

1 General

.1 Audio-Video System Requirements

- .a** These guidelines cover a variety of Audio-Visual (A-V) Systems intended for corporate spaces. They include:
 - i.** Standardized conference rooms A-V systems
 - ii.** Digital Signage displays
 - iii.** Custom A-V systems
- .b** These guidelines do not cover A-V for courthouses and detention facilities.
- .c** The need for Audio-Video (A-V) systems shall be determined by Wake County at the schematic design phase.
- .d** Standardized A-V systems for conference rooms consistent with Wake County Information Technology's (IT) Audio Visual Program referenced under Products, latest edition, shall be followed for all projects unless directed otherwise.
- .e** Digital Signage displays shall follow General Services Administration's (GSA) requirements listed under Products.
- .f** The Designer shall approach Wake County if they feel an A-V consultant is needed for the project if not already part of the design team at the earliest opportunity.
- .g** If stand alone A-V systems are not utilized (less common), the Designer shall provide adequate space for centralized equipment and consider future needs if there is potential for a future facility expansion. A-V closets should be accessed via a single 3' x 7' door, opening out and doors shall be equipped with badge access.
- .h** Coordinate the A-V design with furniture selections as necessary. For lecterns or credenzas that will contain A-V equipment, determine if modifications to stock furniture is needed and coordinate construction documents (A-V and furniture) to show each contractor's responsibilities.
- .i** Audio-Video equipment shall not be placed in MDF and IDF's unless approved by Wake County.
- .j** Coordinate needs for CATV circuits, network, and fiber for A-V systems with the engineer.
- .k** Coordinate with Wake IT Telecommunication Services for CATV service, if needed.
- .l** Static dissipative tile VCT flooring is to be provided in all A-V closets. A light color is preferred.
- .m** Design HVAC conditions supporting equipment housed in A-V closets similar to telecom closets
 - 1. Temperature between 64 and 75 degrees F.
 - 2. Humidity range of 30% to 55%.
 - 3. 24/7 HVAC with positive pressure and a minimum of one air change per hour.
 - 4. Temperature controlled exhaust fans may be used only in TR's that will serve fewer than 48 stations at capacity.
- .n** A-V integrated lighting controls shall be avoided for County Standard A-V installations. Where custom A-V installations are incorporated, lighting controls shall be approved in advance by the County.
- .o** All A-V closets must be equipped with a ¼" x 4" x 8" copper grounding buss bar, with lugholes, connected to building ground.
- .p** Minimum conduit size shall for A-V wiring shall be 1" and shall be pre-colored per division 26 electrical guidelines.
- .q** Conduits shall use compression fittings only. Screw fittings are not acceptable.
- .r** A-V closets must be lighted to provide a minimum of 50-foot candles, measured at 3' above the floor, on all exposed sides of the equipment.

- .s All low voltage A-V cabling must be properly supported per requirements of the electrical code. Basket-type cable tray may be provided across the A-V closet as needed.
- .t All segments of ladder rack and equipment racks, if provided, must be properly grounded.
- .u Ceiling height of A-V closets must be at least 8' 6". False ceilings are not preferred.
- .v Based on end use, provide no less than one (1) 2" conduit between the closest MDF/IDF closet and each A-V closet.
- .w Exposed raceways and/or conduits are unacceptable for the A-V systems.

.2 Codes & Standards

- .a Comply with applicable provisions of the most recent "North Carolina Building Code: Electrical Code".
- .b Comply with NFPA Codes and Standards.
- .c AVIXA (formerly InfoComm International) Standards
- .d Comply with ANSI/TIA/EIA-568B, 569, 606: "Commercial Building Telecommunications Cabling Standard", Commercial Building Standard for Telecommunications Pathways and Spaces", Administration Standard for Telecommunications Infrastructure of Commercial Buildings".
- .e Comply with OSHA electrical standards and workmanship.
- .f Comply with applicable requirements of NEMA Standards.
- .g Comply with BICSI Telecommunication Distribution Methods Manual.
- .h Comply with IEEE Bonding and Grounding best practices.
- .i All materials installed must meet NRTL (Nationally Recognized Testing Laboratory) listed and labeled as defined in the National Electric Code and FCC regulations.

2 Products

.1 Audio-Video Equipment for Conference Rooms

- .a Refer to Appendix A – Wake County Audiovisual Conference Room Standards
 - i. These standards depict A-V solutions for five common conferencing situations
 - ii. Notify Wake IT of new projects requiring conference A-V systems and confirm which of the five systems to use.
 - iii. Variations of the conference room standards are possible but should be approved by and coordinated with Wake IT staff. Variations can trigger a need for an A-V consultant.
- .b Custom A-V designs shall utilize an A-V consultant.
- .c Provide conduit pathways required to support A-V components
- .d Provide in-wall blocking to support wall mounted A-V equipment
- .e Identify and coordinate locations for power, CATV, and network
- .f If ceiling mounted microphones are utilized, coordinate locations with other ceiling mounted fixtures and provide conduit path for wiring
- .g If ceiling mounted speakers are utilized, provide conduit path for wiring.
- .h Coordinate the conference room lighting design with proposed A-V system

.2 Digital Signage displays

- .a Refer to Appendix B - Digital Signage Requirements
 - i. These standards depict requirements for digital signage managed by Wake General Services Administration (GSA)
 - ii. Notify GSA of new projects where digital signage will be utilized and coordinate requirements which can vary based on the installation.
- .b Provide conduit pathways required to support A-V components
- .c Provide in-wall blocking to support wall mounted A-V equipment
- .d Identify and coordinate locations for power, CATV, and network
- .e Coordinate with GSA for the video player and network configurations

3 Audio-Visual Systems Testing Requirements

.1 Audio-Visual Systems Testing

- .a The contractor who installs A-V equipment or Digital Signage shall test equipment to assure proper functionality.
- .b If a standard conference room audiovisual system was installed, Wake IT will commission the system and finalize settings for use.
- .c GSA will commission all digital signage and finalize setting for use. If utilized by a specific department, GSA will advise and train staff how to use the system.
- .d If an A-V consultant was utilized for a custom design, the consultant shall commission the installation alongside Wake IT/GSA staff. The A-V contractor will provide owner training and detailed documentation for systems use.

APPENDIX A

Wake County Audiovisual Conference Room Standards



WAKE COUNTY AUDIOVISUAL CONFERENCE ROOM STANDARDS

AUDIOVISUAL PROGRAM

March 31, 2026

INTRODUCTION

It is our understanding that Wake County intends to standardize the Audiovisual systems in existing and new meeting spaces within all Wake County Buildings. Specifically, the standardization will be focused on five (5) types of conference rooms.

The conference rooms will be used to support several types of meetings and activities. The types include:

- Conference Rooms that are less than 300 SF
- Project Rooms
- Conference Rooms that are 300 – 550 SF
- Conference Rooms that are 550+ SF
- Conference Rooms that are 550+ SF with special use

OWNER FEEDBACK AND COMMENTARY

This document outlines our interpretation of what we gathered from meetings and interviews to date, plus results of prior work by the design team. Where there are no specific directions provided, we will be guided by our experience, focusing on innovative applications which will enrich and strengthen the on-grounds experience.

We will work in conjunction with the appropriate departments of Wake County on the design of technology systems, acknowledging County guidelines, preferences and standards where applicable, and working with the department representatives whenever we see a need for modifications or additions to these guidelines.

We will rely on feedback and commentary from the design team and user groups to confirm this document and allow us to move on to the next design phase of the project.

AUDIOVISUAL REQUIREMENTS

Conference Rooms that are less than 300 SF

The conference room will accommodate local and remote meetings. The space will include a front wall mounted 65" Flat panel display . The users will have access to a variety of audiovisual source devices and functionalities.

An integrated video camera located below the Flat panel display will provide coverage of the room for video conferencing; A microphone system will provide uniform coverage of the room participants. Integrated loudspeakers are planned for program audio and far end audio.

The room will utilize the built in Microsoft Teams Room Android CentOS operating system contained within the hybrid Camera/Sound bar. This will include options for Zoom and Webex functionality as well. An HDMI connection connected to the control panel will direct control of the display without connecting the room itself to a Teams meeting.

A color touch interface will be located at the table and will be used for controlling Microsoft Teams meetings and source selection.

An HDMI cable located at the table will provide users the ability to show content on the Flat panel display . During a Microsoft Teams meeting this connection will allow sharing content to the far end.

Wireless "screen sharing" within the room will be through Microsoft Teams

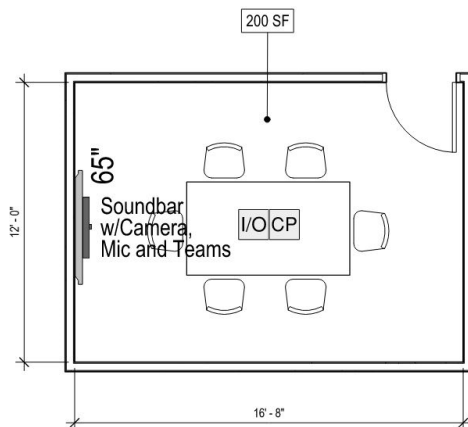
All equipment will be located under the table and behind the Flat panel display .

Space Planning:

- Pathway of at least 1" from under the table to behind the Flat panel display is needed.
- Power will be needed under the table and behind the Flat panel display .
- At least one (1) Telcom connection to the Wake County network will be needed behind the Flat panel display .
- In-wall blocking will be needed for the Flat panel display .
- Several holes will need to be field cut into the table surface.

Discussion Points:

- Who coordinates GSA, IT and AV Integrator for room deployments?
- How will systems be purchased?



1 PLAN - LESS THAN 300 SF
A101 1/4" = 1'-0"

Project Rooms

The Project Room will accommodate local and remote meetings. The space will include a front wall mounted 55" flat panel display. The users will have access to a variety of audiovisual source devices and functionalities.

An integrated video camera located below the flat panel display will provide coverage of the room for video conferencing. A microphone system will provide uniform coverage of the room participants. Integrated loudspeakers are planned for program audio and far end audio.

The room will utilize the built in Microsoft Teams Room Android CentOS operating system contained within the hybrid Camera/Sound bar. This will include options for Zoom and Webex functionality as well. An HDMI connection connected to the control panel will direct control of the display without connecting the room itself to a Teams meeting.

A color touch interface will be located at the table and will be used for controlling Microsoft Teams meetings and source selection.

An HDMI cable located at the table will provide users the ability to show content on the flat panel display. During a Microsoft Teams meeting this connection will allow sharing content to the far end.

Wireless "screen sharing" within the room will be through Microsoft Teams

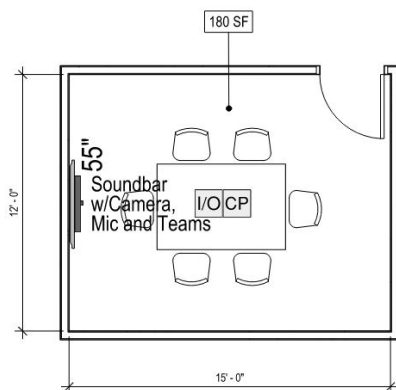
All equipment will be located under the table and behind the Flat panel display.

Space Planning:

- Pathway of at least 1" from under the table to behind the flat panel display in needed.
- Power will be needed under the table and behind the flat panel display.
- At least one (1) Telcom connection to the Wake County network will be needed behind the flat panel display.
- In-wall blocking will be needed for the flat panel display.
- Several holes will need to be field cut into the table surface.

Discussion Points:

- Who coordinates GSA, IT and AV Integrator for room deployments?
- How will systems be purchased?



Conference Rooms that are 300 - 550SF

The conference room will accommodate local and remote meetings. The space will include a wall mounted 75" flat panel display. The users will have access to a variety of audiovisual source devices and functionalities.

An integrated video camera located below the flat panel display will provide coverage of the room for video conferencing. A microphone system with an additional table mounted microphone will provide uniform coverage of the room participants. Integrated loudspeakers are planned for program audio and far end audio.

The room will utilize the built in Microsoft Teams Room Android CentOS operating system contained within the hybrid Camera/Sound bar. This will include options for Zoom and Webex functionality as well. An HDMI connection connected to the control panel will direct control of the display without connecting the room itself to a Teams meeting.

A color touch interface will be located at the table and will be used for controlling Microsoft Teams meetings and source selection.

An HDMI cable located at the table will provide users the ability to show content on the flat panel display. During a Microsoft Teams meeting this connection will allow sharing content to the far end.

Wireless "screen sharing" within the room will be through Microsoft Teams

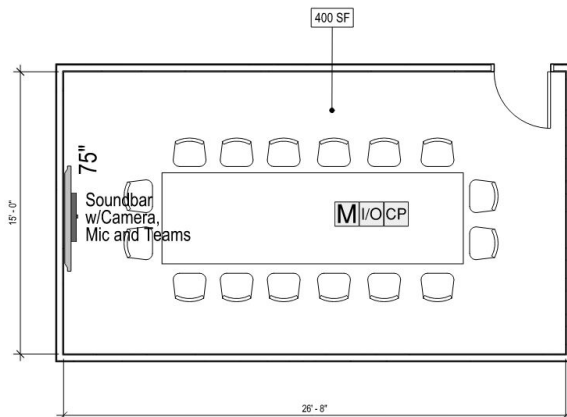
All equipment will be located under the table and behind the flat panel display.

Space Planning:

- Pathway of at least 1" from under the table to behind the flat panel display in needed.
- Power will be needed under the table and behind the flat panel display.
- At least one (1) Telcom connection to the Wake County network will be needed behind the flat panel display.
- In-wall blocking will be needed for the flat panel display.
- Several holes will need to be field cut into the table surface.

Discussion Points:

- Who coordinates GSA, IT and AV Integrator for room deployments?
- How will systems be purchased?



Conference Rooms that are 550 + SF

The conference room will accommodate local and remote meetings. The space will include two (2) front wall mounted 85" flat panel displays that will allow the viewing of content and far end video. The users will have access to a variety of audiovisual source devices and functionalities.

An integrated video camera located below the flat panel display will provide coverage of the room for video conferencing. A microphone system with additional table mounted microphones will provide uniform coverage of the room participants. Integrated loudspeakers are planned for program audio and far end audio.

The room will have a dedicated Windows IOT appliance running Microsoft Teams. This will include options for Zoom and Webex functionality as well. HDMI connection connected to the control panel will direct control of the display without connecting the room itself to a Teams meeting.

A color touch interface will be located at the table and will be used for controlling Microsoft Teams meetings and source selection.

An HDMI cable located at the table will provide users the ability to show content on the flat panel display. During a Microsoft Teams meeting this connection will allow sharing content to the far end.

Wireless "screen sharing" within the room will be through Microsoft Teams

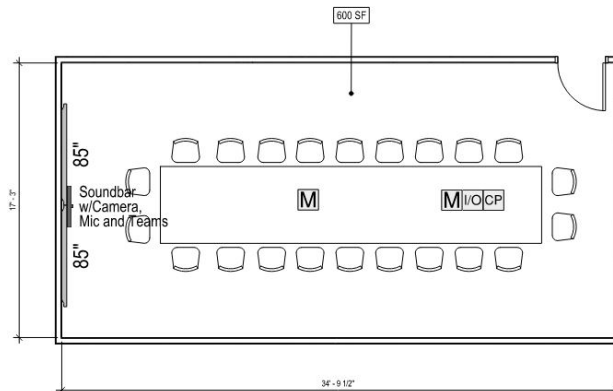
All equipment will be located under the table and behind the flat panel display.

Space Planning:

- Pathway of at least 1" from under the table to behind the flat panel display in needed.
- Power will be needed under the table and behind the flat panel display.
- At least one (1) Telcom connection to the Wake County network will be needed behind the flat panel display.
- In-wall blocking will be needed for the flat panel display.
- Several holes will need to be field cut into the table surface.

Discussion Points:

- Who coordinates GSA, IT and AV Integrator for room deployments?
- How will systems be purchased?



Conference Rooms that are 550 + SF with special use

The conference room will accommodate local and remote meetings. The space will include two (2) front wall mounted 85" flat panel displays that will allow the viewing of content and far end video. The users will have access to a variety of audiovisual source devices and functionalities.

An integrated video camera located below the flat panel display will provide coverage of the room for video conferencing. A microphone system with additional ceiling mounted microphones will provide uniform coverage of the room participants. Integrated loudspeakers are planned for program audio and far end audio.

The room will have a dedicated Windows IOT appliance running Microsoft Teams. This will include options for Zoom and Webex functionality as well. HDMI connection connected to the control panel will direct control of the display without connecting the room itself to a Teams meeting.

A color touch interface will be located at the wall and will be used for control of Microsoft Teams meetings and source selection.

An HDMI cable located at the wall will provide users the ability to show content on the flat panel displays. During a Microsoft Teams meeting this connection will allow sharing content to the far end.

Wireless "screen sharing" within the room will be through Microsoft Teams

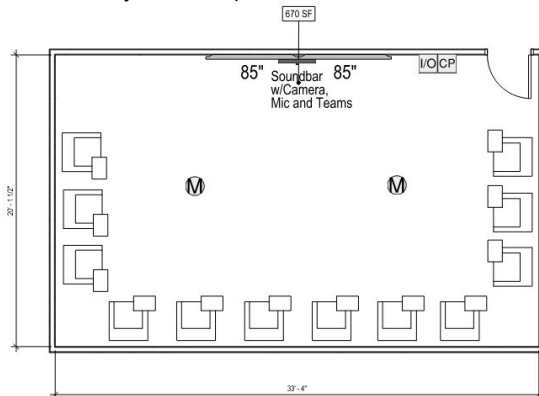
All equipment will be located under the table and behind the flat panel display.

Space Planning:

- Pathway of at least 1" from the wall to behind the flat panel displays in needed.
- Power will be needed at the wall and behind the flat panel displays.
- At least one (1) Telcom connection to the Wake County network will be needed behind the flat panel display.
- In-wall blocking will be needed for both flat panel displays.

Discussion Points:

- Who coordinates GSA, IT and AV Integrator for room deployments?
- A small credenza may be needed to hold some equipment and serve as a "landing" place for a user's device.
- How will systems be purchased?



APPENDIX A: OPINION OF PROBABLE COST

The following Opinion of Probable Cost (OPC) represents a preliminary cost analysis for the systems required to satisfy the functional requirements of the project program. This information is for use as a decision-making tool for planning and budgeting purposes and has been prepared to support the set of functional requirements described earlier at a practical level. An audiovisual system design and specification will be required at a future date.

The OPC identifies “Base Building” and “FF&E” costs to facilitate the development of an overall project budget. Base Building costs are typically associated with the base building and are provided by the General Contractor or its sub-contractors. FF&E costs are associated with the audiovisual systems or “movable equipment,” which are typically part of the “Fixtures, Furniture, and Equipment” (FF&E) budget.

Base Building (General Contractor)

- In-wall blocking for equipment mounting
- Specialty wall and floor boxes

Audiovisual Systems (FF&E)

- Audiovisual, equipment, cabling, and installation hardware
- Audiovisual control system programming and installation labor
- Specialty mounting hardware for audiovisual equipment
- Dedicated PC's in conference spaces

This program and OPC does *not* include:

- Cable pathways (junction boxes, floor boxes, conduit, cable tray/ladder, etc.)
- Structured cabling system for telecommunications
- Data electronics such as network switching and routing
- Standard whiteboards/marker boards or furniture
- General use desktop and laptop computers, copiers, fax machines, office equipment, telephone system or handsets

A conservative discount has been applied to the overall Audiovisual Systems package. This estimate is based on historical data, our experience with similar projects, and our professional opinion

These reductions will depend on a variety of factors, including project delivery method, market conditions at the time of bid, the need to acquire subsets of the program over time due to available funding, and others.

The following Opinion of Probable Cost is based on a full implementation of the systems as described above. If a full system installation is not feasible based on the available budget, it is recommended that the infrastructure to support the full system be included during construction.

Wake County Conference Room Standards

Audiovisual Systems Audiovisual Systems Bidding Equipment List

ID	Manufacturer	Model	Item / Description	Unit Qty	Price/U	Extension	Totals	Bidding Notes
----	--------------	-------	--------------------	----------	---------	-----------	--------	---------------

Number :

Type :

Name : **Conference Room - less than 300 SF**

Rm Qty : **1**

Display Devices

1	Panasonic	TH-65SQ1	65" Class 4K Digital Display	1	4,339	4,339	-	-
2	Chief	MTM1U	Medium FUSION Micro-Adjustable Tilt Wall Display Mount	1	202	202	-	-

Video Capture, Streaming and Conferencing

3	Logitech	960-001336	Rally Bar Mini, Graphite, Video Bar, 4K, 4x zoom, PTZ, Android CentOS design from huddle/sm. rooms. Includes: Rally Bar Mini w/stand, power supply, AC power cord, HDMI cable (2m/6.5ft), USB cable (2.2m/7/2ft), BT remote control, lens caps	1	2,999	2,999	-	-
4	Logitech	952-000009	Logitech Swytch, Room AV/USB Switch, Hub, Extender, Connector, Power Adapter, Mounts, Cables, 2-yr limited warranty	1	999	999	-	-
5	Logitech	939-001799	Strong USB cable for use with Logitech Tap 939-001796, 10m, USB 3.2 Gen 2, Extended-length SuperSpeed USB 10 Gbps, USB-C extension cable for tight spaces	1	250	250	-	-
6	Logitech	939-001950	TAP Controller standalone (with CAT5e kit) NOT TAP IP Version	1	999	999	-	-

Base Building

7		Allowance	Blocking for Wall Mounted Audiovisual Components	1	250	250	-	-
8		Allowance	Specialty Wall Box	1	630	630	-	-
9		Allowance	Specialty Floor Box	1	530	530	-	-

Rack, Panels, Misc.

10			Installation Materials as Defined in AV Systems Specification	Lot	560	560		
11			Custom Wall/Floor Box and Decorator-Style Plates as Needed	Lot				
12			Pre-Made Loose Cabling and Field Cabling as Needed	Lot				
13			Rack Panels, Vents, Mounts, Shelves, Other Equipment Rack Materials as Needed	Lot				
14			Wall, Ceiling Mounts and Mounting Hardware as Needed	Lot				
15			Control System Accessories as Needed	Lot				
16			Power Supplies and Power Distribution as Needed	Lot				
17			Cable Terminations, Cable Dressing, Labels, Ties, Cable Management as Needed	Lot				

Technology Systems OPC (FF&E / Audiovisual System) Totals

Equipment Subtotal	11,758	11,758
Freight & General Administration at 3%	353	
Anticipated Discount at 20%	(2,422)	
Total Equipment		9,689
Systems Installation Labor at 21%	2,035	
Control Software Development at 0%	-	
Electrical Subcontract for Audiovisual System at 0%	-	
Total Labor		2,035
Total Equipment & Labor		11,723
State & Local Taxes at 0%	-	
Contingency at 0%	-	
Total Misc.		-

Grand Total 11,723 11,723

End of System

Wake County Conference Room Standards

Audiovisual Systems Audiovisual Systems Bidding Equipment List

ID	Manufacturer	Model	Item / Description	Unit Qty	Price/U	Extension	Totals	Bidding Notes
----	--------------	-------	--------------------	----------	---------	-----------	--------	---------------

Number :
Type :
Name : **Project Room**
Rm Qty : 1

Display Devices								
1	Panasonic	TH-55SQ1	55" Class 4K Digital Display	1	2,659	2,659		-
2	Chief	MTM1U	Medium FUSION Micro-Adjustable Tilt Wall Display Mount	1	202	202		-

Video Capture, Streaming and Conferencing								
3	Logitech	960-001336	Rally Bar Mini, Graphite, Video Bar, 4K, 4x zoom, PTZ, Android CentOS design from huddle/sm. rooms. Includes: Rally Bar Mini w/stand, power supply, AC power cord, HDMI cable (2m/6.5ft), USB cable (2.2m/7/2ft), BT remote control, lens caps	1	2,999	2,999		-
4	Logitech	952-000009	Logitech Swytch, Room AV/USB Switch, Hub, Extender, Connector, Power Adapter, Mounts, Cables, 2-yr limited warranty	1	999	999		-
5	Logitech	939-001799	Strong USB cable for use with Logitech Tap 939-001796, 10m, USB 3.2 Gen 2, Extended-length SuperSpeed USB 10 Gbps, USB-C extension cable for tight spaces	1	250	250		-
6	Logitech	939-001950	TAP Controller standalone (with CAT5e kit) NOT TAP IP Version	1	999	999		-

Base Building								
7		Allowance	Blocking for Wall Mounted Audiovisual Components	1	250	250		-
8		Allowance	Specialty Wall Box	1	630	630		-
9		Allowance	Specialty Floor Box	1	530	530		-

Rack, Panels, Misc.								
10			Installation Materials as Defined in AV Systems Specification	Lot	476	476		
11			Custom Wall/Floor Box and Decorator-Style Plates as Needed	Lot				
12			Pre-Made Loose Cabling and Field Cabling as Needed	Lot				
13			Rack Panels, Vents, Mounts, Shelves, Other Equipment Rack Materials as Needed	Lot				
14			Wall, Ceiling Mounts and Mounting Hardware as Needed	Lot				
15			Control System Accessories as Needed	Lot				
16			Power Supplies and Power Distribution as Needed	Lot				
17			Cable Terminations, Cable Dressing, Labels, Ties, Cable Management as Needed	Lot				

Technology Systems OPC (FF&E / Audiovisual System) Totals

Equipment Subtotal	9,994	9,994
Freight & General Administration at 3%	300	
Anticipated Discount at 20%	(2,059)	
Total Equipment		8,235
Systems Installation Labor at 21%	1,729	
Control Software Development at 0%	-	
Electrical Subcontract for Audiovisual System at 0%	-	
Total Labor		1,729
Total Equipment & Labor		9,964
State & Local Taxes at 0%	-	
Contingency at 0%	-	
Total Misc.		-

Grand Total 9,964 9,964

End of System

Wake County Conference Room Standards

Audiovisual Systems Audiovisual Systems Bidding Equipment List

ID	Manufacturer	Model	Item / Description	Unit Qty	Price/U	Extension	Totals	Bidding Notes
----	--------------	-------	--------------------	----------	---------	-----------	--------	---------------

Number :
 Type :
 Name : **Conference Room - 300 – 550 SF**
 Rm Qty : **1**

Display Devices								
1	Panasonic	TH-75SQ1	75" Class 4K Digital Display	1	5,649	5,649		-
2	Chief	LTM1U	Large FUSION Micro-Adjustable Tilt Wall Mount	1	315	315		-

Video Capture, Streaming and Conferencing								
3	Logitech	960-001308	Rally Bar, Graphite, Video Bar, 4K, 4x zoom, PTZ, Android CentOS design from huddle/sm. rooms. Includes: Rally Bar Mini w/stand, power supply, AC power cord, HDMI cable (2m/6.5ft), USB cable (2.2m/7.2ft), BT remote control, lens caps 2-yr limited warranty	1	3,999	3,999		-
4	Logitech	952-000009	Logitech Swytch, Room AV/USB Switch, Hub, Extender, Connector, Power Adapter, Mounts, Cables, 2-yr limited warranty	1	999	999		-
5	Logitech	939-001799	Strong USB cable for use with Logitech Tap 939-001796, 10m, USB 3.2 Gen 2, Extended-length SuperSpeed USB 10 Gbps, USB-C extension cable for tight spaces	1	250	250		-
6	Logitech	989-000430	Rally Mic Pod, Graphite, 2.95m/9.6 ft cable length, 4.5m/15ft pickup range(diameter), for use with Rally, Rally Plus, Rally Bar and Rally Bar Mini, 2-yr limited warranty.	1	349	349		-
7	Logitech	952-000047	Rally Mic Pod Extension Cable, white, 10m/32.8ft for use with Rally, Rally Plus, Rally Bar and Rally Bar Mini	1	199	199		-
8	Logitech	939-001950	TAP Controller standalone (with CAT5e kit) NOT TAP IP Version	1	999	999		-

Base Building								
9		Allowance	Blocking for Wall Mounted Audiovisual Components	1	250	250		-
10		Allowance	Specialty Wall Box	1	630	630		-
11		Allowance	Specialty Floor Box	1	530	530		-

Rack, Panels, Misc.								
12			Installation Materials as Defined in AV Systems Specification	Lot	708	708		
13			Custom Wall/Floor Box and Decorator-Style Plates as Needed	Lot				
14			Pre-Made Loose Cabling and Field Cabling as Needed	Lot				
15			Rack Panels, Vents, Mounts, Shelves, Other Equipment Rack Materials as Needed	Lot				
16			Wall, Ceiling Mounts and Mounting Hardware as Needed	Lot				
17			Control System Accessories as Needed	Lot				
18			Power Supplies and Power Distribution as Needed	Lot				
19			Cable Terminations, Cable Dressing, Labels, Ties, Cable Management as Needed	Lot				

Technology Systems OPC (FF&E / Audiovisual System) Totals

Equipment Subtotal	14,877	14,877
Freight & General Administration at 3%	446	
Anticipated Discount at 20%	(3,065)	
Total Equipment		12,259
Systems Installation Labor at 21%	2,574	
Control Software Development at 0%	-	
Electrical Subcontract for Audiovisual System at 0%	-	
Total Labor		2,574
Total Equipment & Labor		14,833
State & Local Taxes at 0%	-	
Contingency at 0%	-	
Total Misc.		-

Grand Total 14,833

End of System

Wake County Conference Room Standards

Audiovisual Systems Audiovisual Systems Bidding Equipment List

ID	Manufacturer	Model	Item / Description	Unit Qty	Price/U	Extension	Totals	Bidding Notes
----	--------------	-------	--------------------	----------	---------	-----------	--------	---------------

Number :
 Type :
 Name : **Conference Room - 500 + SF**
 Rm Qty : **1**

Display Devices

1	Panasonic	TH-86SQ1	86" Class 4K Digital Display	2	8,889	17,778	-	-
2	Chief	LTM1U	Large FUSION Micro-Adjustable Tilt Wall Mount	2	315	630	-	-

Video Capture, Streaming and Conferencing

3	Logitech	960-001308	Rally Bar, Graphite, Video Bar, 4K, 4x zoom, PTZ, Android CentOS design from huddle/sm. rooms. Includes: Rally Bar Mini w/stand, power supply, AC power cord, HDMI cable (2m/6.5ft), USB cable (2.2m/7.2ft), BT remote control, lens caps 2-yr limited warranty	1	3,999	3,999	-	-
4	Logitech	952-000009	Logitech Swytch, Room AV/USB Switch, Hub, Extender, Connector, Power Adapter, Mounts, Cables, 2-yr limited warranty	1	999	999	-	-
5	Logitech	939-001799	Strong USB cable for use with Logitech Tap 939-001796, 10m, USB 3.2 Gen 2, Extended-length SuperSpeed USB 10 Gbps, USB-C extension cable for tight spaces	1	250	250	-	-
6	Logitech	989-000430	Rally Mic Pod, Graphite, 2.95m/9.6 ft cable length, 4.5m/15ft pickup range (diameter), for use with Rally, Rally Plus, Rally Bar and Rally Bar Mini, 2-yr limited warranty.	2	349	698	-	-
7	Logitech	952-000047	Rally Mic Pod Extension Cable, white, 10m/32.8ft for use with Rally, Rally Plus, Rally Bar and Rally Bar Mini	1	199	199	-	-
8	Logitech	939-001950	TAP Controller standalone (with CAT5e kit) NOT TAP IP Version	1	999	999	-	-

Base Building

10		Allowance	Blocking for Wall Mounted Audiovisual Components	2	250	500	-	-
11		Allowance	Specialty Wall Box	2	630	1,260	-	-
12		Allowance	Specialty Floor Box	1	530	530	-	-

Rack, Panels, Misc.

13			Installation Materials as Defined in AV Systems Specification	Lot	1,392	1,392		
14			Custom Wall/Floor Box and Decorator-Style Plates as Needed	Lot				
15			Pre-Made Loose Cabling and Field Cabling as Needed	Lot				
16			Rack Panels, Vents, Mounts, Shelves, Other Equipment Rack Materials as Needed	Lot				
17			Wall, Ceiling Mounts and Mounting Hardware as Needed	Lot				
18			Control System Accessories as Needed	Lot				
19			Power Supplies and Power Distribution as Needed	Lot				
20			Cable Terminations, Cable Dressing, Labels, Ties, Cable Management as Needed	Lot				

Technology Systems OPC (FF&E / Audiovisual System) Totals

Equipment Subtotal	25,000	25,000
Freight & General Administration at 3%	877	
Anticipated Discount at 20%	(6,022)	
Total Equipment		25,089
Systems Installation Labor at 21%	5,000	
Control Software Development at 0%	-	
Electrical Subcontract for Audiovisual System at 0%	-	
Total Labor		5,000
Total Equipment & Labor		35,148
State & Local Taxes at 0%	-	
Contingency at 0%	-	
Total Misc.		-

Grand Total 29,148 29,148

End of System

Wake County Conference Room Standards

Audiovisual Systems

Audiovisual Systems Bidding Equipment List

ID	Manufacturer	Model	Item / Description	Unit Qty	Price/U	Extension	Totals	Bidding Notes
----	--------------	-------	--------------------	----------	---------	-----------	--------	---------------

Number :

Type :

Name : **Conference Room - 500 + SF Special Use**

Rm Qty : **1**

Display Devices

1	Panasonic	TH-86SQ1	86" Class 4K Digital Display	2	8,889	17,778		-
2	Chief	LTM1U	Large FUSION Micro-Adjustable Tilt Wall Mount	2	315	630		-

Video Capture, Streaming and Conferencing

3	Logitech	960-001308	Rally Bar, Graphite, Video Bar, 4K, 15x zoom, PTZ, Rally bar + NUC Design . Includes: Rally Bar w/stand, power supply, AC power cord, HDMI cable (2m/6.5ft), USB cable (2.2m/7.2ft), BT remote control, lens caps 2-yr limited warranty	1	3,999	3,999		-
4	Logitech	952-000009	Logitech Swytch, Room AV/USB Switch, Hub, Extender, Connector, Power Adapter, Mounts, Cables, 2-yr limited warranty	1	999	999		-
5	Logitech	939-001799	Strong USB cable for use with Logitech Tap 939-001796, 10m, USB 3.2 Gen 2, Extended-length SuperSpeed USB 10 Gbps, USB-C extension cable for tight spaces	1	250	250		-
6	Logitech	989-000430	Rally Mic Pod, Graphite, 2.95m/9.6 ft cable length, 4.5m/15ft pickup range(diameter), for use with Rally, Rally Plus, Rally Bar and Rally Bar Mini, 2-yr limited warranty.	2	349	698		-
7	Logitech	952-000047	Rally Mic Pod Extension Cable, white, 10m/32.8ft for use with Rally, Rally Plus, Rally Bar and Rally Bar Mini	1	199	199		-
8	Logitech	939-001950	TAP Controller standalone (with CAT5e kit) NOT TAP IP Version	1	999	999		-
9	CISCO	C9200CX-12T-2X2G	Catalyst c9200 CX - 12 PT Switch	1	1699	1699		-

Base Building

9		Allowance	Blocking for Wall Mounted Audiovisual Components	2	250	500		-
10		Allowance	Specialty Wall Box	2	630	1,260		-

Rack, Panels, Misc.

11			Installation Materials as Defined in AV Systems Specification	Lot	1,366	1,366		
12			Custom Wall/Floor Box and Decorator-Style Plates as Needed	Lot				
13			Pre-Made Loose Cabling and Field Cabling as Needed	Lot				
14			Rack Panels, Vents, Mounts, Shelves, Other Equipment Rack Materials as Needed	Lot				
15			Wall, Ceiling Mounts and Mounting Hardware as Needed	Lot				
16			Control System Accessories as Needed	Lot				
17			Power Supplies and Power Distribution as Needed	Lot				
18			Cable Terminations, Cable Dressing, Labels, Ties, Cable Management as Needed	Lot				

Technology Systems OPC (FF&E / Audiovisual System) Totals

Equipment Subtotal	31500	31500
Freight & General Administration at 3%	860	
Anticipated Discount at 20%	(5,908)	
Total Equipment		25000
Systems Installation Labor at 21%	4,962	
Control Software Development at 0%	-	
Electrical Subcontract for Audiovisual System at 0%	-	
Total Labor		4,962
Total Equipment & Labor		30000
State & Local Taxes at 0%	-	
Contingency at 0%	-	
Total Misc.		-

Grand Total 30000

End of System

APPENDIX B

Digital Signage Requirements

Digital Signage Requirements

- Player size, make and model (iBase SI-323-N) dimensions **215.8mm(W) x 164mm(D) x 45mm(H) 8.49”(W) x 6.45”(D) x 1.77”(H)**
- Software Minimum Specs (PC requirements, processor, ram, etc)
<https://www.omnivex.com/support/kb/134>

Hardware	Moxie Studio	Moxie Data Server	Moxie Player
Operating System	Microsoft Windows 10 or 11 Professional/Enterprise	Microsoft Windows Server 2022, 2016 or 2019	Microsoft Windows 10 or 11 Professional/Enterprise/IoT LTSC
Central Processor	Dual-core or higher suited to content requirements	Quad-core or higher suited to infrastructure requirements	<p>Good: Dual-core 2.0GHz AMD Athlon/Ryzen 3 or Intel Celeron/Core i3 or better</p> <p>Better: Dual-core 2.5GHz AMD Ryzen 3/5 or Intel i3/i5 or better</p> <p>Best: Dual-core 3.-GHz AMD Ryzen 5/7 or Intel i5/i7 or better</p>
Memory	4 GB or greater	8 GB or greater	<p>Good: 4 GB</p> <p>Better: 4-8 GB</p> <p>Best: 8-16 GB</p>

Graphics Adapter	Integrated video or discrete GPU suited to application	Integrated video or virtualized GPU suited to application	Integrated video or discrete GPU suited to application
Storage	1 GB free for software installation, additional space requirements determined by content, generally 512 GB or greater	1 GB free for software installation, additional space requirements determined by content, generally 1 TB - 4 TB	<p>Good: 1 GB free for software installation, additional space requirements determined by content, generally 256 GB or greater</p> <p>Better: 1 GB free for software installation, additional space requirements determined by content, generally 512 GB or greater</p> <p>Best: 1 GB free for software installation, additional space requirements determined by content, generally 1 TB or greater</p>

- Monitor Specs (preferred manufacturer, aspect ratio, resolution) **Preferred Manufacturers** – Sharp/NEC or Sony Commercial line **Aspect Ratio** – 16:9 or 4:3 **Resolution** 1080 or higher
- Mounting Specs **rated for 200lbs or more, blocking in walls behind TV) Chief or Sanus** fixed mount preferred vs telescoping

- Power, data requirements / HDMI and data cable specs **One dual plug outlet for monitor and pc power / HDMI gold plated 4k or higher rating preferred 6ft minimum / Data Jack that supports cat 6 cable. Cable should be at least 6ft**
- Mount for PC behind TV (VESA PC MOUNTS)
<https://res.cloudinary.com/avd/image/upload/v134012628/Resources/Chief/Resources/PAC260-261-I.pdf> Chief PAC-260 preferred. Or similar to
- Placement requirements (**Entry door to TV location 55” for 15ft or less, 65” for 15-25 ft, 75” for 25ft or more**) **Location of monitor shall be viewable from entrance w/o being obscured in any way**