk, which can include any of the inputs of the courtroom system described in section 3 of this proposal.
1.1.36. The audio system in Jury Assembly Room A consists of a digital signal processor (DSP) to handle all audio routing, mixing and control.
    1.1.36.1. This DSP consists of an expansion module which leverages the DSP for the courtroom system.
    1.1.36.2. Jury Rooms B and C are much smaller, and audio will be supported by speakers integrated into the displays.
1.1.37. Flush mounted speakers will reproduce local program audio in Jury room A.
1.1.38. 10” wall mounted room schedulers will be installed outside each Jury room.
1.1.39. A small floor standing equipment rack will be installed in an in Jury Room A.

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Epson L730U PowerLite L730U - 7,000 ANSI Lumen Multimedia Projector

5.2. User Experience:

1.1.40. The court clerk activates the system using the touch panel in the courtroom. The system powers on, displays turn on and the system is ready to use. The court clerk can select which source to display and can also adjust volume using the touch panel. Once use of the system is complete, the system can be powered down using the same touch panel.

6.0 DESCRIPTION OF SYSTEM – HOLDING CELL AV SYSTEM

6.1. Functional Description and Narrative:

1.1.41. A holding cell for the City of Peoria courthouse requires an AV refresh.
1.1.42. The goal of this system is to provide a secure AV system which is self-contained in a wall mounted enclosure, allowing arraignments to be conducted between the courtroom and holding cell.
1.1.43. The main display in the holding cell consists of a wall mounted 43” flat panel monitor.
  1.1.43.1. The display will be equipped with a network-based power distribution surge protector, to provide a degree of remote troubleshooting in the event of a device malfunction.
1.1.44. An integrated Poly Studio X30 system will be installed and configured for Zoom conferencing.
  1.1.44.1. It should be noted that Level 3 AV has no control over the Zoom Room feature set or control interface. This is managed by Zoom exclusively.
  1.1.44.2. The integrated speaker/video bar will be installed above the display but within the security housing.
  1.1.44.3. The speaker/ video bar features an integrated camera and microphones to capture video and audio for far end participants.

  1.1.44.4. A 10” TC10 wall mounted user interface will be installed outside the holding cell in a secure area accessible to the bailiff. This

user interface will provide a surface from which calls can be managed.

1.1.44.5. A LAN connection is required at the display and TC10 locations for Poly system components to connect to the client network.

1.1.44.6. A Bluetooth remote control will also be provided as a secondary controller for the system, specifically if the bailiff wishes to access X30 features from within the holding cell.

AVTEQ SSENCL-43-Poly Wall Mounted Security Display Enclosure

6.2. User Experience:

1.1.45. The bailiff can begin a call using the TC10, and the display will power on and the call can begin. Once the call is completed the system can be powered down using the same TC10 touch panel.

7.0 DESCRIPTION OF SYSTEM – LOBBY & COMMERCE DESK SIGNAGE

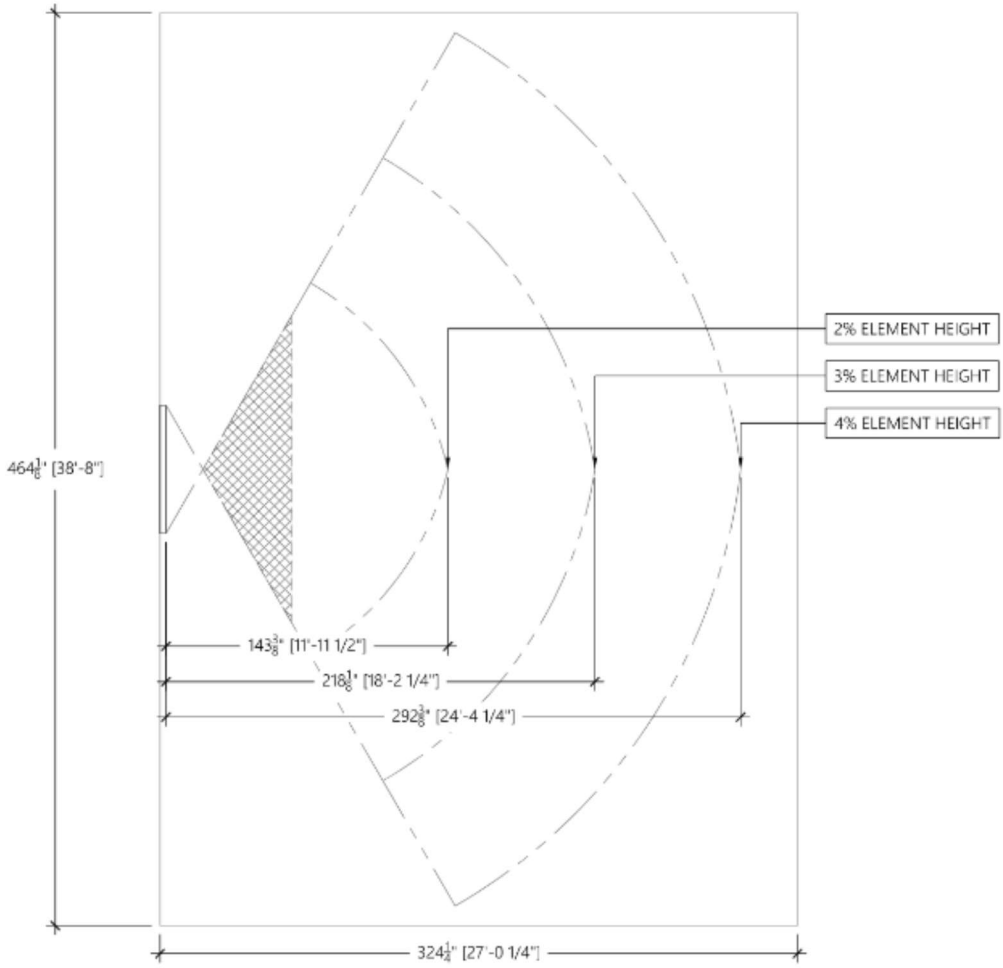
7.1. Functional Description and Narrative:

1.1.46. Two existing lobbies feature displays which are aging and require replacement.
1.1.47. These lobby displays will both be replaced with wall mounted 75” flat panel displays.
1.1.48. These displays will both be equipped with network-based signage players.
    1.1.48.1. Please note that signage content is to be managed and provided by others.
1.1.49. In addition, two 43” wall mounted displays will be installed in the commerce desk lobby.
1.1.50. These two displays will be equipped with network-based signage players.
1.1.51. A 10” wall mounted control panel located in the equipment rack will provide control over the displays.
    1.1.51.1. This touch panel is listed in the judges’ conference room bill of materials.
1.1.52. Each display will be equipped with a network-based power distribution surge protector, to provide a degree of remote troubleshooting in the event of a device malfunction.

Detailed Subsystem Information

1.2. Display System:

1.2.1. The Courtroom displays specified for this design consist of two NEC E758 75” flat panel displays.
1.2.2. Properly sizing a display relies on a number of variables.
1.2.3. The specified display size is based on the requirement of viewing content for BASIC DECISION MAKING. This includes PowerPoint presentations, videos or any content that does not require fine detail to be examined. In other words, visual elements whose measured height is 3-4% of the display screen height.
1.2.4. As an example of % element height, Calibri 11 pt. font within a program at 100% zoom levels is roughly 1% element height as compared to the measured screen height.
1.2.5. Based on the overall room dimensions and ceiling height, not all viewing positions fall within this range, which is 24’4” at maximum. Viewers beyond this range may struggle with clearly seeing information.
    1.2.5.1. However, relevant participants such as prosecution and defense tables as well as the witness stand reside within the appropriate viewing distance. Courtroom gallery is the only area outside of the viewing range.
1.2.6. Please keep in mind, some programs (Word, Excel) can typically zoom in and out, making visual elements larger or smaller, which will affect the % element height and therefore, the recommended viewing ranges.



Viewing Range Summary – 75" Courtroom Displays

1.1. **Video System:**

1.1.1. The video system consists of an AV-over-IP encoder/decoder system, capable of delivering any source to any display. The AV-over-IP encoder/decoder system functions much like a matrix switch.

1.1.2. Each display contained in the courtrooms, and jury assembly rooms is equipped with an AV-over-IP decoder, allowing sources from courtrooms to be routed to jury assembly rooms, and judges' conference room as needed.

1.1.2.1. Additionally, the holding cell system will be capable of displaying shared content from courtroom Zoom calls.

1.1.3. The video system is designed to use video scalers at the display devices, allowing for faster switching times with less time spent on a "black" screen when switching between sources.

1.2. Audio System:

1.2.1. A DSP will be provided with this AV system in the form of a BiAmp TesiraFORTE X 1600 for each courtroom, outfitted with expansion modules necessary for supporting the zones outlined in this proposal.

1.2.2. Eight (8) flush mounted ceiling speakers will be installed in each courtroom, deployed in a mix-minus format to provide both improved gain-before-feedback, as well as to allow white noise to be passed through speakers above designated areas during bench conferences.

1.2.3. A total of four (4) Shure MX310B tabletop boundary microphone arrays will be provided and installed in each courtroom.

1.2.3.1. These microphones will provide voice lift (local sound reinforcement) to each courtroom.

1.2.4. The wireless microphones will reinforce speech within the space targeting the levels below.

1.2.4.1. The target level for speech reinforcement in the space is 65 dB SPL (A weighted)

1.2.4.2. The target head room level for speech reinforcement above ambient noise in the space is 15 dB SPL (A weighted)

1.2.5. Two (2) Shure MXA920 ceiling microphones will be installed in each courtroom.

1.2.5.1. These microphones will be used solely for audio capture for recording and web-conferencing purposes, and will not provide voice lift within each courtroom.

1.2.6. A Listen LS-100-01assisted listening system will be provided and installed in each courtroom to meet ADA requirements.

1.2.6.1. These ALS devices are IR based to ensure audio is not accessed outside of each courtroom, and to prevent interference between courtrooms.

1.3. Acoustics

1.3.1. This system includes audio and/or video conferencing.

1.3.2. The acoustics of the room are as important, if not more important, than the technology used to capture and process speech, which include the microphones and audio processing equipment.

1.3.3. The microphones in this system have been selected based on a combination of usability, pickup pattern, and placement options. The success of the microphones is impacted by the acoustic performance of the room.

1.3.4. L3AV has no control over the construction of the room, the dimensions, interior finishes, or furniture.

1.3.5. L3AV requires certain acoustical targets to be met to guarantee an intelligible and useful audio experience for listeners on the far-end of audio or video conference calls.

1.3.6. Ambient Noise – NC35 or better

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1.3.6.1. In an empty room (no people), during business hours, with mechanical/HVAC systems engaged, the ambient noise at target frequencies should measure below the NC35 curves using a calibrated microphone and calibrated SPL meter with Real-Time Analyzer (RTA) capabilities.

1.3.6.2. If ambient noise levels are too high, users will “hear the room” and speech will be less intelligible, resulting in a diminished experience for participants within the room and at the far ends of their calls.

1.3.7. RT60/Reverberance – 0.5s or less, depending on room size.

1.3.7.1. Using a powered speaker and RT60 calibrated microphone and meter, the time it takes for acoustical energy (60dB above ambient) to decay by 60dB should measure 0.5s or less.

1.3.7.2. If the room is too reflective, audio energy remains in the space for too long, speech intelligibility suffers greatly, and it becomes difficult for users to understand what is being said. Over long periods of time this becomes very strenuous on the participants, causing listener fatigue. The effect is lots of “reverb” like the talker is in a box (or it sounds “echo-y”) where sound continues to bounce off surfaces and get into the microphones after they have stopped talking.

1.3.7.3. ***A highly reverberant room is the primary reason for poor audio and can’t be “fixed” with technology. The more reverberant a space is, the closer the microphones must be to the mouths of participants. Using ceiling microphones or a video bar all-in-one codec in a highly reflective space is a recipe for disaster. In a highly reverberant space, the only solution is to improve the acoustics of the room or to integrate a solution with a microphone placed close to each user.

1.3.8. L3AV recommends immediately sending these specifications to your architectural and interior design teams immediately for review.

1.3.9. In the event the room does not meet the above acoustic specifications L3AV will recommend improvements to the space or revisions to the audio system design to deliver the project.

1.3.9.1. These changes typically result in additional charges and project delays

1.3.9.2. L3AV can arrange the acoustic measurements of the room by our staff or local partners.

1.3.9.2.1. The charge for this analysis is not included in the base proposal unless specifically called out.

1.4. Digital Signage

1.4.1. The digital signage platform will be a “cloud” solution where content is managed by the owner through a browser. Content may be uploaded, and players managed through this browser portal.

1.4.2. Signage players must have access to the internet, provided by the owner.

1.4.3. Content creation and management services are included in this proposal and consist of the following:

1.4.3.1. 8 hours of online remote training has been provided through BrightSign, which consists of custom training adapted to specific customer requirements.

1.5. Video/Audio Conferencing:

1.5.1. The system functions primarily as an “Open UC” system. Open UC means that the meeting host must bring their meeting to the room on their laptop and connect with a USB cable. All meeting software is supported, such as Zoom, Teams, Webex, etc.

1.5.2. The USB connection provides access for the meeting software to the camera, microphones and speakers installed in the room.

1.5.3. The provided hardware components are designed to act as conferencing devices to an operating system like Windows. This increases the chance the software application will default the selection of camera and audio devices to the room camera, microphones, and speakers when connected. End users should be trained on how to select the correct conferencing device from within a conferencing application.

1.5.4. Zoom is the natively supported software platform for video calls for the judges conference room and holding cell AV system, consisting of a Poly X52 in the judges conference room and a Poly X30 in the holding cell. Each Poly compute device is registered as a Zoom Room and is managed by the client’s Zoom administrator. Licensing is required and provided by the client. It is the responsibility of the client to provide license keys during system staging, prior to installation, for testing so the system is operational when delivered.

1.5.5. The user interface/experience on the touch screen is managed exclusively by Zoom and is not customizable.

1.5.5.1. Other platforms (Teams, etc.) may be joined directly from the Zoom Room when invited to a meeting. This is dependent on each platform’s interoperability with Zoom and may require separate licensing for each. More information on joining 3rd party meetings can be found here.

1.6. Camera System:

1.6.1. Three Aver 4K resolution PTZ cameras will be wall or ceiling mounted in each courtroom, utilizing existing camera positions where feasible.

1.6.2. The camera selected as the current source will be configured to be captured on the FTR PC archiving court proceedings.

1.6.2.1. Two of the PTZ cameras are a AVR-COM520PR2 model, and the third camera a PATR313V2,

1.6.2.2. The PATR313V2 PTZ Camera features speaker tracking functionality to pan and tilt the camera so that it frames the current speaker in a presentation or conference call.

1.6.2.3. Tracking can be turned on & off from the touch panel, however configuration and management of these tracking functions first must be configured in the Aver Web GUI. The three available AI tracking modes consist of:

1.6.2.4. **Presenter Mode:** Camera will start tracking when a presenter appears on the camera view. The camera will focus on the targeted presenter with less background if the Upper Body is selected for the People Size. If the presenter is out of the camera view, the camera will return to the pre-configured Tracking Point.

1.6.2.5. **Zone Mode:** Camera will focus on the pre-configured zones (preset areas) while tracking the presenter.

1.6.2.6. **Hybrid Mode:** The camera will start tracking when a presenter is detected in the camera view. If the position where a presenter enters is pre-configured as a tracking zone (preset area), the camera will activate as Zone tracking.

1.7. Control System:

1.7.1. Each courtroom features a Crestron RMC4 control processor, to manage the AV system.

1.7.2. A Crestron CP4 is to be installed in the jury assembly room rack, providing a single control processor suitable for supporting the assembly rooms as well as the judges' conference room.

1.7.2.1. A 10" TS-1070-B-S tabletop touch screen will be provided at the judge's bench and court clerk position for control over the system in each courtroom.

1.7.2.2. A 10" TSW-1070-B-S will be installed in the judges' conference room.

1.7.2.3. A 10" TS-1070-B-S paired with a rack mount kit will be installed in the equipment rack for control over the systems.

1.8. Calendar Systems:

1.8.1. Room booking screens are provided in the following areas:

1.8.1.1. Courtroom 1
1.8.1.2. Courtroom 2
1.8.1.3. Courtroom 3
1.8.1.4. Courtroom 4
1.8.1.5. Jury Assembly A
1.8.1.6. Jury Assembly B
1.8.1.7. Jury Assembly C
1.8.1.8. Judges' Conference Room

1.8.2. The calendar system used for room reservations is Microsoft O365.

1.8.3. The Customer IT department will be responsible for creating room accounts and service credentials for each room within the AV scope with connected hardware. A Level 3 AV network engineer will further define the requirements during project planning phase.

1.8.4. All features of the room booking system outside of the client calendar systems will be limited to native functions within the current software version at the time of installation. The client's IT department will manage ongoing changes as needed to these settings post-deployment.

1.9. Programming Functional Scope

1.9.1. User Interface
- 1.9.1.1. Level 3 AV standard graphics template – User experience (UX) focused

1.9.2. General functions and modes
- 1.9.2.1. Startup screen/customer logo
- 1.9.2.2. Date and time on screen
- 1.9.2.3. System On/Off
- 1.9.2.4. Presentation mode
- 1.9.2.5. Video Conferencing mode

1.9.3. Startup operation
- 1.9.3.1. Manual startup from a button press on user interface

1.9.4. Shutdown operation
- 1.9.4.1. Manual shutdown with confirmation

1.9.5. Video Routing
- 1.9.5.1. Automated routing based on source selection/preset
- 1.9.5.2. Admin user custom routing (any source to any display)

1.9.6. Video Conferencing (Soft codec, i.e., Teams, Zoom, Google, etc.)
- 1.9.6.1. PTZ camera control (zoom/pan/presets)
  - 1.9.6.1.1. Via third-party control system

1.9.7. Audio Conferencing
- 1.9.7.1. Phone dialing
- 1.9.7.2. Incoming volume control
- 1.9.7.3. Redial
- 1.9.7.4. Flash (if applicable)

1.9.8. Audio
- 1.9.8.1. Basic program volume control
- 1.9.8.2. In room speech volume control
- 1.9.8.3. Gain adjustment for all mic channels (admin function)
- 1.9.8.4. Zone volume control and muting (admin function)

1.9.9. Device level controls – functions typically triggered by presets
- 1.9.9.1. Display/Projector on/off
- 1.9.9.2. Screen up/down
- 1.9.9.3. Default source routing
- 1.9.9.4. Default audio levels

1.9.10. Admin level monitoring
- 1.9.10.1. Status list for devices (online/offline page)

1.9.10.2. Usage tracking

1.10. Furniture / Equipment Rack:

1.10.1. A floor standing AV equipment rack for each courtroom will be provided to house equipment required to run the system.
  1.10.1.1. The racks will replace existing equipment racks and will utilize the same power receptacles used by the previous racks.
  1.10.1.2. While it was requested that the racks be reused, building out new racks will allow these systems to be staged and tested in the L3 rack build facility. This shorten the deployment time, making the downtime for this install as brief as possible.

1.10.2. The AV equipment rack will be located in the existing equipment room.
  1.10.2.1. *The closet housing the AV equipment rack must be climate controlled.*
  1.10.2.2. *The cumulative heat load of the AV equipment rack may be coordinated by L3AV with the upon receipt of an executed purchase order and project commencement.*

1.11. Network Coordination

1.11.1. All reasonable efforts to coordinate testing during installation of equipment will be made by owner.

1.11.2. IP video streaming appliances will be connecting to owner network. Owner IT to coordinate with L3AV on required network configuration (VLAN, QoS, IGMP, Multicast, etc.)

1.11.3. Audio over IP (AoIP) devices will be connecting to owner network. Owner IT to coordinate with L3AV on required network configuration (VLAN, QoS, IGMP, Multicast, etc.)

1.11.4. A connection to the owner Microsoft Exchange room calendar is required for on screen display of calendar events. Owner to provide network connection, exchange resource mailbox, credentials and configure permissions to allow for this capability.

7.2. System/Site Specific Assumptions/Exclusions (Standard assumptions/exclusions in later sections):

**Items listed here supersede standard assumptions & exclusions in following sections.*

1.11.5. Any existing cabling occupying the same pathway as new cabling per this scope of work may be removed, if required to complete work. This proposal does not include removal of any other equipment or cabling unless explicitly stated within this scope of work.

1.11.6. It is expected that cable pathways will be provided by others. If they are not provided by others, Level 3 Audiovisual will provide a surface-mounted raceway and/or submit a change order to coordinate cable pathways for the system.
1.11.7. It is expected that deliveries can be made to the site during normal business hours. If deliveries must be made after hours, or only during times that are not conducive to the AV project schedule, additional charges may apply.
1.11.8. If the ceiling and/or wall types are not as specified during a site visit or as shown in drawings, a change order may be required to integrate with this unanticipated site condition.
1.11.9. It is expected that all high voltage electrical infrastructure, display wall backing, and architectural or construction requirements to support AV systems are provided by others.

2.0 SUPPORT SERVICES

The following scope of services are provided only with the purchase of a Comprehensive Support and Maintenance Agreement (CSMA) attached to the system(s) in this proposal. Without an active CSMA, support requests will be received and processed by the Level 3 support services help desk with best effort and promise of payment prior to delivering support.

System maintenance and support is an important aspect of ensuring audiovisual system stability and long-term customer success. Along with quality audiovisual integration, we are committed to delivering quality ongoing maintenance and support. With a Support Services Agreement, you have a team of certified experts standing by to support you and your systems upon installation completion. Our Support team focuses on your systems so you can focus on your business.

7.3. Comprehensive Support Service Plan

This subscription plan includes unlimited support from both onsite and remote support engineers for a fixed price based on the room complexity and number of devices.
Plan details:

- Support for break-fix issues is unlimited* throughout the contract term.
- Secure remote access edge node and AV device monitoring are included in the pricing.
- Entitlements to the service are subscribed to on a per system/room basis.
- Preventative maintenance is optional and may be added to any system/room subscription as required.
- Systems not installed by L3AV are available for the service after a mandatory onboarding and audit process. This process carries a one-time cost and is not part of the subscription pricing.

**For the Scope of Work contained in this document*

Secure Remote Access

Enabling L3AV Help desk remote access enables faster troubleshooting and reduces the need for more costly onsite support.

Details:

- The hardware and software are included in the subscription.
- The number of edge nodes required will vary based on the network topology within the customer environment. The services required to work with the client IT group on topology and deployment are included in the subscription.
- Additional information related to security, auditability, and network considerations is available upon request.

7.4. AV Device Monitoring

AV devices on the network and reachable by an edge node may be enrolled in the monitoring service. Devices report various health status indicators and metrics to the monitoring service which will proactively alert the L3AV support desk to potential system issues.

The goal is for issues impacting the use of systems to be surfaced by the monitoring platform and not by end users attempting to use systems. Issue detection coupled with remote access allows for the fastest support option available.

Plan details:

- L3AV Help desk will receive alerts when an issue is detected that may impact use of AV systems.
- L3AV can proactively access remote systems to begin immediate diagnosing of the issue while alerting client contacts of the issue.
- Additional devices may be enrolled at any time during the subscription.

7.5. Preventative Maintenance

Preventative maintenance may uncover system issues, prevent premature equipment failure, and provide peace of mind that AV systems are being maintained.

Service details:

- Each room/system enrolled in comprehensive support may have preventative maintenance visits included as an option. The standard is (2) maintenance visits per year. The pricing will vary between basic and advanced room/system types.

7.6. Locations & Systems Covered

Room List			
Site Address	**Building**	**Room Number**	**Room Name**
10100 N 83rd Ave	City Court	1	Courtroom
10100 N 83rd Ave	City Court	2	Courtroom
10100 N 83rd Ave	City Court	3	Courtroom
10100 N 83rd Ave	City Court	4	Courtroom
10100 N 83rd Ave	City Court	1	Jury Assembly Room
10100 N 83rd Ave	City Court	A	Jury Deliberation Room
10100 N 83rd Ave	City Court	B	Jury Deliberation Room
10100 N 83rd Ave	City Court	N/A	Judges Conference Room
10100 N 83rd Ave	City Court	N/A	Holding Cell
10100 N 83rd Ave	City Court	N/A	Lobby & Commerce Desk

3.0 PARTS & EQUIPMENT

Mfr.	Description	Quantity		AZ State Price	AZ State Ext Price	% Discount
Courtroom AV System Refresh - Typical of						
DISPLAY SYSTEMS						
NEC Display Solutions	75 in LED Professional Large Format Display	2		$2,204.30	$4,408.60	30%
CHIEF	Tempo Flat Panel Wall Mount System	2		$620.31	$1,240.62	31%
Lightware	IP based decoder with PoE via a Gigabit Ethernet network. Analog audio	2	NIC	$872.00	$1,744.00	20%
Middle Atlantic Products	15A,2 OUTLET,IP CONTROLLED POWER,COMPACT	2		$227.50	$455.00	35%
VIDEO SYSTEM						
Lightware	IP based encoder with PoE via a Gigabit Ethernet network. HDMI local output,	5	NIC	$872.00	$4,360.00	20%
Lightware	IP based decoder with PoE via a Gigabit Ethernet network. Analog audio	2	NIC	$872.00	$1,744.00	20%
Client Furnished Gear	Owner Furnished PC	1		$0.00	$0.00	NIC
Wolfvision, Inc.	Visualizer vSolution Cam	1		$1,606.50	$1,606.50	15%
AVPro Global	HDBaseT (CAT6) Extender Kit. ICT 18G, 70m 4K (100m HD) Slim Extender	1	NIC	$895.30	$895.30	30%
AVPro Global	USB 2.0 via HDBaseT 100 Meter Extender	1	NIC	$503.30	$503.30	30%
Liberty AV Solutions	DIGITALINX SECURE ADAPTER RING	3		$226.95	$680.85	35%
AUDIO SYSTEM						
Biamp Systems	Meeting Room DSP	1		$4,291.20	$4,291.20	40%
Biamp Systems	Modular Expander Device	1		$1,386.00	$1,386.00	40%
Biamp Systems	PoE AVB/USB expander with Bluetooth wireless technology	1		$508.80	$508.80	40%
Lightware	IP based decoder with PoE via a Gigabit Ethernet network. Analog audio	1	NIC	$872.00	$872.00	20%
Shure Incorporated	Table Array Microphone with ShureÂ® IntelliMixÂ® DSP Suite, Black, White or	4		$958.10	$3,832.40	35%
Shure Incorporated	Square MXA920 Ceiling Microphone, White	2		$3,359.72	$6,719.44	29%
Listen Technologies Corp.	ListenIR iDSP Standard System	1		$3,489.60	$3,489.60	20%
Lab.Gruppen	2 x 120 Watt Commercial Amplifier with Direct Drive Technology, Dante	2		$524.25	$1,048.50	25%
Crestron Electronics, Inc.	Ceiling - Saros 2-Way In-Ceiling Speaker, White Textured, Single	8		$198.00	$1,584.00	40%
COURT RECORDING SYSTEM						
Client Furnished Gear	Existing FTR System (FTR Gold 7 Recording Suite)	1		$0.00	$0.00	NIC
VIDEOCONFERENCING SYSTEM						
Client Furnished Gear	Owner Furnished PC	1		$0.00	$0.00	NIC
AVER	PATR313V2 Auto Tracking Camera	1		$2,249.99	$2,249.99	10%
AVER	CAM520 Pro2 Conference Camera	2		$899.99	$1,799.98	10%
AVER	HDMI to USB Converter AVer BU110	1		$170.99	$170.99	10%
AVPro Global	HDBaseT (CAT6) Extender Kit. ICT 18G, 70m 4K (100m HD) Slim Extender	3	NIC	$895.30	$2,685.90	30%
AVPro Global	USB 2.0 via HDBaseT 100 Meter Extender	3	NIC	$503.30	$1,509.90	30%
Lightware	IP based encoder with PoE via a Gigabit Ethernet network. HDMI local output,	3	NIC	$872.00	$2,616.00	20%
Vaddio	Drop Down Mount for Small PTZ Cameras - Short (12-inch)	3		$270.97	$812.91	21%
CONTROL SYSTEM						
Crestron Electronics, Inc.	4-Series Control System	1		$660.00	$660.00	40%
Crestron Electronics, Inc.	10.1 in. Room Scheduling Touch Screen, Black Smooth	1		$831.60	$831.60	40%
Crestron Electronics, Inc.	10.1 in. Tabletop Touch Screen, Black Smooth	2		$1,960.80	$3,921.60	40%
Netgear	Netgear M4300 Layer 3 Switch - 48ports	1		$2,995.07	$2,995.07	25%
Netgear	16' 10G ethernet DAC. AXM761 for fiber links	1		$87.14	$87.14	25%
FURNITURE/EQUIPMENT RACK						
EXTRON	Cable Cubby 500 US	3		$408.00	$1,224.00	40%
Middle Atlantic Products	44SP/25D CONFIG AV RACK	1		$2,074.15	$2,074.15	35%
Middle Atlantic Products	CASTER BASE FOR ERK 25DP	1		$219.05	$219.05	35%
Middle Atlantic Products	15A9 OUTIP CTRL POWER	2		$383.50	$767.00	35%

Jury Assembly Room						
DISPLAY SYSTEMS						
EPSON	Epson PowerLite L730U 7,000 Lumen Laser Projector	1		$3,457.09	$3,457.09	9%
CHIEF	Projector Ceiling Mount Kit(RPAUW, CMS006W, CMS440), White	1		$319.47	$319.47	31%
DA-LITE	Recessed - 16:10 - 109 in D, 57.5 in x 92 in, Electric Screens	1		$2,458.40	$2,458.40	30%
NEC Display Solutions	75 in LED Professional Large Format Display	1		$2,204.30	$2,204.30	30%
CHIEF	Tempo Flat Panel Wall Mount System	1		$620.31	$620.31	31%
Lightware	IP based decoder with PoE via a Gigabit Ethernet network. Analog audio	2	NIC	$872.00	$1,744.00	20%
Middle Atlantic Products	15A,2 OUTLET,IP CONTROLLED POWER,COMPACT	2		$227.50	$455.00	35%
AUDIO SYSTEM						
Biamp Systems	Modular Expander Device	1		$1,386.00	$1,386.00	40%
Lightware	IP based decoder with PoE via a Gigabit Ethernet network. Analog audio	1	NIC	$872.00	$872.00	20%
Lab.Gruppen	2 x 120 Watt Commercial Amplifier with Direct Drive Technology, Dante	1		$524.25	$524.25	25%
Crestron Electronics, Inc.	Ceiling - Saros 2-Way In-Ceiling Speaker, White Textured, Single	4		$198.00	$792.00	40%
CONTROL SYSTEM						
Crestron Electronics, Inc.	10.1 in. Room Scheduling Touch Screen, Black Smooth	1		$831.60	$831.60	40%
FURNITURE/EQUIPMENT RACK						
Middle Atlantic Products	24SP/32D MULTIBAY WRK	1		$1,306.50	$1,306.50	35%
Middle Atlantic Products	24SP LARGE PERF FR DOOR	1		$371.80	$371.80	35%
Middle Atlantic Products	Side Panels, 24 RU, 31-32" Deep Racks (PAIR)	1		$566.80	$566.80	35%
Middle Atlantic Products	Caster Base, 32"D, WRK Series	1		$241.15	$241.15	35%
Middle Atlantic Products	Fan Top for WRK RAck	1		$440.05	$440.05	35%
Middle Atlantic Products	Rear Rack Rail Kit 24 space	1		$124.80	$124.80	35%
Middle Atlantic Products	15A9 OUTIP CTRL POWER	2		$383.50	$767.00	35%
Jury Deliberation Rooms A&B						
DISPLAY SYSTEMS						
NEC Display Solutions	75 in LED Professional Large Format Display	2		$2,204.30	$4,408.60	30%
CHIEF	X-large Fusion Micro-adjustable Tilt Wall Mount	2		$313.95	$627.90	31%
CHIEF	Proximity Component Storage Slide-Lock Panel	2		$147.66	$295.32	31%
Lightware	IP based decoder with PoE via a Gigabit Ethernet network. Analog audio	2	NIC	$872.00	$1,744.00	20%
Middle Atlantic Products	15A,2 OUTLET,IP CONTROLLED POWER,COMPACT	2		$227.50	$455.00	35%
CONTROL SYSTEM						
Crestron Electronics, Inc.	10.1 in. Room Scheduling Touch Screen, Black Smooth	1		$831.60	$831.60	40%
Crestron Electronics, Inc.	10.1 in. Tabletop Touch Screen, Black Smooth	1		$1,960.80	$1,960.80	40%
Judges Conference Room						
DISPLAY SYSTEMS						
NEC Display Solutions	75 in LED Professional Large Format Display	1		$2,204.30	$2,204.30	30%
CHIEF	Tempo Flat Panel Wall Mount System	1		$620.31	$620.31	31%
Polycom, Inc.	Poly Studio X52 All-In-One Video Bar-US	1		$3,998.95	$3,998.95	7%
Polycom, Inc.	1 Year Poly+ Studio X52	1		$283.60	$283.60	7%
Polycom, Inc.	Poly Studio X52 Wall Mount	1		$92.95	$92.95	7%
Lightware	IP based encoder with PoE via a Gigabit Ethernet network. HDMI local output,	1	NIC	$872.00	$872.00	20%
Lightware	IP based decoder with PoE via a Gigabit Ethernet network. Analog audio	1	NIC	$872.00	$872.00	20%
Middle Atlantic Products	15A,2 OUTLET,IP CONTROLLED POWER,COMPACT	1		$227.50	$227.50	35%
CONTROL SYSTEM						
Crestron Electronics, Inc.	4-Series Control System	1		$1,320.00	$1,320.00	40%
Crestron Electronics, Inc.	10.1 in. Room Scheduling Touch Screen, Black Smooth	1		$831.60	$831.60	40%
Crestron Electronics, Inc.	10.1 in. Wall Mount Touch Screen, Black Smooth	2		$1,830.00	$3,660.00	40%
Crestron Electronics, Inc.	Rack Mount Kit for TSW-1070 Series	1		$132.00	$132.00	40%
Netgear	Netgear M4300 Layer 3 Switch - 48ports	1		$2,995.07	$2,995.07	25%
Netgear	multimode 50/125um Fiber DAC	1		$375.00	$375.00	25%
Commerce Desk Displays						
DISPLAY SYSTEMS						
NEC Display Solutions	43 in Commercial Grade Display	2		$888.30	$1,776.60	30%
CHIEF	Medium Fusion Portrait Tilt Wall Mount	2		$151.11	$302.22	31%
CHIEF	Proximity Component Storage Slide-Lock Panel	2		$147.66	$295.32	31%
BrightSign, LLC	Standard Digital Signage Player	2		$440.00	$880.00	12%
BrightSign, LLC	8 GB SDHC card for signage player	2		$15.84	$31.68	12%
Middle Atlantic Products	15A,2 OUTLET,IP CONTROLLED POWER,COMPACT	2		$227.50	$455.00	35%
Lobby Signage						
DISPLAY SYSTEMS						
NEC Display Solutions	75 in LED Professional Large Format Display	2		$2,204.30	$4,408.60	30%
CHIEF	FUSION Large Flat Panel Ceiling Mount, Portrait	2		$344.31	$688.62	31%
BrightSign, LLC	Standard Digital Signage Player	2		$440.00	$880.00	12%
BrightSign, LLC	8 GB SDHC card for signage player	2		$15.84	$31.68	12%
Middle Atlantic Products	15A,2 OUTLET,IP CONTROLLED POWER,COMPACT	2		$227.50	$455.00	35%
SIGNAGE TRAINING						
BrightSign, LLC	Per hour. Custom training adapted to specific customer requirements.	8		$220.00	$1,760.00	12%

Holding Cell Videoconferencing Solution					
DISPLAY SYSTEMS					
NEC Display Solutions	43 in Commercial Grade Display	1	$888.30	$888.30	30%
Polycom, Inc.	POLY STUDIO X30 All-in-one 4K Video Conf/Collab/Wireless Pres Sys	1	$1,896.22	$1,896.22	7%
Polycom, Inc.	Poly Studio X30 Mounting Kit	1	$141.31	$141.31	7%
Polycom, Inc.	Poly TC10 – BLACK Stand-alone 10" room scheduler / touch control for use	1	$1,040.58	$1,040.58	7%
Polycom, Inc.	Wall Mount kit for TC10	1	$28.32	$28.32	7%
Polycom, Inc.	PC Poly+, 1YR, TC10	1	$113.41	$113.41	7%
Polycom, Inc.	Poly Care Poly+, Studio X30 1yr	1	$188.74	$188.74	7%
Avteq, Inc.	Security Display Enclosure for the Poly X30	1	$1,721.55	$1,721.55	31%
Polycom, Inc.	Bluetooth Remote for X30 Device	1	$141.31	$141.31	7%
Middle Atlantic Products	15A,2 OUTLET,IP CONTROLLED POWER,COMPACT	1	$227.50	$227.50	35%

4.0 WORKMANSHIP GUARANTEE

7.7. All work performed by L3AV is guaranteed for one year from the date of project completion. This warranty includes defects related to workmanship of installed cables, connectors, installation hardware, system programming and commissioning. All equipment supplied by L3AV will feature the manufacturer's warranty specified for each item.

Manufacturer warranties vary in duration and typically begin when equipment is received from the manufacturer. Manufacturer warranties do not cover the cost of on-site diagnosis, removal, shipping, and re-installation of defective equipment.

5.0 PERFORMANCE SPECIFICATIONS

Description	Specification
Audio	
Anticipated ambient noise (dB-SPL, A wtd.)	**40 dB SPL**
Reverberance (RT60) Target	**<0.4s**
Target speech level	**65 dB SPL**
Target Program level	**68 dB SPL**
Head room level, speech	**15 dB**
Head room level, program	**10 dB**
Electrical signal to noise, all audio systems	**55 dB**
Approximate variance between program source audio levels	**+/- 1 dB**
Speech Transmission Index for Public Address (STI-PA)	**> 0.62**
Display	
Display size (relative distance to furthest viewer)	**FV / 6**
Video level tolerance	**+/- 1 dB**
Targeted resolution(s)	**1920 x 1080**
Targeted contrast ratio (for projection systems)	**15:1**
Targeted screen Luminance (for projection systems)	**90 ftL**
Max. ambient light at prj. screen (to achieve contrast & luminance targets)	**100 Lux**

6.0 SCHEDULE FOR DELIVERY

7.8. L3AV follows best practices included in the AV9000 Quality Management System. Adherence to this process reduces design, installation and commissioning errors, which leads to reduced/eliminated punch lists and faster onsite deployments. For this reason, an average delivery timeframe from the moment we receive a purchase order, to final delivery typically varies from 8-12 weeks, but can be longer in some cases. Every project schedule is different, especially when coordinating with construction schedules.

7.9. A detailed project schedule estimate for this proposal is available upon request.

7.10. Availability of resources at the time of engagement may affect project delivery dates.

*** Estimated Delivery Project Dates

Milestone	Specification
Need to receive PO	Minimum 8 weeks prior/Minimum 12 weeks prior (w/ programming) to desired delivery date
Desired Completion Date	No set delivery date, PM will provide schedule after received PO

7.0 SCOPE OF WORK - GENERAL

7.11. Assign a Project Manager to administer the project including equipment and labor control, scheduling and all coordination with client, architect, and consultants. Provide a single point of contact throughout all phases of the project. Develop installation documentation for the assembly and wiring of the audiovisual systems. Document package to include shop drawings that depict signal flow, AV fixture locations and construction detail to convey methods of installation.

7.12. Timely purchasing of all audiovisual equipment, software, and materials. Coordination with the various vendors and suppliers.

7.13. Acquire and inspect owner furnished equipment specified in this scope of work and equipment list.

7.14. Assembly and wiring at L3AV facility of all consoles, control panels, audiovisual equipment cabinets, electronic components, etc.

7.15. Custom programming of all control systems, DSP devices, and other electronic components specified in this scope of work and equipment list.

7.16. Testing and staging of audiovisual systems at L3AV facility. Review of all system functions and operation.

7.17. Regular job site visits to verify dimensions and to coordinate with various trades such as electrical contractors, millwork contractor, general contractor, architect, and interior designers, as required.

7.18. Preparation of cable pull drawings. Early delivery of cable, connectors, and wall plates if possible.

7.19. Furnish and install all low voltage cable.

7.20. Coordination and delivery of the audiovisual systems to job site.
7.21. Install all audiovisual components listed in the parts and equipment section of this proposal. Installation techniques and methods used are industry standard best practices.
7.22. Complete thorough testing of the audiovisual systems. Test, set levels, balance, and equalize the system.
7.23. Certification of the audiovisual systems. Acceptance and checkout with the client representatives.
7.24. Preparation of as built documentation drawings, owner's manuals, and operator instructions. Provide a complete Documentation Package of all shop drawings, owner's manuals, and operator instructions to the client.
7.25. Provide training and demonstration sessions for operators, end-users, interested executives and others. Provide training and assistance to the client on the proper use and maintenance of the audiovisual systems.

8.0 ASSUMPTIONS

7.26. Owner is responsible for providing a single point of contact for all project related coordination and authority for design and change request review and approval.
7.27. Any work supplied by L3AV will be non-union. There are no local labor unions with jurisdiction over the site.
7.28. Owner is responsible for providing all telecommunications connection information as required for successful AV system network connectivity. Including but not limited to IP Address Information, Phone Numbers, Email Accounts, and network credentials.
7.29. This proposal includes an initial control system GUI submittal and up to two revisions. Additional revisions and associated meetings are available but will result in additional project costs.
7.30. It is assumed that any existing systems (Lighting, Shade, HVAC, Audiovisual and Control), that are to be integrated into the proposed system, will have readily available, the currently implemented version of system source code. If the original programming source code cannot be provided, any additional work required will necessitate a signed change order. In the event that Level 3 is supplied control system code that does not match what is currently installed in the OFE device(s) the owner shall be responsible for all additional costs associated with correcting programming as a result of installing older/incorrect version(s).
7.31. The use of control system code provided by others necessitates that all devices in the proposed system are the same make and model as those in the code. Also, signal flow drawings representing the interconnection of equipment that matches the provided code and proposed system functionality must be provided. In the absence of these requirements, additional cost for programming and engineering hours should be anticipated. The developer of the supplied code shall be available remotely to assist with any needed debugging during the staging and onsite installation processes.
7.32. Site prep to be verified by L3AV project manager or representative before scheduling of the installation. All work areas should be clean and dust free prior to the beginning of onsite integration of electronic equipment.

7.33. In the event of any arrival to site that L3AV is not able to execute work and definable progress, the client will be charged a $250.00 Mobilization Fee to offset the lost time due to the lack of readiness. The Mobilization Fee will be presented as a Contract Change Order and will halt work until acceptance by the client and rescheduling of the installation is agreed upon. If travel is required more than 50 miles from Mesa, AZ, expenses, such as airfare, incurred will also be included in Contract Change Order.

7.34. There is onsite secure storage for equipment during a multiple day integration.

7.35. If owner furnished equipment and existing cabling is to be used, L3AV assumes that these items are in good working condition at this time. Any repair or replacement of these items that may be necessary will be made at an additional cost.

7.36. If applicable, Cable or Satellite drops must be in place with converter boxes operational before the completion of integration. Any delay resulting in extra work caused by late arrival of these items will result in a change order for time and materials.

7.37. The building structure is stable such that projected images from projectors or captured camera images will not visibly vibrate, bounce, or shake during typical operation, activities, and occupancy. Vibration isolation mounts are available at an additional cost unless specifically referenced in the scope of work and included in the bill of materials.

9.0 EXCLUSIONS

7.38. The following items are typical construction activities that are often required for the successful implementation of audiovisual systems. These activities are not included in this proposal.

7.39. All conduit and high voltage work required for AV equipment.

7.40. Finish work including drywall, paint, and wall/ceiling framing.

7.41. Millwork (moldings, trim, etc.)

7.42. All owner network and phone system connections

7.43. Permits (Unless specifically provided for and identified within the contract)

7.44. Removal of existing equipment or cabling, unless specifically stated in the scope of work.

10.0 ADDITIONAL SERVICES (IF REQUIRED)

7.45. The work proposed in the document is all inclusive to the scope as it has been defined in the RFP and this proposal. For changes that occur, L3AV will show line item deductions including labor and materials related to the equipment line item and additions will be based on the standard rate schedule below. L3AV will provide a detailed schedule of values with this line item pricing as a post award submittal or as an exhibit attachment to a formal contract.

11.0 Job Quality

7.46. All personnel assigned to this project are required to meet strict guidelines for the purpose of professional conduct and exceptional workmanship. Our staff features certifications and training issued by recognized industry vendors and associations. Our engineering practices include the effective application of document control, shop/lab testing/validation, and exhaustive research conducted on new products, methodologies, and materials. Project management processes feature real-time reporting of progress, exceptional record keeping and communications. All primary systems are built and staged in L3AV's facility prior to site installation. Within these processes, we conduct a well-documented series of quality control checks.

12.0 Project Management

7.47. L3AV follows a formal project management process which may/will include the following actions / deliverables (based on the size/complexity/duration of the integration project):

7.48. Project Kick-off meeting with customer representative(s) and L3AV assigned integration team members. This can be in person or by conference call.

7.49. Submittals and Design Review. Often completed during the Project Kick-off meeting.

7.50. Site Verification – conducted prior to integration – can be in conjunction with Project Kick-off meeting.

7.51. Weekly project status review meetings with customer representative(s) and L3AV integration team members. This can be in person or by conference call.

7.52. Change control management through a documented Change Order Request (COR) procedure, submittals, and owner authorization requirements.

7.53. Project punch list resolution and substantial completion verification during customer system acceptance walkthrough.

13.0 Standards & Compliance

7.54. Level 3 Audio Visual is a licensed and bonded contractor with the capacity to carry project specific performance bonds at a reasonable market rate. All work is performed in accordance with the latest revisions of applicable codes and standards including the National Electric Code and local government codes and regulations for construction/building.

14.0 Work Schedule

7.55. Unless otherwise noted, all work proposed will be conducted during regular business hours Monday – Friday, 8 a.m. – 5 p.m. Proposed work is based on a 40-hour work week / 8-hour workday. All work is scheduled at a minimum of one week in advance. Changes to the work schedule may be made by the customer with recognition and acceptance of any additional costs required to support overtime, weekend, or holiday pay fees.

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15.0 System Testing & Evaluation

7.56. Completion of shop or field assembly and installation will lead to testing and evaluation. This will include performance testing of individual components and testing of the overall system. Testing may include the supporting infrastructure supplied and installed by others. A client representative may be present during testing and evaluation. Results of this process are formatted and submitted to the formal job record. Signature acceptance will be requested from the client for the project completion milestone.

16.0 Availability of Information

7.57. This proposal is based on information presented during the meetings and conversations between L3AV representatives and the client's representatives described in the executive summary. Other information may include the review of architectural drawings and specifications, shop, or site visits as well as surveys and meetings with job related contractors.

17.0 Site Access

7.58. Costs proposed consider that jobsite access is unrestricted and can occur during regular business hours unless otherwise agreed and noted in this proposal. Unforeseen restrictions may affect the project schedule and proposed costs. Parking and delivery restrictions should be identified in advance to avoid disruption of the project schedule.

18.0 Coordination with other trades

7.59. Coordination with other trades and project concerns has been accounted for in L3AV's determination of project management and engineering estimates. This coordination will be provided in the form of meetings, conferences, and reference documentation. Records of this activity will be included in the job report and can be made available to the client's representatives upon request.

19.0 Unforeseen hazards

7.60. Costs included in the proposal do not account for any unforeseen hazards such as faulty existing wiring, dangerous structure, hazardous materials, or any other issues that could affect safety and proposed costs. It is L3AV's practice to avoid adding contingency costs to our proposed fees by accounting for elements that affect costs in a fair and equitable manner.

20.0 USE OF THIS DOCUMENT

7.61. Concepts, ideas, and details included in this document developed by L3AV represent intellectual property and in whole or part are considered a product of limited service engagement between L3AV and our client. Both parties must provide consent or permission to use the content of this document and attached data.

21.0 PAYMENT SCHEDULE

7.62. Payment will be per State Contract Special Terms and Conditions.

22.0 Design Approval / Proposal Acceptance

An authorized representative of the client and principal representing Level 3 Audio Visual may indicate acceptance of this proposal in the designated areas below. **This proposal and pricing are valid until September 30, 2024. If this proposal is signed after such date, it will be reviewed for accuracy and amended if needed.** This proposal may serve as an attachment to other binding agreements.

PROJECT NAME: Courtroom AV Technology Replacement

Project Summary					
Total Price $		**699,955.88**			
Service Description	**1 Year Term**	**2 Year Term**	**3 Year Term**	**4 Year Term**	**5 Year Term**
Support Services	Included	$ 93,498.45	$ 135,910.12	$ 175,430.09	$ 212,058.35
Multi-Year Discount:		3%	6%	9%	12%
Tax:		$ -	$ -	$ -	$ -
Grand Total:		**$ 745,259.25**	**$ 787,670.92**	**$ 827,190.89**	**$ 863,819.15**

Please Initial additional Term of Choice: 2 yr _____ 3 yr _____ 4 yr _____ 5 yr _____

I decline to include Support Services at this time Initials _____

The above prices, specifications and conditions are hereby accepted. Level 3 Audio Visual is authorized to begin Design Phase of the Project as outlined in this Proposal. I understand that by signing this proposal I agree that Level 3 Audio Visual will be engaged as my design/build systems integrator.

Agreed to for **City of Peoria**

Print Name: _____ *Date:* _____

Title: _____

Signature: _____

Agreed to for **Level 3 Audio Visual, LLC.**

Print Name: Bridget Thrun *Date:* 08/13/2024

Title: Sales Manager

Signature: _____