



Smart Building Technology
and Hybrid Work Solutions

Cisco Talent and Collaboration Centers

Large Collaboration Room

Cisco Room Kit EQ Option Shown





Rear Cisco Room Board Pro 75 Option Shown

Large Collaboration Room

Design Guide

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Introduction

Overview and Intent

This document provides guidance on how to design a Large Collaboration Room effectively.

This design brings space layout, technology, and furnishings together to create an optimal experience for those present locally and for remote attendees.

Each project is unique; thus, it is important to involve internal facilities and IT teams, as well as an architect and/or space designer, furniture providers, and a Cisco-certified integrator, as early as possible. The goal is to thoroughly understand the needs of the end users and address any local concerns, including physical layout, wall, floor, and ceiling composition, electrical/mechanical integration, network and cabling considerations, and external environmental issues (lighting/noise/temperature) before the design is finalized.



Note: Links to key Cisco documentation, including product data sheets, room preparation guides and installation materials can be found at the last page of this Design Guide.

Room Description

This collaboration space is specifically designed for large groups, supporting in-person meetings from 10-15 individuals. Dual screens allow in-person attendees to see both remote participants and content, and the tapered table shape ensures those attending virtually can see everyone in the room. The optional rear-mounted Cisco PTZ 4K Camera automatically captures presenters as they move in the front of the room; two additional Cisco Quad Cameras can be placed on the side walls to enable Cisco's Cinematic Meeting's Cross View feature. The optional Cisco Board Pro 75, operating in companion mode, allows co-creation capabilities to be brought into a video meeting.

Supported Collaboration Activities

- Information Sharing
- Brainstorming
- Team Building
- Decision Making

Visualization of Key Cisco Elements



Cisco Room Navigator
for Wall



Cisco Room Navigator
for Table



Cisco Board Pro 75
(Companion mode)
(Optional)



Cisco PTZ 4K Camera
(Optional)



Dual 75" or 85" displays
LG / Panasonic / Samsung / Sony
(Selected 85" displays also an option
for Room Kit EQX deployments.)

Option 1

Cisco Room Kit EQ
& Quad Camera



Third-Party
Overhead Speakers



Third-Party
Amplifier

Option 2

Cisco Room Kit EQX



Microphone Options (require PoE compatible switch)



Cisco Table Microphone Pro
Quantities Vary by Room Size

- or -



Cisco Ceiling Microphone Pro
Quantities Vary by Room Size

Certified Third Party Displays



Webex certified displays have been tested for compatibility and robustness of their video interfaces, optical characteristics, and basic security practices.

When connected to a Cisco collaboration device they will automatically reconfigure to the optimal configuration already tested and verified.

This list of verified devices was update on November 4, 2024. For up to date information on certified and compatible Cisco collaboration device partner offers, click on the link below.

Vendor	Product or Series	Firmware version
Samsung	QMB	1040.7
Samsung	QBB	1040.7
Samsung	QMC	1040.4
Panasonic	EQ2	2.40
LG	UL3J	03.08.41
LG	UH5J	03.24.01
LG	UR640S	03.17.00
LG	UM5K	3.70.30
Sony	BZ30J, BU30J, BZ35J, BU35J, BZ40H, BU40H, BZ40J, BU40J	6.5929
Sharp/NEC	M751, M861, M981	1.200
Sharp/NEC	MA431, MA491, MA551, P435, P495, P555	3.203
Sharp	PN-LA652, PN-LA752, PN-LA862	1.112

Option 1: Cisco Room Kit EQ

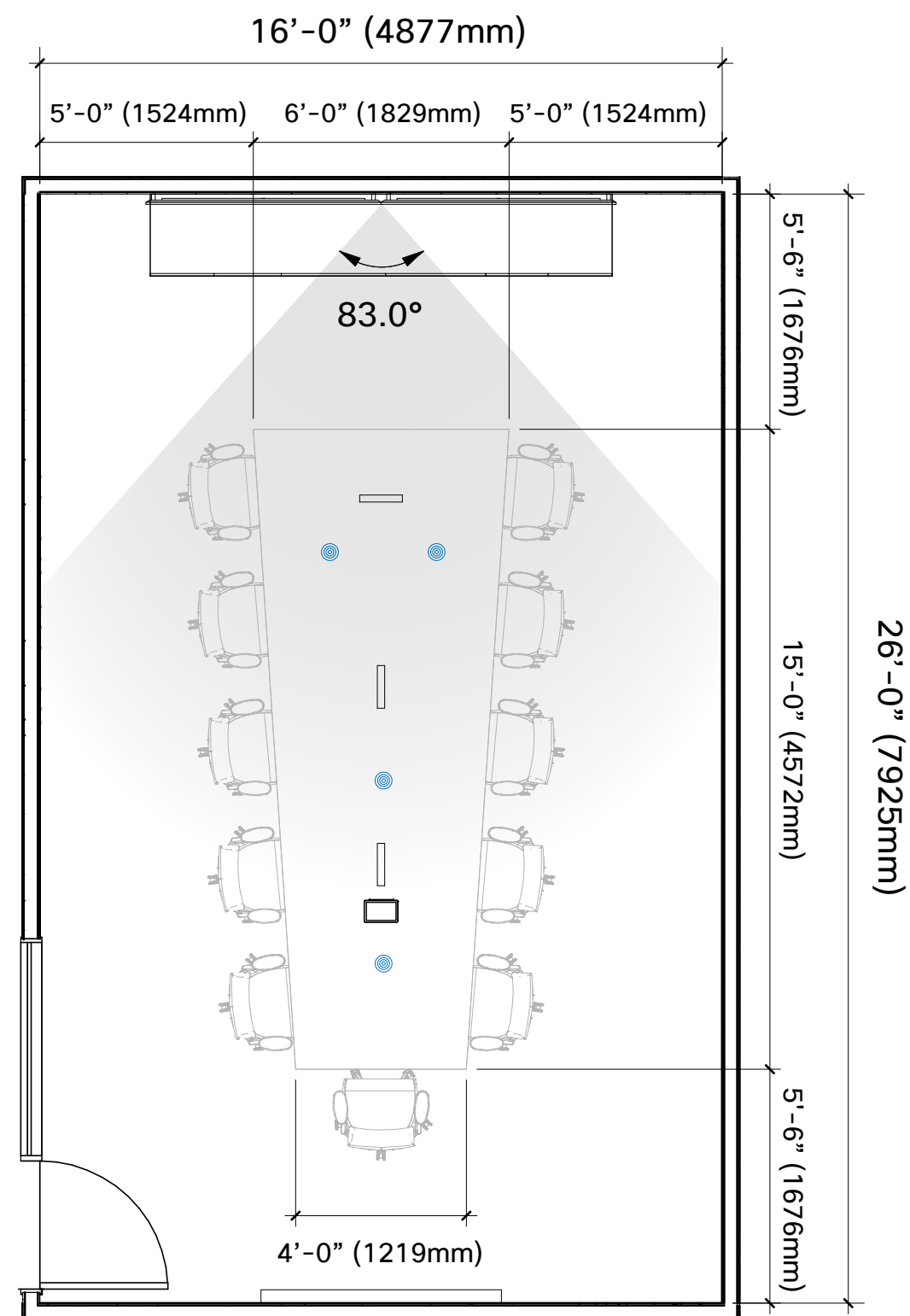


Room Layout

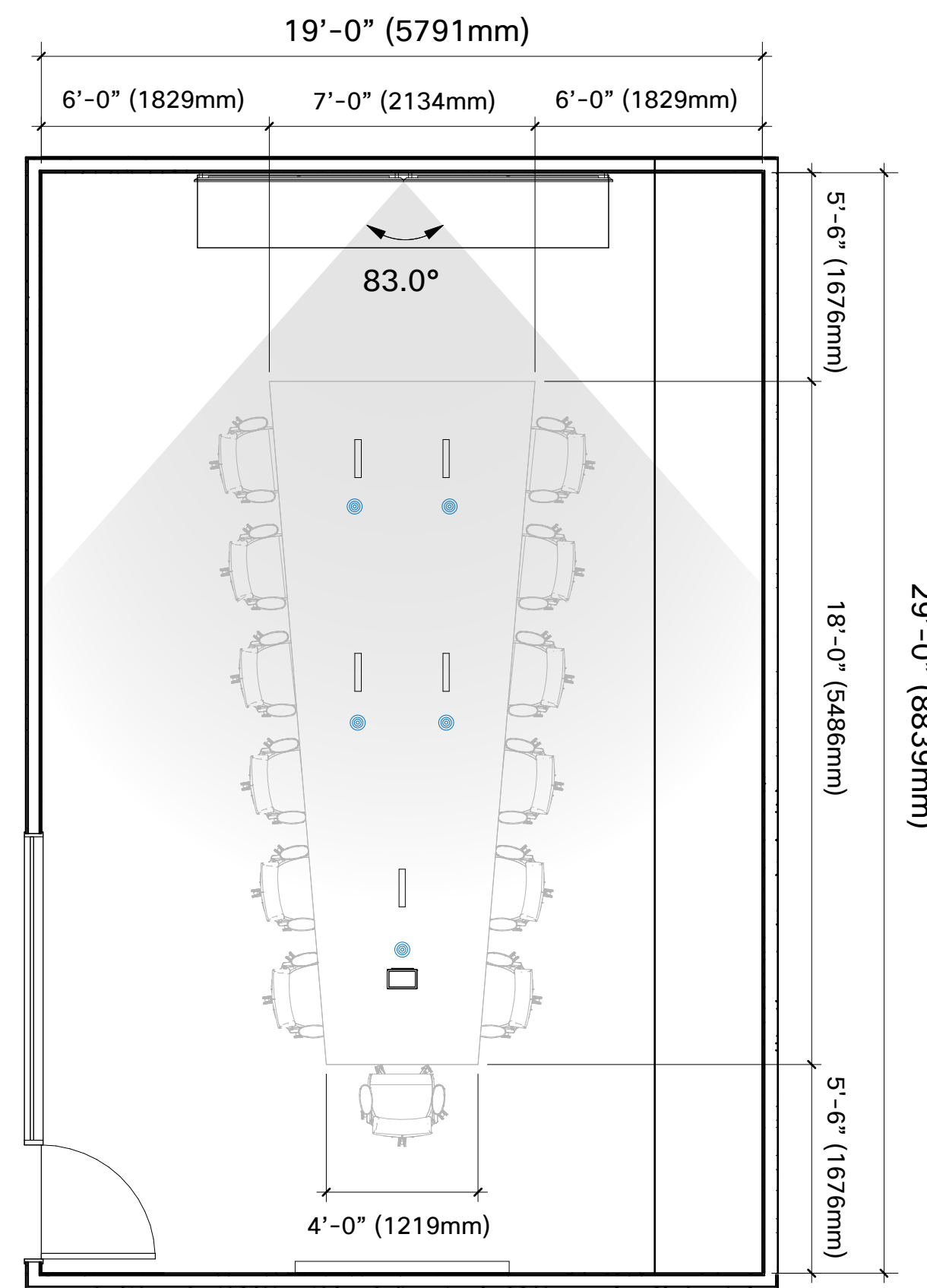


Room dimensions show are the minimal size, based on the technology and furniture options shown.

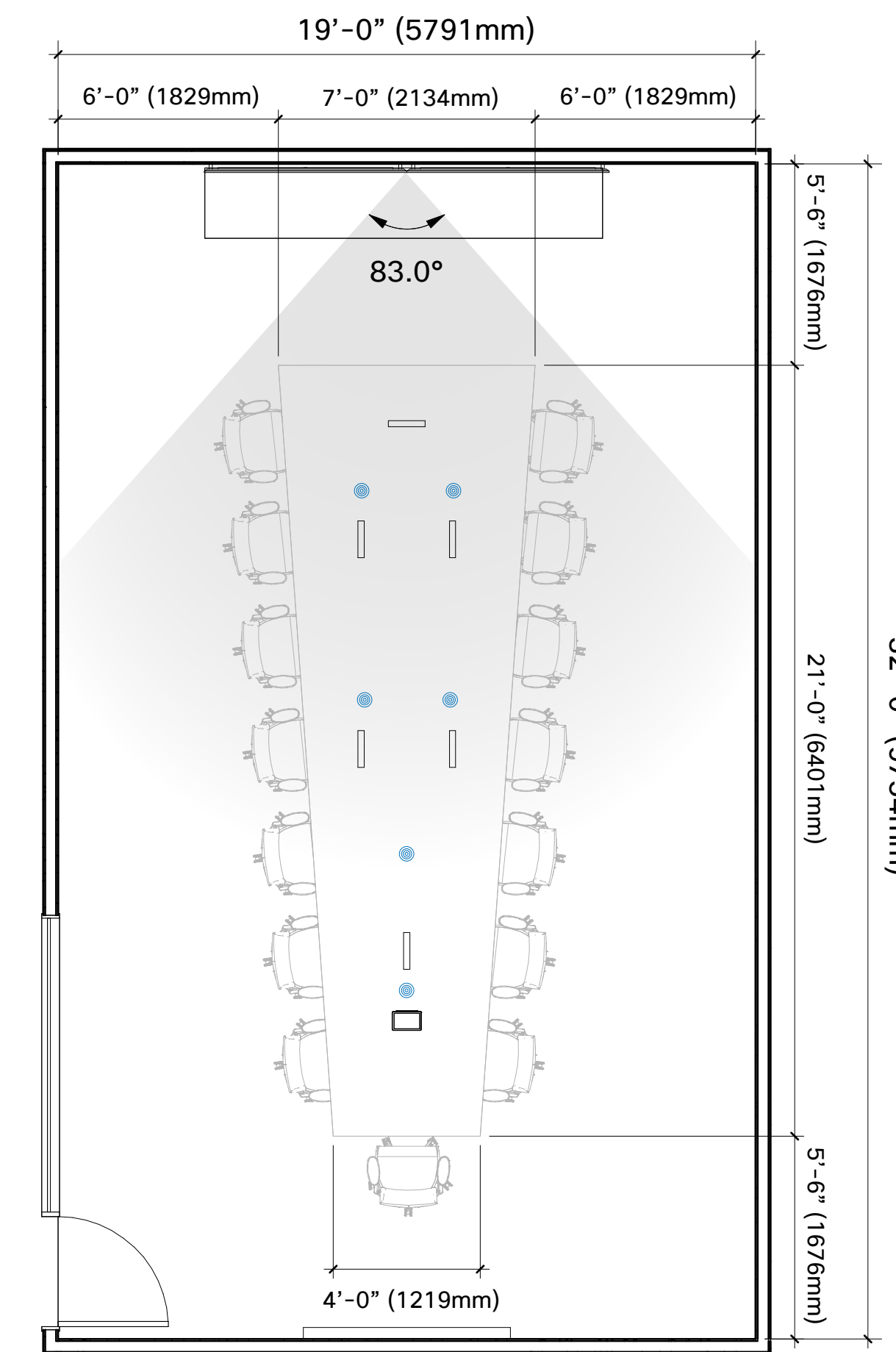
10-11 Person Layout



12-13 Person Layout



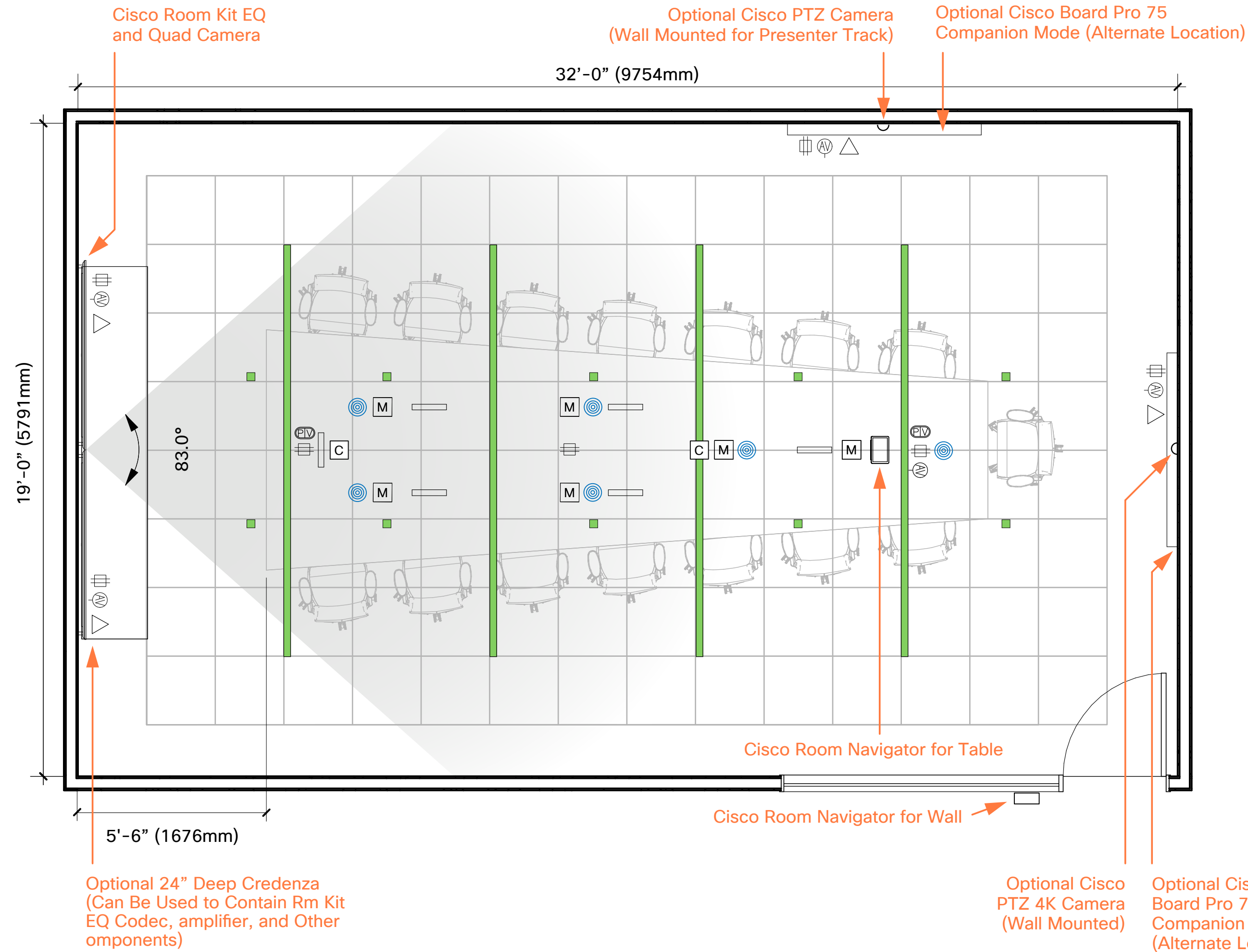
14-15 Person Layout



Composite Plan



Either Cisco Table Microphone Pros or Ceiling Microphone Pros are required; quantity varies depending on table length. If Cisco Table Microphone Pros are used, they should be placed between seats to ensure there is no shadowing due to open laptops. They should also be placed no greater than 24" from the table edge so each individual has access to a mute button (labeled in the drawing as "M"). If Cisco Ceiling Microphone Pros are used, they should be mounted on the centerline of the table, no farther than 3 meters from the farthest participant, and then in 3-meter increments towards the front of the table (labeled in the drawing as "C").



Graphics Symbols

- Acoustical Ceiling & Grid
 - HVAC Diffusers (T.B.D.) Shown as Example Only
 - Light Fixtures
 - Acoustical Wall
- Furniture Systems Version Devices**
- Duplex Receptacle & Grid
 - Data Receptacle
- Power and Communication**
WALL / CEILING / FLOOR VERSION DEVICES
- Cisco Ceiling Microphone Pro
 - Third Party Speakers (Optional)
 - Duplex Receptacle
 - Data Receptacle
 - Light Switch
 - AV Receptacle
 - Table Microphone
 - Combination Power & Voice / Data Infeed

Video Device Mounting Options

Option 1 Cisco Room Kit EQ and Quad Camera

There are two mounting options for the device when deploying the Cisco Room Kit EQ and Quad Camera. Several factors will go into determining which option is best.

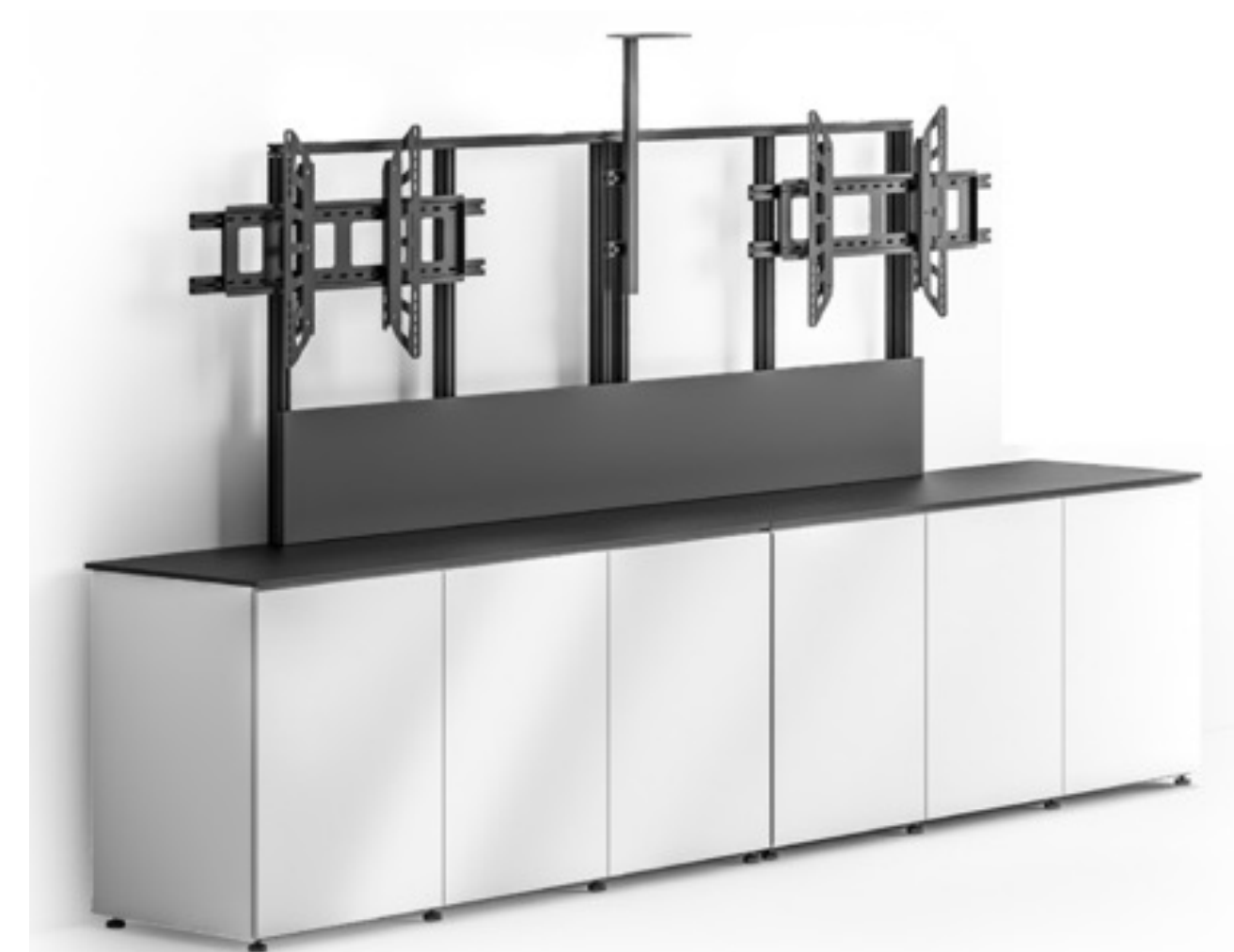
Option 1a Wall Mount

Wall Mounted – Requires wall to be blocked and electrical and data to be elevated. Specific wall mount hardware must be determined based on the weight of the displays that are selected.



Option 1b Credenza

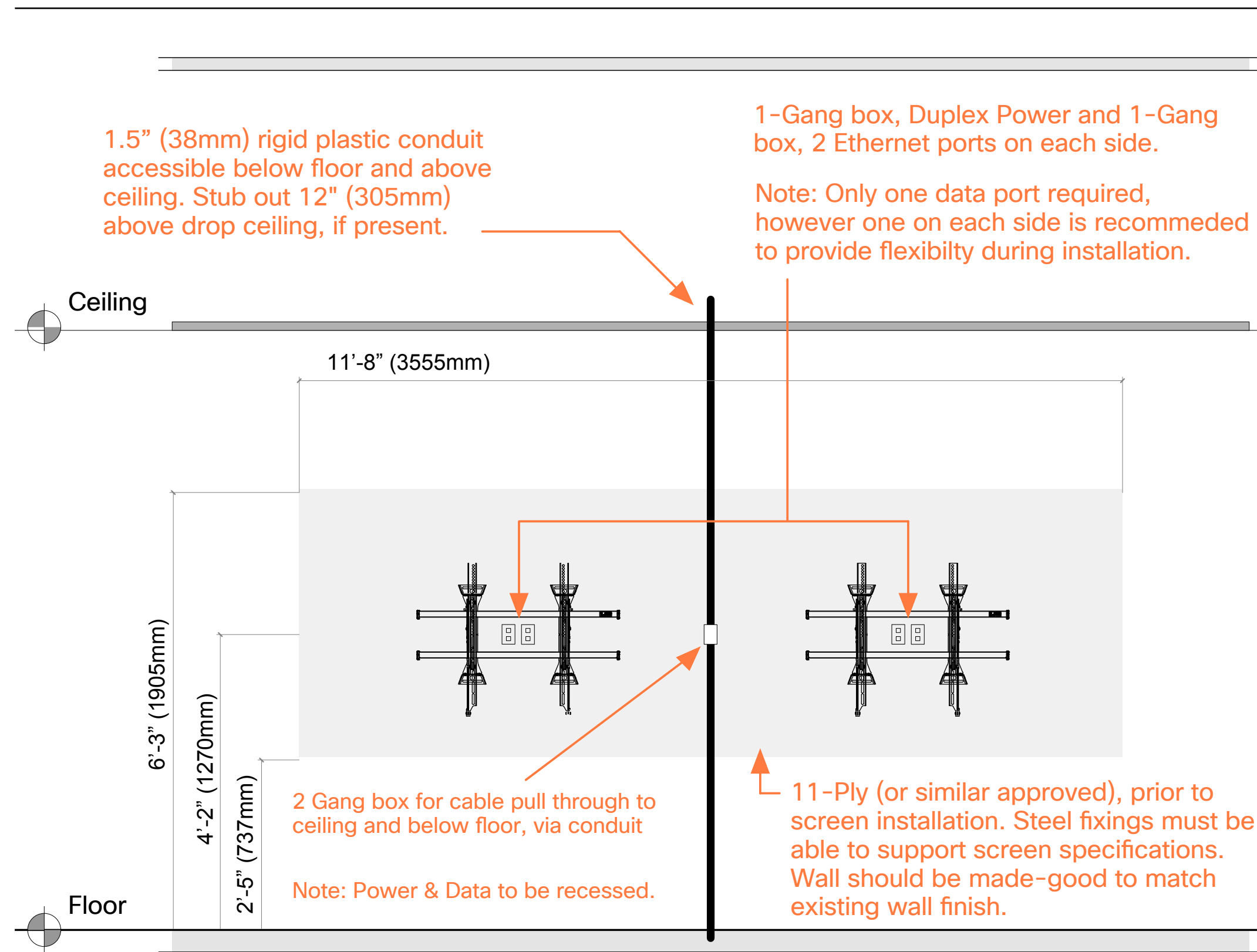
A/V compatible credenza – Freestanding and fully integrated cabinets available from a number of specialized vendors eliminate the requirement for the wall to be blocked and electrical moved. Perfect for new and retrofit installations, allowing for quick and efficient installation.



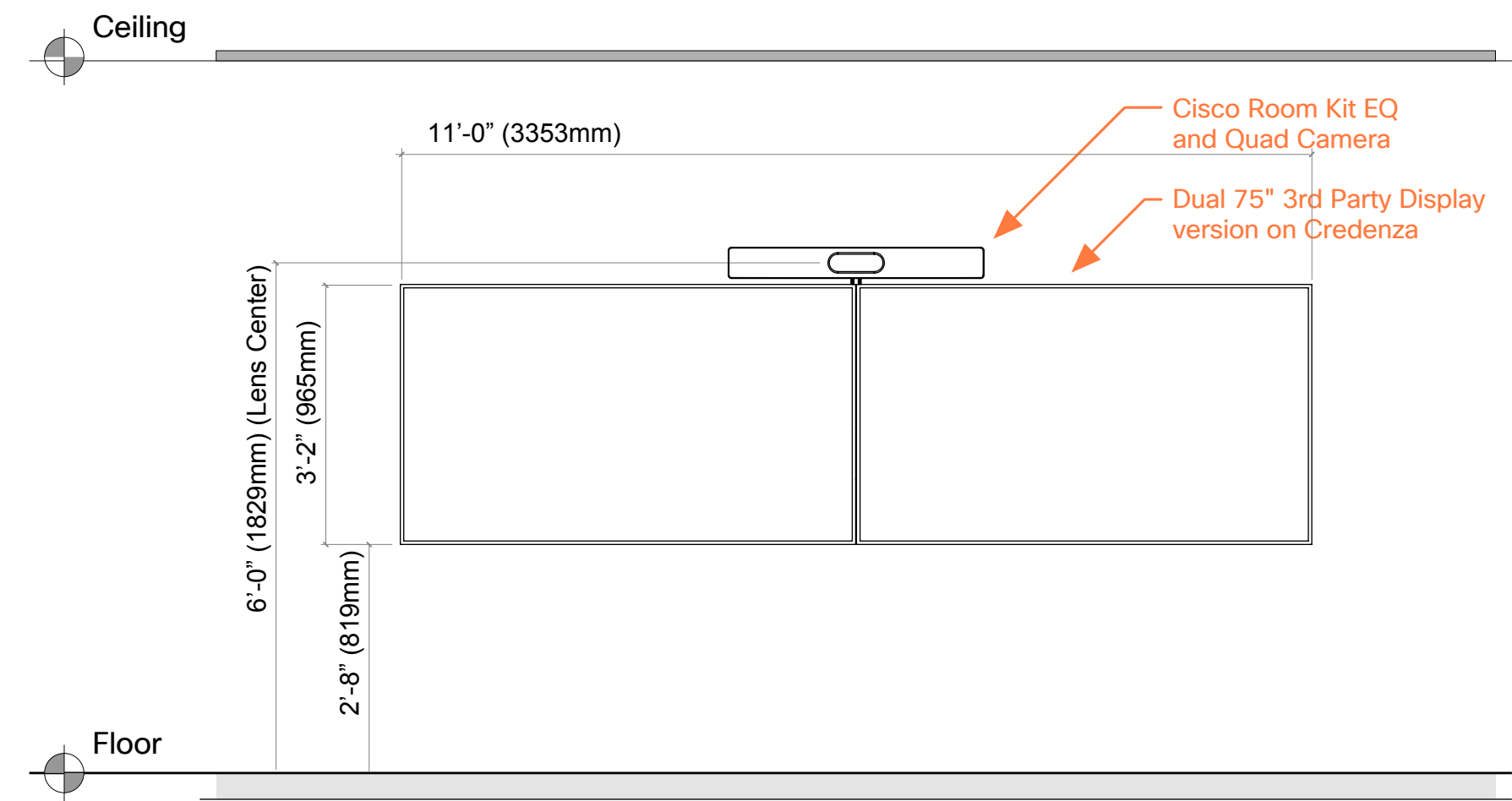
Room Elevations

Option 1a Cisco Room Kit EQ and Quad Camera - Wall Mount

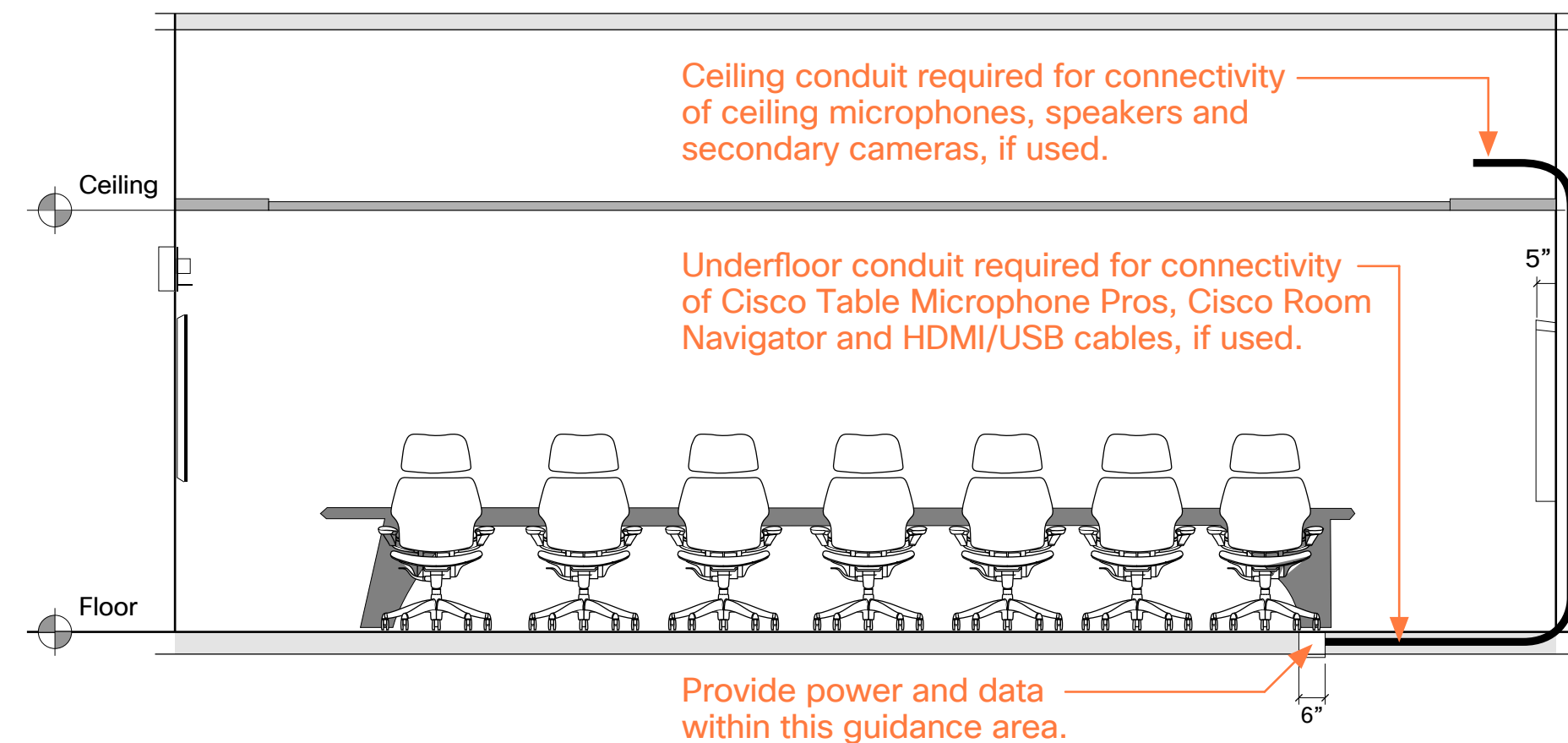
Construction Elevation



Finished Elevation



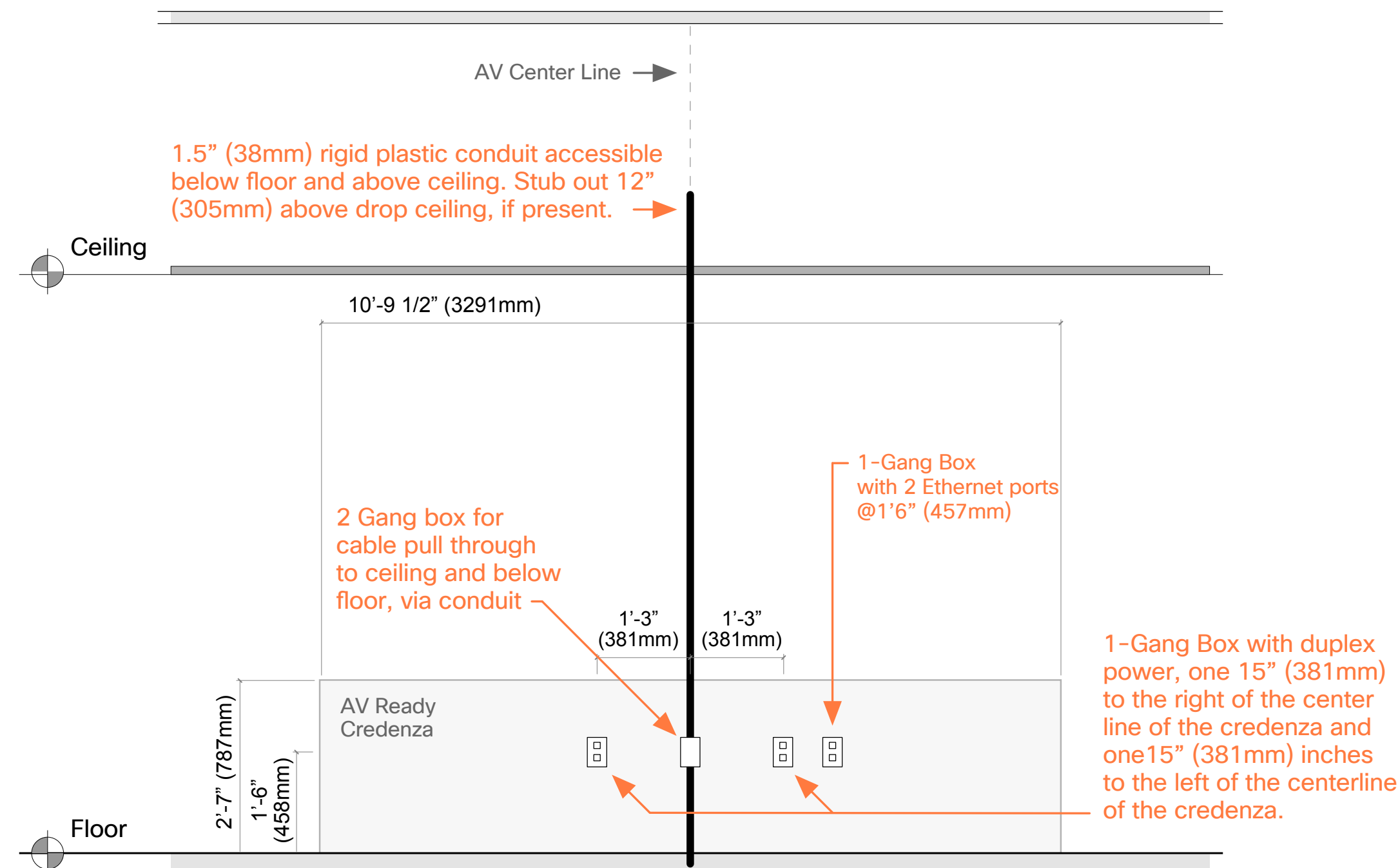
Side Elevation



Room Elevations

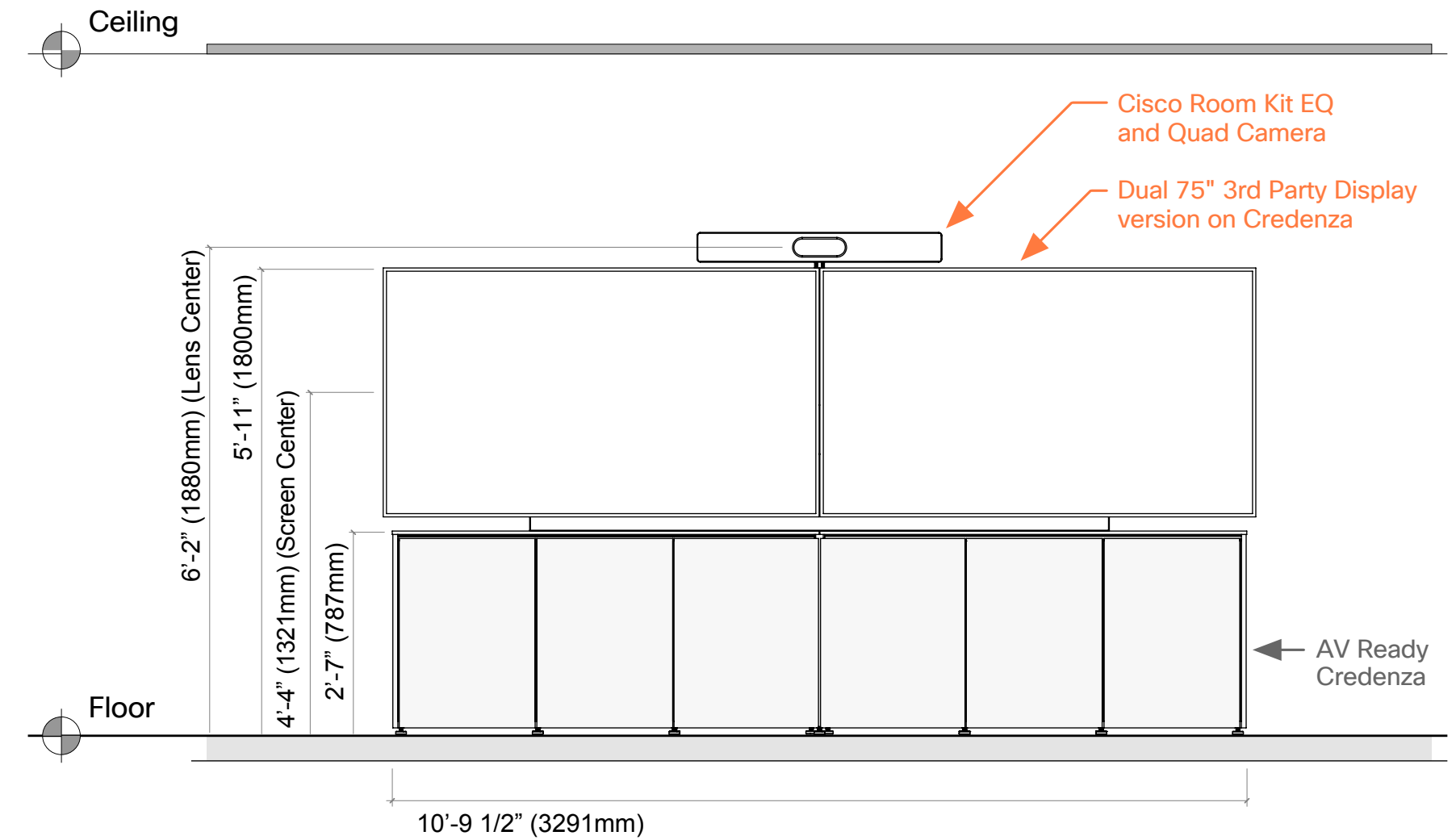
Option 1b Cisco Room Kit EQ and Quad Camera - Credenza

Construction Elevation

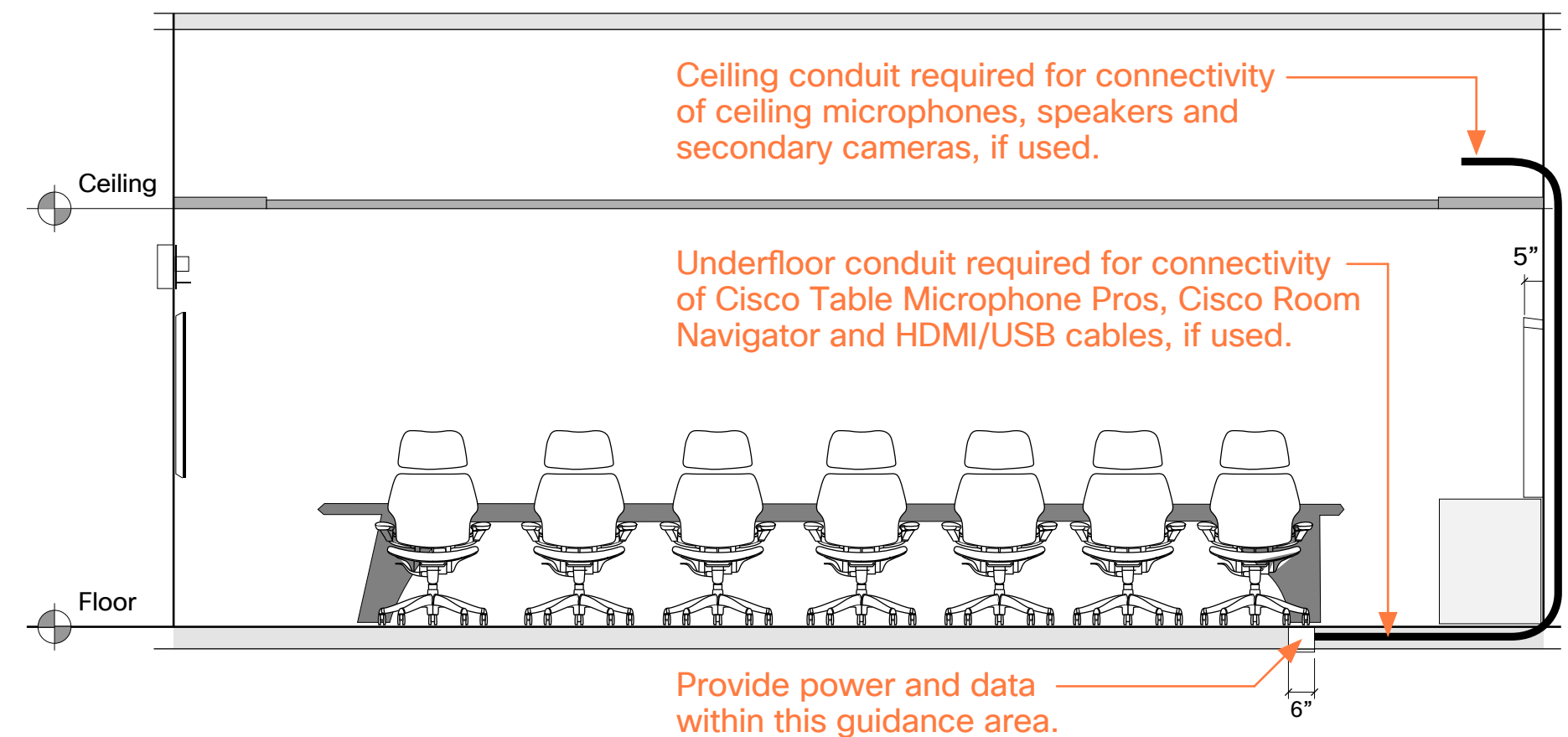


i Note: Configuration shown mounts video device and displays directly on an AV ready credenza.

Finished Elevation

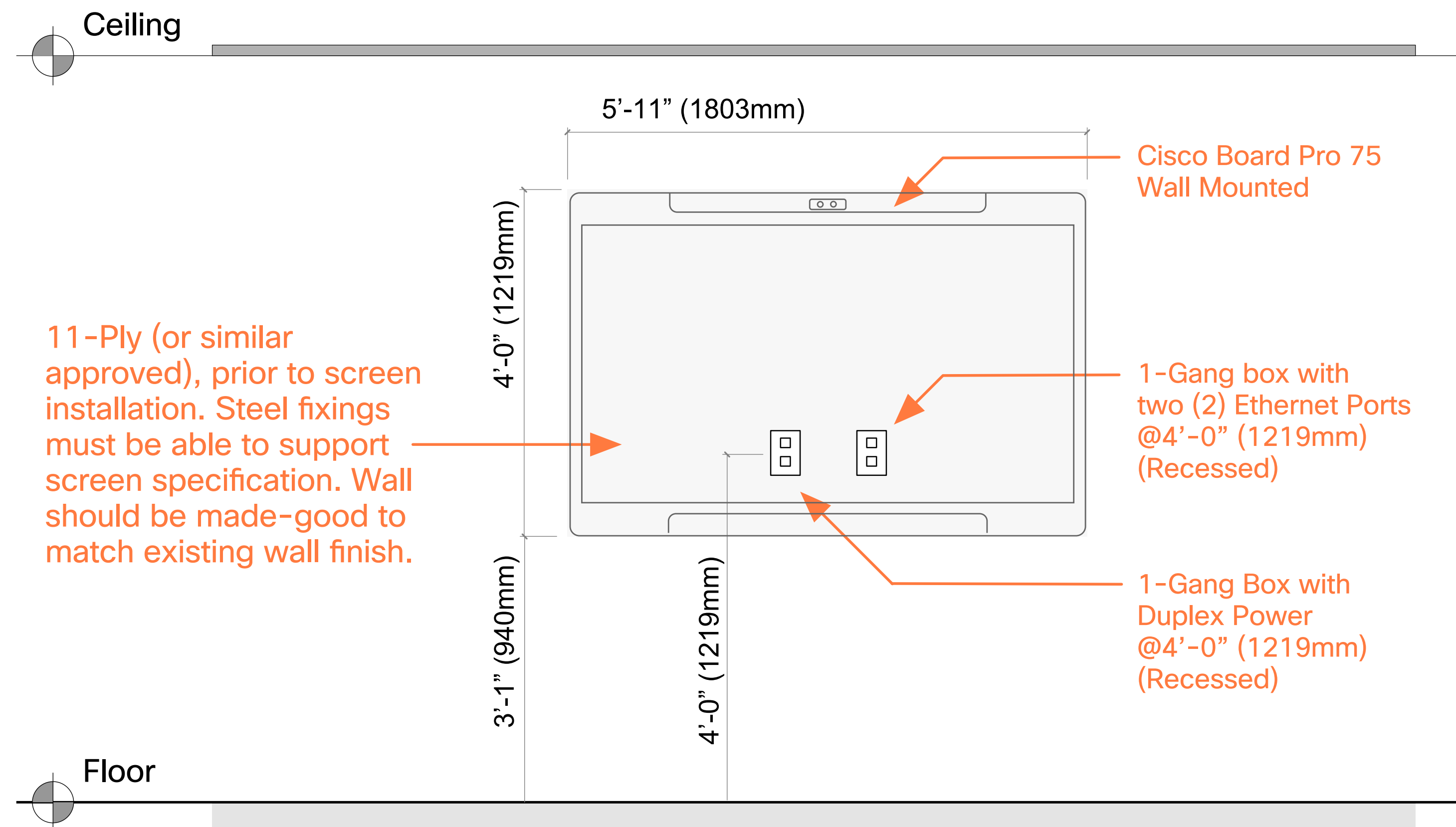


Side Elevation

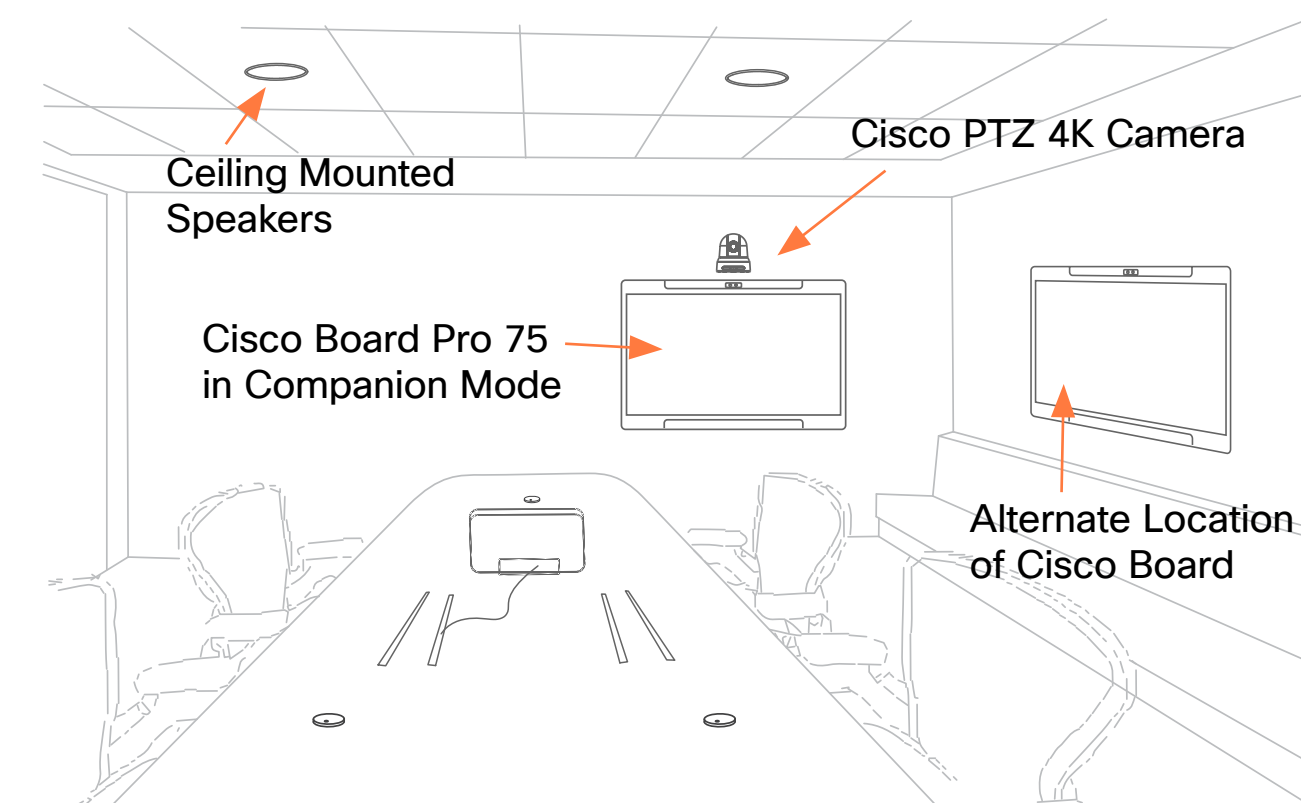


Room Elevations (Optional Companion Board)

Construction and Finished Elevations

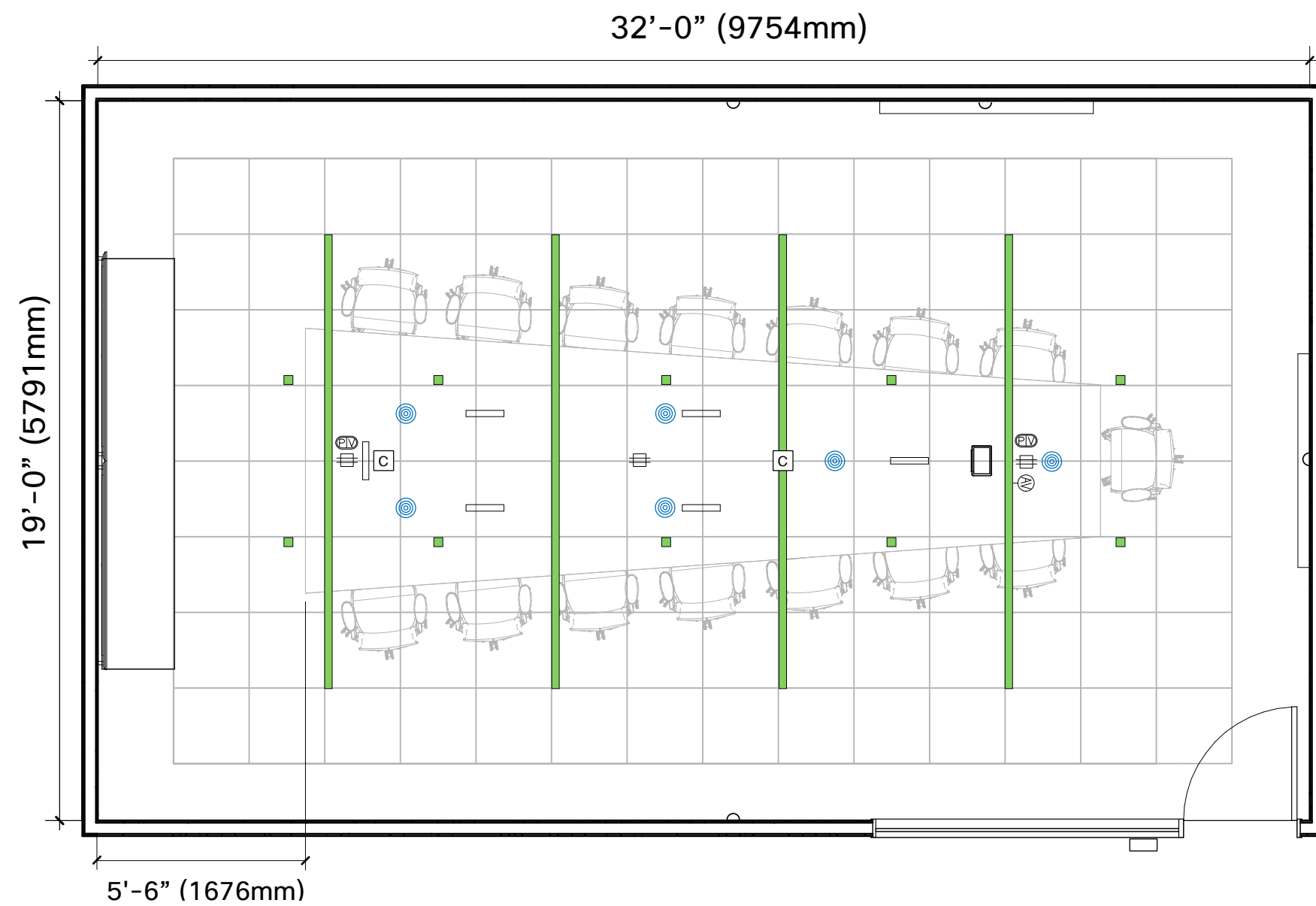


Rear Elevation: Perspective View

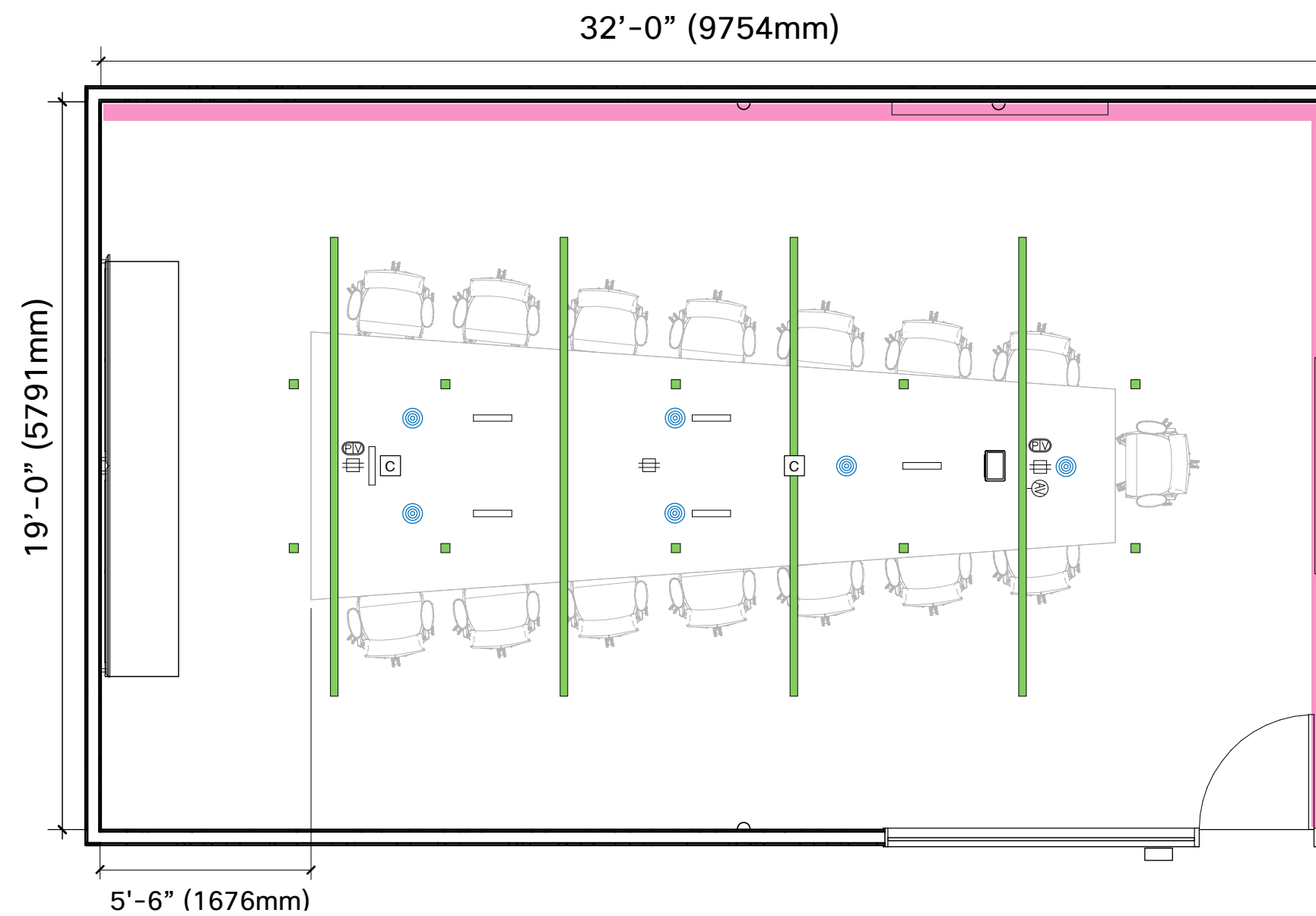


Reflective Ceiling Plan & Acoustical Treatment

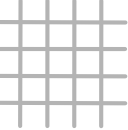













Reflective Ceiling Plan



Acoustical Treatment



Graphics Symbols

-  Acoustical Ceiling & Grid
-  HVAC Diffusers (T.B.D.)
Shown as Example Only
-  Light Fixtures
-  Acoustical Wall
- Furniture Systems Version Devices**
-  Duplex Receptacle & Grid
-  Data Receptacle
- Power and Communication**
- WALL / CEILING / FLOOR VERSION DEVICES**
-  Cisco Ceiling Microphone Pro
-  Third Party Speakers (Optional)
-  Duplex Receptacle
-  Data Receptacle
-  Light Switch
-  AV Receptacle
-  Table Microphone
-  Combination Power & Voice / Data Infeed

● A glare-free luminary with a beam angle of 90° or wider is recommended. In addition, fixtures selected should have a color temperature of ~4000K and color rendering index (CRI) of 85 or better.

● Two walls of acoustical wall treatment is optimal, preferred location is wall opposite device and then adjoining, away from entry location.

Power & Data

General Specifications

Power/data requirements need to be verified for each project. Provide video device power/data even if the project plan does not include it on day one. Based on the design of this space, core drills and floor boxes will be required.

Power & Data

Provide one (1) LAN/Ethernet jack and two (2) duplex outlets on the wall behind the Cisco Room Kit EQ (a second ethernet port can be added for redundancy/future use). Exact location for both will depend on the mounting option chosen. Suggested locations can be found in the elevations section of this document, but exact location should be verified with the mount manufacturer or the A/V partner doing the install. In addition, one (1) duplex outlet positioned under the table, preferably the table leg with access, to power the PoE Switch for microphone and Table Navigator connectivity. (To be verified with furniture provider).

Power in Tabletop

User power should be surface mounted in the tabletop. If pop-ups or table wells are used, it is important to verify that they can accommodate all laptop power supplies. Provide shared power – 1 power port for every two seats.

Exploded IT Diagram



Cisco Room Navigator for Table (required)

The preferred method of connectivity for the Cisco Room Navigator for Table is directly to one of the four (4) general use PoE ports on the Cisco Room Kit EQ. Alternatively, the Navigator can also be connected to a PoE compatible switch mounted under the table, which then connects back to a PoE port on the EQ, or directly to the network switch via a Ethernet port in the floor.

Cisco Room Navigator for Wall

It is recommended to run the cable inside the wall or through the door frame directly back to a network switch.

Cisco Microphones

External microphones are required, quantities vary based on room and table size. Although the Cisco Room Kit EQ has four (4) general use PoE ports that can be used for Audio over IP, three (3) of those ports are required to connect the camera, amplifier and the Cisco Room Navigator for Table. Thus, the final port should be used for a PoE compatible switch to support the microphones and any additional cameras.

Third-party Speakers

Third-party ceiling speakers are required in rooms of this size, quantity is dependent on the size and acoustical characteristics of the space (Requires conduit behind device to ceiling.)

Table Top Charging

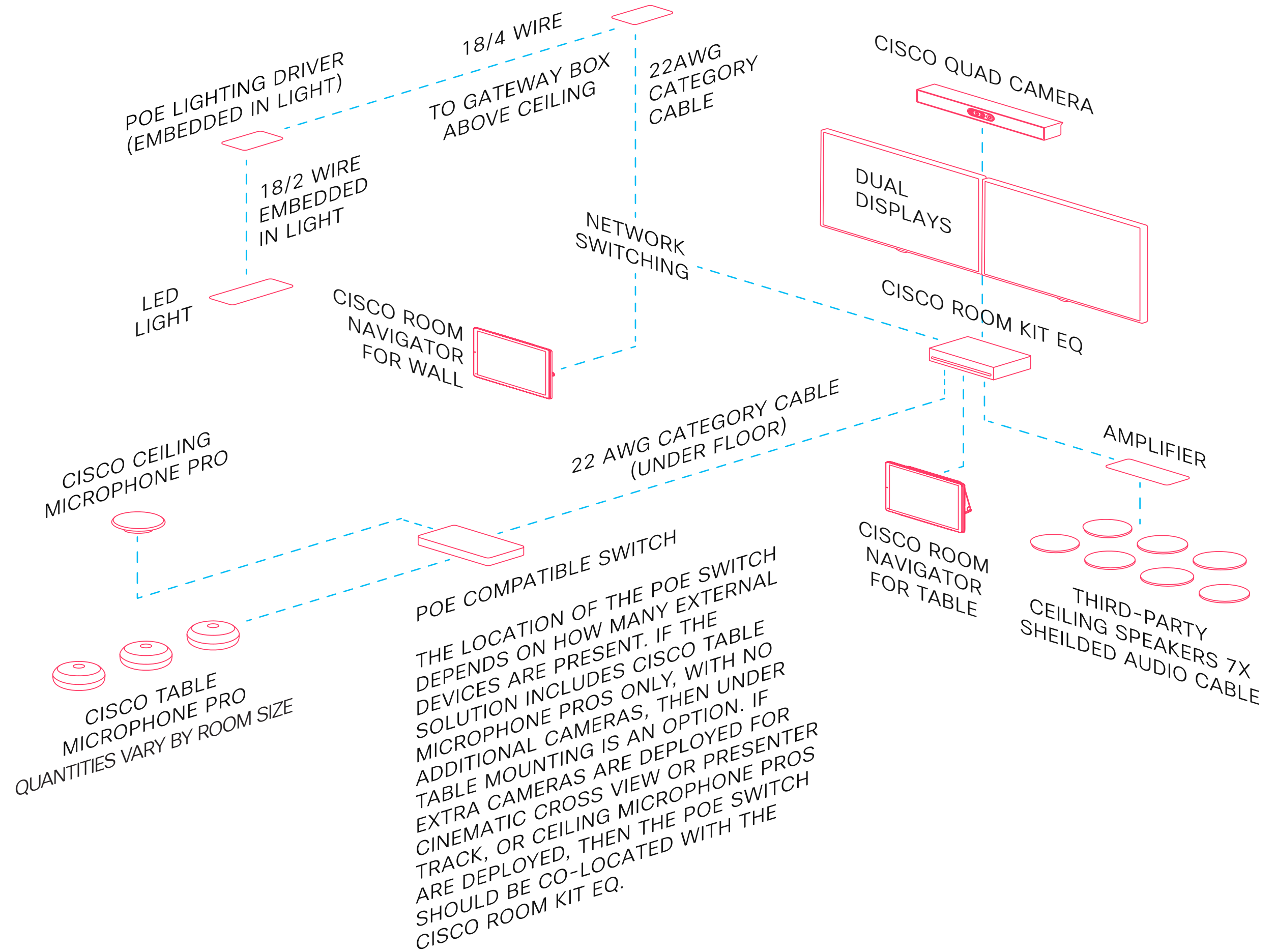
USB-C charging and convenience outlets on table top. Ensure the size of the trough and layout can accommodate a variety of laptop power supplies.

Wall Blocking

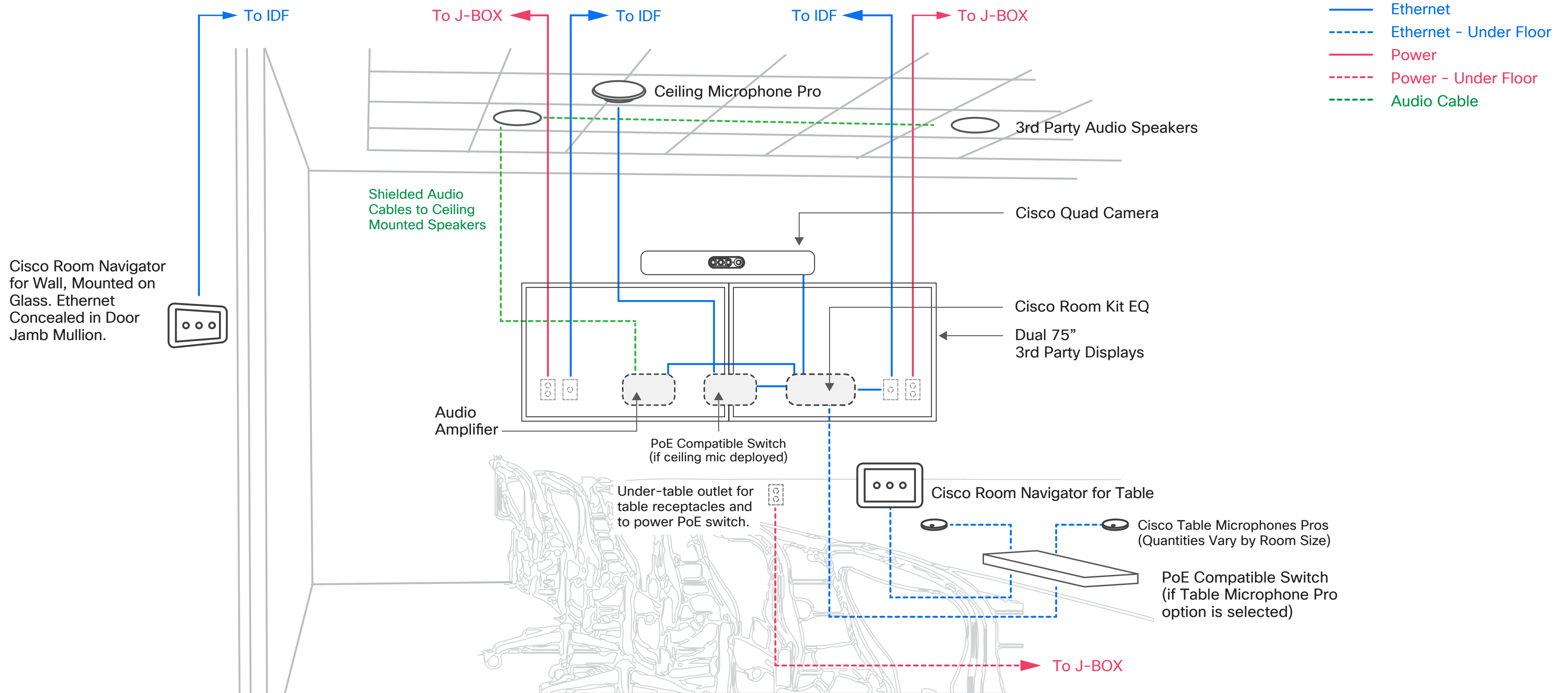
Required when the device is wall-mounted. The size and composition of blocking materials should be determined based on the overall weight of the solution deployed.

Core Drilling

Preferred method for providing connectivity between the table and the Cisco Room Kit EQ for the Cisco Room Navigator for Table, Cisco Table Microphone Pro and/or A/V cables. If core drilling is not an option, a floor cable cover or wire concealer can be used.



Connectivity View



IT/OT Bill of Material

Cisco Products

- **CS-KIT-EQ-C-K9** Cisco Room Kit EQ
 - **CS-QUADCAM** Cisco Quad Camera (included)
 - **CS-T10-TS+** Cisco Room Navigator for Table (included)
 - **CS-MIC-ARRAY-T** Cisco Table Microphone Pro
 - **CS-MIC-CLGPRO** Cisco Ceiling Microphone Pro, Arctic White (optional)
 - **C1200-8FP-2G** Cisco Catalyst 1200 Series PoE Switch (or equivalent)
 - **CS-T10-WM-K9=** Cisco Room Navigator for Wall
 - **CS-BRD75P-K9** Cisco Board Pro 75 (optional)
 - **CS-CAM-PTZ4K** Cisco PTZ 4K Camera for Presenter Track (optional)
 - **CS-QUADCAM** Cisco Quad Cameras for Cross View - Qty 2 (optional)
-

Non-Cisco peripherals

- Dual 75" or 85" Video Displays
-

IOT Devices

- IAQ coming from the Cisco Room Navigator, No additional IoT IAQ
 - Occupancy sensing is coming from the Cisco Endpoints and IoT sensor
 - Suggested lighting specifications: 220LPW raw,140LPW delivered
 - Each Large Briefing room being power by a 10-12 ports on the ceiling
 - Traditional DC Wall Switch
 - No ASHRARE 90.1 outlets
 - No individual HVAC control in the space
-

External microphones and speakers

- External microphones are required for this room
 - Third-party speakers and an amplifier are required for this room
-

Option 2: Cisco Room Kit EQX

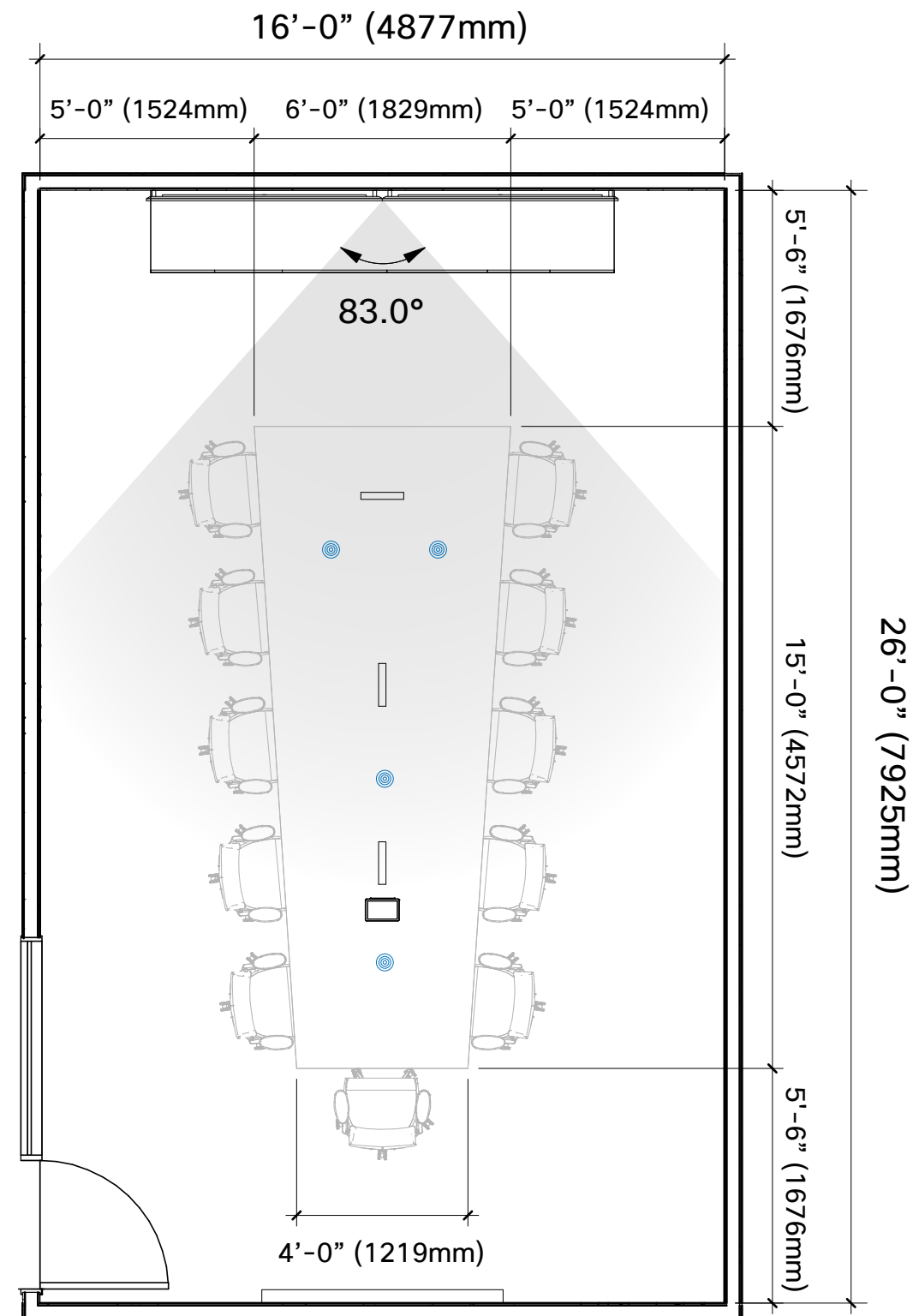


Room Layout

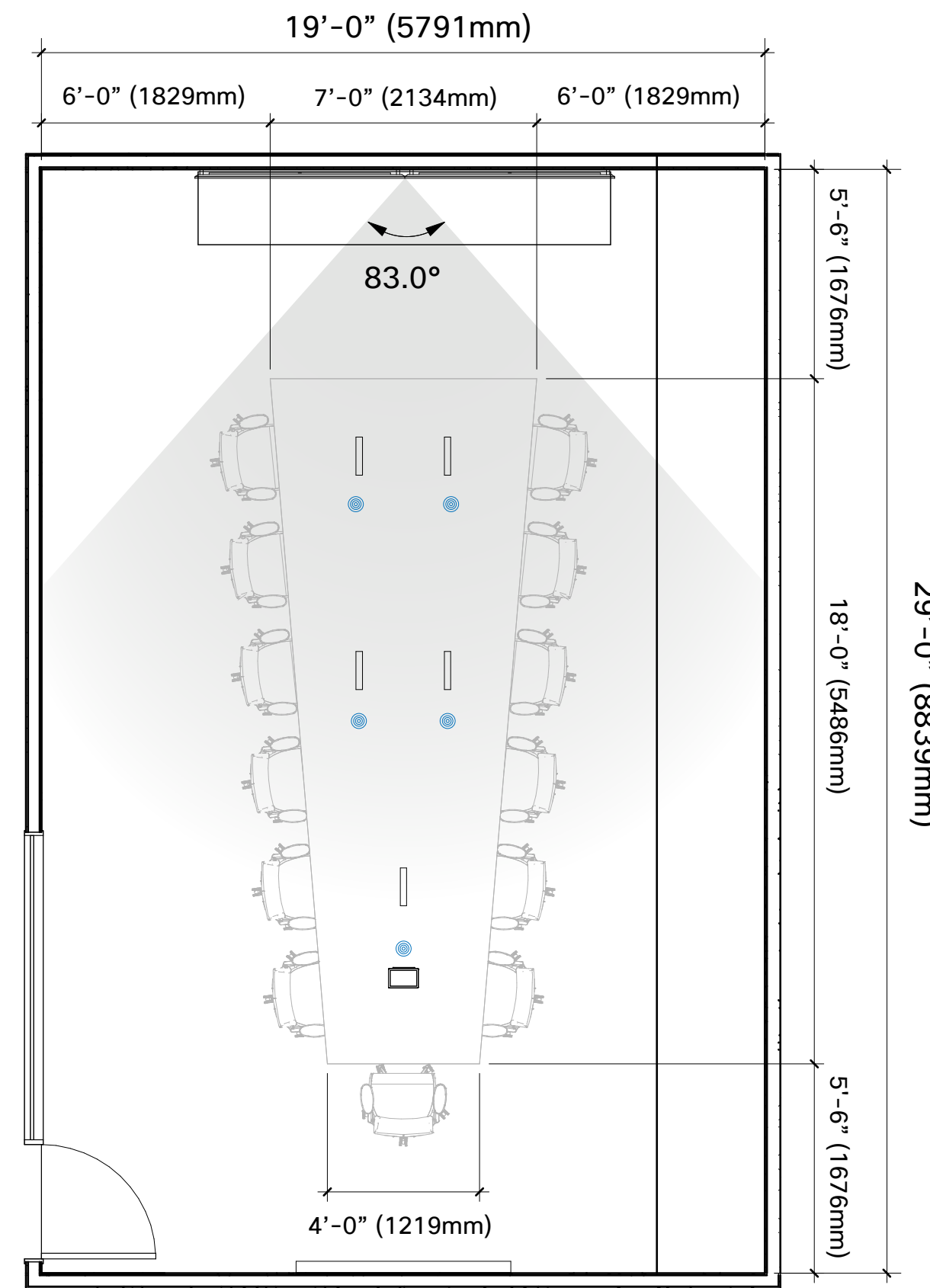


Room dimensions show are the minimal size, based on the technology and furniture options shown.

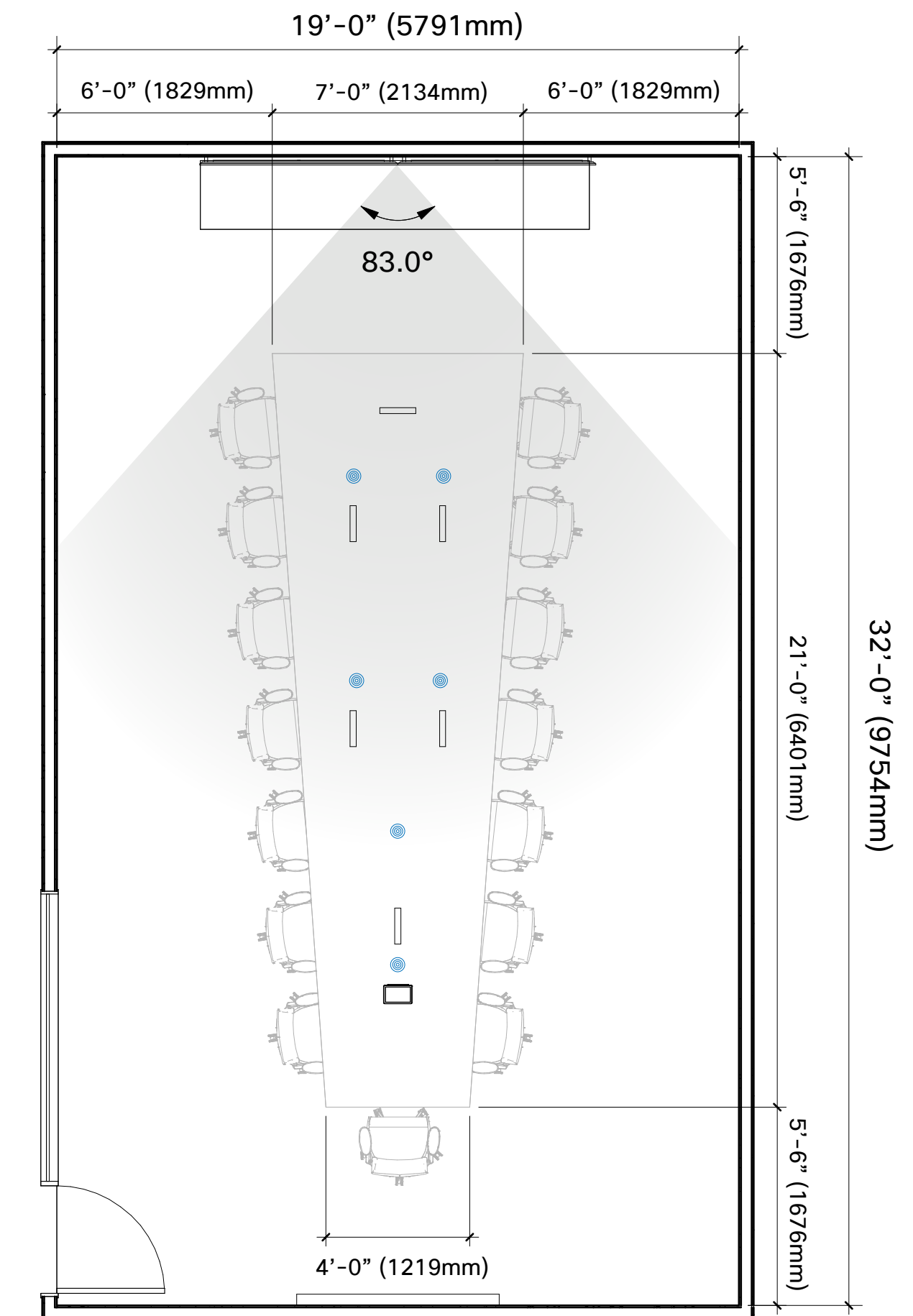
10-11 Person Layout



12-13 Person Layout



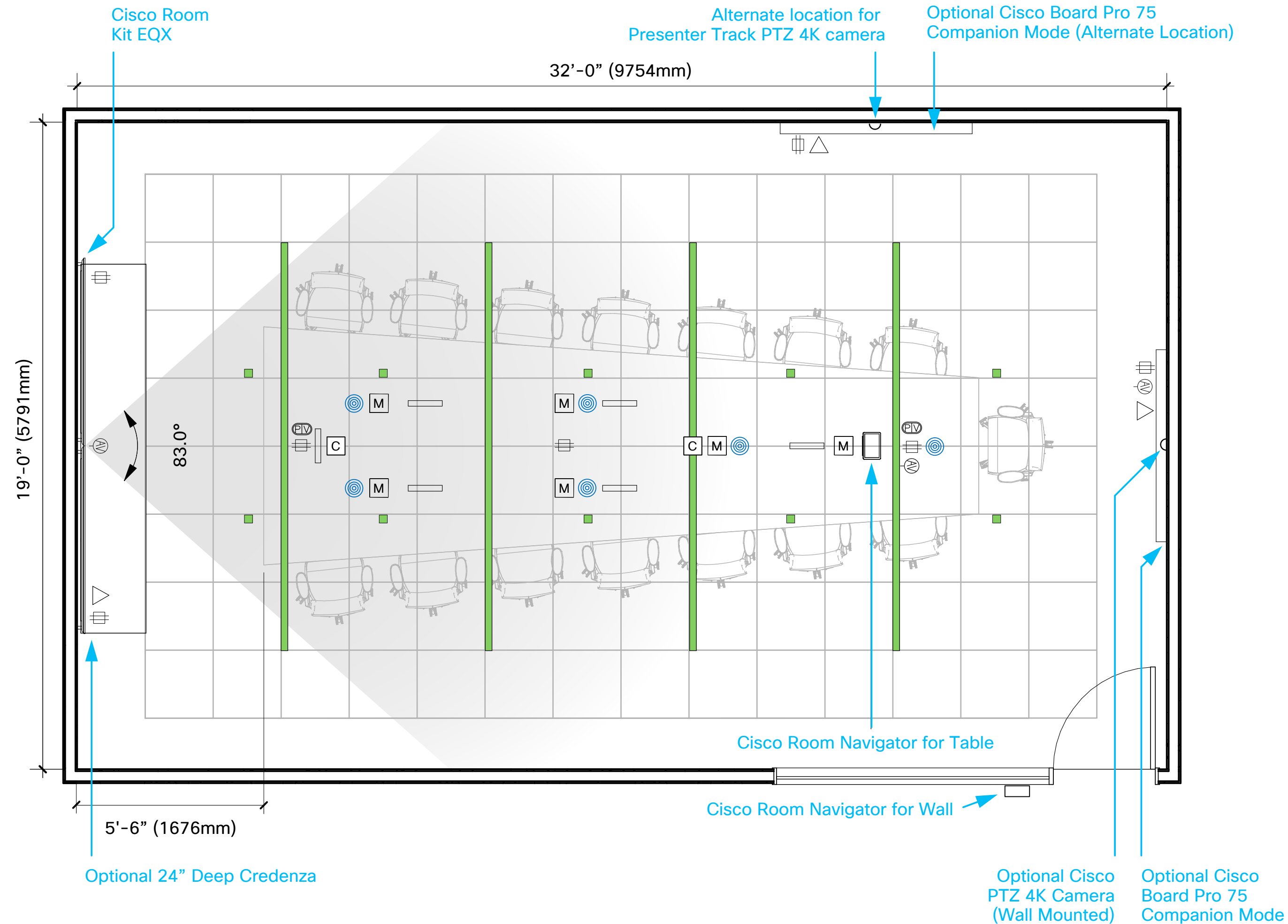
14-15 Person Layout



Composite Plan



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Graphics Symbols

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- Furniture Systems Version Devices**
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WALL / CEILING / FLOOR VERSION DEVICES
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 - Third Party Speakers (Optional)
 - Duplex Receptacle
 - Data Receptacle
 - Light Switch
 - AV Receptacle
 - Table Microphone
 - Combination Power & Voice / Data Infeed

Video Device Mounting Options



Cisco Room Kit EQX

There are four mounting options for the device when using the Cisco Room Kit EQX in the Large Collaboration Room. The physical conditions of the space, desired aesthetics, and required amenities will define which solution is most appropriate.



Wall Mount

Wall Mounted – Requires wall to be blocked and electrical and data to be elevated.



A/V Credenza

Freestanding – Does not require wall blocking. Perfect for retrofit installations, or when trash, recycling and/or extra storage is required.



Wall Stand

Wall tethered – An effective solution when especially when room remediation is not an option.



Floor Stand

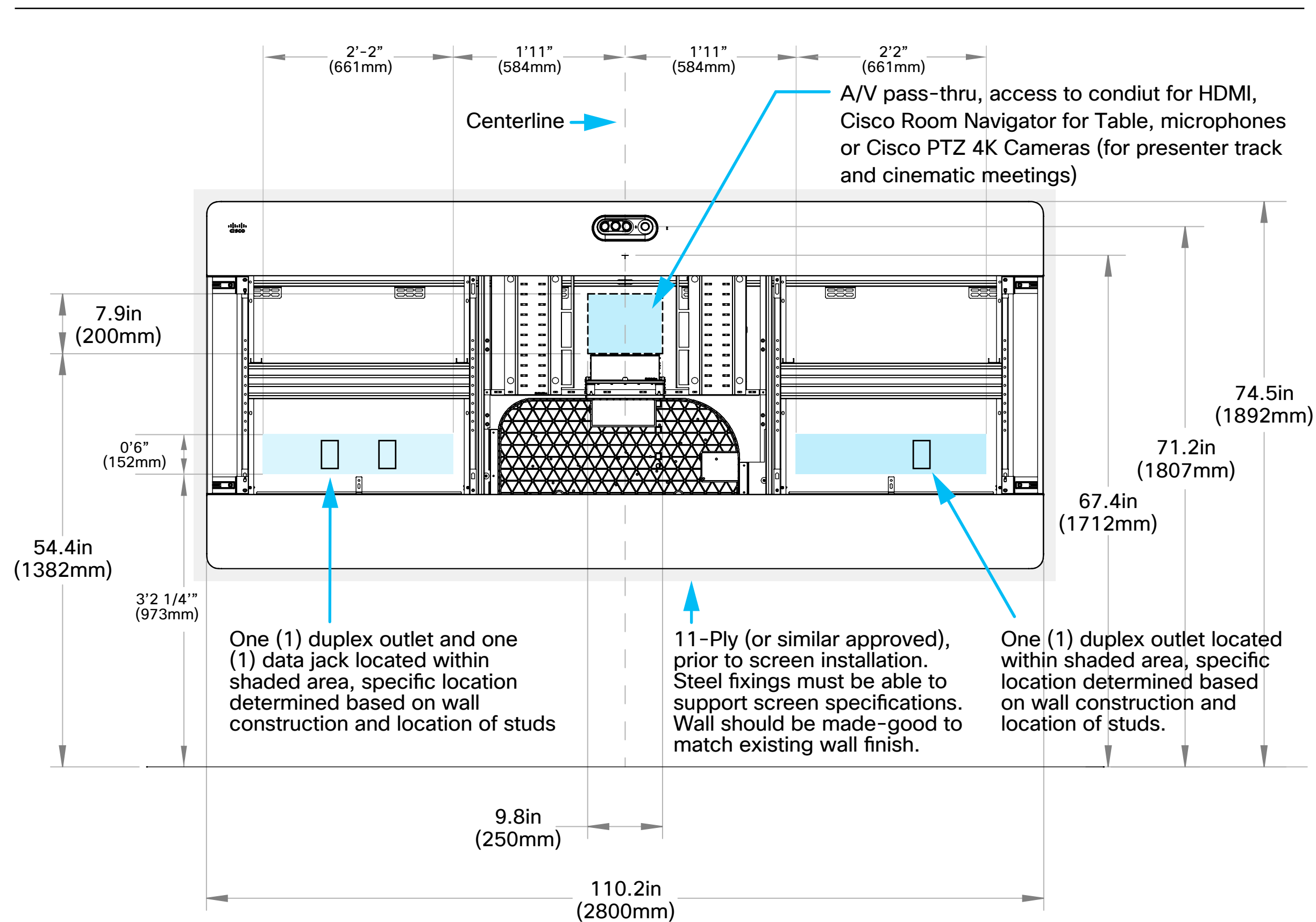
Freestanding – A perfect for retrofits, open area deployments, or when video needs to be installed quickly.



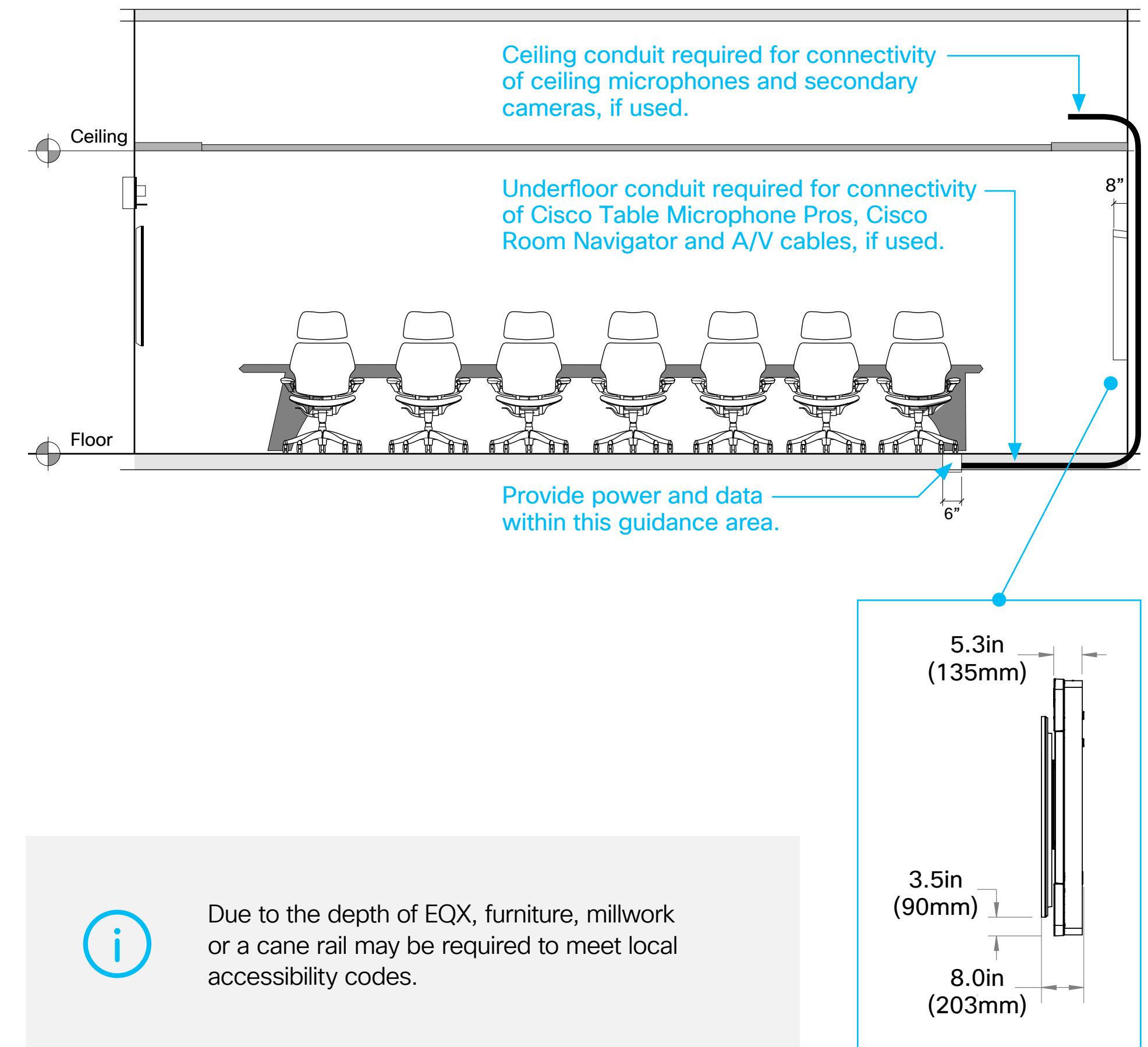
Room Elevations

Option 2a Cisco Room Kit EQX with Wall Mount

Construction and Finished Elevations



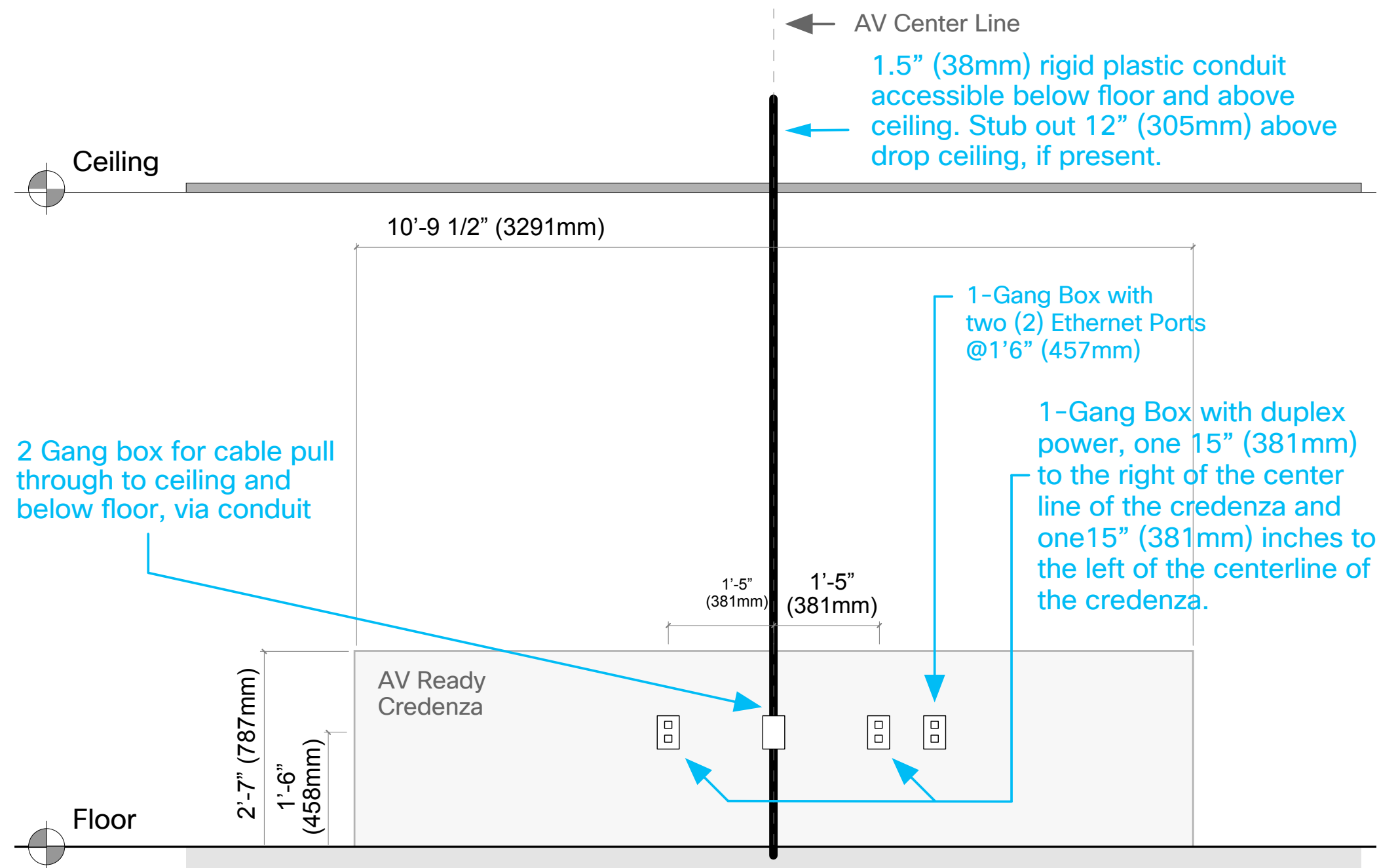
Side Elevations



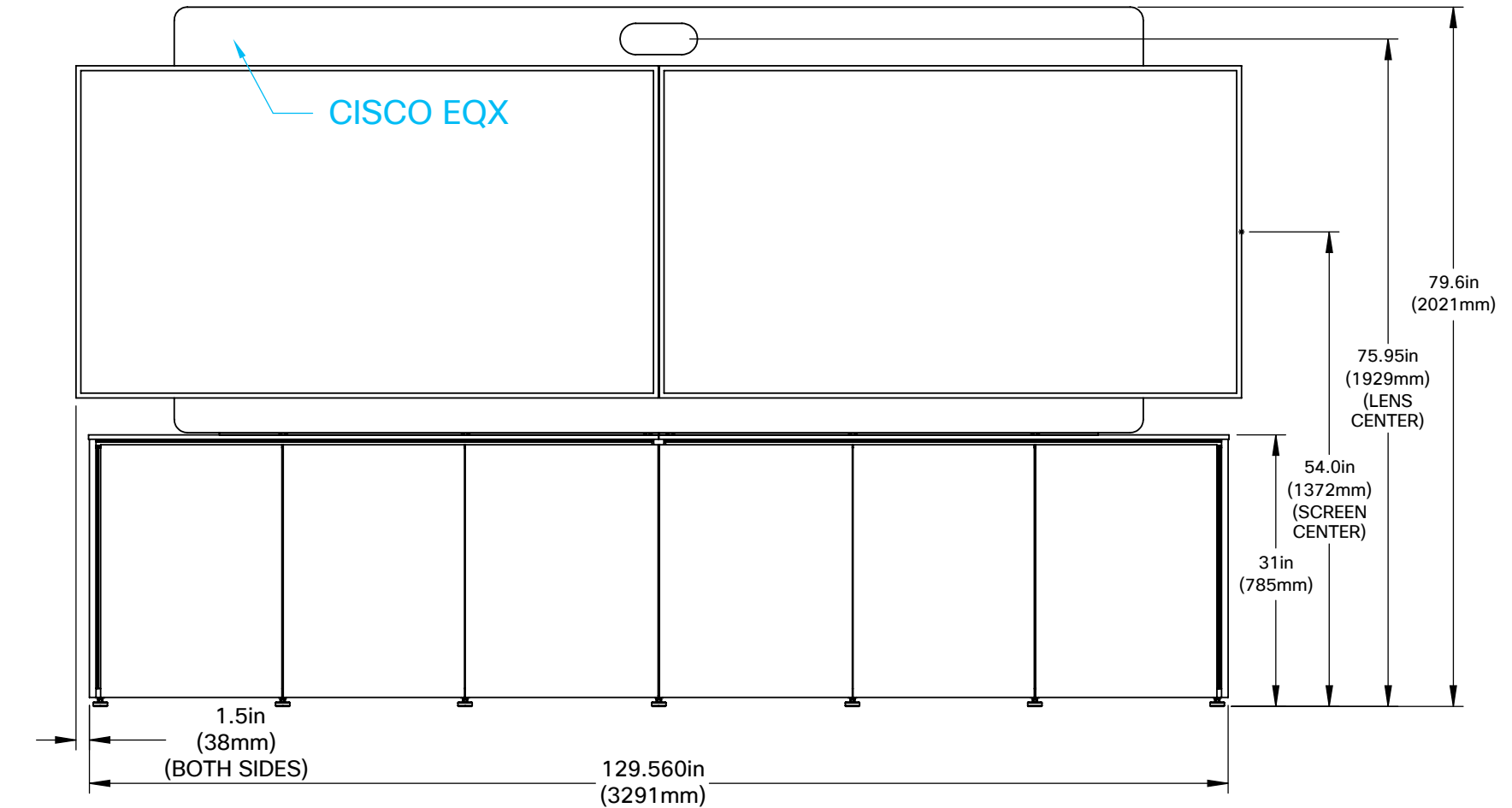
Room Elevations

Option 2b Cisco Room Kit EQX with A/V Credenza

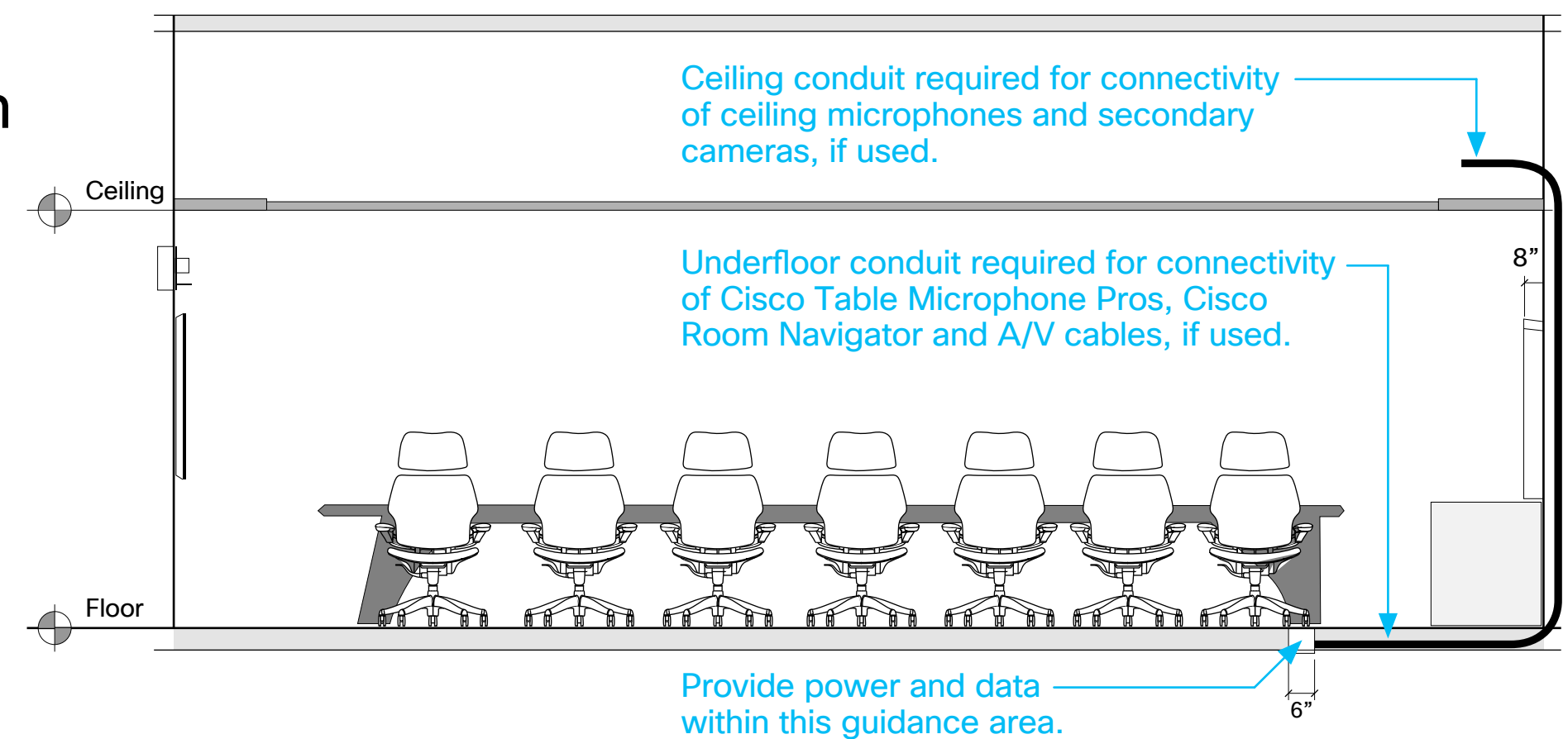
Construction Elevation



Finished Elevation



Side Elevation

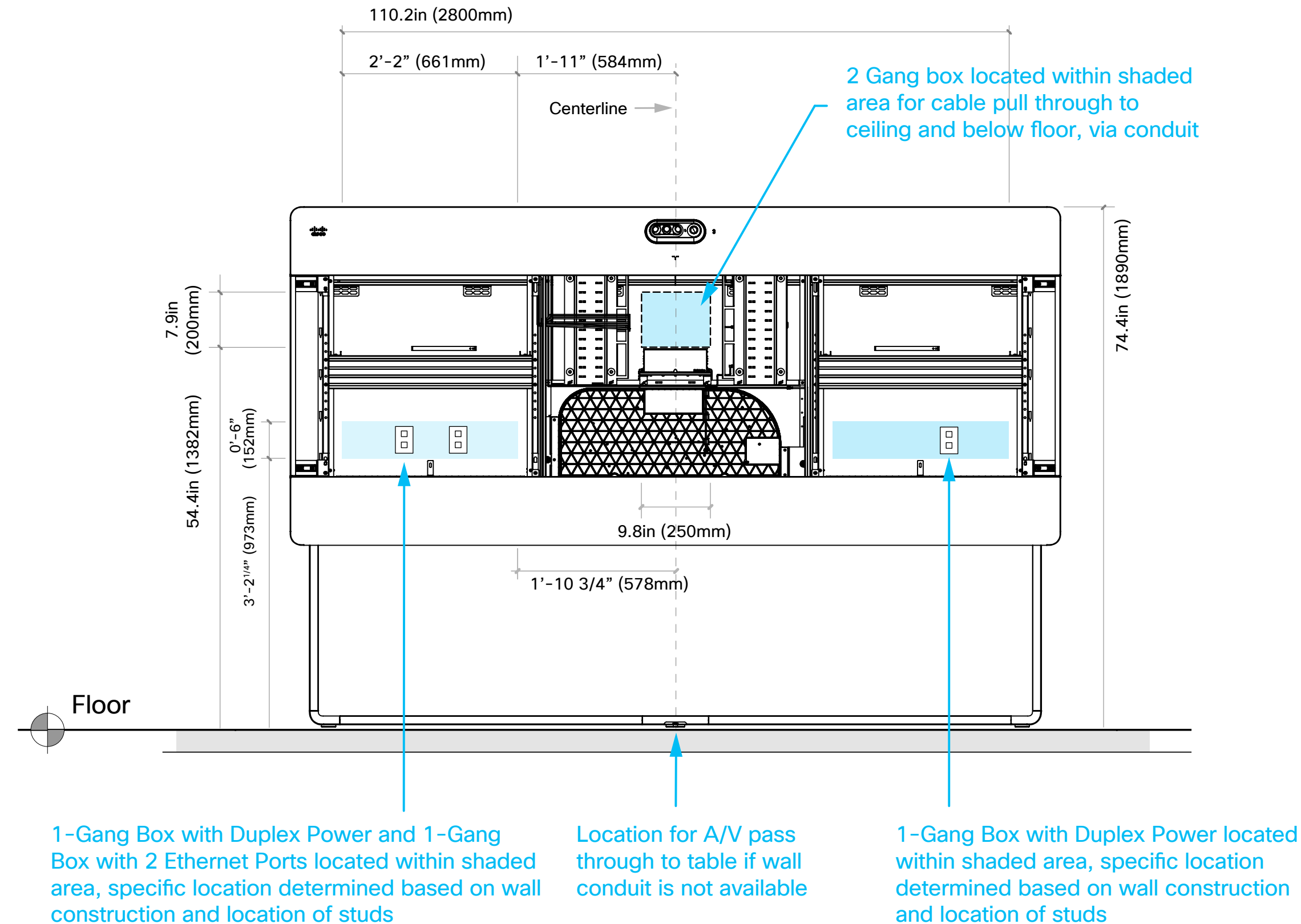


Room Elevations

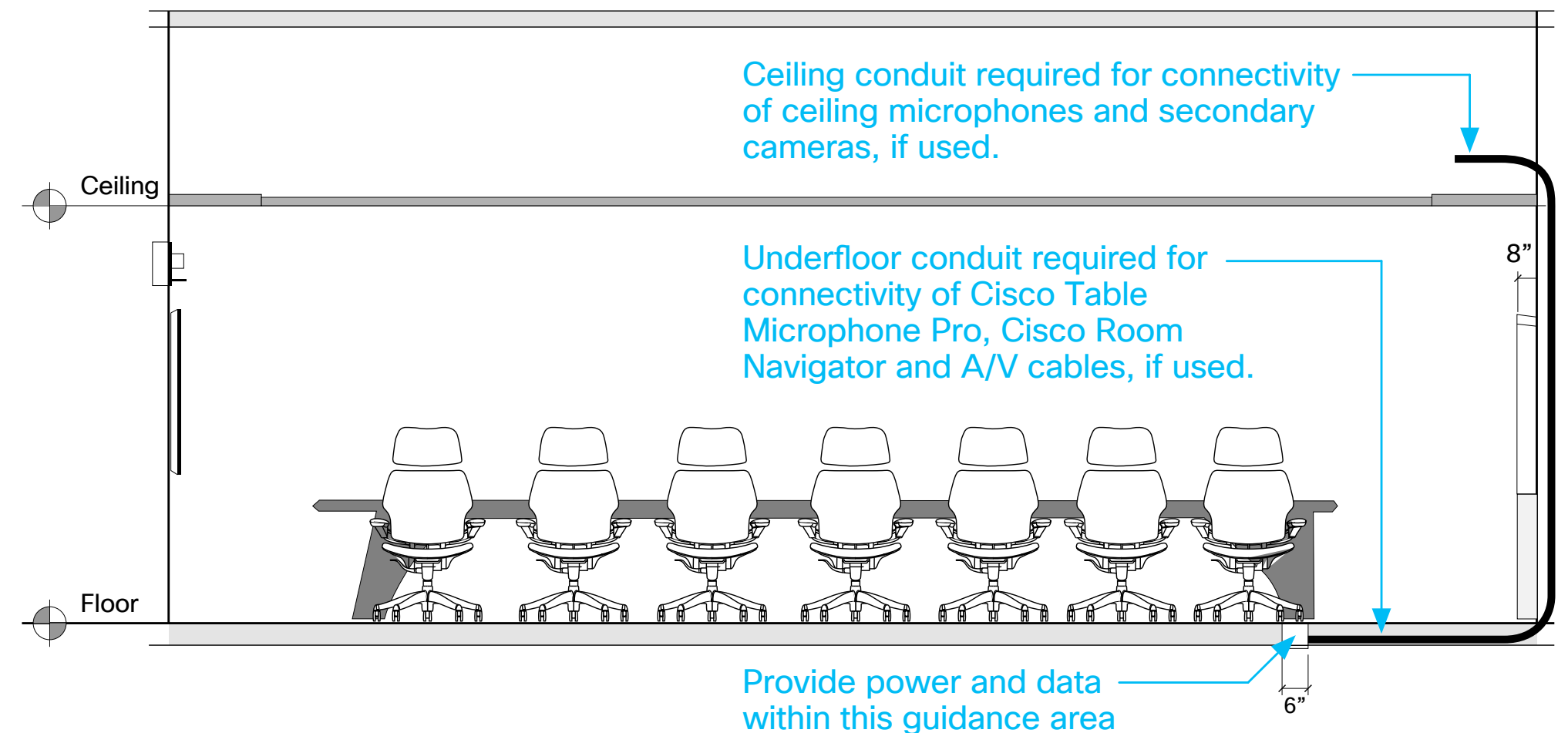


Cisco Room Kit EQX with Wall Stand

Construction and Finished Elevations



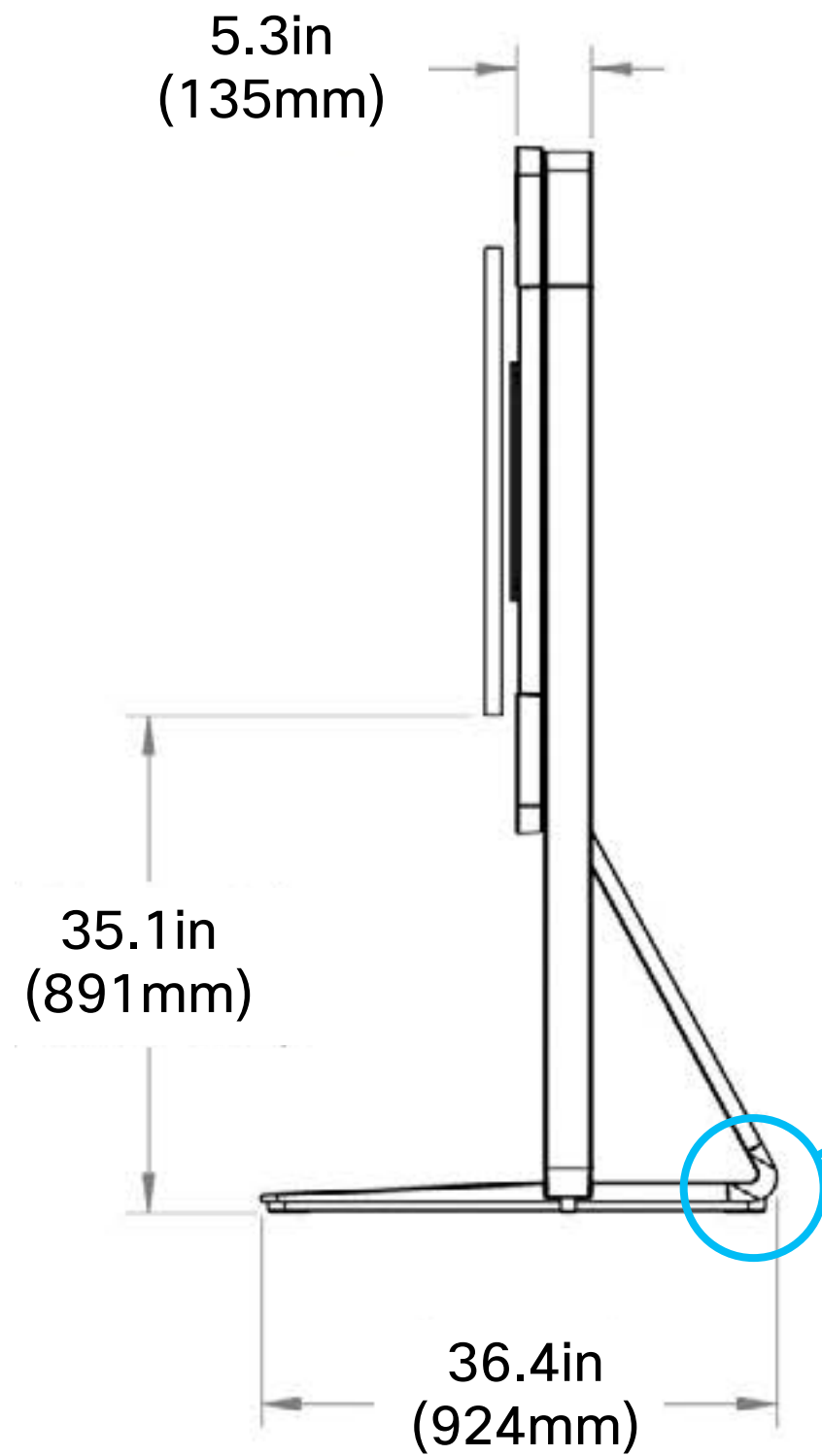
Side Elevation



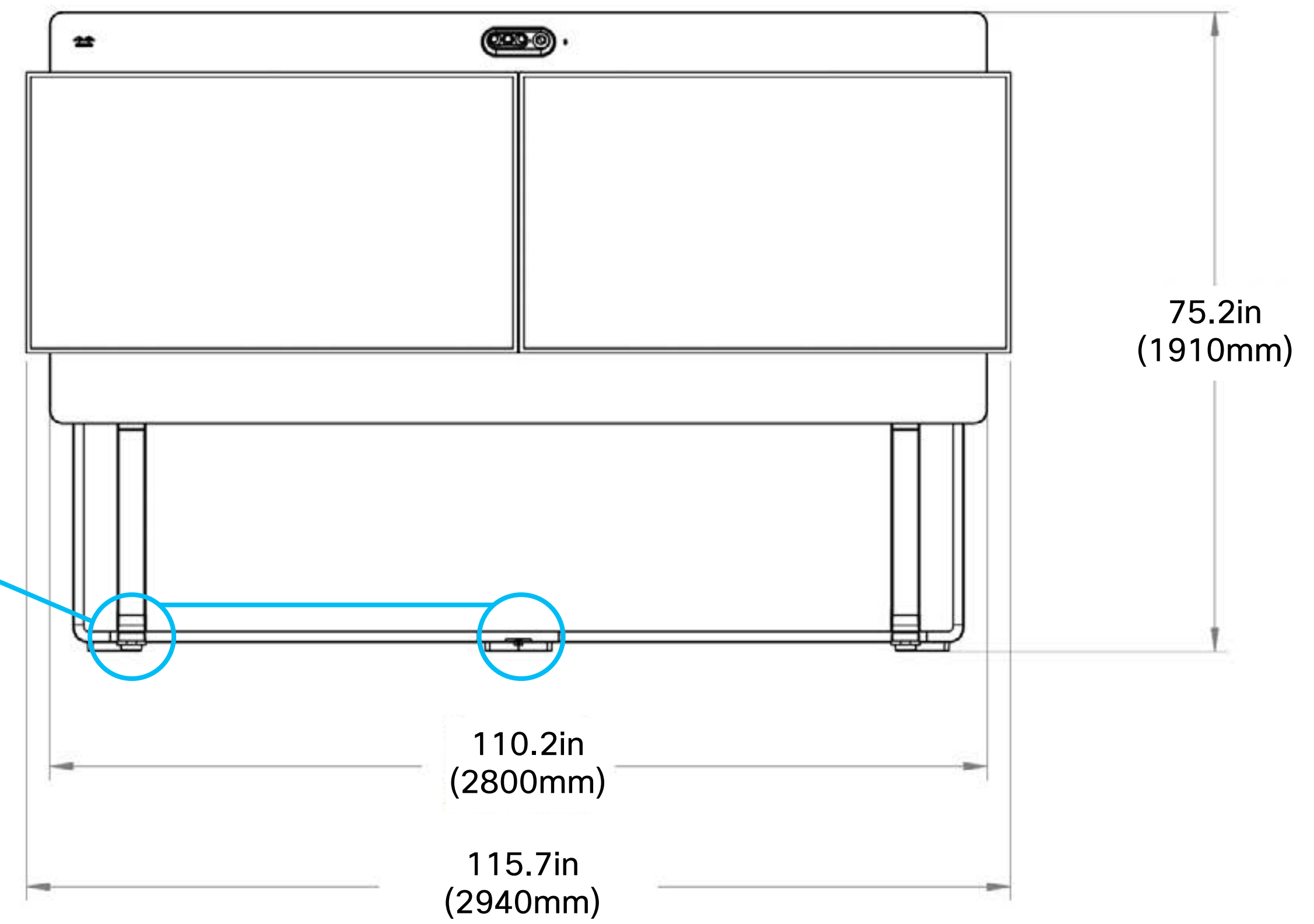
Room Elevations

Option
2d

Cisco Room Kit EQX with Floor Stand



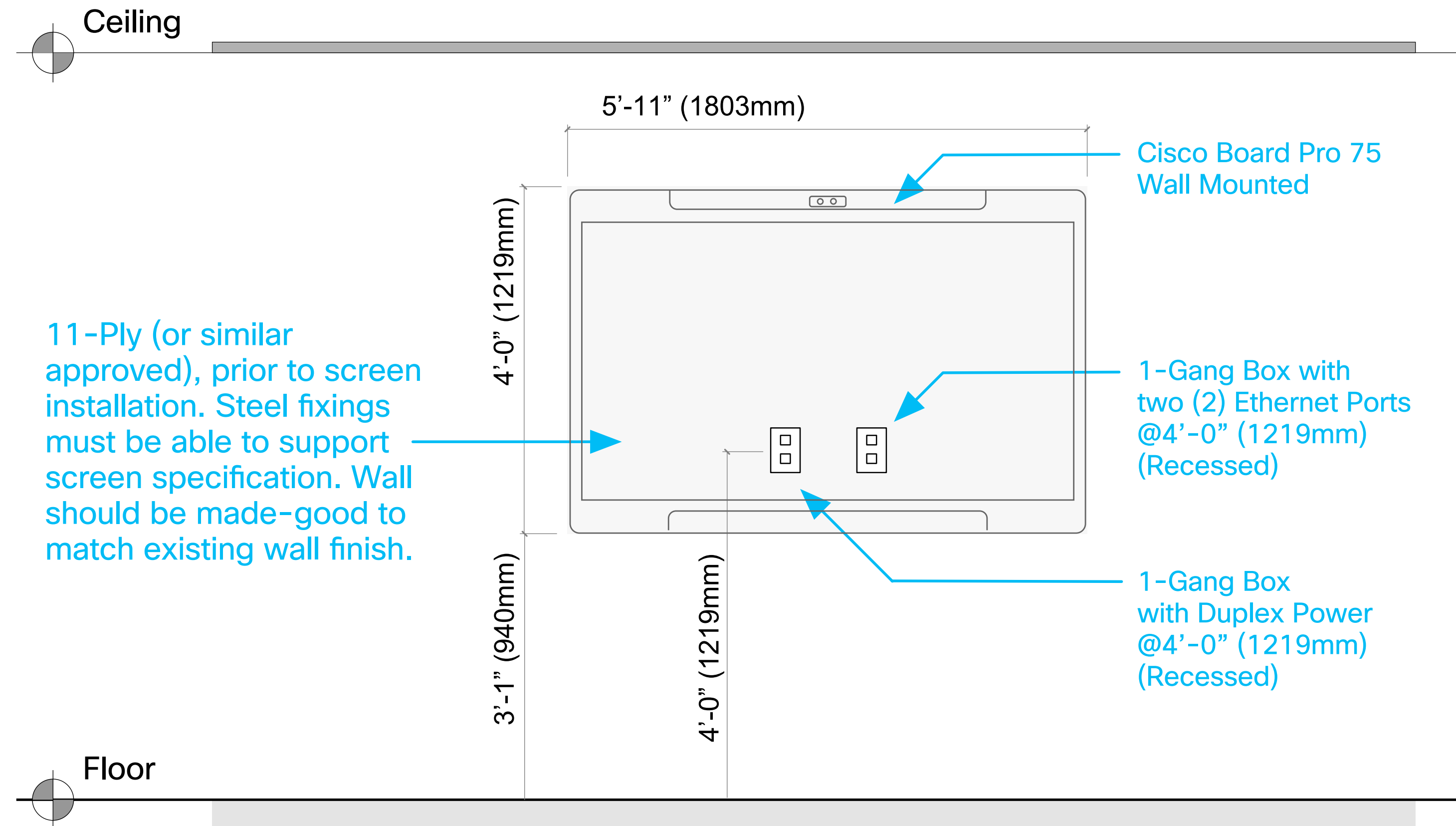
Location where power, data and microphone cables exit the floor stand



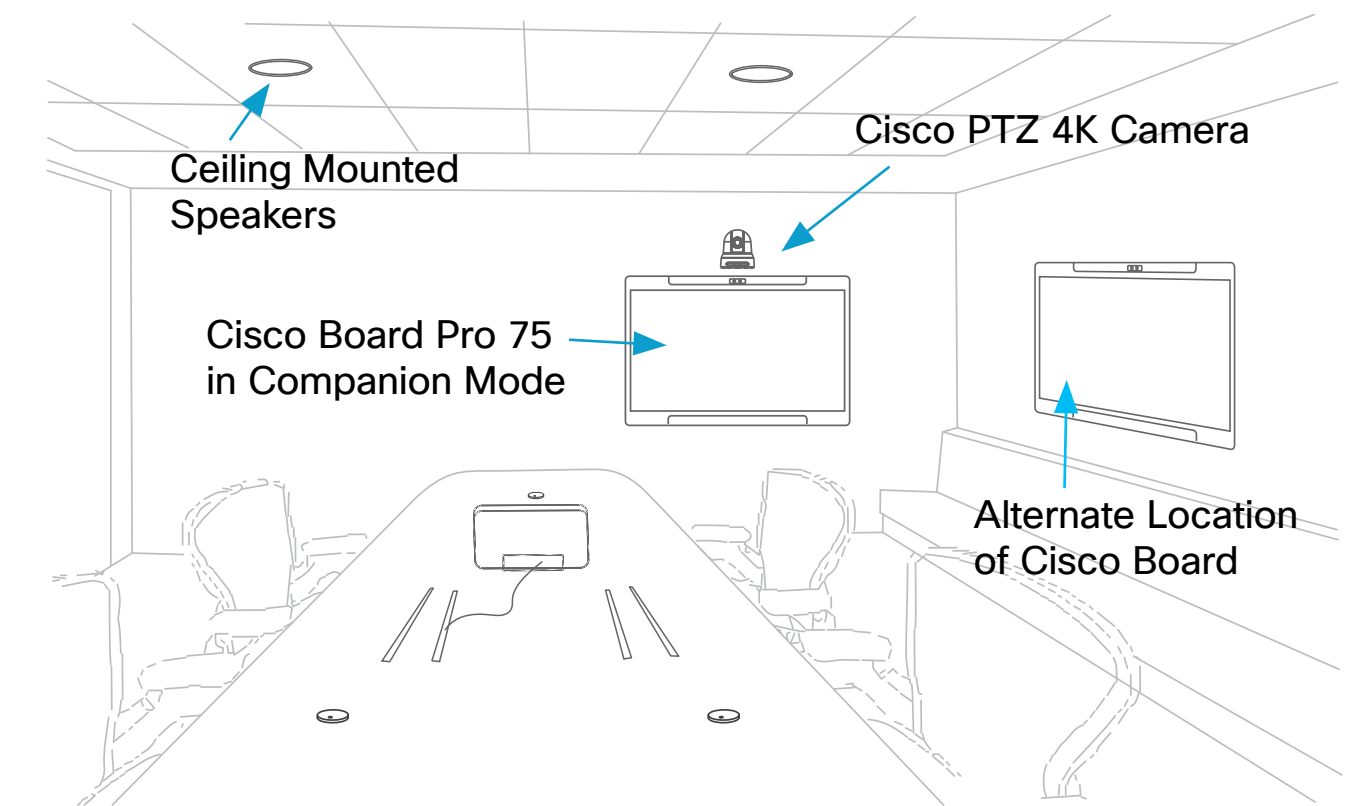
Note: For aesthetics purposes, the optimal location for power, data and A/V passthru is in floor boxes. Wall mounted outlets, either standard or elevated, can also be used.

Room Elevations (Optional Companion Board)

Construction & Finished Elevation

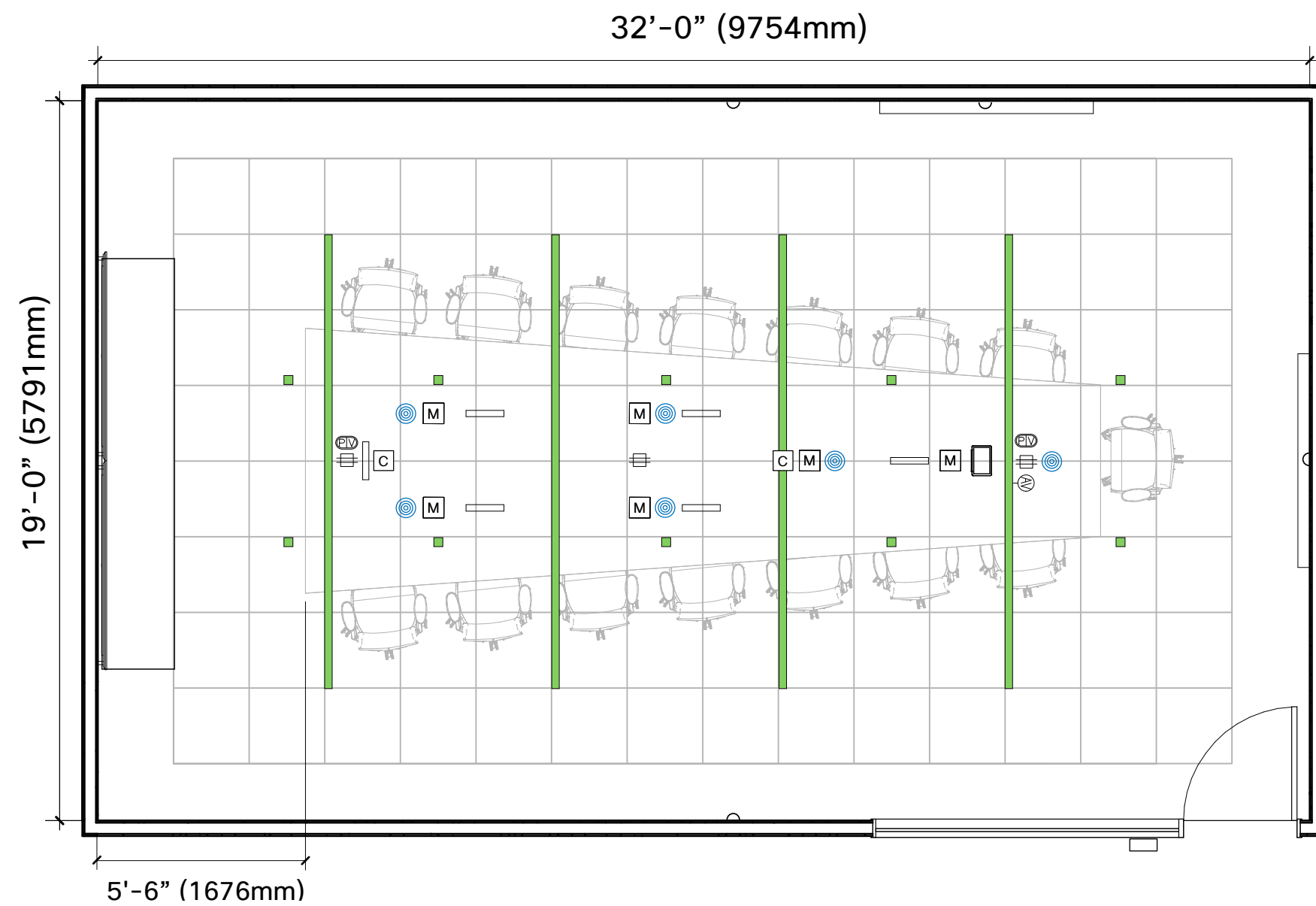


Rear Elevation: Perspective View

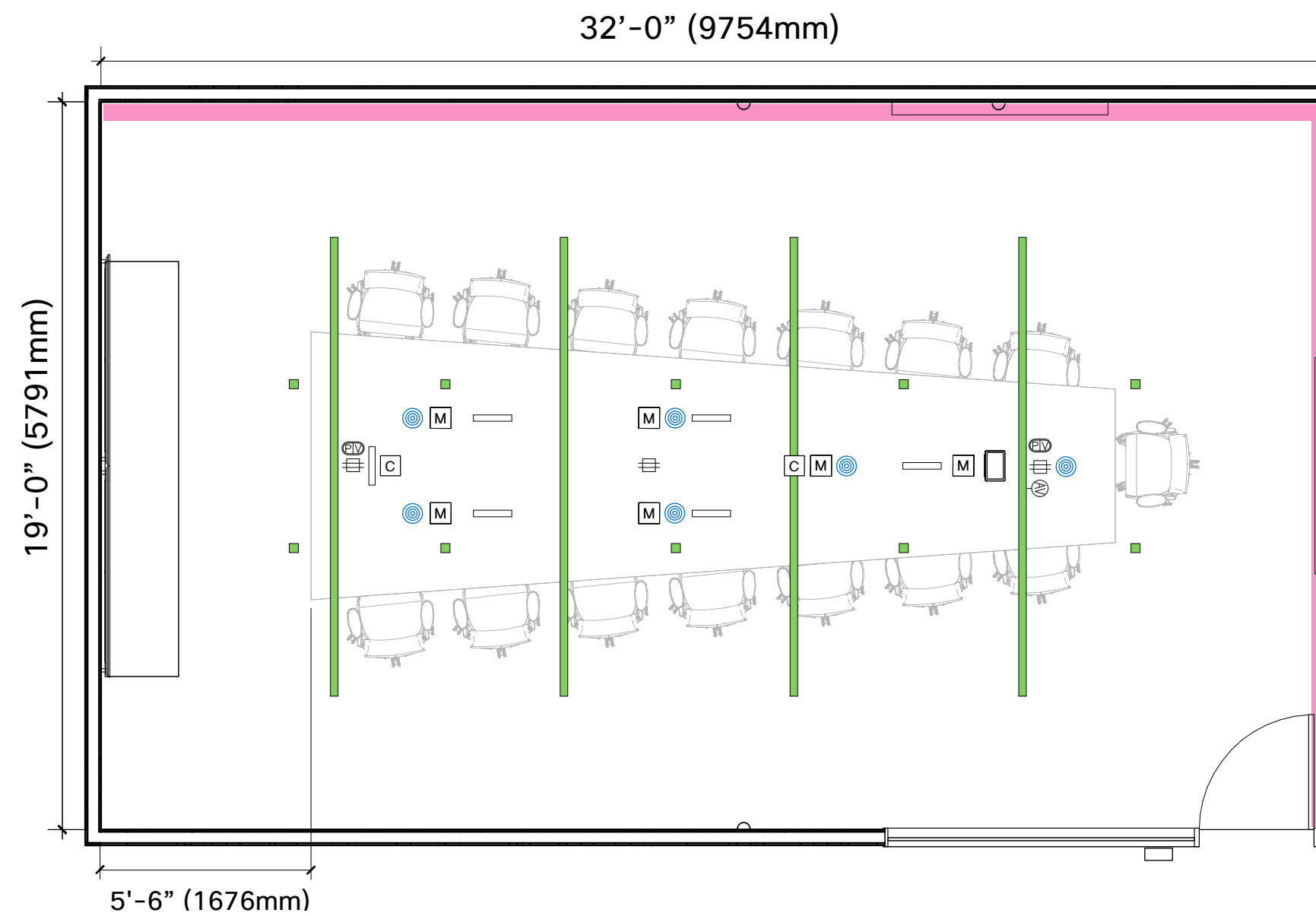


Reflective Ceiling Plan & Acoustical Treatment

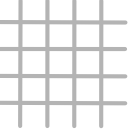













Reflective Ceiling Plan



Acoustical Treatment



Graphics Symbols

-  Acoustical Ceiling & Grid
-  HVAC Diffusers (T.B.D.)
Shown as Example Only
-  Light Fixtures
-  Acoustical Wall
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● A glare-free luminary with a beam angle of 90° or wider is recommended. In addition, fixtures selected should have a color temperature of ~4000K and color rendering index (CRI) of 85 or better.

● Two walls of acoustical wall treatment is optimal, preferred location is wall opposite device and then adjoining, away from entry location.

Power & Data

General Specifications

Power/data requirements need to be verified for each project. Provide video device power/data even if the project plan does not include it on day one. Based on the design of this space, core drills and floor boxes will be required.

Power & Data

The Cisco Room Kit EQX requires two (2) duplex outlets and one (1) LAN/Ethernet jack located on the wall behind the device (a second Ethernet jack can also be added for redundancy/future use). Suggested locations for these services can be found in the “Elevations” section of this document. The exact location, however, should be verified with A/V consultants and installation personnel. If Cisco Table Microphone Pros are used, an additional duplex outlet may need to be added under the table to provide power to the required PoE switch. (To be verified with the furniture provider).

Power in Tabletop

User power should be surface mounted in the tabletop. If pop-ups or table wells are used, it is important to verify that they can accommodate all laptop power supplies. Provide shared power – 1 power port for every two seats.

Exploded IT Diagram



Cisco Room Navigator for Table (required)

The recommended approach is to connect the Cisco Room Navigator for table directly to the switch mounted under the table, along with the Cisco Table Microphone Pros. Alternatively, the Table Navigator can be connected to via ethernet to a PoE network switch port, or directly connected to the ethernet port on the Room Kit EQ.

Cisco Room Navigator for Wall

It is recommended to run the cable inside the wall or through the door frame directly back to a network switch.

Cisco Microphones

External microphones are required, quantities vary based on room and table size. Although the Cisco Room Kit EQX has four (4) general use PoE ports that can be used for Audio over IP, three (3) of those ports are required to connect the camera, amplifier and the Cisco Room Navigator for Table. Thus, the final port should be used for a PoE compatible switch to support the microphones and any additional cameras.

Third-party Speakers

Third-party ceiling speakers are required in rooms of this size, quantity is dependent on the size and acoustical characteristics of the space (Requires conduit behind device to ceiling.)

Table Top Charging

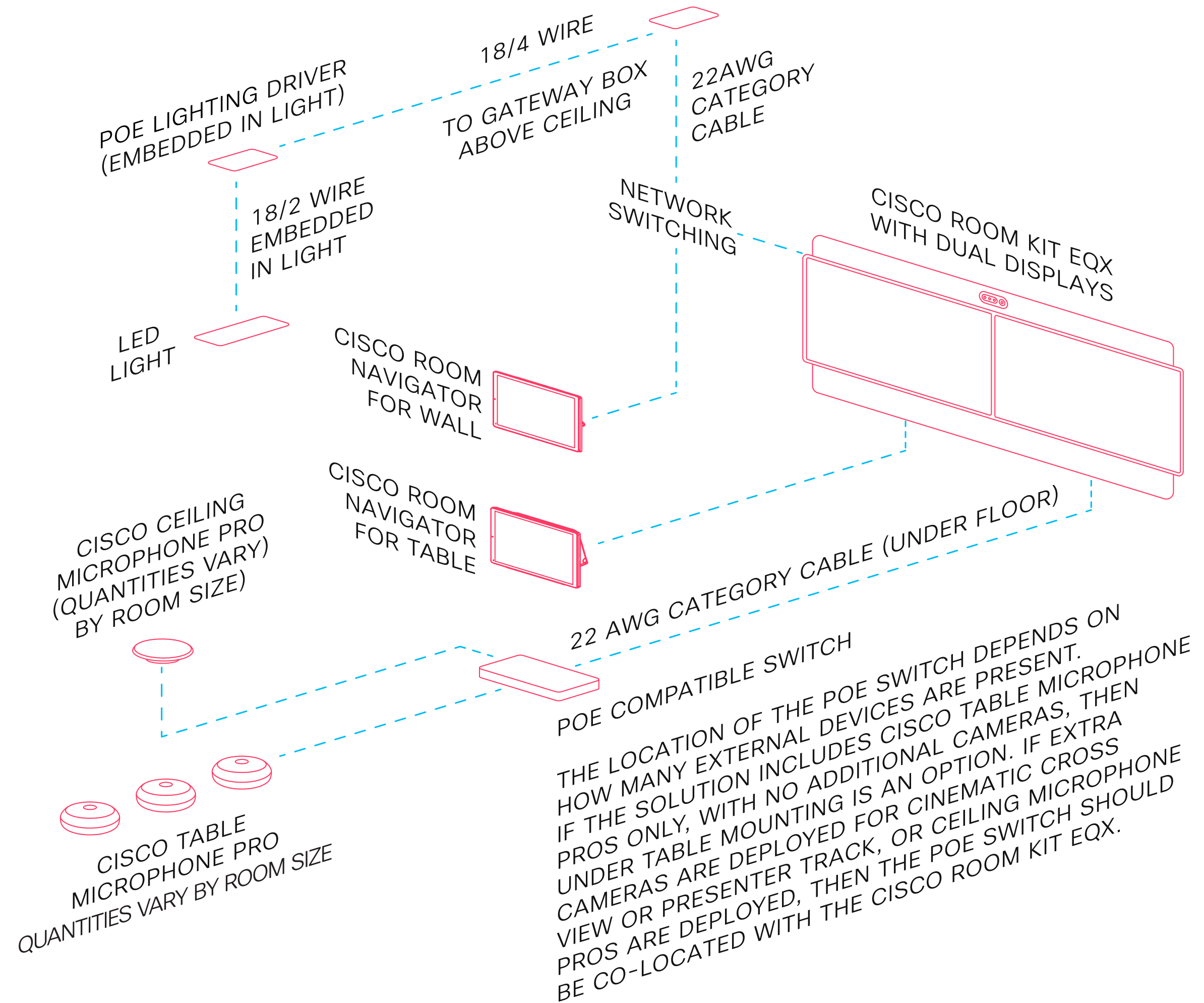
USB-C charging and convenience outlets on table top. Ensure the size of the trough and layout can accommodate a variety of laptop power supplies.

Wall Blocking

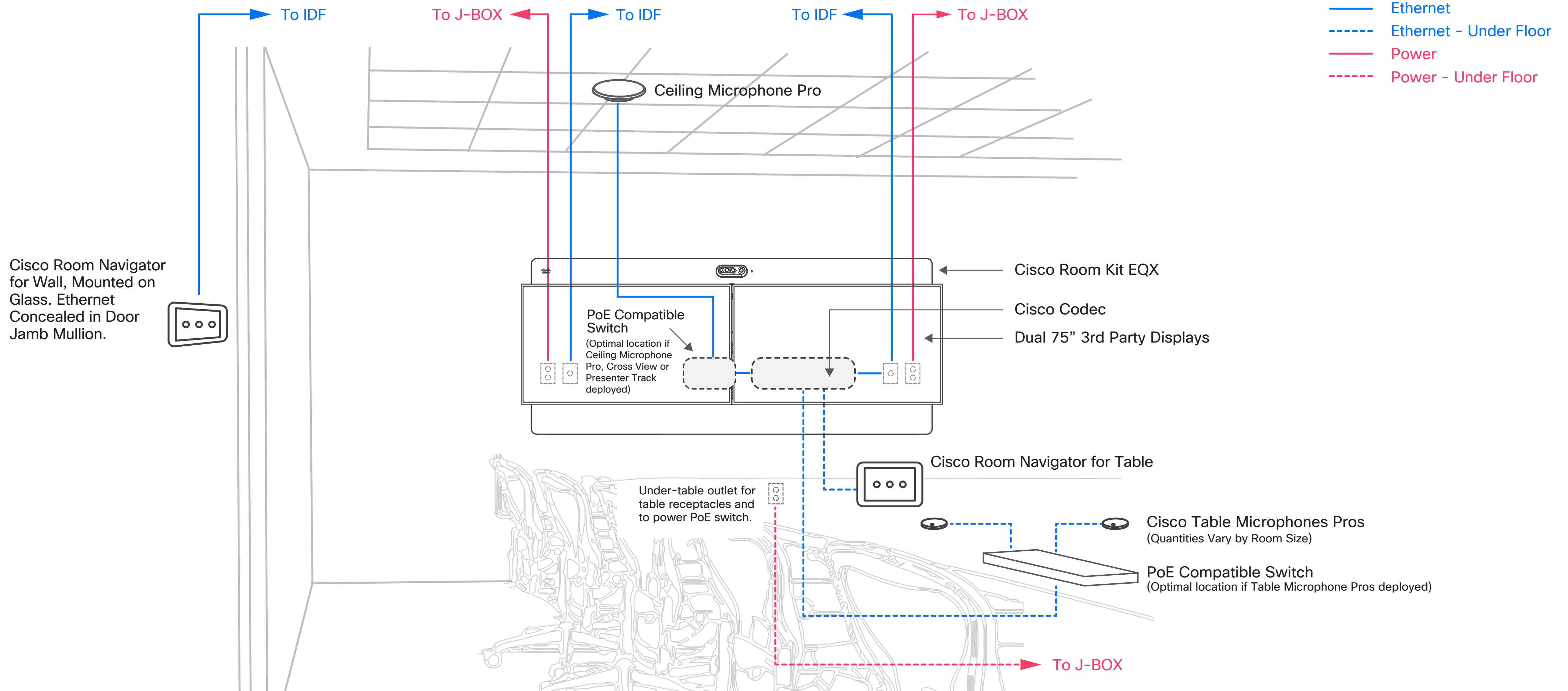
Required when the device is wall-mounted. The size and composition of blocking materials should be determined based on the overall weight of the solution deployed.

Core Drilling

Preferred method for providing connectivity between the table and the Cisco Room Kit EQ for the Cisco Room Navigator for Table, Cisco Table Microphone Pro and/or A/V cables. If core drilling is not an option, a floor cable cover or wire concealer can be used.



Connectivity View



IT/OT Bill of Material

Cisco Products

Cisco Room Kit EQX Option:

- **CS-KIT-EQZX-C-K9.** Cisco Room Kit EQX, Carbon Black
- **CS-KIT-EQX-WMK-C** Cisco Room Kit EQX Wall Mount Carbon Black (optional)
- **CS-KIT-EQX-WSK-C** Cisco Room Kit EQX Wall Stand Carbon Black (optional)
- **CS-KIT-EQX-FSK-C** Cisco Room Kit EQX Floor Stand Carbon Black (optional)
- **CS-MIC-ARRAY-T** Cisco Table Microphone Pro
- **CS-MIC-CLGPRO** Cisco Ceiling Microphone Pro, Arctic White
- **C1200-8FP-2G** Cisco Catalyst 1200 Series PoE Switch (or equivalent)
- **CS-T10-WM-K9=** Cisco Room Navigator for Wall
- **CS-BRD75P-K9** Cisco Board Pro 75 (optional)
- CS-CAM-PTZ4K Cisco 4K PTZ Camera for Presenter Track (optional)
- CS-QUADCAM Cisco Quad Cameras for Cross View (optional)

Non-Cisco peripherals

- Dual 75” or 85” Video Displays

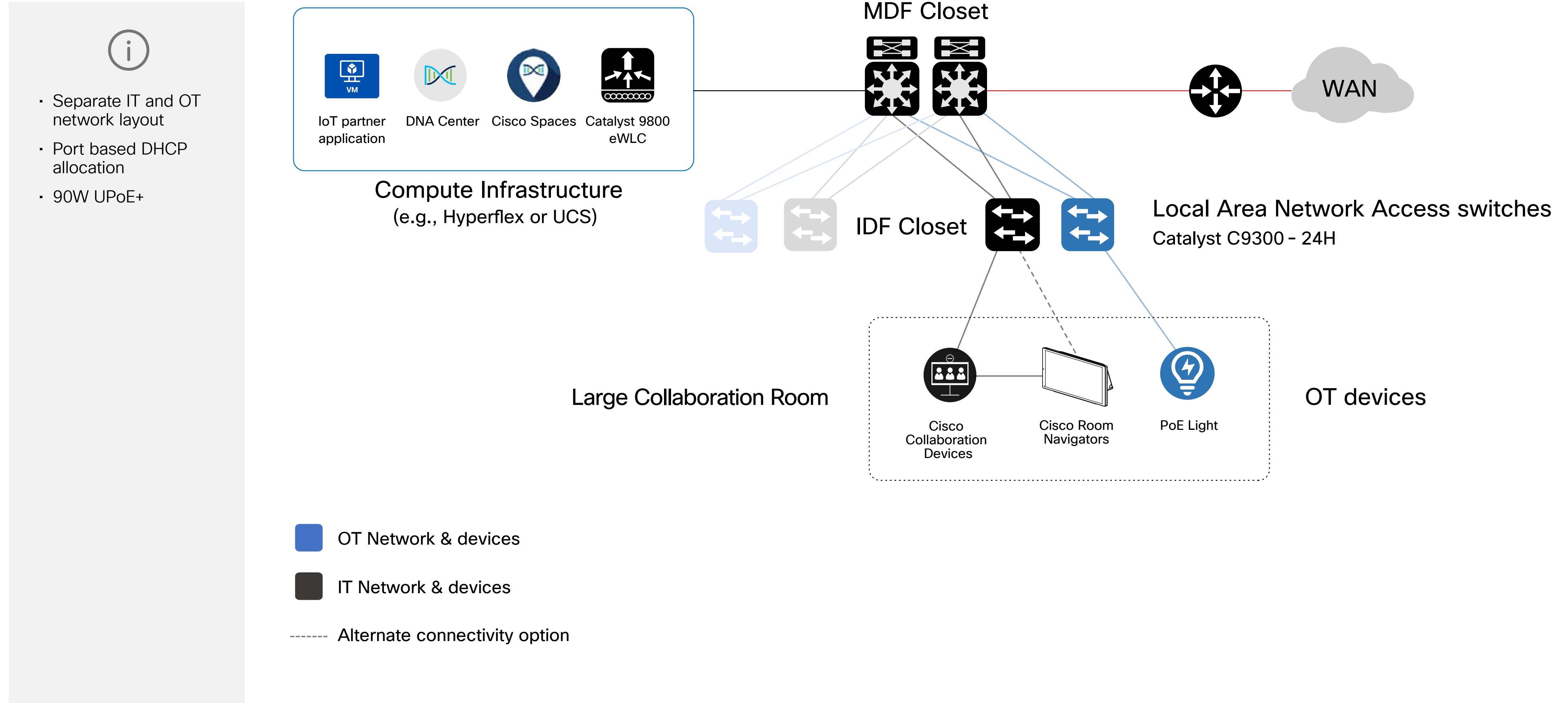
IOT Devices

- IAQ coming from the Cisco Room Navigator, No additional IoT IAQ
- Occupancy sensing is coming from the Cisco Endpoints
- Suggested lighting specifications: 220LPW raw, 140LPW delivered
- Each Medium Collaboration room POE lights being power by 4 ports on the ceiling
- Traditional DC Wall Switch
- Ensure device is not connected to ASHRAE 90.1 outlet

External microphones and speakers

- Table or ceiling microphones are required for the Cisco Room Kit EQX installation. Third-party speakers are not typically required in a space of this size unless environmental conditions warrant their use.

IT/OT Reference Architectures



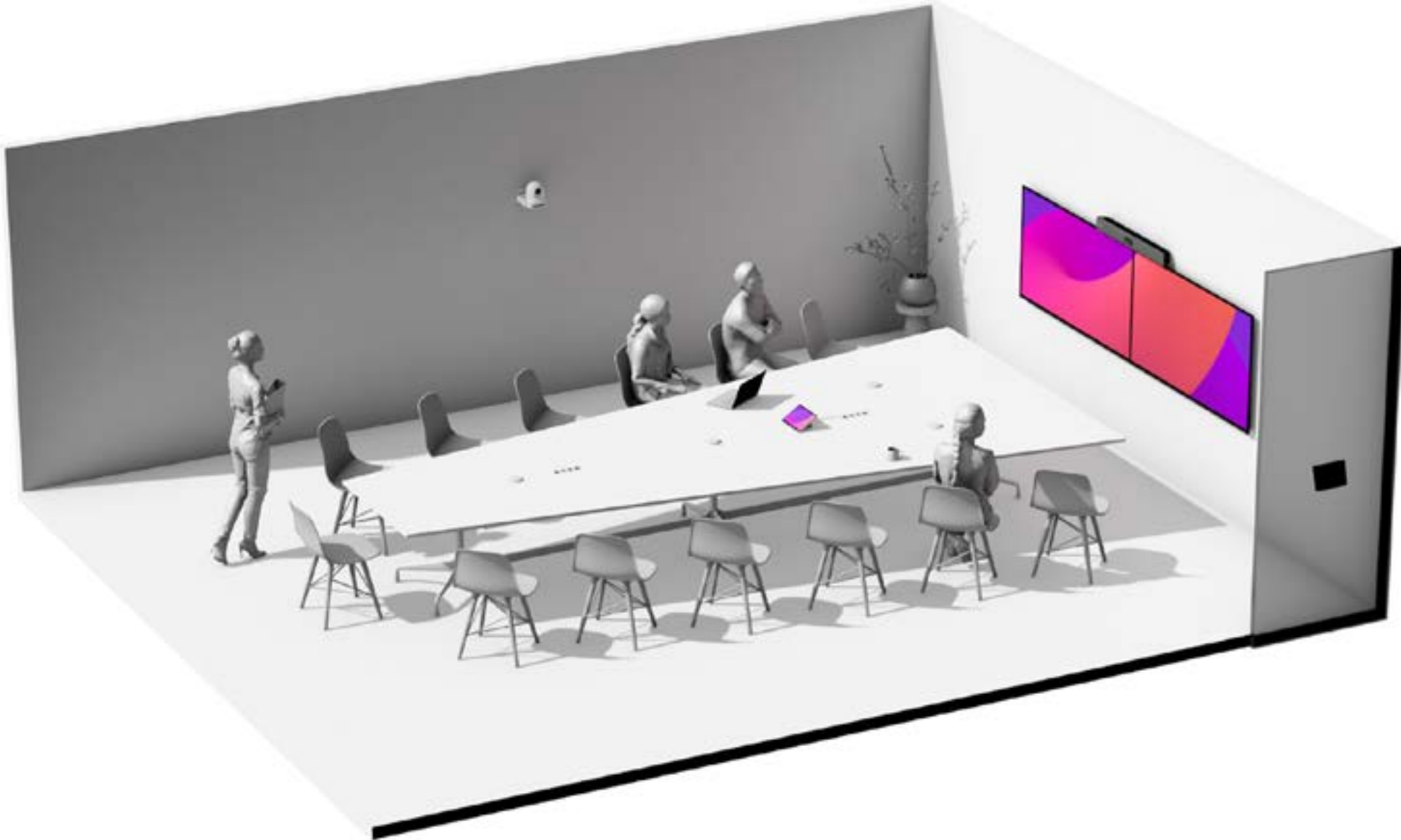
Cross View



As specified in this design document, Cisco's new Cinematic feature called Cross View can be added to this room.

With cross-view, remote participants will see the best view of the people in the room from different angles through two additional PTZ cameras mounted on both side walls. The Cross View Room Preparations Guideline document provides specific room design considerations for this capability.

Cross View Room
Preparations Guidelines



Commissioning-User Acceptance Testing (UAT) Criteria

OT/Space Testing

- Verify manual adjustment of lights, shades and environmental controls are operational from wall controls.
- Confirm lighting occupancy sensor is functional.
- Check any tabletop power and data functionality.
- Verify any smart buildings integrations are working properly.

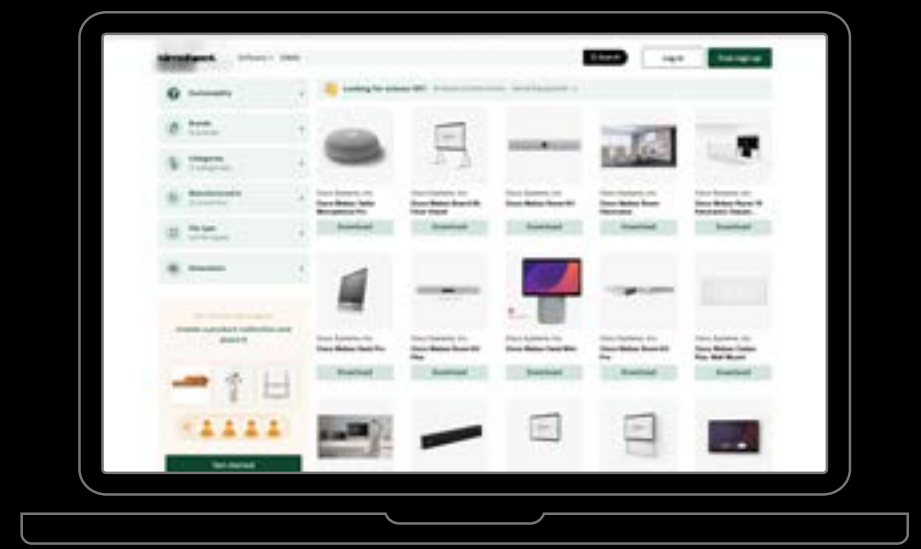
IT Testing

- Internet connectivity of Cisco Collaboration device.
- Initiate test calls on video endpoint (via Room Navigator, Webex app and voice controls).
- Validate environmental metrics are being displayed on collaboration device and Room Navigator.
- Confirm help videos are loaded.
- Confirm that Room Navigator for Wall is powered and that booking function is working properly. Check that booking function is also available within the room via the Room Navigator for Table.
- Verify the Cisco Smart Workspaces display is showing proper presence status.



Design Files

Design files (Revit, AutoCAD, Sketch up, Rhino3D, etc.) for Cisco's collaboration devices, network switches, wireless access points and Meraki security cameras can be found at www.bimobjects.com, search "Cisco."



Resources

Guide: Best Practices for Creating Effective Video-enabled Rooms

Cisco Room Bar Pro Data Sheet

Cisco Room Kit EQX Data Sheet

Cisco Room Kit EQX Room Preparations Guide

Cisco Room Kit EQX Installation Guide

Cross View Room Preparations Guidelines

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The intent of this document is to highlight the details, components and partners used in the creation of a Large Collaboration Room. Any reference herein to any specific commercial products or service does not necessarily constitute or imply its endorsement or recommendation.

