Multimedia spaces, equipment, and control design shall be approved through the UCF Office of Instructional Resources (OIR). Refer to the OIR website for additional Standards and equipment specification information related to OIR items.

OFFICE OF INSTRUCTIONAL RESOURCES STANDARDS

1. **Infrastructure/Installation for Vertical walls:**
    a) In-wall boxes are the preferred basis of design for all AV support installations. Boxes shall be mounted 60" AFF to middle of in-wall box for most typical AV TV installations (E.g. classrooms, conference room, study rooms), unless otherwise specified by owner. In-wall boxes shall be owner provided and contractor installed including power and data infrastructure.
    b) In wall boxes shall be mounted at 72" to the middle of the in-wall box for "digital signage" TVs. In-wall boxes shall be owner provided and contractor installed including power and data infrastructure.
    c) In wall boxes shall be mounted 20" AFF to the center of the in wall box for AV cabinets. Location of in wall boxes shall be determined by UCF-OIR. In-wall boxes shall be owner provided and contractor installed including power and data infrastructure (see AV Cabinet Infrastructure cut sheet for detail).
    d) Placement of wall mounted equipment shall be coordinated with head room and ADA projection limitations.
    e) TV/Monitor mounts shall be owner provided and contractor installed. Installation height of mounts shall be 73" AFF to center of mount centered on in-wall box for typical AV installations (E.g. classrooms, conference room, study rooms) and 4" to center of mount above and centered on the top flange of the Chief in-wall box unless otherwise specified by owner. For side of in-wall box mounting hardware for TVs/Monitors that weigh 120-lbs or more (E.g. Chief LTM1U), the mounts shall be installed on the sides of the Chief in-wall box symmetrically into the blocking and/or metal/wood beams sufficient to support the required weight. Contractor shall provide and install the required backing/blocking to install the mount on per applicable code.
    f) If not using a chief in wall box, where at all possible, connections for TV/IT/PWR and similar wall mounted connections shall be installed recessed in a manner that allows them to be hidden behind the AV component when mounted.
    g) Touch screens panels for room lighting and AV (Audio Visual) controls shall be provided in an ADA accessible manner at the AV cabinet. They may be desktop or wall mounted and shall be coordinated with the teaching lectern as needed. Power and data infrastructure are to be contractor provided. Touch screen panels are owner provided and installed.
    h) Wall mounted speakers shall be owner provided and contractor installed including power and data infrastructure. Contractor shall install a single gang in wall box with a conduit stub out above ceiling (OIR to specify conduit size). Contractor shall install all speaker mounts and speakers. Locations of each shall be specified by OIR.

2. **Infrastructure/Installation for above ceiling and ceiling hardware:**
    a) In wall boxes shall be mounted 20" AFF to the center of the in wall box for AV cabinets. Location of in wall boxes shall be determined by UCF-OIR. In-wall boxes shall be owner provided and contractor installed including power and data infrastructure (see AV Cabinet Infrastructure cut sheet for detail).

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b) Room lighting controllers shall be installed approximately 1' to the outside edge of the projection screen motor above the ceiling (typically to the left if facing the screen). In rooms without motorized screens room lighting controls shall be located by the primary room entrance door above ceiling (OIR to clarify). Power and data infrastructure are to be contractor provided. A local disconnect switch shall be provided by the contractor at the last connection before the controller to facilitate maintenance, as well as a knockout hole and grommet for low voltage wire access to the lighting controller. Room lighting controllers are owner provided and contractor installed.

c) Recessed motorized projection screens are the preferred design basis for drop ceiling installations. Preferred recessed screens are low voltage, quiet motor type. A minimum of 8" of full clearance above the drop ceiling grid is required for all installations, this includes MEP installed components. Alternative mounting arrangements and supporting soffits may be needed for open ceilings and where the screens projects below the drop ceiling due to insufficient clearance overhead. All soffit installations must allow for future screen service and replacement without significant demolition and reconstruction. Access hatches and/or conduit with pull string to screen control termination boxes are required at soffit mounted screens to facilitate service access to connections and serviceable parts.

d) Placement of overhead mounting equipment shall be coordinated with head room and ADA projection limitations.

e) All above ceiling mounting equipment shall be contractor installed unless otherwise noted in the design including adequate anchor safety wires with at least 1 per speaker and 4 per projector pan.

f) Projector mounting equipment and pans shall be designed and installed substantially centered on the actual projection screen surface. Placement of the screen must take into account projection distances and room layout to ensure adequate visibility to the audience, and projectors and screens must be coordinated with fire sprinkler heads for proper coverage (I.e. corner edges of projector pan must be a minimum of 3-feet from closest sprinkler head). Projectors pans shall be owner provided and contractor installed with two (2) duplex power outlets (side by side) and one (1) data two (2) cable infrastructure installed on projector pan in the punch-out's on the rear of the pan if facing the projection screen.

g) AV J-hooks will be installed 4 to 5 feet apart creating a cable path between all ceiling and ceiling mounted equipment. One (1) J-hook will be installed at all above ceiling and ceiling mounted equipment.

h) All speakers shall be installed taking into consideration the seating orientation of the room and evenly spaced when installed in the ceiling grid (unless otherwise specified by OIR). Ceiling speakers shall be oriented in manner that allows easy access for connections, service and switch setting. Speakers (grid, pendent, other) shall be owner provided and contractor installed to include one (1) primary speaker wire installation for each room.

3. **General Notes:**
   a. All AV floor boxes must have continuous conduit to stub out above ceiling or to TV in-wall box per OIR direction. Floor boxes shall contain one 1" conduit for UCF IT, one 1"

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        conduit for UCF OIR, and one duplex electrical receptacle (unless otherwise specified) with a pull string for each conduit.

b. For HDMI plug in's for in-wall boxes, the contractor shall provide one (1) single gang box and one 1" continuous conduit running from the single gang box to the in-wall box with a pull string.

c. All AV in wall cable must have a conduit or flex path way provided with pull string.

d. All AV conduit installed will adhere to conduit manufacturer's capacity guidelines. One cable may occupy 53 percent of conduits inside area. Two cables may occupy 31 percent of conduits inside area. Three or more cables may occupy 40 percent of conduits inside area. If cable fill is greater than the manufacturer's conduit capacity guidelines, then additional conduit must be installed.

EQUIPMENT/MANUFACTURER ADDENDUM

Equipment:	Preferred Manufacturer/Model:
In-wall boxes	Chief/PAC526FCW
Motorized Recessed Projection Screens	
- 8' Screen	Draper/ 139039QU
- 10' Screen	Draper/ 139041QU
- 12' Screen	Draper/ 116370QU
Lighting Controllers	Crestron/ GLPAC-DIMFLV8-PM-CP
4K Projectors	Epson/
2'x2' Speakers	JBL/ LCT81C/T
Touch Panel	Crestron/TSW-1060-B-S
Room Scheduler	Crestron/TSW-760-B-S