



## **ADDENDUM NO. 4**

**OCTOBER 8, 2012**

Re: HACC, Central Pennsylvania's Community College  
RFB13-06 Audio Visual Installations at the Harrisburg, Lancaster, Lancaster Campuses

From: HACC, Central Pennsylvania's Community College  
Garry Crider, Procurement Services Manager  
One HACC Drive  
Harrisburg, PA 17110

To: All Bidders

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This Addendum is hereby made part of the Request for Bid No. RFB13-06 dated September 24, 2012. The provisions of this Addendum are intended to supplement the provisions and scope of work and/or supersede them where contradictory thereto.

## MODIFICATIONS

All locations: As specified, low voltage cabling shall be wrapped in cloth snakeskin cover. However the power cable coming from instructor table (power strip) to the wall should be run along the exterior of the snakeskin but attached with a heavy duty black wire ties.

All locations: The serial cable running from the MCL controller to the projector shall be supplied by the vendor and shall be 2 conductor, 22 gauge (minimum), shielded cable.

All locations: As requested, there can be secure areas designated for storage for vendors' material. However, as specified, HACC accepts no responsibility for lost or stolen property.

All locations: Page 7, #21; any user manuals and/or un-used materials should be given to the AV representatives at the respective locations:

Robert Dudley (Harrisburg, Exhibit A)

Lori Swoyer (Lebanon, Exhibit B)

Jason Stetler (Lancaster, Exhibit C)

Considering HACC Security coverage at each of the three campuses and Midtown 2, it is anticipated that the Lancaster Campus project (Exhibit C) will be begin first; sometime mid to late November. When completed, the Harrisburg Campus project (Exhibit A) will begin second; sometime mid to late December and extend through the College holiday break and into January. When completed, the Lebanon Campus project (Exhibit B) will begin last in January. However, the overall schedule based on class schedules, vendor work schedules and other various factors and is subject to continuous revision. Each exhibit shall be invoiced and paid upon successful completion.

Daily campus availability guidelines:

Lebanon: Monday – Thursday; 7:30am-9pm  
Friday; 7:30am-4pm

Lancaster: Monday – Thursday; 7:30am-9pm  
Friday; 7:30am-4pm  
Saturday; 7:30am-11am

Harrisburg (Wildwood): Each day the College is not closed; 7:30am-??  
(24/7 Security coverage, but Campus access will be as per the discretion of the Safety and Security Office)

Harrisburg (Midtown 2): Monday – Thursday; 7:30am-9pm  
Friday; 7:30am-4pm

Harrisburg: As specified, trash should be removed from work areas daily. There dumpsters behind Stabler Hall where all trash and cardboard can be discarded. Boxes should be broken down. At Midtown 2, there is an area on the loading dock where cardboard can be discarded if it not too excessive. Otherwise vendors are requested to discard the trash and cardboard off site or bring it to Stabler Hall.

Official notification to the winning bidder will not be given until the POs are issued after November 6, 2012

Lebanon: As specified, please use existing, reusable cable runs, (most are front wall, corner). Do not relocate cable to side wall in those front-wall locations. MLC controller is ok to on front wall corner as well in those same locations.

All final questions related to this bid shall be submitted no later than 7am Wednesday October 10, 2012. Answers shall be provided to all vendors no later than 12pm Wednesday October 10, 2012.

**REVISED SCOPE OF WORK**  
**LANCASTER CAMPUS ONLY – AV**  
**INSTALLATION SERVICES**  
**CAPITAL 2013**

**(Exhibit C)**

**The following specifications will replace the Lancaster portion in it's entirety of the original bid (pages 70-106)**

Wherever possible please relocate existing, reusable cable runs and/or locate new cable runs to side wall near instructor table. Wherever possible please also locate new MLC controller on side wall. Front wall near corner is acceptable but only if side walls are impossible to use or impractical. Please verify each location with Jason Stetler prior in advance.

East Room 330 may be used as sample reference to a Projection Classroom for Lancaster, except for the wall plate. **The wall plate specified on this revised specification are to be used.**

Power cable shall be located on the exterior of the snakeskin but attached with a heavy duty black wire ties.

Any Anchor desktop powered speakers that are currently being used as well as any connection cables in any of the rooms to be upgraded, shall be disconnected and returned to Jason Stetler, room 215 East Building, IT Technician at Lancaster Campus as each room is completed.

## New Projection Classrooms – Lancaster Campus

### Location #1 Main 309

This room is a general classroom. The wall is drywall, and surface mount raceway may not be used. However cables should still be hidden as much as possible. Cloth “snakeskin” shall be used for exposed cables between wall plate and instructor station – there is no separate equipment rack. The instructor station is just furniture with a CPU holder and a VCR mount underneath.

The wall screen is a 96” x 96” screen (see diagram). The audio speakers are to be ceiling mounted spaced for best sound. The instructor station will be located in the front of the room along the outside wall. There is a full drop ceiling (9’6” high).

Use outside wall for the cable pathway.

The following equipment either already exists in the room or is being purchased separately and supplied by HACC will be the following:

<b>Item</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Quantity</b>
Data Projector	Panasonic	PT-FW430U	1
Speakers	Tannoy	CVS6	2
Instructor Station (42”)	Versa	CTL-4824-GM	1
96” x 96” Wall Screen	DaLite	Model C	1
Wall Screen Brackets	DaLite	Number 6	1 Pair
Projector Mount	Chief	RPA-191	1
DVD/VHS VCR	Toshiba	SD-V296	1
Power strip for instructor station	TrippLite	6SPDX-15	1
VCR Bracket	Peerless	SVPM-25J	1
Wireless Keyboard and Mouse Suite	Gyration	GYM1100CKN	1
PC and Desktop VGA Monitor	Lanovo	ThinkCentre	1
MLC 104 IP Plus Controller	Extron	60-818-02	1
P/2 DA2xi VGA Distribution amp	Extron	60-506-03	1
Mini Amp	Kramer	900XL	1

The following specific equipment will be supplied by the **vendor**:

<b>Item</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Quantity</b>
2-gang wall plate	Custom Made	??	1
Plenum electric box for ceiling plate	Peerless	PB-1	1
Suspended projector ceiling plate	Peerless	CMJ500	1

Installation shall include:

1. Mounting data projector including mounting hardware. Please setup projector for 4:3 1024x768. The image should fill the screen at the current distance. However the hope is in the future, the projector and screen placement should be already such that the image could be wide format and would fill the screen. Set projector for closed captioning 'off'.
2. Mount Peerless VCR bracket under table and install VCR. Lancaster IT Staff will provide VCR
3. Cables needed to connect the equipment at the instructor station to the data projector including:

VGA {HD 15 (m to m)} from PC to Extron P/2 DA2xi  
VGA {HD 15 (m to m)} from Extron P/2 DA2xi to 2-gang wall plate ('VGA 1')  
VGA {HD 15 (m to m)} from Extron P/2 DA2xi to VGA monitor  
PC audio out {3.5mm (m to m) stereo} from PC to 2-gang wall plate  
Composite video {RCA (m to m)} from DVD/VHS combo ('Video Out') to 2-gang wall plate ('Video in')  
RCA {2-RCA (m to m)} from DVD/VHS combo ('Video Out') to 2-gang wall plate (audio input)  
3.5mm (m to m) from data projector ("Audio Out") to Kramer 900XL amp  
5mm captive screw connectors from Kramer 900XL amp to ceiling speakers

4. All cables in cloth wrap shall run from outside wall side of instructor table to 2-gang wall plate.
5. Custom 2-gang wall plate including the following:

VGA 1 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m) to from wall plate (inside) to data projector ("Computer 1 in")  
VGA 2 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m)} from wall plate (inside) to data projector ("Computer 2 in")  
RCA {R and L RCA (f to f) feed-thru} Connect RCA {R and L (m)} from wall plate (inside) to RCA {R and L (m)} - data projector ("Video <audio> in")  
Composite video {RCA (f to f) feed-thru} Connect RCA (m to m) from wall plate (inside) to data projector ("Video in")  
3.5mm {with VGA 1 (f) stereo to rear solder or feed thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 1 in")  
3.5mm {with VGA 2 (f) stereo to rear solder or feed-thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 2 in")  
Serial cable from wall plate (inside; for future connection) to data projector ("Serial") (Leave 4' coiled service loop for future Smart Classroom conversion).  
Speaker wire from wall plate (inside; for future speakon connection) to above drop ceiling (leave 15' – 20' service loop to connect to first speaker - future Smart Classroom conversion).  
Cat 5e from wall plate (inside; for future connection) to data projector (leave 4' coiled service loop for future Smart Classroom conversion).

The computer and video cables will run directly from the instructor station to 2-gang wall plate, through wall cavity and terminate at the data projector. The speaker wire will run from the Kramer 900XL amp to the speakers.

Run cables for future Smart Classroom conversion. If there is no room for termination inside box or wall cavity, cables shall run un-terminated from tight coil inside wall cavity to projector. Leave 4' service loop at projector.

6. Mount audio speakers in ceiling tile and connect from amp. No less than 16-gauge speaker cable to be used
7. Wall screen is already in place. Provide and tie heavy string to screen handle so that user can reach from the floor when screen is retracted.
8. Mount Extron MLC 104 directly above 2-gang A/V wall plate.
9. Connect MLC 104 Power Supply (pickup AC near projector) to 12V+ and Ground on MLC 104 unit. Connect 'DISPLAY/RS-232/IR' from MLC 104 to data projector serial in. Connect 'MLS RS-232' from MLC 104 to Kramer 900XL. \*\*
10. Verify programming for all buttons, Power OFF/ON and volume control. HACC will provide programmed controller.
11. Connect cat5e cable in the ceiling (provided by HACC Lancaster IT Staff in a 10' coil) coming from data closet to Extron MLC 104 inside wall or wall box.
12. Install and Connect cat5e cable between PC and data wall plate \* All cables in cloth wrap shall run from student side of instructor table under-side to data wall plate.  
Note: Vendor shall fit all A/V cables and data cables into a single cloth wrap if possible.

\* HACC will provide short Blue Cat5e cables

\*\* Cable shall be 2 conductor, 22 gauge (minimum), shielded cable.

## **Location #2 Main 316**

This room is a general classroom. The wall is drywall, and surface mount raceway may not be used. However cables should still be hidden as much as possible. Cloth "snakeskin" shall be used for exposed cables between wall plate and instructor station – there is no separate equipment rack. The instructor station is just furniture with a CPU holder and a VCR mount underneath.

The wall screen is a 96" x 96" screen (see diagram). The audio speakers are to be ceiling mounted spaced for best sound. The instructor station will be located in the front of the room along the outside wall. There is a full drop ceiling (9'6" high).

Use pole enclosure for cable pathway

The following equipment either already exists in the room or is being purchased separately and supplied by HACC will be the following:

Item	Manufacturer	Model	Quantity
Data Projector	Panasonic	PT-FW430U	1
Speakers	Tannoy	CVS6	2
Instructor Station (42")	Versa	CTL-3024-GM	1
96" x 96" Wall Screen	DaLite	Model C	1
Wall Screen Brackets	DaLite	Number 6	1 Pair
Projector Mount	Chief	RPA-191	1
DVD/VHS VCR	Toshiba	SD-V296	1
Power strip for instructor station	TrippLite	6SPDX-15	1
VCR Mount	Peerless	SVPM-25J	1
Wireless Keyboard and Mouse Suite	Gyration	GYM1100CKN	1
PC and Desktop VGA Monitor	Lanovo	ThinkCentre	1
MLC 104 IP Plus Controller	Extron	60-818-02	1
P/2 DA2xi VGA Distribution amp	Extron	60-506-03	1
Mini Amp	Kramer	900XL	1

The following **specific** equipment will be supplied by the **vendor**:

Item	Manufacturer	Model	Quantity
2-gang wall plate	Custom Made	??	1
Plenum electric box for ceiling plate	Peerless	PB-1	1
Suspended projector ceiling plate	Peerless	CMJ500	1

Installation shall include:

1. Mounting data projector including mounting hardware. Please setup projector for 4:3 1024x768. The image should fill the screen at the current distance. However the hope is in the future, the projector and screen placement should be already such that the image could be wide format and would fill the screen. Set projector for closed captioning 'off'.
2. Mount Peerless VCR bracket under table and install VCR. Lancaster IT Staff will provide VCR
3. Cables needed to connect the equipment at the instructor station to the data projector including:

VGA {HD 15 (m to m)} from PC to Extron P/2 DA2xi  
VGA {HD 15 (m to m)} from Extron P/2 DA2xi to 2-gang wall plate ('VGA 1')  
VGA {HD 15 (m to m)} from Extron P/2 DA2xi to VGA monitor  
PC audio out {3.5mm (m to m) stereo} from PC to 2-gang wall plate  
Composite video {RCA (m to m)} from DVD/VHS combo ('Video Out') to 2-gang wall plate ('Video in')

RCA {2-RCA (m to m)} from DVD/VHS combo ('Video Out') to 2-gang wall plate (audio input)  
3.5mm (m to m) from data projector ("Audio Out") to Kramer 900XL amp  
5mm captive screw connectors from Kramer 900XL amp to ceiling speakers

4. All cables in cloth wrap shall run from outside wall side of instructor table to 2-gang wall plate.
5. Custom 2-gang wall plate including the following:

VGA 1 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m) to from wall plate (inside) to data projector ("Computer 1 in")

VGA 2 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m)} from wall plate (inside) to data projector ("Computer 2 in")

RCA {R and L RCA (f to f) feed-thru} Connect RCA {R and L (m)} from wall plate (inside) to RCA {R and L (m)} - data projector ("Video <audio> in")

Composite video {RCA (f to f) feed-thru} Connect RCA (m to m) from wall plate (inside) to data projector ("Video in")

3.5mm {with VGA 1 (f) stereo to rear solder or feed thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 1 in")

3.5mm {with VGA 2 (f) stereo to rear solder or feed-thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 2 in")

Serial cable from wall plate (inside; for future connection) to data projector ("Serial") (Leave 4' coiled service loop for future Smart Classroom conversion).

Speaker wire from wall plate (inside; for future speakon connection) to above drop ceiling (leave 15' – 20' service loop to connect to first speaker - future Smart Classroom conversion).

Cat 5e from wall plate (inside; for future connection) to data projector (leave 4' coiled service loop for future Smart Classroom conversion).

The computer and video cables will run directly from the instructor station to 2-gang wall plate, through wall cavity and terminate at the data projector. The speaker wire will run from the Kramer 900XL amp to the speakers.

Run cables for future Smart Classroom conversion. If there is no room for termination inside box or wall cavity, cables shall run un-terminated from tight coil inside wall cavity to projector. Leave 4' service loop at projector.

6. Mount audio speakers in ceiling tile and connect from amp. No less than 16-gauge speaker cable to be used
7. Wall screen is already in place. Provide and tie heavy string to screen handle so that user can reach from the floor when screen is retracted.
8. Mount Extron MLC 104 directly above 2-gang A/V wall plate.
9. Connect MLC 104 Power Supply (pickup AC near projector) to 12V+ and Ground on MLC 104 unit. Connect 'DISPLAY/RS-232/IR' from MLC 104 to data projector serial in. Connect 'MLS RS-232' from MLC 104 to Kramer 900XL. \*\*
10. Verify programming for all buttons, Power OFF/ON and volume control. HACC will programmed controller.
11. Connect cat5e cable in the ceiling (provided by HACC Lancaster IT Staff in a 10' coil) coming from data closet to Extron MLC 104 inside wall or wall box.

12. Install and Connect cat5e cable between PC and data wall plate \* All cables in cloth wrap shall run from student side of instructor table under-side to data wall plate.  
 Note: Vendor shall fit all A/V cables and data cables into a single cloth wrap if possible.

\* HACC will provide short Blue Cat5e cables

\*\* Cable shall be 2 conductor, 22 gauge (minimum), shielded cable.

## **Projection Classroom Upgrades – Lancaster Campus**

### **Location #3 East Room 308**

This room is a general classroom. The wall is drywall, and surface mount raceway may not be used. However cables should still be hidden as much as possible. Cloth “snakeskin” shall be used for exposed cables between wall plate and instructor station – there is no separate equipment rack. The instructor station is just furniture with a CPU holder and a VCR mount underneath.

The wall screen is a 96” x 96” screen (see diagram). The audio speakers are to be ceiling mounted spaced for best sound. The instructor station will be located in the front of the room along the outside wall. There is a full drop ceiling (9’6” high).

The following equipment either already exists in the room or is being purchased separately and supplied by HACC will be the following:

<b>Item</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Quantity</b>
Data Projector	Panasonic	PT-FW430U	1
Speakers	Tannoy	CVS6	2
Instructor Station (42”)	Smith System	Acrobat	1
96” x 96” Wall Screen	DaLite	Model C	1
Wall Screen Brackets	DaLite	Number 6	1 Pair
Projector Mount	Chief	RPA-191	1
DVD/VHS VCR	Zenith	XBV443	1
Power strip for instructor station	TrippLite	6SPDX-15	1
Wireless Keyboard and Mouse Suite	Gyration	GYM1100CKN	1
VCR Mount	Peerless	SVPM-25J	1
PC and Desktop VGA Monitor	Lanovo	ThinkCentre	1
MLC 104 IP Plus Controller	Extron	60-818-02	1
P/2 DA2 Plus VGA Distribution amp	Extron	60-046-03	1
Suspended projector ceiling plate *	Peerless ??	CMJ500 ??	1
Mini Amp	Kramer	900XL	1

\* Ceiling cloud is already in place. Can Peerless PB-1 be used with a non-Peerless 2’ x 2’ cloud?

The following **specific** equipment will be supplied by the **vendor**:

Item	Manufacturer	Model	Quantity
2-gang wall plate	Custom Made	??	1
Plenum electric box for ceiling plate	Peerless	PB-1	1

Installation shall include:

1. Remove existing projector and replace with new data projector including mounting hardware. Please setup projector for 4:3 1024x768. The image should fill the screen at the current distance. However the hope is in the future, the projector and screen placement should be already such that the image could be wide format and would fill the screen. Set projector for closed captioning 'off'. Ceiling cloud is already in place
2. Mount Peerless VCR bracket under table. Disconnect VCR from top of table and install VCR in mount.
3. Cables needed to connect the equipment at the instructor station to the data projector including:

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to 2-gang wall plate ('VGA 1')

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to VGA monitor (ALREADY EXISTS)

PC audio out {3.5mm (m to m) stereo} from PC to 2-gang wall plate

Composite video {RCA (m to m)} from DVD/VHS combo ('Video Out') to 2-gang wall plate ('Video in')

RCA {2-RCA (m to m)} from DVD/VHS combo ('Video Out') to 2-gang wall plate (audio input)

3.5mm (m to m) from data projector ("Audio Out") to Kramer 900XL amp

5mm captive screw connectors from Kramer 900XL amp to ceiling speakers

4. All cables in cloth wrap shall run from outside wall side of instructor table to 2-gang wall plate.
5. Custom 2-gang wall plate including the following:

VGA 1 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m) to from wall plate (inside) to data projector ("Computer 1 in") (ALREADY EXISTS) \*

VGA 2 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m)} from wall plate (inside) to data projector ("Computer 2 in") (ALREADY EXISTS) \*

RCA {R and L RCA (f to f) feed-thru} Connect RCA {R and L (m)} from wall plate (inside) to RCA {R and L (m)} - data projector ("Video <audio> in") (ALREADY EXISTS)

Composite video {RCA (f to f) feed-thru} Connect RCA (m to m) from wall plate (inside) to data projector ("Video in") (ALREADY EXISTS) \*\*

3.5mm {with VGA 1 (f) stereo to rear solder or feed thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 1 in")

3.5mm { with VGA 2 (f) stereo to rear solder or feed-thru } Connect rear solder or feed thru to 3.5mm (m) stereo - data projector (“Audio 2 in”)  
Serial cable from wall plate (inside; for future connection) to data projector (“Serial”) (Leave 4’ coiled service loop for future Smart Classroom conversion).  
Speaker wire from wall plate (inside; for future speakon connection) to above drop ceiling (leave 15’ – 20’ service loop to connect to first speaker - future Smart Classroom conversion).  
Cat 5e from wall plate (inside; for future connection) to data projector (leave 4’ coiled service loop for future Smart Classroom conversion).

\* VGA cables already exist and run from the P/2 DA2 Plus through the wall to the projector. If the cable is already terminated and usable, then simply pull it back to re-use it and coil excess above the ceiling as a service loop. If the cable is terminated and/or not re-usable, then please remove and discard and provide new cable through wall or conduit.

\*\* Composite video cable already exists and runs directly from the VCR through the wall to the projector. If the cable is already terminated and usable, then simply pull it back to re-use it and coil excess above the ceiling as a service loop. If the cable is terminated and/or not re-usable, then please remove and discard and provide new cable through wall or conduit.

The computer and video cables will run directly from the instructor station to 2-gang wall plate, through wall cavity and terminate at the data projector. The speaker wire will run from the Kramer 900XL amp to the speakers.

Run cables for future Smart Classroom conversion. If there is no room for termination inside box, cables shall run un-terminated from tight coil inside wall cavity to projector. Leave 4’ service loop at projector.

6. Mount audio speakers in ceiling tile and connect from amp. No less than 16-gauge speaker cable to be used
7. Wall screen is already in place. Provide and tie heavy string to screen handle so that user can reach from the floor when screen is retracted.
8. Mount Extron MLC 104 directly above 2-gang A/V wall plate.
9. Connect MLC 104 Power Supply (pickup AC near projector) to 12V+ and Ground on MLC 104 unit. Connect ‘DISPLAY/RS-232/IR’ from MLC 104 to data projector serial in. Connect ‘MLS RS-232’ from MLC 104 to Kramer 900XL. \*\*
10. Verify programming for all buttons, Power OFF/ON and volume control. HACC will programmed controller.
11. Connect cat5e cable in the ceiling (provided by HACC Lancaster IT Staff in a 10’ coil) coming from data closet to Extron MLC 104 inside wall or wall box.
12. Install and Connect cat5e cable between PC and data wall plate \* All cables in cloth wrap shall run from student side of instructor table under-side to data wall plate.  
Note: Vendor shall fit all A/V cables and data cables into a single cloth wrap if possible.

\* HACC will provide short Blue Cat5e cables

\*\* Cable shall be 2 conductor, 22 gauge (minimum), shielded cable.

#### **Location #4 East Room 327**

This room is a computer classroom. The wall is drywall, and surface mount raceway may not be used. However cables should still be hidden as much as possible. Cloth “snakeskin” shall be used for exposed cables between wall plate and instructor station – there is no separate equipment rack. The instructor station is just furniture with a CPU holder and a VCR mount underneath.

The wall screen is a 96” x 96” screen (see diagram). The audio speakers are to be ceiling mounted spaced for best sound. The instructor station will be located in the front of the room along the outside wall. There is a full drop ceiling (9’6” high).

There is currently no VCR in this room and none will be added. Please, however, provide AV cabling in the wall to the projector and from the instructor table to the wall plate.

The following equipment either already exists in the room or is being purchased separately and supplied by HACC will be the following:

<b>Item</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Quantity</b>
Data Projector	Panasonic	PT-L785U	1
Speakers	Tannoy	CVS6	4
Instructor Station (42”)	Smith System	Acrobat	1
96” x 96” Wall Screen	DaLite	Model C	1
Wall Screen Brackets	?	?	1 Pair
Projector Mount	Chief	RPA-191	1
Power strip for instructor station	TrippLite	6SPDX-15	1
Wireless Keyboard and Mouse Suite	Gyration	GYM1100CKN	1
PC and Desktop VGA Monitor	Lanovo	ThinkCentre	1
MLC 104 IP Plus Controller	Extron	60-818-02	1
P/2 DA2 Plus VGA Distribution amp	Extron	60-046-03	1
Suspended projector ceiling plate *	Peerless ??	CMJ500 ??	1
Mini Amp	Kramer	900XL	1

\* Ceiling cloud is already in place. Can Peerless PB-1 be used with a non-Peerless 2’ x 2’ cloud?

The following **specific** equipment will be supplied by the **vendor**:

Item	Manufacturer	Model	Quantity
2-gang wall plate	Custom Made	??	1
Plenum electric box for ceiling plate	Peerless	PB-1	1

Installation shall include:

- Existing projector shall remain. Please setup projector for 4:3 1024x768. The image should fill the screen at the current distance. However the hope is in the future, the projector and screen placement should be already such that the image could be wide format and would fill the screen. Set projector for closed captioning 'off'. Ceiling cloud is already in place
- Cables needed to connect the equipment at the instructor station to the data projector including:

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to 2-gang wall plate ('VGA 1')

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to VGA monitor (MAY ALREADY EXIST)

PC audio out {3.5mm (m to m) stereo} from PC to 2-gang wall plate

Composite video {RCA (m to m)} from under table where a future VCR might be mounted (leave 24" coil) to 2-gang wall plate ('Video in')

RCA {2-RCA (m to m)} from under table where a future VCR might be mounted (leave 24" coil) to 2-gang wall plate (audio input)

3.5mm (m to m) from data projector ("Audio Out") to Kramer 900XL amp

5mm captive screw connectors from Kramer 900XL amp to ceiling speakers

- All cables in cloth wrap shall run from outside wall side of instructor table to 2-gang wall plate.
- Custom 2-gang wall plate including the following:

VGA 1 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m) to from wall plate (inside) to data projector ("Computer 1 in") (ALREADY EXISTS) \*

VGA 2 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m)} from wall plate (inside) to data projector ("Computer 2 in") (ALREADY EXISTS) \*

RCA {R and L RCA (f to f) feed-thru} Connect RCA {R and L (m)} from wall plate (inside) to RCA {R and L (m)} - data projector ("Video <audio> in") (MAY ALREADY EXIST)

Composite video {RCA (f to f) feed-thru} Connect RCA (m to m) from wall plate (inside) to data projector ("Video in") (MAY ALREADY EXIST) \*\*

3.5mm {with VGA 1 (f) stereo to rear solder or feed thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 1 in")

3.5mm {with VGA 2 (f) stereo to rear solder or feed-thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 2 in")

Serial cable from wall plate (inside; for future connection) to data projector ("Serial") (Leave 4' coiled service loop for future Smart Classroom conversion).

Speaker wire from wall plate (inside; for future speakon connection) to above drop ceiling (leave 15' – 20' service loop to connect to first speaker - future Smart Classroom conversion).

Cat 5e from wall plate (inside; for future connection) to data projector (leave 4' coiled service loop for future Smart Classroom conversion).

\* One VGA cable already exists and runs from the P/2 DA2 Plus through the wall to the projector. If the cable is already terminated and usable, then simply pull it back to re-use it and coil excess above the ceiling as a service loop. If the cable is terminated and/or not re-usable, then please remove and discard and provide new cable through wall or conduit.

\*\* Composite video cable MAY already exist and runs directly from the instructor desk through the wall to the projector. If the cable is already terminated and usable, then simply pull it back to re-use it and coil excess above the ceiling as a service loop. If the cable is terminated and/or not re-usable, then please remove and discard and provide new cable through wall or conduit.

The computer and video cables will run directly from the instructor station to 2-gang wall plate, through wall cavity and terminate at the data projector. The speaker wire will run from the Kramer 900XL amp to the speakers.

Run cables for future Smart Classroom conversion. If there is no room for termination inside box, cables shall run un-terminated from tight coil inside wall cavity to projector. Leave 4' service loop at projector.

5. Mount audio speakers in ceiling tile and connect from amp. No less than 16-gauge speaker cable to be used
6. Wall screen is already in place. Provide and tie heavy string to screen handle so that user can reach from the floor when screen is retracted.
7. Mount Extron MLC 104 directly above 2-gang A/V wall plate (use same raceway if possible).
8. Connect MLC 104 Power Supply (pickup AC near projector) to 12V+ and Ground on MLC 104 unit. Connect 'DISPLAY/RS-232/IR' from MLC 104 to data projector serial in. Connect 'MLS RS-232' from MLC 104 to Kramer 900XL. \*\*
9. Verify programming for all buttons, Power OFF/ON and volume control. HACC will provide programmed controller
10. Connect cat5e cable in the ceiling (provided by HACC Lancaster IT Staff in a 10' coil) coming from data closet to Extron MLC 104 inside wall or wall box.
11. Install and Connect cat5e cable between PC and data wall plate \* All cables in cloth wrap shall run from student side of instructor table under-side to data wall plate.  
Note: Vendor shall fit all A/V cables and data cables into a single cloth wrap if possible.

\* HACC will provide short Blue Cat5e cables

\*\* Cable shall be 2 conductor, 22 gauge (minimum), shielded cable.

## **Location #5 East Room 335**

This room is a computer classroom. The wall is drywall, and surface mount raceway may not be used. However cables should still be hidden as much as possible. Cloth “snakeskin” shall be used for exposed cables between wall plate and instructor station – there is no separate equipment rack. The instructor station is just furniture with a CPU holder and a VCR mount underneath.

The wall screen is a 96” x 96” screen (see diagram). The audio speakers are to be ceiling mounted spaced for best sound. The instructor station will be located in the front of the room along the outside wall. There is a full drop ceiling (9’6” high).

There is currently no VCR in this room and none will be added. Please, however, provide AV cabling in the wall to the projector and from the instructor table to the wall plate.

The following equipment either already exists in the room or is being purchased separately and supplied by HACC will be the following:

<b>Item</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Quantity</b>
Data Projector	Panasonic	PT-F300NT	1
Speakers	Tannoy	CVS6	4
Instructor Station (42”)	Smith System	Acrobat	1
96” x 96” Wall Screen	DaLite	Model C	1
Wall Screen Brackets	?	?	1 Pair
Projector Mount	Chief	RPA-191	1
Power strip for instructor station	TrippLite	6SPDX-15	1
Wireless Keyboard and Mouse Suite	Gyration	GYM1100CKN	1
PC and Desktop VGA Monitor	Lanovo	ThinkCentre	1
MLC 104 IP Plus Controller	Extron	60-818-02	1
P/2 DA2 Plus VGA Distribution amp	Extron	60-046-03	1
Suspended projector ceiling plate *	Peerless ??	CMJ500 ??	1
Mini Amp	Kramer	900XL	1

\* Ceiling cloud is already in place. Can Peerless PB-1 be used with a non-Peerless 2’ x 2’ cloud?

The following **specific** equipment will be supplied by the **vendor**:

<b>Item</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Quantity</b>
2-gang wall plate	Custom Made	??	1
Plenum electric box for ceiling plate	Peerless	PB-1	1

Installation shall include:

1. Existing projector shall remain. Please setup projector for 4:3 1024x768. The image should fill the screen at the current distance. However the hope is in the future, the projector and screen placement should be already such that the image could be wide format and would fill the screen. Set projector for closed captioning 'off'. Ceiling cloud is already in place
2. Cables needed to connect the equipment at the instructor station to the data projector including:

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to 2-gang wall plate ('VGA 1')

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to VGA monitor (MAY ALREADY EXIST)

PC audio out {3.5mm (m to m) stereo} from PC to 2-gang wall plate

Composite video {RCA (m to m)} from under table where a future VCR might be mounted (leave 24" coil) to 2-gang wall plate ('Video in')

RCA {2-RCA (m to m)} from under table where a future VCR might be mounted (leave 24" coil) to 2-gang wall plate (audio input)

3.5mm (m to m) from data projector ("Audio Out") to Kramer 900XL amp

5mm captive screw connectors from Kramer 900XL amp to ceiling speakers

3. All cables in cloth wrap shall run from outside wall side of instructor table to 2-gang wall plate.
4. Custom 2-gang wall plate including the following:

VGA 1 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m) to from wall plate (inside) to data projector ("Computer 1 in") (ALREADY EXISTS) \*

VGA 2 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m)} from wall plate (inside) to data projector ("Computer 2 in") (ALREADY EXISTS) \*

RCA {R and L RCA (f to f) feed-thru} Connect RCA {R and L (m)} from wall plate (inside) to RCA {R and L (m)} - data projector ("Video <audio> in") (MAY ALREADY EXIST)

Composite video {RCA (f to f) feed-thru} Connect RCA (m to m) from wall plate (inside) to data projector ("Video in") (MAY ALREADY EXIST) \*\*

3.5mm {with VGA 1 (f) stereo to rear solder or feed thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 1 in")

3.5mm {with VGA 2 (f) stereo to rear solder or feed-thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 2 in")

Serial cable from wall plate (inside; for future connection) to data projector ("Serial") (Leave 4' coiled service loop for future Smart Classroom conversion).

Speaker wire from wall plate (inside; for future speakon connection) to above drop ceiling (leave 15' - 20' service loop to connect to first speaker - future Smart Classroom conversion).

Cat 5e from wall plate (inside; for future connection) to data projector (leave 4' coiled service loop for future Smart Classroom conversion).

\* One VGA cable already exists and runs from the P/2 DA2 Plus through the wall to the projector. If the cable is already terminated and usable, then simply pull it back to re-use it and coil excess above the ceiling as a service loop. If the cable is terminated

and/or not re-usable, then please remove and discard and provide new cable through wall or conduit.

.  
\*\* Composite video cable MAY already exist and runs directly from the instructor desk through the wall to the projector. If the cable is already terminated and usable, then simply pull it back to re-use it and coil excess above the ceiling as a service loop. If the cable is terminated and/or not re-usable, then please remove and discard and provide new cable through wall or conduit.

The computer and video cables will run directly from the instructor station to 2-gang wall plate, through wall cavity and terminate at the data projector. The speaker wire will run from the Kramer 900XL amp to the speakers.

Run cables for future Smart Classroom conversion. If there is no room for termination inside box, cables shall run un-terminated from tight coil inside wall cavity to projector. Leave 4' service loop at projector.

5. Mount audio speakers in ceiling tile and connect from amp. No less than 16-gauge speaker cable to be used
6. Wall screen is already in place. Provide and tie heavy string to screen handle so that user can reach from the floor when screen is retracted.
7. Mount Extron MLC 104 directly above 2-gang A/V wall plate (use same raceway if possible).
8. Connect MLC 104 Power Supply (pickup AC near projector) to 12V+ and Ground on MLC 104 unit. Connect 'DISPLAY/RS-232/IR' from MLC 104 to data projector serial in. Connect 'MLS RS-232' from MLC 104 to Kramer 900XL. \*\*
9. Verify programming for all buttons, Power OFF/ON and volume control. HACC will provide programmed controller
10. Connect cat5e cable in the ceiling (provided by HACC Lancaster IT Staff in a 10' coil) coming from data closet to Extron MLC 104 inside wall or wall box.
11. Install and Connect cat5e cable between PC and data wall plate \* All cables in cloth wrap shall run from student side of instructor table under-side to data wall plate.  
Note: Vendor shall fit all A/V cables and data cables into a single cloth wrap if possible.

\* HACC will provide short Blue Cat5e cables

\*\* Cable shall be 2 conductor, 22 gauge (minimum), shielded cable.

### **Location #6 East Room 305**

This room is a general classroom. The wall is drywall, and surface mount raceway may not be used. However cables should still be hidden as much as possible. Cloth "snakeskin" shall be used for exposed cables between wall plate and instructor station – there is no separate equipment rack. The instructor station is just furniture with a CPU holder and a VCR mount underneath.

The wall screen is a 96" x 96" screen (see diagram). The audio speakers are to be ceiling mounted spaced for best sound. The instructor station will be located in the front of the room along the outside wall. There is a full drop ceiling (9'6" high).

The following equipment either already exists in the room or is being purchased separately and supplied by HACC will be the following:

<b>Item</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Quantity</b>
Data Projector	Panasonic	PT-FW300NTU	1
Speakers	Tannoy	CVS6	4
Instructor Station (42")	Smith System	Acrobat	1
96" x 96" Wall Screen	DaLite	Model C	1
Wall Screen Brackets	?	?	1 Pair
Projector Mount	Chief	RPA-191	1
VCR mount	Peerless	SVPM-25J	1
DVD/VHS VCR	Zenith	XBV443	1
Power strip for instructor station	TrippLite	6SPDX-15	1
Document Camera **	Samsung	SDP-900DXA	1
Wireless Keyboard and Mouse Suite	Gyration	GYM1100CKN	1
PC and Desktop VGA Monitor	Lanovo	ThinkCentre	1
MLC 104 IP Plus Controller	Extron	60-818-02	1
P/2 DA2 Plus VGA Distribution amp	Extron	60-046-03	1
Suspended projector ceiling plate *	Peerless ??	CMJ500 ??	1
Mini Amp	Kramer	900XL	1

\* Ceiling cloud is already in place. Can Peerless PB-1 be used with a non-Peerless 2' x 2' cloud?

The following **specific** equipment will be supplied by the **vendor**:

<b>Item</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Quantity</b>
2-gang wall plate	Custom Made	??	1
Plenum electric box for ceiling plate	Peerless	PB-1	1

Installation shall include:

1. Existing projector shall remain. Please setup projector for 4:3 1024x768. The image should fill the screen at the current distance. However the hope is in the future, the projector and screen placement should be already such that the image could be wide format and would fill the screen. Set projector for closed captioning 'off'. Ceiling cloud is already in place
2. Mount Peerless VCR bracket under table. Disconnect VCR from top of table and install VCR in mount.
3. Cables needed to connect the equipment at the instructor station to the data projector including:

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to 2-gang wall plate ('VGA 1')

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to VGA monitor  
(ALREADY EXISTS)

PC audio out {3.5mm (m to m) stereo} from PC to 2-gang wall plate

Composite video {RCA (m to m)} from DVD/VHS combo ('Video Out') to 2-gang wall plate ('Video in')

RCA {2-RCA (m to m)} from DVD/VHS combo ('Video Out') to 2-gang wall plate (audio input)

3.5mm (m to m) from data projector ("Audio Out") to Kramer 900XL amp

5mm captive screw connectors from Kramer 900XL amp to ceiling speakers

\*\* Note: There is a document camera in the room that is broken and will be removed.

4. All cables in cloth wrap shall run from outside wall side of instructor table to 2-gang wall plate.
5. Custom 2-gang wall plate including the following:

VGA 1 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m) to from wall plate (inside) to data projector ("Computer 1 in") (ALREADY EXISTS) \*

VGA 2 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m)} from wall plate (inside) to data projector ("Computer 2 in") (ALREADY EXISTS) \*

RCA {R and L RCA (f to f) feed-thru} Connect RCA {R and L (m)} from wall plate (inside) to RCA {R and L (m)} - data projector ("Video <audio> in") (ALREADY EXISTS)

Composite video {RCA (f to f) feed-thru} Connect RCA (m to m) from wall plate (inside) to data projector ("Video in") (ALREADY EXISTS) \*\*

3.5mm {with VGA 1 (f) stereo to rear solder or feed thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 1 in")

3.5mm {with VGA 2 (f) stereo to rear solder or feed-thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 2 in")

Serial cable from wall plate (inside; for future connection) to data projector ("Serial") (Leave 4' coiled service loop for future Smart Classroom conversion).

Speaker wire from wall plate (inside; for future speaker connection) to above drop ceiling (leave 15' – 20' service loop to connect to first speaker - future Smart Classroom conversion).

Cat 5e from wall plate (inside; for future connection) to data projector (leave 4' coiled service loop for future Smart Classroom conversion).

\* One VGA cable already exists and runs from the P/2 DA2 Plus through the wall to the projector. If the cable is already terminated and usable, then simply pull it back to re-use it and coil excess above the ceiling as a service loop. If the cable is terminated and/or not re-usable, then please remove and discard and provide new cable through wall or conduit.

\*\* Composite video cable already exists and runs directly from the VCR through the wall to the projector. If the cable is already terminated and usable, then simply pull it back to re-use it and coil excess above the ceiling as a service loop. If the cable is

terminated and/or not re-usable, then please remove and discard and provide new cable through wall or conduit.

The computer and video cables will run directly from the instructor station to 2-gang wall plate, through wall cavity and terminate at the data projector. The speaker wire will run from the Kramer 900XL amp to the speakers.

Run cables for future Smart Classroom conversion. If there is no room for termination inside box, cables shall run un-terminated from tight coil inside wall cavity to projector. Leave 4' service loop at projector.

6. Mount audio speakers in ceiling tile and connect from amp. No less than 16-gauge speaker cable to be used
7. Wall screen is already in place. Provide and tie heavy string to screen handle so that user can reach from the floor when screen is retracted.
8. Mount Extron MLC 104 directly above 2-gang A/V wall plate (use same raceway if possible).
9. Connect MLC 104 Power Supply (pickup AC near projector) to 12V+ and Ground on MLC 104 unit. Connect 'DISPLAY/RS-232/IR' from MLC 104 to data projector serial in. Connect 'MLS RS-232' from MLC 104 to Kramer 900XL. \*\*
10. Verify programming for all buttons, Power OFF/ON and volume control. HACC will provide programmed controller
11. Connect cat5e cable in the ceiling (provided by HACC Lancaster IT Staff in a 10' coil) coming from data closet to Extron MLC 104 inside wall or wall box.
12. Install and Connect cat5e cable between PC and data wall plate \* All cables in cloth wrap shall run from student side of instructor table under-side to data wall plate.  
Note: Vendor shall fit all A/V cables and data cables into a single cloth wrap if possible.

\*HACC will provide short Blue Cat5e cables

### **Location #7 East Room 306**

This room is a general classroom. The wall is drywall, and surface mount raceway may not be used. However cables should still be hidden as much as possible. Cloth "snakeskin" shall be used for exposed cables between wall plate and instructor station – there is no separate equipment rack. The instructor station is just furniture with a CPU holder and a VCR mount underneath.

The wall screen is a 96" x 96" screen (see diagram). The audio speakers are to be ceiling mounted spaced for best sound. The instructor station will be located in the front of the room along the outside wall. There is a full drop ceiling (9'6" high).

The following equipment either already exists in the room or is being purchased separately and supplied by HACC will be the following:

Item	Manufacturer	Model	Quantity
Data Projector	Panasonic	PT-FW430U	1
Speakers	Tannoy	CVS6	2
Instructor Station (42")	Smith System	Acrobat	1
96" x 96" Wall Screen	DaLite	Model C	1
Wall Screen Brackets	?	?	1 Pair
Projector Mount	Chief	RPA-191	1
VCR Mount	Peerless	SVPM-25J	1
DVD/VHS VCR	Zenith	XBV443	1
Power strip for instructor station	TrippLite	6SPDX-15	1
Wireless Keyboard and Mouse Suite	Gyration	GYM1100CKN	1
PC and Desktop VGA Monitor	Lanovo	ThinkCentre	1
MLC 104 IP Plus Controller	Extron	60-818-02	1
P/2 DA2 Plus VGA Distribution amp	Extron	60-046-03	1
Suspended projector ceiling plate *	Peerless ??	CMJ500 ??	1
Mini Amp	Kramer	900XL	1

\* Ceiling cloud is already in place. Can Peerless PB-1 be used with a non-Peerless 2' x 2' cloud?

The following **specific** equipment will be supplied by the **vendor**:

Item	Manufacturer	Model	Quantity
2-gang wall plate	Custom Made	??	1
Plenum electric box for ceiling plate	Peerless	PB-1	1

Installation shall include:

1. Remove existing projector and replace with new data projector including mounting hardware. Please setup projector for 4:3 1024x768. The image should fill the screen at the current distance. However the hope is in the future, the projector and screen placement should be already such that the image could be wide format and would fill the screen. Set projector for closed captioning 'off'. Ceiling cloud is already in place
2. Mount Peerless VCR bracket under table. Disconnect VCR from top of table and install VCR in mount.
3. Cables needed to connect the equipment at the instructor station to the data projector including:

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to 2-gang wall plate ('VGA 1')

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to VGA monitor  
 (ALREADY EXISTS)  
 PC audio out {3.5mm (m to m) stereo} from PC to 2-gang wall plate  
 Composite video {RCA (m to m)} from DVD/VHS combo ('Video Out') to 2-gang wall plate ('Video in')  
 RCA {2-RCA (m to m)} from DVD/VHS combo ('Video Out') to 2-gang wall plate (audio input)  
 3.5mm (m to m) from data projector ("Audio Out") to Kramer 900XL amp  
 5mm captive screw connectors from Kramer 900XL amp to ceiling speakers

4. All cables in cloth wrap shall run from outside wall side of instructor table to 2-gang wall plate.
5. Custom 2-gang wall plate including the following:

VGA 1 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m) to from wall plate (inside) to data projector ("Computer 1 in") (ALREADY EXISTS) \*  
 VGA 2 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m)} from wall plate (inside) to data projector ("Computer 2 in") (ALREADY EXISTS) \*  
 RCA {R and L RCA (f to f) feed-thru} Connect RCA {R and L (m)} from wall plate (inside) to RCA {R and L (m)} - data projector ("Video <audio> in") (ALREADY EXISTS)  
 Composite video {RCA (f to f) feed-thru} Connect RCA (m to m) from wall plate (inside) to data projector ("Video in") (ALREADY EXISTS) \*\*  
 3.5mm {with VGA 1 (f) stereo to rear solder or feed thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 1 in")  
 3.5mm {with VGA 2 (f) stereo to rear solder or feed-thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 2 in")  
 Serial cable from wall plate (inside; for future connection) to data projector ("Serial") (Leave 4' coiled service loop for future Smart Classroom conversion).  
 Speaker wire from wall plate (inside; for future speakon connection) to above drop ceiling (leave 15' – 20' service loop to connect to first speaker - future Smart Classroom conversion).  
 Cat 5e from wall plate (inside; for future connection) to data projector (leave 4' coiled service loop for future Smart Classroom conversion).

\* One VGA cable already exists and runs from the P/2 DA2 Plus through the wall to the projector. If the cable is already terminated and usable, then simply pull it back to re-use it and coil excess above the ceiling as a service loop. If the cable is terminated and/or not re-usable, then please remove and discard and provide new cable through wall or conduit.

\*\* Composite video cable already exists and runs directly from the VCR through the wall to the projector. If the cable is already terminated and usable, then simply pull it back to re-use it and coil excess above the ceiling as a service loop. If the cable is terminated and/or not re-usable, then please remove and discard and provide new cable through wall or conduit.

The computer and video cables will run directly from the instructor station to 2-gang wall plate, through wall cavity and terminate at the data projector. The speaker wire will run from the Kramer 900XL amp to the speakers.

Run cables for future Smart Classroom conversion. If there is no room for termination inside box, cables shall run un-terminated from tight coil inside wall cavity to projector. Leave 4' service loop at projector.

6. Mount audio speakers in ceiling tile and connect from amp. No less than 16-gauge speaker cable to be used
7. Wall screen is already in place. Provide and tie heavy string to screen handle so that user can reach from the floor when screen is retracted.
8. Mount Extron MLC 104 directly above 2-gang A/V wall plate (use same raceway if possible).
9. Connect MLC 104 Power Supply (pickup AC near projector) to 12V+ and Ground on MLC 104 unit. Connect 'DISPLAY/RS-232/IR' from MLC 104 to data projector serial in. Connect 'MLS RS-232' from MLC 104 to Kramer 900XL. \*\*
10. Verify programming for all buttons, Power OFF/ON and volume control. HACC will provide programmed controller
11. Connect cat5e cable in the ceiling (provided by HACC Lancaster IT Staff in a 10' coil) coming from data closet to Extron MLC 104 inside wall or wall box.
12. Install and Connect cat5e cable between PC and data wall plate \* All cables in cloth wrap shall run from student side of instructor table under-side to data wall plate.  
Note: Vendor shall fit all A/V cables and data cables into a single cloth wrap if possible.

\* HACC will provide short Blue Cat5e cables

\*\* Cable shall be 2 conductor, 22 gauge (minimum), shielded cable.

### **Location #8 Main Room 301**

This room is a computer room. The wall is drywall, and surface mount raceway may not be used. However cables should still be hidden as much as possible. Cloth "snakeskin" shall be used for exposed cables between wall plate and instructor station – there is no separate equipment rack. The instructor station is just furniture with a CPU holder.

The wall screen is a 96" x 96" screen (see diagram). The audio speakers are to be ceiling mounted spaced for best sound. The instructor station will be located in the front of the room along the outside wall. There is a full drop ceiling (9'6" high).

The following equipment either already exists in the room or is being purchased separately and supplied by HACC will be the following:

Item	Manufacturer	Model	Quantity
Data Projector	Panasonic	PT-F300NT	1
Speakers	Tannoy	CVS6	2
Instructor Desk	??	??	1
96" x 96" Wall Screen	DaLite	Model C	1
Wall Screen Brackets	?	?	1 Pair
Projector Mount	Chief	RPA-191	1
Power strip for instructor station	TrippLite	6SPDX-15	1
Wireless Keyboard and Mouse Suite	Gyration	GYM1100CKN	1
PC and Desktop VGA Monitor	Dell	780	1
MLC 104 IP Plus Controller	Extron	60-818-02	1
P/2 DA2 Plus VGA Distribution amp	Extron	60-046-03	1
Suspended projector ceiling plate *	Peerless ??	CMJ500 ??	1
Mini Amp	Kramer	900XL	1

\* Ceiling cloud is already in place. Can Peerless PB-1 be used with a non-Peerless 2' x 2' cloud?

The following **specific** equipment will be supplied by the **vendor**:

Item	Manufacturer	Model	Quantity
2-gang wall plate	Custom Made	??	1
Plenum electric box for ceiling plate	Peerless	PB-1	1

Installation shall include:

- Existing projector shall remain. Please setup projector for 4:3 1024x768. The image should fill the screen at the current distance. However the hope is in the future, the projector and screen placement should be already such that the image could be wide format and would fill the screen. Set projector for closed captioning 'off'. Ceiling cloud is already in place
- Cables needed to connect the equipment at the instructor station to the data projector including:

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to 2-gang wall plate ('VGA 1')

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to VGA monitor (MAY ALREADY EXIST)

PC audio out {3.5mm (m to m) stereo} from PC to 2-gang wall plate

Composite video {RCA (m to m)} from under table where a future VCR might be mounted (leave 24" coil) to 2-gang wall plate ('Video in')

RCA {2-RCA (m to m)} from under table where a future VCR might be mounted (leave 24" coil) to 2-gang wall plate (audio input)

3.5mm (m to m) from data projector (“Audio Out”) to Kramer 900XL amp  
5mm captive screw connectors from Kramer 900XL amp to ceiling speakers

3. All cables in cloth wrap shall run from outside wall side of instructor table to 2-gang wall plate.
4. Custom 2-gang wall plate including the following:

VGA 1 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m) to from wall plate (inside) to data projector (“Computer 1 in”)\*

VGA 2 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m)} from wall plate (inside) to data projector (“Computer 2 in”)\*

RCA {R and L RCA (f to f) feed-thru} Connect RCA {R and L (m)} from wall plate (inside) to RCA {R and L (m)} - data projector (“Video <audio> in”)\*

Composite video {RCA (f to f) feed-thru} Connect RCA (m to m) from wall plate (inside) to data projector (“Video in”)\*

3.5mm {with VGA 1 (f) stereo to rear solder or feed thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector (“Audio 1 in”)\*

3.5mm {with VGA 2 (f) stereo to rear solder or feed-thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector (“Audio 2 in”)\*

Serial cable from wall plate (inside; for future connection) to data projector (“Serial”) (Leave 4’ coiled service loop for future Smart Classroom conversion).

Speaker wire from wall plate (inside; for future speakon connection) to above drop ceiling (leave 15’ – 20’ service loop to connect to first speaker - future Smart Classroom conversion).

Cat 5e from wall plate (inside; for future connection) to data projector (leave 4’ coiled service loop for future Smart Classroom conversion).

\* Please remove and discard old cabling and provide new cable through wall or conduit.

The computer and video cables will run directly from the instructor station to 2-gang wall plate, through wall cavity and terminate at the data projector. The speaker wire will run from the Kramer 900XL amp to the speakers.

Run cables for future Smart Classroom conversion. If there is no room for termination inside box, cables shall run un-terminated from tight coil inside wall cavity to projector. Leave 4’ service loop at projector.

5. Mount audio speakers in ceiling tile and connect from amp. No less than 16-gauge speaker cable to be used
6. Wall screen is already in place. Provide and tie heavy string to screen handle so that user can reach from the floor when screen is retracted.
7. Mount Extron MLC 104 directly above 2-gang A/V wall plate (use same raceway if possible).
8. Connect MLC 104 Power Supply (pickup AC near projector) to 12V+ and Ground on MLC 104 unit. Connect ‘DISPLAY/RS-232/IR’ from MLC 104 to data projector serial in. Connect ‘MLS RS-232’ from MLC 104 to Kramer 900XL. \*\*
9. Verify programming for all buttons, Power OFF/ON and volume control. HACC will provide programmed controller

10. Connect cat5e cable in the ceiling (provided by HACC Lancaster IT Staff in a 10' coil) coming from data closet to Extron MLC 104 inside wall or wall box.
11. Install and Connect cat5e cable between PC and data wall plate \* All cables in cloth wrap shall run from student side of instructor table under-side to data wall plate.  
Note: Vendor shall fit all A/V cables and data cables into a single cloth wrap if possible.

\* HACC will provide short Blue Cat5e cables

\*\* Cable shall be 2 conductor, 22 gauge (minimum), shielded cable.

### **Location #9 Main Room 302**

This room is a computer classroom. The wall is drywall, and surface mount raceway may not be used. However cables should still be hidden as much as possible. Cloth “snakeskin” shall be used for exposed cables between wall plate and instructor station – there is no separate equipment rack. The instructor station is just furniture with a CPU holder and a VCR mount underneath.

The wall screen is a 96” x 96” screen (see diagram). The audio speakers are to be ceiling mounted spaced for best sound. The instructor station will be located in the front of the room along the outside wall. There is a full drop ceiling (9’6” high).

The following equipment either already exists in the room or is being purchased separately and supplied by HACC will be the following:

<b>Item</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Quantity</b>
Data Projector	Panasonic	PT-F300NT	1
Speakers	Tannoy	CVS6	2
Instructor Desk	??	??	1
96” x 96” Wall Screen	DaLite	Model C	1
Wall Screen Brackets	?	?	1 Pair
Projector Mount	Chief	RPA-191	1
Power strip for instructor station	TrippLite	6SPDX-15	1
Wireless Keyboard and Mouse Suite	Gyration	GYM1100CKN	1
PC and Desktop VGA Monitor	Lanovo	ThinkCentre	1
MLC 104 IP Plus Controller	Extron	60-818-02	1
P/2 DA2 Plus VGA Distribution amp	Extron	60-046-03	1
Suspended projector ceiling plate *	Peerless ??	CMJ500 ??	1
Mini Amp	Kramer	900XL	1

\* Ceiling cloud is already in place. Can Peerless PB-1 be used with a non-Peerless 2’ x 2’ cloud?

The following **specific** equipment will be supplied by the **vendor**:

Item	Manufacturer	Model	Quantity
2-gang wall plate	Custom Made	??	1
Plenum electric box for ceiling plate	Peerless	PB-1	1

Installation shall include:

- Existing projector shall remain. Please setup projector for 4:3 1024x768. The image should fill the screen at the current distance. However the hope is in the future, the projector and screen placement should be already such that the image could be wide format and would fill the screen. Set projector for closed captioning 'off'. Ceiling cloud is already in place
- Cables needed to connect the equipment at the instructor station to the data projector including:

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to 2-gang wall plate ('VGA 1')

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to VGA monitor (MAY ALREADY EXIST)

PC audio out {3.5mm (m to m) stereo} from PC to 2-gang wall plate

Composite video {RCA (m to m)} from under table where a future VCR might be mounted (leave 24" coil) to 2-gang wall plate ('Video in')

RCA {2-RCA (m to m)} from under table where a future VCR might be mounted (leave 24" coil) to 2-gang wall plate (audio input)

3.5mm (m to m) from data projector ("Audio Out") to Kramer 900XL amp

5mm captive screw connectors from Kramer 900XL amp to ceiling speakers

- All cables in cloth wrap shall run from outside wall side of instructor table to 2-gang wall plate.
- Custom 2-gang wall plate including the following:

VGA 1 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m) to from wall plate (inside) to data projector ("Computer 1 in") \*

VGA 2 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m)} from wall plate (inside) to data projector ("Computer 2 in") \*

RCA {R and L RCA (f to f) feed-thru} Connect RCA {R and L (m)} from wall plate (inside) to RCA {R and L (m)} - data projector ("Video <audio> in") \*

Composite video {RCA (f to f) feed-thru} Connect RCA (m to m) from wall plate (inside) to data projector ("Video in") \*

3.5mm {with VGA 1 (f) stereo to rear solder or feed thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 1 in")

3.5mm {with VGA 2 (f) stereo to rear solder or feed-thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 2 in")

Serial cable from wall plate (inside; for future connection) to data projector ("Serial") (Leave 4' coiled service loop for future Smart Classroom conversion).

Speaker wire from wall plate (inside; for future speakon connection) to above drop ceiling (leave 15' – 20' service loop to connect to first speaker - future Smart Classroom conversion).

Cat 5e from wall plate (inside; for future connection) to data projector (leave 4' coiled service loop for future Smart Classroom conversion).

\* Please remove old cabling and discard and provide new cable through wall or conduit.

The computer and video cables will run directly from the instructor station to 2-gang wall plate, through wall cavity and terminate at the data projector. The speaker wire will run from the Kramer 900XL amp to the speakers.

Run cables for future Smart Classroom conversion. If there is no room for termination inside box, cables shall run un-terminated from tight coil inside wall cavity to projector. Leave 4' service loop at projector.

5. Mount audio speakers in ceiling tile and connect from amp. No less than 16-gauge speaker cable to be used
6. Wall screen is already in place. Provide and tie heavy string to screen handle so that user can reach from the floor when screen is retracted.
7. Mount Extron MLC 104 directly above 2-gang A/V wall plate (use same raceway if possible).
8. Connect MLC 104 Power Supply (pickup AC near projector) to 12V+ and Ground on MLC 104 unit. Connect 'DISPLAY/RS-232/IR' from MLC 104 to data projector serial in. Connect 'MLS RS-232' from MLC 104 to Kramer 900XL. \*\*
9. Verify programming for all buttons, Power OFF/ON and volume control. HACC will provide programmed controller
10. Connect cat5e cable in the ceiling (provided by HACC Lancaster IT Staff in a 10' coil) coming from data closet to Extron MLC 104 inside wall or wall box.
11. Install and Connect cat5e cable between PC and data wall plate \* All cables in cloth wrap shall run from student side of instructor table under-side to data wall plate. Note: Vendor shall fit all A/V cables and data cables into a single cloth wrap if possible.

\* HACC will provide short Blue Cat5e cables

\*\* Cable shall be 2 conductor, 22 gauge (minimum), shielded cable.

### **Location #10 Main Room 304**

This room is a computer classroom. The wall is drywall, and surface mount raceway may not be used. However cables should still be hidden as much as possible. Cloth "snakeskin" shall be used for exposed cables between wall plate and instructor station – there is no separate equipment rack. The instructor station is just furniture with a CPU holder and a VCR mount underneath.

The wall screen is a 96" x 96" screen (see diagram). The audio speakers are to be ceiling mounted spaced for best sound. The instructor station will be located in the front of the room along the outside wall. There is a full drop ceiling (9'6" high).

The following equipment either already exists in the room or is being purchased separately and supplied by HACC will be the following:

Item	Manufacturer	Model	Quantity
Data Projector	Panasonic	PT-FW300NT	1
Speakers	Tannoy	CVS6	4
Instructor Desk	??	??	1
96" x 96" Wall Screen	DaLite	Model C	1
Wall Screen Brackets	?	?	1 Pair
Projector Mount	Chief	RPA-191	1
Power strip for instructor station	TrippLite	6SPDX-15	1
Wireless Keyboard and Mouse Suite	Gyration	GYM1100CKN	1
PC and Desktop VGA Monitor	Lanovo	ThinkCentre	1
MLC 104 IP Plus Controller	Extron	60-818-02	1
P/2 DA2 Plus VGA Distribution amp	Extron	60-046-03	1
Suspended projector ceiling plate *	Peerless ??	CMJ500 ??	1
Mini Amp	Kramer	900XL	1

\* Ceiling cloud is already in place. Can Peerless PB-1 be used with a non-Peerless 2' x 2' cloud?

The following **specific** equipment will be supplied by the **vendor**:

Item	Manufacturer	Model	Quantity
2-gang wall plate	Custom Made	??	1
Plenum electric box for ceiling plate	Peerless	PB-1	1

Installation shall include:

- Existing projector shall remain. Please setup projector for 4:3 1024x768. The image should fill the screen at the current distance. However the hope is in the future, the projector and screen placement should be already such that the image could be wide format and would fill the screen. Set projector for closed captioning 'off'. Ceiling cloud is already in place
- Cables needed to connect the equipment at the instructor station to the data projector including:
  - VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to 2-gang wall plate ('VGA 1')
  - VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to VGA monitor (MAY ALREADY EXIST)
  - VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to 2-gang wall plate ('VGA 2')
  - PC audio out {3.5mm (m to m) stereo} from PC to 2-gang wall plate
  - Composite video {RCA (m to m)} from under table where a future VCR might be mounted (leave 24" coil) to 2-gang wall plate ('Video in')

RCA {2-RCA (m to m)} from under table where a future VCR might be mounted (leave 24" coil) to 2-gang wall plate (audio input)  
3.5mm (m to m) from data projector ("Audio Out") to Kramer 900XL amp  
5mm captive screw connectors from Kramer 900XL amp to ceiling speakers

3. All cables in cloth wrap shall run from outside wall side of instructor table to 2-gang wall plate.
4. Custom 2-gang wall plate including the following:

VGA 1 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m) to from wall plate (inside) to data projector ("Computer 1 in")} \*

VGA 2 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m)} from wall plate (inside) to data projector ("Computer 2 in")} \*

RCA {R and L RCA (f to f) feed-thru} Connect RCA {R and L (m)} from wall plate (inside) to RCA {R and L (m)} - data projector ("Video <audio> in")} \*

Composite video {RCA (f to f) feed-thru} Connect RCA (m to m) from wall plate (inside) to data projector ("Video in")} \*

3.5mm {with VGA 1 (f) stereo to rear solder or feed thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 1 in")} \*

3.5mm {with VGA 2 (f) stereo to rear solder or feed-thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector ("Audio 2 in")} \*

Serial cable from wall plate (inside; for future connection) to data projector ("Serial") (Leave 4' coiled service loop for future Smart Classroom conversion).

Speaker wire from wall plate (inside; for future speakon connection) to above drop ceiling (leave 15' – 20' service loop to connect to first speaker - future Smart Classroom conversion).

Cat 5e from wall plate (inside; for future connection) to data projector (leave 4' coiled service loop for future Smart Classroom conversion).

\* Please remove old cabling and discard and provide new cable through wall or conduit.

The computer and video cables will run directly from the instructor station to 2-gang wall plate, through wall cavity and terminate at the data projector. The speaker wire will run from the Kramer 900XL amp to the speakers.

Run cables for future Smart Classroom conversion. If there is no room for termination inside box, cables shall run un-terminated from tight coil inside wall cavity to projector. Leave 4' service loop at projector.

5. Mount audio speakers in ceiling tile and connect from amp. No less than 16-gauge speaker cable to be used
6. Wall screen is already in place. Provide and tie heavy string to screen handle so that user can reach from the floor when screen is retracted.
7. Mount Extron MLC 104 directly above 2-gang A/V wall plate (use same raceway if possible).
8. Connect MLC 104 Power Supply (pickup AC near projector) to 12V+ and Ground on MLC 104 unit. Connect 'DISPLAY/RS-232/IR' from MLC 104 to data projector serial in. Connect 'MLS RS-232' from MLC 104 to Kramer 900XL. \*\*

9. Verify programming for all buttons, Power OFF/ON and volume control. HACC will provide programmed controller
10. Connect cat5e cable in the ceiling (provided by HACC Lancaster IT Staff in a 10' coil) coming from data closet to Extron MLC 104 inside wall or wall box.
11. Install and Connect cat5e cable between PC and data wall plate \* All cables in cloth wrap shall run from student side of instructor table under-side to data wall plate.  
Note: Vendor shall fit all A/V cables and data cables into a single cloth wrap if possible.

\* HACC will provide short Blue Cat5e cables

\*\* Cable shall be 2 conductor, 22 gauge (minimum), shielded cable.

### **Location #11 Main Room 306**

This room is a computer classroom. The wall is drywall, and surface mount raceway may not be used. However cables should still be hidden as much as possible. Cloth "snakeskin" shall be used for exposed cables between wall plate and instructor station – there is no separate equipment rack. The instructor station is just furniture with a CPU holder and a VCR mount underneath.

The wall screen is a 96" x 96" screen (see diagram). The audio speakers are to be ceiling mounted spaced for best sound. The instructor station will be located in the front of the room along the outside wall. There is a full drop ceiling (9'6" high).

The following equipment either already exists in the room or is being purchased separately and supplied by HACC will be the following:

<b>Item</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Quantity</b>
Data Projector	Panasonic	PT-FW430U	1
Speakers	Tannoy	CVS6	2
Instructor Station (42")	Smith System	Acrobat	1
96" x 96" Wall Screen	DaLite	Model C	1
Wall Screen Brackets	?	?	1 Pair
Projector Mount	Chief	RPA-191	1
DVD/VHS VCR	Zenith	XBV443	1
Power strip for instructor station	TrippLite	6SPDX-15	1
Wireless Keyboard and Mouse Suite	Gyration	GYM1100CKN	1
PC and Desktop VGA Monitor	Dell	780	1
MLC 104 IP Plus Controller	Extron	60-818-02	1
P/2 DA2 Plus VGA Distribution amp	Extron	60-046-03	1
Suspended projector ceiling plate *	Peerless ??	CMJ500 ??	1
Mini Amp	Kramer	900XL	1

\* Ceiling cloud is already in place. Can Peerless PB-1 be used with a non-Peerless 2' x 2' cloud?

The following **specific** equipment will be supplied by the **vendor**:

Item	Manufacturer	Model	Quantity
2-gang wall plate	Custom Made	??	1
Plenum electric box for ceiling plate	Peerless	PB-1	1
Cable pathway “speed bump”	??	??	1

Installation shall include:

1. Remove existing projector and replace with new data projector including mounting hardware. Please setup projector for 4:3 1024x768. The image should fill the screen at the current distance. However the hope is in the future, the projector and screen placement should be already such that the image could be wide format and would fill the screen. Set projector for closed captioning ‘off’. Ceiling cloud is already in place
2. Install heavy duty “speed bump” to enclose cables running from instructor station to wall. Cables before and after will be enclosed in cloth “snakeskin” Cables exiting shall turn left and run along wall to front wall plate.
3. Cables needed to connect the equipment at the instructor station to the data projector including:

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to 2-gang wall plate (‘VGA 1’)

VGA {HD 15 (m to m)} from Extron P/2 DA2 Plus to VGA monitor (MAY ALREADY EXIST)

PC audio out {3.5mm (m to m) stereo} from PC to 2-gang wall plate

Composite video {RCA (m to m)} from DVD/VHS combo (‘Video Out’) to 2-gang wall plate (‘Video in’)

RCA {2-RCA (m to m)} from DVD/VHS combo (‘Video Out’) to 2-gang wall plate (audio input)

3.5mm (m to m) from data projector (“Audio Out”) to Kramer 900XL amp

5mm captive screw connectors from Kramer 900XL amp to ceiling speakers

4. All cables in cloth wrap shall run from outside wall side of instructor table to 2-gang wall plate.
5. Custom 2-gang wall plate including the following:

VGA 1 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m) to from wall plate (inside) to data projector (“Computer 1 in”) (ALREADY EXISTS) \*

VGA 2 {HD 15 (f to f) feed-thru} Connect {HD 15 (m to m)} from wall plate (inside) to data projector (“Computer 2 in”) \*

RCA {R and L RCA (f to f) feed-thru} Connect RCA {R and L (m)} from wall plate (inside) to RCA {R and L (m)} - data projector (“Video <audio> in”) \*

Composite video {RCA (f to f) feed-thru} Connect RCA (m to m) from wall plate (inside) to data projector (“Video in”) \*

3.5mm {with VGA 1 (f) stereo to rear solder or feed thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector (“Audio 1 in”)

3.5mm {with VGA 2 (f) stereo to rear solder or feed-thru} Connect rear solder or feed thru to 3.5mm (m) stereo - data projector (“Audio 2 in”)

Serial cable from wall plate (inside; for future connection) to data projector (“Serial”) (Leave 4’ coiled service loop for future Smart Classroom conversion).

Speaker wire from wall plate (inside; for future speaker connection) to above drop ceiling (leave 15’ – 20’ service loop to connect to first speaker - future Smart Classroom conversion).

Cat 5e from wall plate (inside; for future connection) to data projector (leave 4’ coiled service loop for future Smart Classroom conversion).

\* One VGA cable currently exists and runs from the P/2 DA2 Plus through the wall to the projector. If the cable is already terminated and usable, then simply pull it back, relocate it to the new location closer to the outside wall and re-terminate. New cabling for the second VGA, both computer audios, video and video audio will be needed.

The computer and video cables will run directly from the instructor station to 2-gang wall plate, through wall cavity and terminate at the data projector. The speaker wire will run from the Kramer 900XL amp to the speakers.

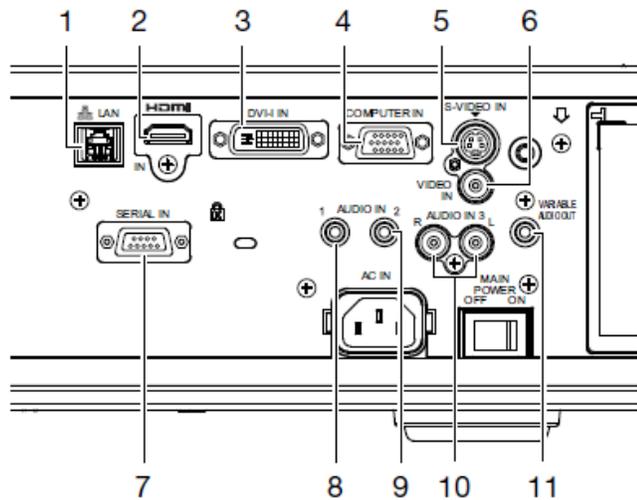
Run cables for future Smart Classroom conversion. If there is no room for termination inside box, cables shall run un-terminated from tight coil inside wall cavity to projector. Leave 4’ service loop at projector.

6. Mount audio speakers in ceiling tile and connect from amp. No less than 16-gauge speaker cable to be used
7. Wall screen is already in place. Provide and tie heavy string to screen handle so that user can reach from the floor when screen is retracted.
8. Mount Extron MLC 104 directly above 2-gang A/V wall plate (use same raceway if possible).
9. Connect MLC 104 Power Supply (pickup AC near projector) to 12V+ and Ground on MLC 104 unit. Connect ‘DISPLAY/RS-232/IR’ from MLC 104 to data projector serial in. Connect ‘MLS RS-232’ from MLC 104 to Kramer 900XL. \*\*
10. Verify programming for all buttons, Power OFF/ON and volume control. HACC will provide programmed controller
11. Connect cat5e cable in the ceiling (provided by HACC Lancaster IT Staff in a 10’ coil) coming from data closet to Extron MLC 104 inside wall or wall box.
12. Install and Connect cat5e cable between PC and data wall plate \* All cables in cloth wrap shall run from student side of instructor table under-side to data wall plate. Note: Vendor shall fit all A/V cables and data cables into a single cloth wrap if possible.

\* HACC will provide short Blue Cat5e cables

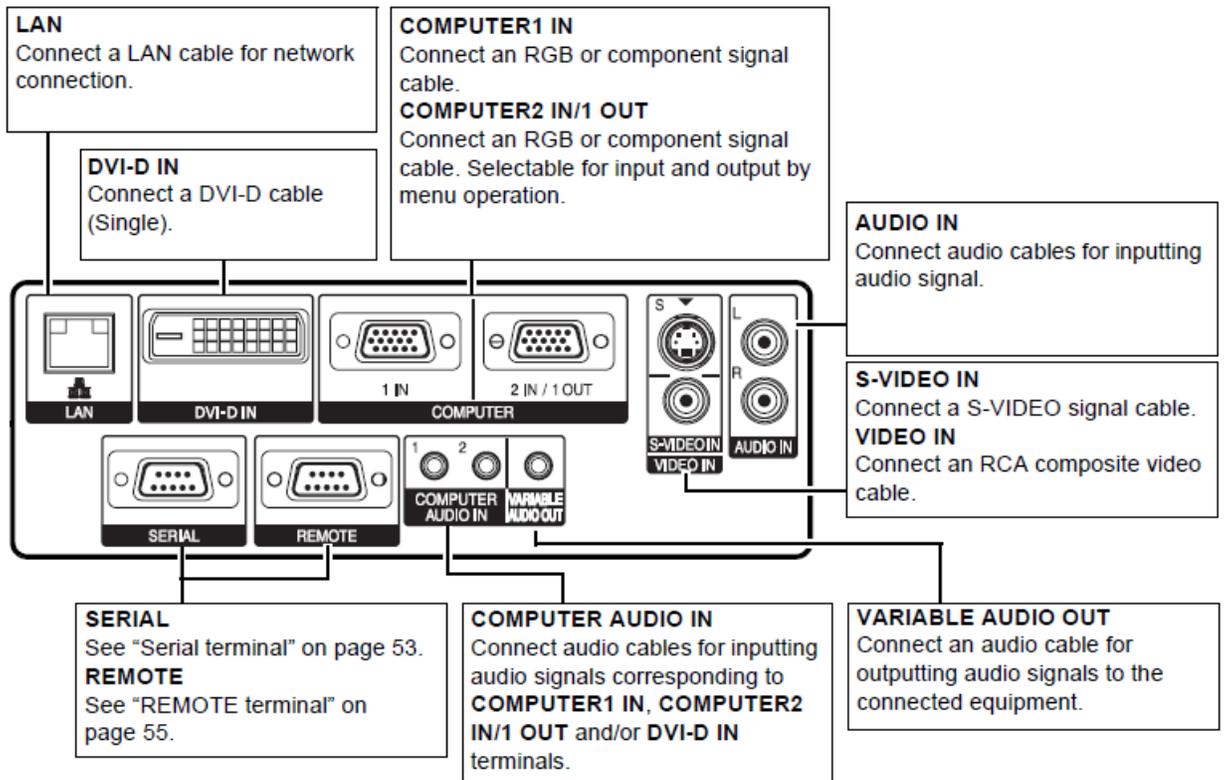
\*\* Cable shall be 2 conductor, 22 gauge (minimum), shielded cable.

## Panasonic PT-FW430U Connection Terminals

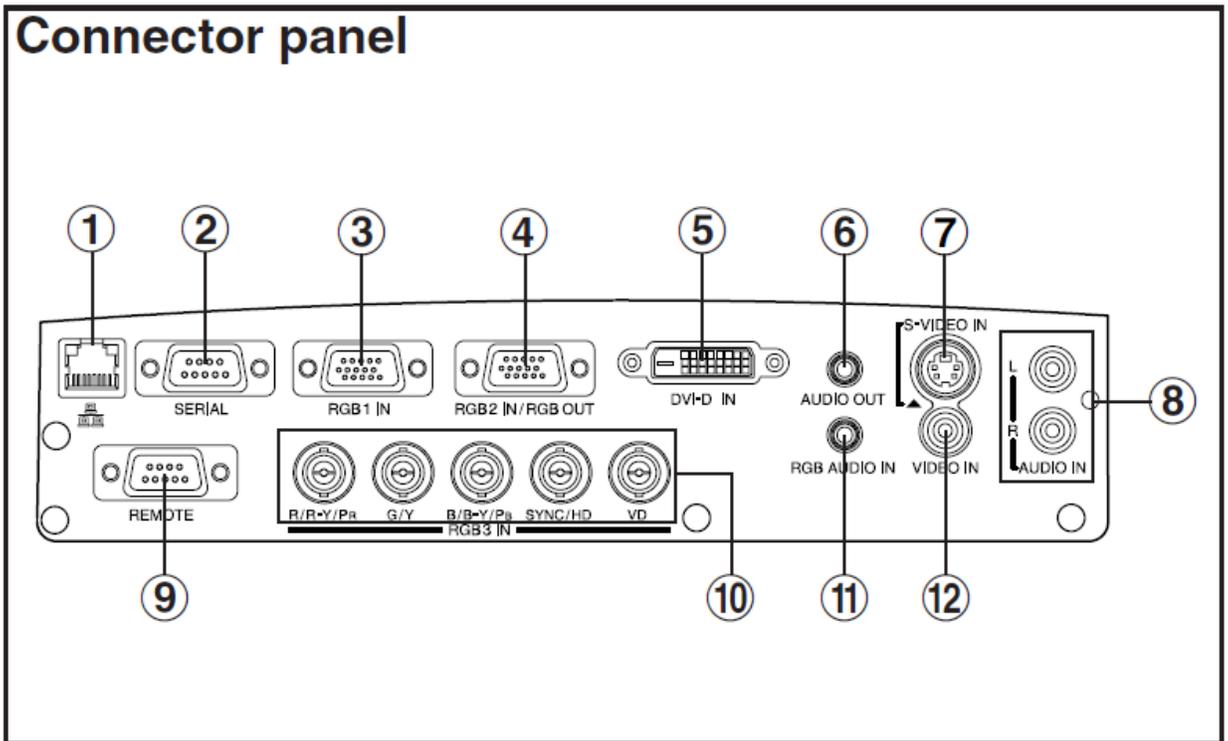


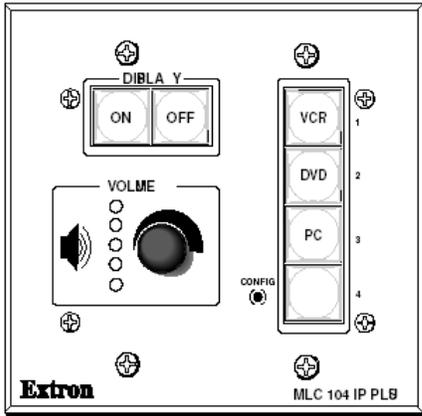
- 1 LAN connector
- 2 HDMI input
- 3 DVI-I input
- 4 Computer input
- 5 S-Video input
- 6 Video input
- 7 Serial input
- 8 Audio input 1
- 9 Audio input 2
- 10 Audio input 3
- 11 Audio output

## Panasonic PT-FW300NTU Connection Terminals

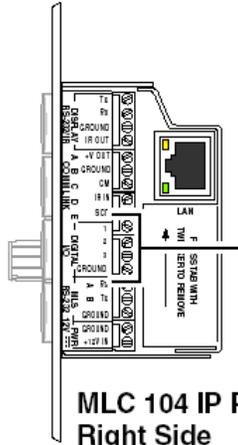


## Panasonic PT-L785U Connection Terminals

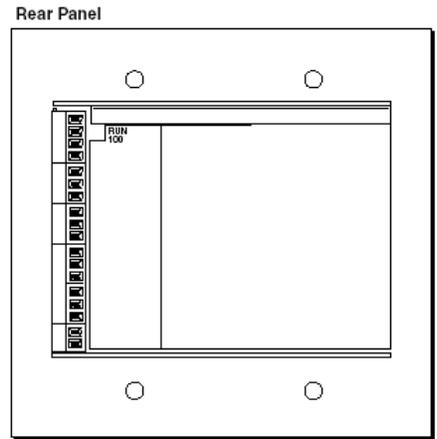




MLC 104 IP Plus Front



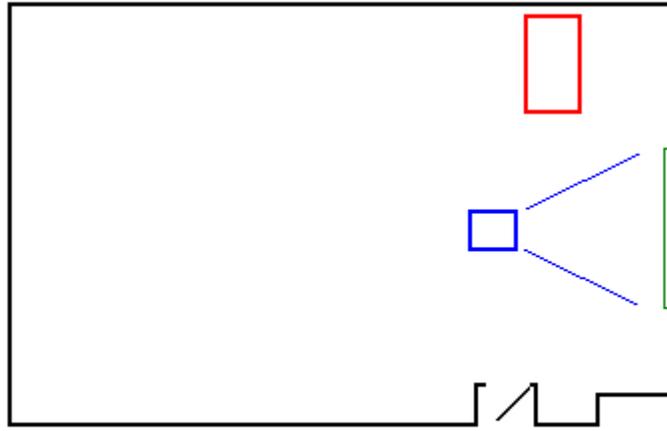
MLC 104 IP Plus  
Right Side  
(rotated)



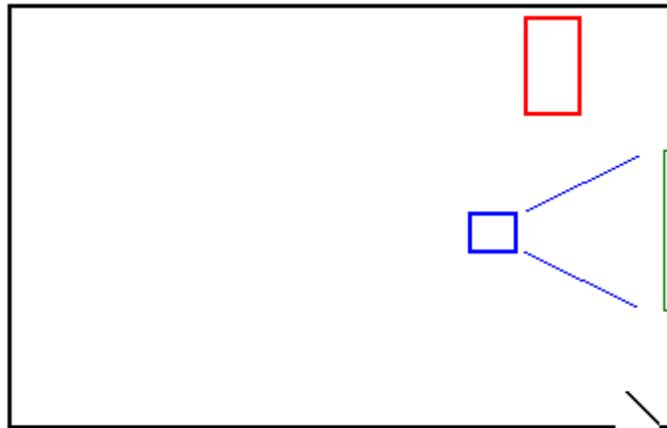
Rear Panel

## 2-gang Wall Plate

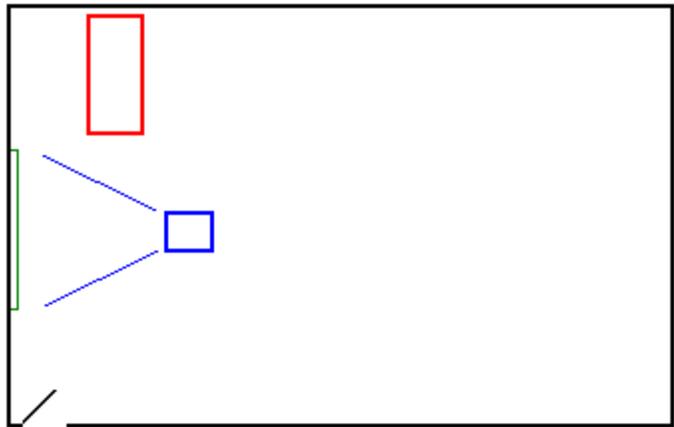




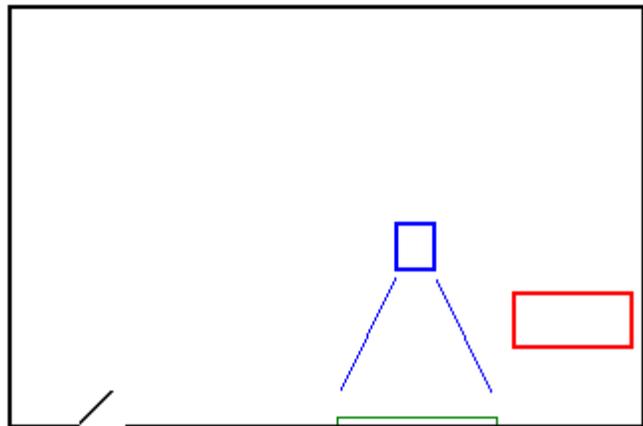
Main 309



Main 316, East 306, 320, 324,



East 210, 213, 308, 309, 342



East 305

**END OF ADDENDUM**