



**ASU New Business School Facility**  
 Arizona State University  
 450 E. Leman Street  
 Tempe, AZ 85287

**Client**  
 Arizona Board of Regents  
 for and on behalf of  
 Arizona State University  
 P.O. Box 875512  
 Tempe, AZ 85287-5512

**Architect**  
 Kohn Pedersen Fox Associates PC  
 11 West 42nd Street  
 New York, New York 10036  
 Tel: 212.977.6500 Fax: 212.956.2526

**Architect of Record**  
 RSP Architects  
 502 S. College Ave. Suite 203  
 Tempe, AZ 85281  
 Tel: 408.889.2022 Fax: 408.889.2099

**Structural Engineer**  
 Meyer Borgman & Johnson, Inc.  
 1438 W. Broadway Road, Suite 212  
 Tempe, AZ 85282-1125  
 Tel: 480.747.6737 Fax: 480.747.6727

**MEP Engineer**  
 Energy Systems Design Inc.  
 7135 E. Camelback Road, Suite 275  
 Scottsdale, AZ 85251  
 Tel: 480.481.4900 Fax: 480.481.4903

**Civil Engineer**  
 Wood, Patel & Associates  
 6115 N. Camelback Road, Suite 100  
 Phoenix, AZ 85021  
 Tel: 480.834.3300

**Landscape Architect**  
 GBTwo Landscape Architecture, Inc.  
 6115 N. Camelback Road  
 Scottsdale, AZ 85250  
 Tel: 480.991.3384 Fax: 480.452.1878

**Telecom Systems Designer**  
 Jeremiah & Associates  
 10575 N. 114th Street, Suite 103  
 Scottsdale, AZ 85259  
 Tel: 480.723.0100

**AV Systems / Acoustical**  
 McKay Conant Hoover, Inc.  
 7435 E. Stetson Drive, Suite A  
 Scottsdale, AZ 85251  
 Tel: 480.947.3335

**Lighting**  
 Lam Partners  
 84 Sherman Street  
 Cambridge, MA 02140  
 Tel: 617.354.4502

**Certification**

No.	Date	Description
1	12/19/11	ASU PERMIT REVIEW
2	05/09/12	OWNER REVISIONS
3	08/23/12	MOCKUP REVISIONS
4	01/21/13	ISSUED FOR BID
5	01/23/13	UTILITY COORDINATION
6	02/28/13	AS-BUILT
7	03/07/13	BID ADDENDUM

**Project Status**

**Issue Date:** 10/31/11  
**Scale:** As indicated  
**Project No:** 1279.013.00  
**Drawn By:** LRM

**AV GENERAL NOTES AND SCHEDULES**

**AV-001**

### GENERAL INSTALLATION NOTES

REFER TO SPECIFICATION DIVISION 27 SECTION 274116 FOR DETAILED AV INSTALLATION INSTRUCTIONS.

I. RACEWAY AND WIRE PULLING:

- ALL RACEWAY, PULL BOXES AND BACK BOXES TO BE INSTALLED BY ELECTRICAL CONTRACTOR PER DIVISION 26.
- USE ALL FERROUS METAL CONDUIT. NON METALLIC CONDUIT SHALL NOT BE ALLOWED UNLESS SPECIFICALLY NOTED ON THE AV CATEGORY CONDUIT RISER.
- IN EACH CONDUIT RUN BETWEEN SUCCESSIVE BACK BOXES AND PULL BOXES, INSTALL A LENGTH OF YELLOW PULL LINE.
- SLASH MARK  $\frac{---}{---}$  QUANTITY OF INDICATED CONDUIT SIZE. QUANTITY OF CONDUIT FILL IS NOT SHOWN ON RISER. REFER TO A/V SPECIFICATION FOR WIRE TYPES. REFER TO THE SINGLE LINE DRAWINGS FOR QUANTITIES.
- PULL BOXES ARE NOT SHOWN ON THE RISERS, BUT MUST BE INSTALLED AFTER EACH 270 DEGREES OF BEND. EVERY 50 FEET OF STRAIGHT CONDUIT LENGTH SHALL BE CONSIDERED EQUAL TO 90 DEGREES OF CONDUIT BEND.
- ISOLATE ALL CONDUITS FROM THE A/V GROUND SYSTEM. USE INSULATED MOUNTINGS FOR ALL CONNECTORS INCLUDING BUT NOT LIMITED TO, 1/4", PHONO, BNC, XLR AND ANY OTHER JACKS THAT CAN SHORT THE AUDIO GROUND TO THE CONDUIT. ALL CONDUITS ENTERING THE RACKS SHALL BE INSULATED FROM THE RACKS WITH PLASTIC BUSHINGS.
- THE ELECTRICAL CONTRACTOR SHALL DEVELOP CONDUIT CONTINUITY BY PASSING A MOUSE WITH A PULL STRING THROUGH EACH CONDUIT RUN.
- ELECTRICAL CONTRACTOR SHALL MAKE AVAILABLE A FIELD REPRESENTATIVE FOR THE INSTALLER OF THE A/V EQUIPMENT DURING THE A/V INSTALLATION.
- PULL WIRES THROUGH J-BOXES WITHOUT CUTS OR SPLICES.
- AUDIO AND CONTROL LINES MAY BE CUT AT TERMINAL CABINETS FOR EASE OF INSTALLATION. SPLICES ARE MADE ONLY VIA BARRIER TERMINAL STRIPS OR OTHER APPROVED METHODS.
- VIDEO LINES MAY BE CUT AT TERMINAL CABINETS IF NECESSARY FOR PULLING. IF CUT, RECONNECT VIA BNC COUPLERS.
- NO WIRES SHALL BE SPLICED IN ANY OTHER WAY OR AT ANY OTHER PLACE THAN THE TERMINAL CABINETS AS DESCRIBED ABOVE.
- LEAVE NO CONDUIT COMING INTO RACKS FROM TOP AND/OR SIDES EXPOSED TO FRONT VIEW OF RACKS. PLACE TRIM OR PANELS TO HIDE CONDUIT RUNS FOR A NEAT APPEARANCE.
- WHERE CONDUIT IS TO BE SURFACE RUN, THE CONTRACTOR SHALL FINISH THE CONDUIT TO MATCH THE WALL FINISH.
- REFER TO TELECOM DRAWINGS FOR ADDITIONAL RACEWAY ROUTING AND PATH INFORMATION.
- ADHERE TO ALL APPLICABLE SECTIONS OF THE NEC INCLUDING, BUT NOT LIMITED TO SEC. 640.3(A),(B)&(C).

II. BACK BOX LOCATIONS AND MOUNTING:

- REFER TO ARCHITECTURAL DRAWINGS AND COORDINATE EXACT MOUNTING LOCATIONS OF ALL BACK BOXES.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL BACK BOXES WITH OWNER'S REPRESENTATIVE IN THE FIELD.
- ALL BOXES DESIGNATED AS FUTURE SHALL HAVE A BLANK COVER PLATE WITH THE STENCILED AV BACK BOX LABEL PAINTED ON THE INSIDE OF THE COVER PLATE FOR IDENTIFICATION.

III. WIRING:

- WIRE ALL RACKS COMPLETELY IN THE SOUND CONTRACTOR'S SHOP. NO INTERNAL RACK WIRING TO BE DONE ON THE JOB SITE.
- ROUTE RACK AND WIRE WAY WIRING TO AVOID INDUCED HUM IN AUDIO LINES OR EQUIPMENT.
- FOLLOW THE GROUNDING PLAN SHOWN ON THE DRAWINGS.
- LABEL ALL SWITCHES, CONTROLS, RECEPTACLES AND GENERAL INFORMATION LABELING WITH ENGRAVED PLASTIC LAMINATE OR ENGRAVED METAL PLATES. DRY TRANSFER OR OTHER TYPES OF ADHESIVE (LABEL GUNS) ARE NOT ACCEPTABLE.
- CONNECT MICROPHONE, LINE-LEVEL AND DC CONTROL CABLES ENTERING EQUIPMENT RACK ONLY TO BARRIER TERMINAL STRIPS OR DIRECTLY TO PATCH PANELS.
- CONNECT LOUDSPEAKER LINES ENTERING EQUIPMENT RACKS VIA BARRIER TERMINAL STRIPS WITH SPADE LUGS. DO NOT BUS COMMONS TOGETHER; DO NOT GROUND.
- BUNDLE AUDIO CABLES TO THE CONTROL CONSOLE AND SECURE THE BUNDLE TO THE CONSOLE LEAVING A CABLE LOOP LONG ENOUGH TO MOVE THE CONSOLE AWAY FROM THE WALL FOR SERVICE.
- WIRING OF 3-PIN CONNECTORS, RECEPTACLES, JACKS AND PLUGS:  
 PIN 1 OR SLEEVE: SHIELD, DO NOT GROUND  
 PIN 2 OR TIP: RED (OR WHITE), (+) HIGH  
 PIN 3 OR RING: BLACK, (-) LOW
- WIRING OF 2-PIN CONNECTORS, RECEPTACLES, JACKS AND PLUGS:  
 PIN 1 OR (-): BLACK, COMMON  
 PIN 2 OR (+): RED (OR WHITE), HOT
- ALL AUDIO EQUIPMENT SHALL HAVE BALANCED INPUTS AND OUTPUTS. INCLUDE INPUT/OUTPUT TRANSFORMERS WHERE NECESSARY. UNBALANCED AUDIO CIRCUITS ARE NOT ACCEPTABLE UNLESS NOTED OTHERWISE IN THE DRAWINGS OR SPECIFICATIONS.
- ENSURE THAT THE SHIELDS OF THE PRODUCTION COMMUNICATION SYSTEM ARE NOT GROUNDED ANYWHERE EXCEPT WITHIN THE MAIN STATION POWER SUPPLY.

IV. WIRE NUMBERING:

EACH CABLE SHALL BE ASSIGNED A UNIQUE NUMBER AND PRINTED WITH THAT NUMBER ON EACH END WITH PERMANENT WIRE LABELS SUCH AS TYTON TAB TAG OR SHRINK TAB LABELS. THESE WIRE NUMBERS SHALL BE SHOWN ON THE AS-BUILT DRAWINGS AND COMPILED IN A TERMINAL AND WIRE SCHEDULE.

V. VIDEO SYSTEMS:

ISOLATE ALL VIDEO EQUIPMENT AND RACKS FROM AUDIO EQUIPMENT AND RACKS WHEN MULTIPLE RACKS ARE IN USE.

VI. SEISMIC RESTRAINTS:

- ALL HANGING OR FREE STANDING EQUIPMENT AND CABINETS FURNISHED INCLUDING, BUT NOT LIMITED TO, RACKS, LOUDSPEAKERS, PROJECTION SCREENS AND TV MONITORS, SHALL BE SECURED TO SUBSTANTIAL BUILDING STRUCTURE SO AS TO RESIST SEISMIC ACCELERATION PER CBC2001. SEE DRAWING S1.00.
- LOUDSPEAKER HANGING DETAILS, RACK BRACING, AND OTHER SEISMIC RESTRAINTS NOT SHOWN ON THE CONTRACT DRAWINGS SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DEVELOP THESE DETAILS.
- SUBMIT THE DRAWINGS TO THE ARCHITECT FOR REVIEW AFTER THEY HAVE BEEN APPROVED, STAMPED AND SIGNED BY A STRUCTURAL ENGINEER REGISTERED, LICENSED, AND ENGAGED IN REGULAR PRACTICE IN THE PROJECT'S STATE.

### BACK BOX SCHEDULE

SYMBOL EXAMPLE:  $\square$  XXX WALL, CATWALK OR ABOVE CEILING MOUNTED BACKBOX.  
 $\otimes$  XX FLUSH MOUNTED CEILING BACKBOX  
 $\otimes$  XXX FLUSH IN FLOOR MOUNTED BACKBOX.

SYMBOL	FUNCTION (PANEL NAME)	BOX SIZE	DETAIL/NOTE	MOUNTING LOCATION (CENTER OF BOX)
AVP	AV PRODUCTION PANEL	4 GANG MASONRY	AV601	+18" AFF
AVP2	AV PRODUCTION PANEL TYPE 2	4 GANG MASONRY	AV601	+18" AFF
DS1	DIGITAL SIGNAGE DISPLAY TYPE 1	1 GANG MASONRY	-	BUILDING SWITCH HEIGHT
DS2	DIGITAL SIGNAGE DISPLAY TYPE 2	1 GANG MASONRY	-	BUILDING SWITCH HEIGHT
CAM1	CAMERA TYPE 1	-	(11)	AS NOTED
CAM2	CAMERA TYPE 2	2 GANG	-	AS NOTED
CAM3	CAMERA TYPE 3	2 GANG	-	AS NOTED
COL	CREDENZA COLLECTOR BOX	NEMA 12124	-	+18" AFF
ER	EQUIPMENT RACK COLLECTOR	AS NOTED	-	AS NOTED
ER1	EQUIPMENT RACK COLLECTOR	AS NOTED	-	AS NOTED
FB1	AV FLOORBOX TYPE 1	-	(1)	FLUSH IN ACCESS FLOOR
FB2	AV FLOORBOX TYPE 2	-	(1)	FLUSH IN ACCESS FLOOR
FB3	AV FLOORBOX TYPE 3	-	(1)	FLUSH IN ACCESS FLOOR
FB4	AV FLOORBOX TYPE 4	-	(1)	FLUSH IN ACCESS FLOOR
FB5	AV FLOORBOX TYPE 5	-	(1)	FLUSH IN ACCESS FLOOR
FPD	FLAT PANEL DISPLAY	-	(9)	REFER TO DETAILS
IR1	INTERVIEW ROOM AV INPUT	2 GANG/1	-	BUILDING OUTLET HEIGHT
M	MICROPHONE PANEL	1 GANG	-	FLUSH IN CEILING
RM1	REMOTE CONTROL TYPE 1	2 GANG	-	BUILDING SWITCH HEIGHT
RM2	REMOTE CONTROL TYPE 2	2 GANG	-	BUILDING SWITCH HEIGHT
S	CEILING DISTRIBUTED LOUDSPEAKER	-	(2)	FLUSH IN CEILING
SC	PROJECTION SCREEN WALL MOUNT	2 GANG W/ SEPTUM	(7)	AT SCREEN MOTOR ELECTRICAL/L.V. CONTROL
-	-	-	-	-
SC	PROJECTION SCREEN CEILING	-	(7)	AT SCREEN MOTOR LOW VOLTAGE CONTROL
-	-	-	-	-
-	-	-	-	-
SCS	SINGLE SCREEN CONTROL SWITCH	1 GANG	-	AS NOTED
SCS2	DUAL SCREEN CONTROL SWITCH	2 GANG	-	AS NOTED
SCS3	TRIPLE SCREEN CONTROL SWITCH	T.B.D.	T.B.D.	T.B.D.
TR1	TEAM ROOM PANEL	3 GANG	-	REFER TO DETAILS
VW1	VIDEO WALL PANEL	NEMA 684	-	AS NOTED
VP	VIDEO PROJECTOR	2 GANG DEEP	-	FLUSH IN CEILING
FPD2	FLAT PANEL DISPLAY	-	(10)	REFER TO DETAILS
-	-	-	-	-

NOTES:  
 1. EQUIPMENT TO BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR.  
 2. LOUDSPEAKER BACKCANS TO BE SUPPLIED BY AV CONTRACTOR FOR INSTALLATION BY ELECTRICAL CONTRACTOR.  
 3. 2 GANG/1 REPRESENTS A DOUBLE GANG BACK BOX WITH SINGLE GANG ADAPTER RING TO ACCEPT A SINGLE GANG PLATE.  
 4. NEMA SIZES ARE (HWD) HEIGHTxWIDTHxDEPTH OR STANDARD GANG, DEEP.  
 5. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT MOUNTING LOCATION.  
 6. ALL BOXES ARE RECESSED FOR FLUSH MOUNTING UNLESS NOTED OTHERWISE.  
 7. HARDWIRE ELECTRICAL POWER DIRECTLY TO PROJECTION SCREEN MOTOR CONNECTION.  
 8. ALL MASONRY BOXES SHALL BE 3.5" DEEP.  
 9. FPD2 BACKBOX TO BE FSR PWB 270 WITH ALL REQUIRED ACCESSORIES  
 10. FPD2 BACKBOX TO BE FSR PWB 270 WITH ALL REQUIRED ACCESSORIES  
 11. CAM1 BACKBOX TO BE FSR PWB 200 (BOX ONLY BY ELECTRICAL CONTRACTOR), WITH ONE-GANG PLATE AND CUSTOM ESCUTCHEON (BY AV CONTRACTOR).

### WIRE TYPE SCHEDULE

SYMBOL EXAMPLE:  $\square$  1" 3/4" 2" F TO EQUIPMENT RACK

TWO 1" CONDUITS WITH MICROPHONE LEVEL, ONE CONDUIT WITH PRODUCTION COMMUNICATION LEVEL AND ONE 2" CONDUIT WITH VIDEO LEVEL.  
 SLASH MARKS INDICATE QUANTITY OF CONDUIT; QUANTITY OF WIRES IS NOT SHOWN.

LETTER	DESCRIPTION	LETTER	DESCRIPTION
A	MIC, 2 CONDUCTOR SHIELDED	H	CAMERA
B	LINE, 2 CONDUCTOR SHIELDED	J	CONTROL, DC
C	PRODUCTION COMMUNICATIONS	K	CONTROL, DIGITAL
D	SPEAKER, LOW Z, PAIR #10 THHN	L	OPTICAL FIBER
E	SPEAKER 70V, PAIR #14 THHN	M	EMPTY, RESERVED FOR FUTURE
F	VIDEO CO-AX	N	DATA, NETWORK
G	RF CO-AX	O	DC POWER

NOTES:  
 1. ALL UNLABELED CONDUIT IS 3/4"  
 2. SEE SPECIFICATIONS FOR CABLE REQUIREMENTS.

### PROJECT WORK SCOPE

ITEMS TO BE PROVIDED AND INSTALLED	ELECTRICAL CONTRACTOR		AUDIOVISUAL CONTRACTOR	
	PROVIDES	INSTALLS	PROVIDES	INSTALLS
AUDIOVISUAL CONDUIT RISER DIAGRAM			X	
AUDIOVISUAL EQUIPMENT RACKS AND DEVICES			X	X
METALLIC CONDUIT BETWEEN AUDIOVISUAL DEVICES AND AUDIOVISUAL EQUIPMENT RACKS	X	X		
CONDUIT INSULATION BUSHINGS BETWEEN METALLIC CONDUIT AND AUDIOVISUAL EQUIPMENT RACKS	X	X		
AUDIOVISUAL EQUIPMENT RACK CABLING			X	X
AUDIOVISUAL EQUIPMENT RACK TERMINATIONS				X
AUDIOVISUAL DEVICE SPECIALTY BACK BOXES			X	X
AUDIOVISUAL DEVICE SPECIALTY FLOOR BOXES	X	X+		
AUDIOVISUAL DEVICE METALLIC CONDUIT	X	X		
AUDIOVISUAL DEVICE CABLING			X	X
AUDIOVISUAL DEVICE TERMINATION				X
EMPTY CONDUIT (FOR FUTURE AV USE)	X	X		
CABLE TRAYS FOR AUDIOVISUAL USE	X	X		
CABLE SLEEVES FOR AUDIOVISUAL USE	X	X		
PULL BOXES FOR AUDIOVISUAL USE	X	X		

◊ = INSTALLATION CRITERIA TO BE PROVIDED BY AUDIOVISUAL CONTRACTOR  
 += INSTALLATION CRITERIA TO BE PROVIDED BY AUDIOVISUAL CONSULTANT

### AV CONDUIT SPACING REQUIREMENTS

EMI SOURCE	MINIMUM SEPERATION FROM AUDIOVISUAL SIGNAL CONDUIT	
	EMI SOURCE IN FERROUS METAL CONDUIT	EMI SOURCE EXPOSED, IN CABLE TRAY OR NON-FERROUS METAL CONDUIT
TV, SECURITY, LIFE SAFETY CIRCUITS, AND OTHER BUILDING CONTROL NETWORKS	6 INCHES	12 INCHES
SINGLE-PHASE POWER CIRCUITS	18 INCHES	36 INCHES
THREE-PHASE POWER CIRCUITS	36 INCHES	72 INCHES
FLUORESCENT & DIMMED LIGHTING CIRCUITS	36 INCHES	
COLD-CATHODE, MERCURY VAPOR, HID, HALOGEN, ETC. LIGHTING	48 INCHES	
TRANSFORMERS & MOTORS	60 INCHES	

D:\Dropbox\ASU\_NBSA\Drawings\AV-001\_THRU\_AV-004.dwg, AV-001\_AV\_General Notes and Schedules, 3/6/2013 9:49:40 PM, Bluebeam PDF, ARCH\_EL\_30.00\_X\_42.00\_inches



**ASU New Business School Facility**  
 Arizona State University  
 450 E. Leman Street  
 Tempe, AZ 85287

**Client**  
 Arizona Board of Regents  
 for and on behalf of  
 Arizona State University  
 P.O. Box 875512  
 Tempe, AZ 85237-5512

**Architect**  
 Kohn Pedersen Fox Associates PC  
 11 West 43rd Street  
 New York, New York 10036  
 Tel: 212.977.6300 Fax: 212.956.2526

**Architect of Record**  
 RSP Architects  
 502 S. College Ave. Suite 203  
 Tempe, AZ 85281  
 Tel: 408.889.2022 Fax: 408.889.2099

**Structural Engineer**  
 Meyer Borgman & Johnson, Inc.  
 1435 W. Broadway Road, Suite 212  
 Tempe, AZ 85283-1125  
 Tel: 480.747.6737 Fax: 480.747.6727

**MEP Engineer**  
 Energy Systems Design Inc.  
 7135 E. Camelback Road, Suite 275  
 Scottsdale, AZ 85251  
 Tel: 480.481.4900 Fax: 480.481.4903

**Civil Engineer**  
 Wood, Patel & Associates  
 2051 W. Northern Avenue, Suite 100  
 Phoenix, AZ 85021  
 Tel: 480.834.3300

**Landscape Architect**  
 GB Two Landscape Architecture, Inc.  
 6135 N. Camelback Road  
 Scottsdale, AZ 85250  
 Tel: 480.991.3384 Fax: 480.452.1878

**Telecom Systems Designer**  
 Jeremiak & Associates  
 10573 N. 114th Street, Suite 103  
 Scottsdale, AZ 85259  
 Tel: 480.722.0100

**AV Systems / Acoustical**  
 McKay Conant Hoover, Inc.  
 7435 E. Stetson Drive, Suite A  
 Scottsdale, AZ 85251  
 Tel: 480.947.3335

**Lighting**  
 Lam Partners  
 84 Sherman Street  
 Cambridge, MA 02140  
 Tel: 617.354.4502

Certification

Revisions

No.	Date	Description
1	08/23/12	MOCKUP PRELIMS
2	01/21/13	ISSUED FOR BID
3	01/23/13	UTILITY COORDINATION ASB07
4	02/20/13	BID ADDENDUM ASB-107
5	02/27/13	BID ADDENDUM
6	03/07/13	BID ADDENDUM

Project Status

Issue Date: 10/31/11

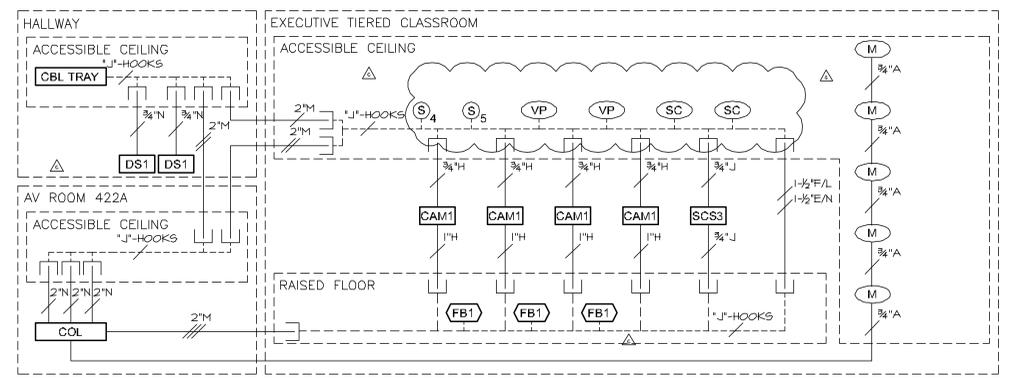
Scale: As indicated

Project No: 1279.013.00

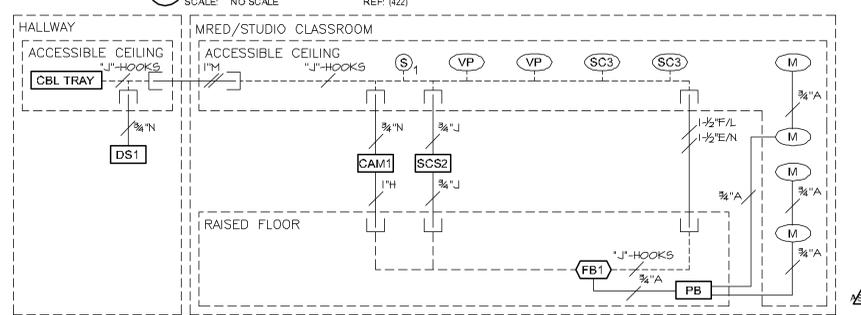
Drawn By: LRM

AV CONDUIT RISER

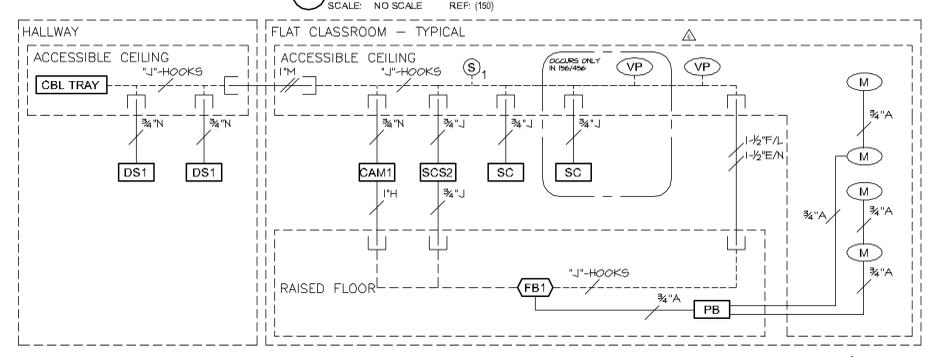
AV-010



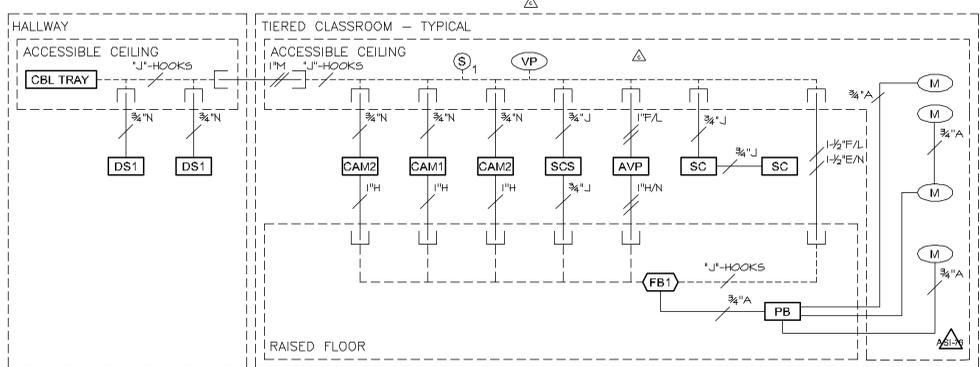
**5 EXECUTIVE TIERED CLASSROOM CONDUIT RISER**  
 SCALE: NO SCALE REF: (422)



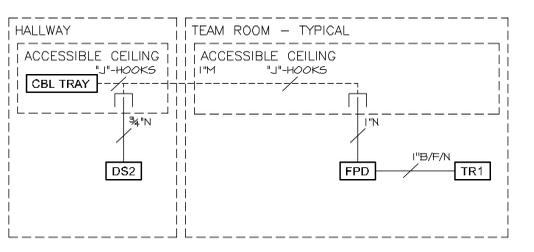
**4 MRED/STUDIO CLASSROOM CONDUIT RISER**  
 SCALE: NO SCALE REF: (150)



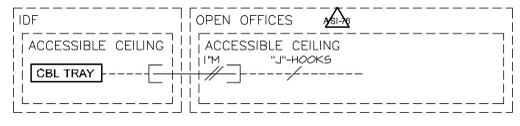
**3 TYP FLAT CLASS LAB CONDUIT RISER**  
 SCALE: NO SCALE REF: (156, 256, 456)



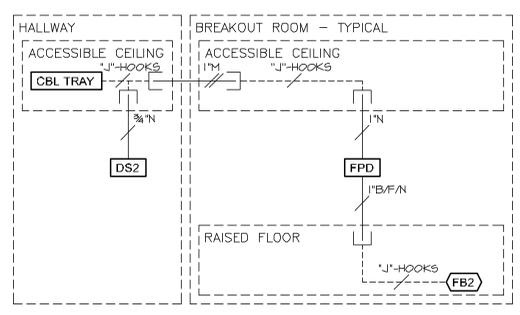
**2 TIERED CLASSROOM CONDUIT RISER**  
 SCALE: NO SCALE REF: (158, 164, 170, 176, 258, 264, 270, 276)



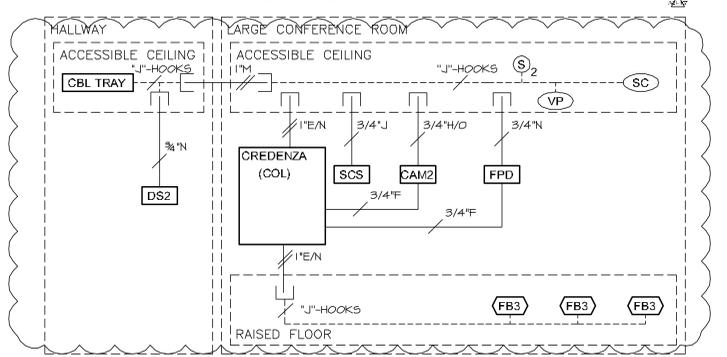
**1 TEAM ROOM CONDUIT RISER**  
 SCALE: NO SCALE REF: TYPICAL OF 50



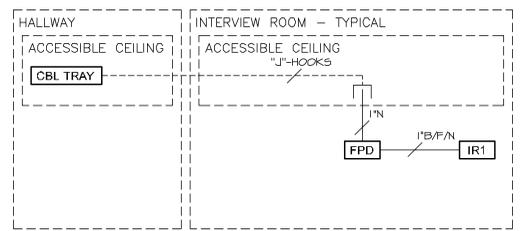
**10 3RD/4TH FLOOR SOUND MASKING CONDUIT RISER**  
 SCALE: NO SCALE REF: TYPICAL OF 3RD AND 4TH FLOOR SOUTH OPEN OFFICES



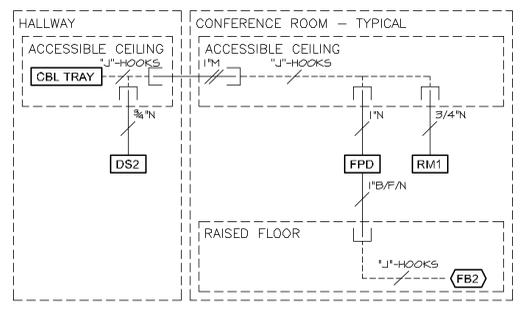
**9 BREAKOUT ROOM CONDUIT RISER**  
 SCALE: NO SCALE REF: TYPICAL OF 8



**8 LARGE CONFERENCE ROOM CONDUIT RISER**  
 SCALE: NO SCALE REF: (885)



**7 INTERVIEW ROOM CONDUIT RISER**  
 SCALE: NO SCALE REF: TYPICAL OF 10



**6 MEDIUM CONFERENCE ROOM CONDUIT RISER**  
 SCALE: NO SCALE REF: (351, 357)

**WIRE TYPE SCHEDULE**

SYMBOL EXAMPLE: TO EQUIPMENT RACK

TWO 1" CONDUITS WITH MICROPHONE LEVEL, ONE CONDUIT WITH PRODUCTION COMMUNICATION LEVEL AND ONE 2" CONDUIT WITH VIDEO LEVEL.  
 SLASH MARKS INDICATE QUANTITY OF CONDUIT; QUANTITY OF WIRES IS NOT SHOWN.

A	MIC, 2 CONDUCTOR SHIELDED	H	CAMERA
B	LINE, 2 CONDUCTOR SHIELDED	J	CONTROL, DC
C	PRODUCTION COMMUNICATIONS	K	CONTROL, DIGITAL
D	SPEAKER, LOW Z, PAIR #10 THHN	L	OPTICAL FIBER
E	SPEAKER 70V, PAIR #14 THHN	M	CABLE CHASE
F	VIDEO CO-AX	N	DATA, NETWORK
G	RF CO-AX	O	DC POWER

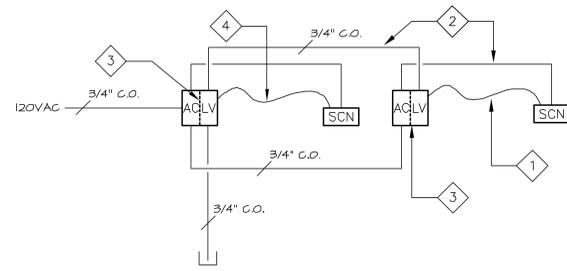
NOTES:  
 1. ALL UNLABELED CONDUIT IS 3/4"  
 2. SEE SPECIFICATIONS FOR CABLE REQUIREMENTS.

**AV CONDUIT SPACING REQUIREMENTS**

EMI SOURCE	MINIMUM SEPERATION FROM AUDIOVISUAL SIGNAL CONDUIT	
	EMI SOURCE IN FERROUS METAL CONDUIT	EMI SOURCE EXPOSED, IN CABLE TRAY OR NON-FERROUS METAL CONDUIT
TV, SECURITY, LIFE SAFETY CIRCUITS, AND OTHER BUILDING CONTROL NETWORKS	6 INCHES	12 INCHES
SINGLE-PHASE POWER CIRCUITS	18 INCHES	36 INCHES
THREE-PHASE POWER CIRCUITS	36 INCHES	72 INCHES
FLUORESCENT & DIMMED LIGHTING CIRCUITS	36 INCHES	
COLD-CATHODE, MERCURY VAPOR, HID, HALOGEN, ETC. LIGHTING	48 INCHES	
TRANSFORMERS & MOTORS	60 INCHES	

ASI-18

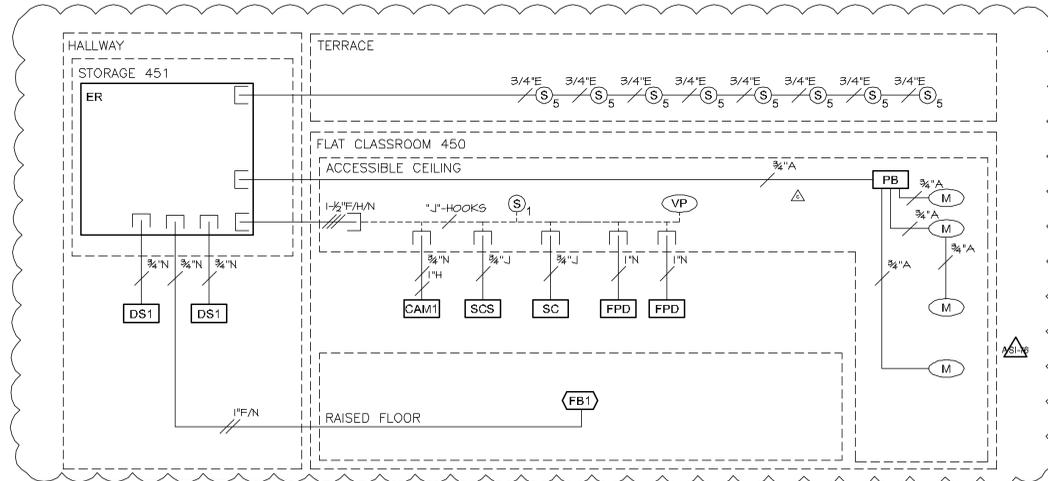
D:\Dropbox\ASU\_NBSA\Drawings\AV-010.dwg, AV-010 AV Conduit Riser, 3/16/2013 9:49:45 PM, Bluebeam PDF, ARCH\_EI\_30.00\_X\_42.00\_inches



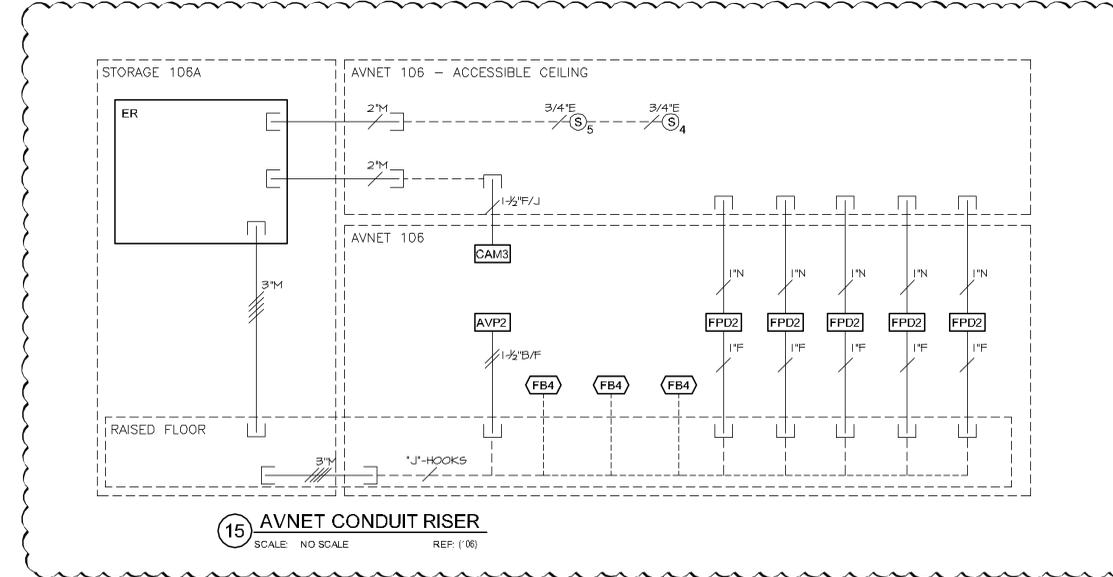
**14 CONDUIT DETAIL - DUAL PROJECTION SCREENS**  
SCALE: NO SCALE REF:

**KEYNOTES**

1. FREE-RUN LOW VOLTAGE CABLE
2. METAL CLAD ELECTRICAL WIRING
3. BACK BOX SEPTUM



**13 FLAT CLASS LAB 450 CONDUIT RISER**  
SCALE: NO SCALE REF: (450)



**15 AVNET CONDUIT RISER**  
SCALE: NO SCALE REF: (106)



**ASU New Business School Facility**

Arizona State University  
450 E. Lemon Street  
Tempe, AZ 85287

*Client*  
Arizona Board of Regents  
for and on behalf of  
Arizona State University  
P.O. Box 875512  
Tempe, AZ 85287-5512

*Architect*  
Kohn Pedersen Fox Associates PC  
11 West 42nd Street  
New York, New York 10036  
Tel: 212.977.6500 Fax: 212.956.2526

*Architect of Record*  
RSP Architects  
502 S. College Ave. Suite 203  
Tempe, AZ 85281  
Tel: 408.889.2022 Fax: 408.889.2099

*Structural Engineer*  
Meyer Borgman & Johnson, Inc.  
1435 W. Broadway Road, Suite 212  
Tempe, AZ 85282-1125  
Tel: 480.747.6737 Fax: 480.747.6727

*MEP Engineer*  
Energy Systems Design Inc.  
7135 E. Camelback Road, Suite 275  
Scottsdale, AZ 85251  
Tel: 480.481.4900 Fax: 480.481.4903

*Civil Engineer*  
Wood, Patel & Associates  
2051 W. Northern Avenue, Suite 100  
Phoenix, AZ 85021  
Tel: 480.834.3300

*Landscape Architect*  
GB Two Landscape Architecture, Inc.  
6115 N. Camelback Road  
Scottsdale, AZ 85250  
Tel: 480.991.3384 Fax: 480.452.1878

*Telecom Systems Designer*  
Jeremiah & Associates  
10573 N. 114th Street, Suite 103  
Scottsdale, AZ 85259  
Tel: 480.722.0100

*AV Systems / Acoustical*  
McKay Conant Hoover, Inc.  
7435 E. Stinson Drive, Suite A  
Scottsdale, AZ 85251  
Tel: 480.947.3335

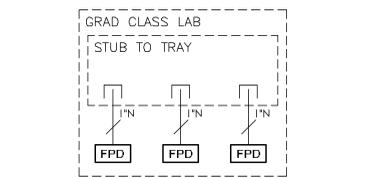
*Lighting*  
Lani Partners  
84 Sherman Street  
Cambridge, MA 02140  
Tel: 617.354.4502

Certification

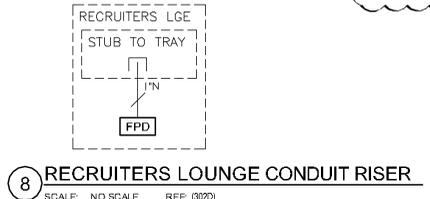
Revisions		
No.	Date	Description
1	08/23/12	MOCKUP PREPARED
2	01/21/13	ISSUED FOR BID
3	01/23/13	UTILITY COORDINATION ASSET
4	02/28/13	ASH-108
5	02/27/13	BD ADDENDUM
6	03/07/13	BD ADDENDUM

Project Status	
Issue Date:	10/31/11
Scale:	As indicated
Project No.	1279.013.00
Drawn By	LRM

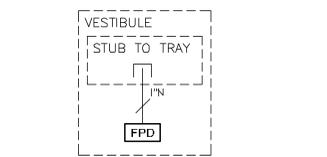
**AV CONDUIT RISER**



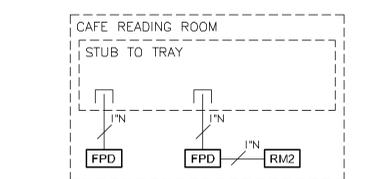
**12 GRAD CLASS LAB CONDUIT RISER**  
SCALE: 12 REF: (250)



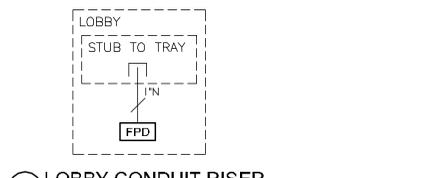
**8 RECRUITERS LOUNGE CONDUIT RISER**  
SCALE: NO SCALE REF: (302)



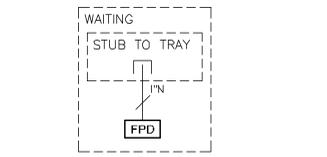
**4 VESTIBULE CONDUIT RISER**  
SCALE: NO SCALE REF: (450/1)



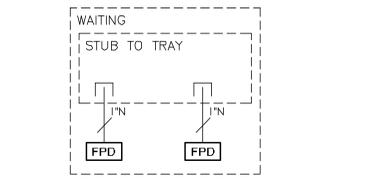
**11 CAFE READING ROOM CONDUIT RISER**  
SCALE: NO SCALE REF: (241, 341, 441)



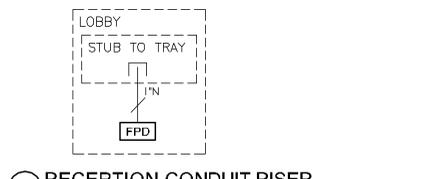
**7 LOBBY CONDUIT RISER**  
SCALE: NO SCALE REF: (322, 1)



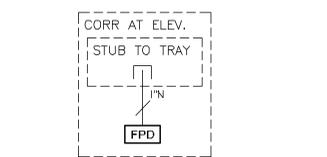
**3 WAITING CONDUIT RISER**  
SCALE: NO SCALE REF: (950)



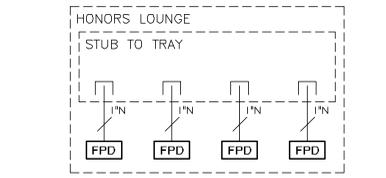
**10 WAITING CONDUIT RISER**  
SCALE: NO SCALE REF: (802/1)



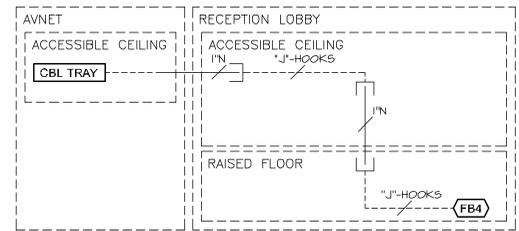
**6 RECEPTION CONDUIT RISER**  
SCALE: NO SCALE REF: (400/2)



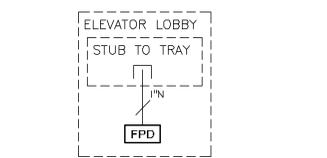
**2 CORRIDOR CONDUIT RISER**  
SCALE: NO SCALE REF: (200/1, 300/1, 400/1)



**9 HONORS LOUNGE CONDUIT RISER**  
SCALE: NO SCALE REF: (102)



**5 RECEPTION LOBBY 132L1 CONDUIT RISER**  
SCALE: NO SCALE REF: 132L1



**1 ELEVATOR LOBBY CONDUIT RISER**  
SCALE: NO SCALE REF: (100/1)

**WIRE TYPE SCHEDULE**

SYMBOL EXAMPLE: TO EQUIPMENT RACK

TWO 1" CONDUITS WITH MICROPHONE LEVEL, ONE CONDUIT WITH PRODUCTION COMMUNICATION LEVEL AND ONE 2" CONDUIT WITH VIDEO LEVEL.

SLASH MARKS INDICATE QUANTITY OF CONDUIT; QUANTITY OF WIRES IS NOT SHOWN.

A	MIC, 2 CONDUCTOR SHIELDED	H	CAMERA
B	LINE, 2 CONDUCTOR SHIELDED	J	CONTROL, DC
C	PRODUCTION COMMUNICATIONS	K	CONTROL, DIGITAL
D	SPEAKER, LOW Z, PAIR #10 THHN	L	OPTICAL FIBER
E	SPEAKER 70V, PAIR #14 THHN	M	CABLE CHASE
F	VIDEO CO-AX	N	DATA, NETWORK
G	RF CO-AX	O	DC POWER

NOTES:  
1. ALL UNLABELED CONDUIT IS 3/4"  
2. SEE SPECIFICATIONS FOR CABLE REQUIREMENTS.

**AV CONDUIT SPACING REQUIREMENTS**

EMI SOURCE	MINIMUM SEPERATION FROM AUDIOVISUAL SIGNAL CONDUIT	
	EMI SOURCE IN FERROUS METAL CONDUIT	EMI SOURCE EXPOSED, IN CABLE TRAY OR NON-FERROUS METAL CONDUIT
TV, SECURITY, LIFE SAFETY CIRCUITS, AND OTHER BUILDING CONTROL NETWORKS	6 INCHES	12 INCHES
SINGLE-PHASE POWER CIRCUITS	18 INCHES	36 INCHES
THREE-PHASE POWER CIRCUITS	36 INCHES	72 INCHES
FLUORESCENT & DIMMED LIGHTING CIRCUITS	36 INCHES	
COLD-CATHODE, MERCURY VAPOR, HID, HALOGEN, ETC. LIGHTING	48 INCHES	
TRANSFORMERS & MOTORS	60 INCHES	



D:\Dropbox\ASU\_NBSA\Drawings\AV-011.dwg, AV-011 AV Conduit Riser, 3/6/2013 9:49:48 PM, Bluebeam PDF, ARCH\_EI\_(30.00\_X\_42.00\_inches)





**ASU New Business School Facility**  
 Arizona State University  
 450 E. Lemon Street  
 Tempe, AZ 85287

**Client**  
 Arizona Board of Regents  
 for and on behalf of  
 Arizona State University  
 P.O. Box 875512  
 Tempe, AZ 85287-5512

**Architect**  
 Kohn Pedersen Fox Associates PC  
 11 West 42nd Street  
 New York, New York 10036  
 Tel: 212.977.6300 Fax: 212.956.2526

**Architect of Record**  
 RSP Architects  
 502 S. College Ave. Suite 203  
 Tempe, AZ 85281  
 Tel: 408.889.2022 Fax: 408.889.2099

**Structural Engineer**  
 Meyer Borgman & Johnson, Inc.  
 1435 W. Broadway Road, Suite 212  
 Tempe, AZ 85282-1125  
 Tel: 480.747.6737 Fax: 480.747.6727

**MEP Engineer**  
 Energy Systems Design Inc.  
 7135 E. Camelback Road, Suite 275  
 Scottsdale, AZ 85251  
 Tel: 480.481.4900 Fax: 480.481.4903

**Civil Engineer**  
 Wood, Patel & Associates  
 2051 W. Northern Avenue, Suite 100  
 Phoenix, AZ 85021  
 Tel: 480.834.3300

**Landscape Architect**  
 GBTwo Landscape Architecture, Inc.  
 6115 N. Camelback Road  
 Scottsdale, AZ 85259  
 Tel: 480.991.3384 Fax: 480.452.1878

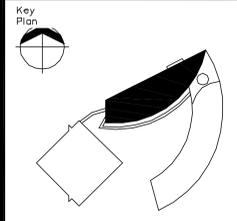
**Telecomm Systems Designer**  
 Jeremiah & Associates  
 10575 N. 114th Street, Suite 103  
 Scottsdale, AZ 85259  
 Tel: 480.722.0100

**AV Systems / Acoustical**  
 McKay Conant Hoover, Inc.  
 7435 E. Stetson Drive, Suite A  
 Scottsdale, AZ 85251  
 Tel: 480.947.3335

**Lighting**  
 Lam Partners  
 84 Sherman Street  
 Cambridge, MA 02140  
 Tel: 617.354.4502

**Certification**

No.	Date	Description
1	05/07/12	OWNER REVISIONS
2	09/14/12	OWNER REVISIONS
3	01/21/13	ISSUED FOR BID
4	01/23/13	UTILITY COORDINATION ASH-97
5	02/20/13	BID ADDENDUM ASH-107
6	02/27/13	BID ADDENDUM
7	03/07/13	BID ADDENDUM

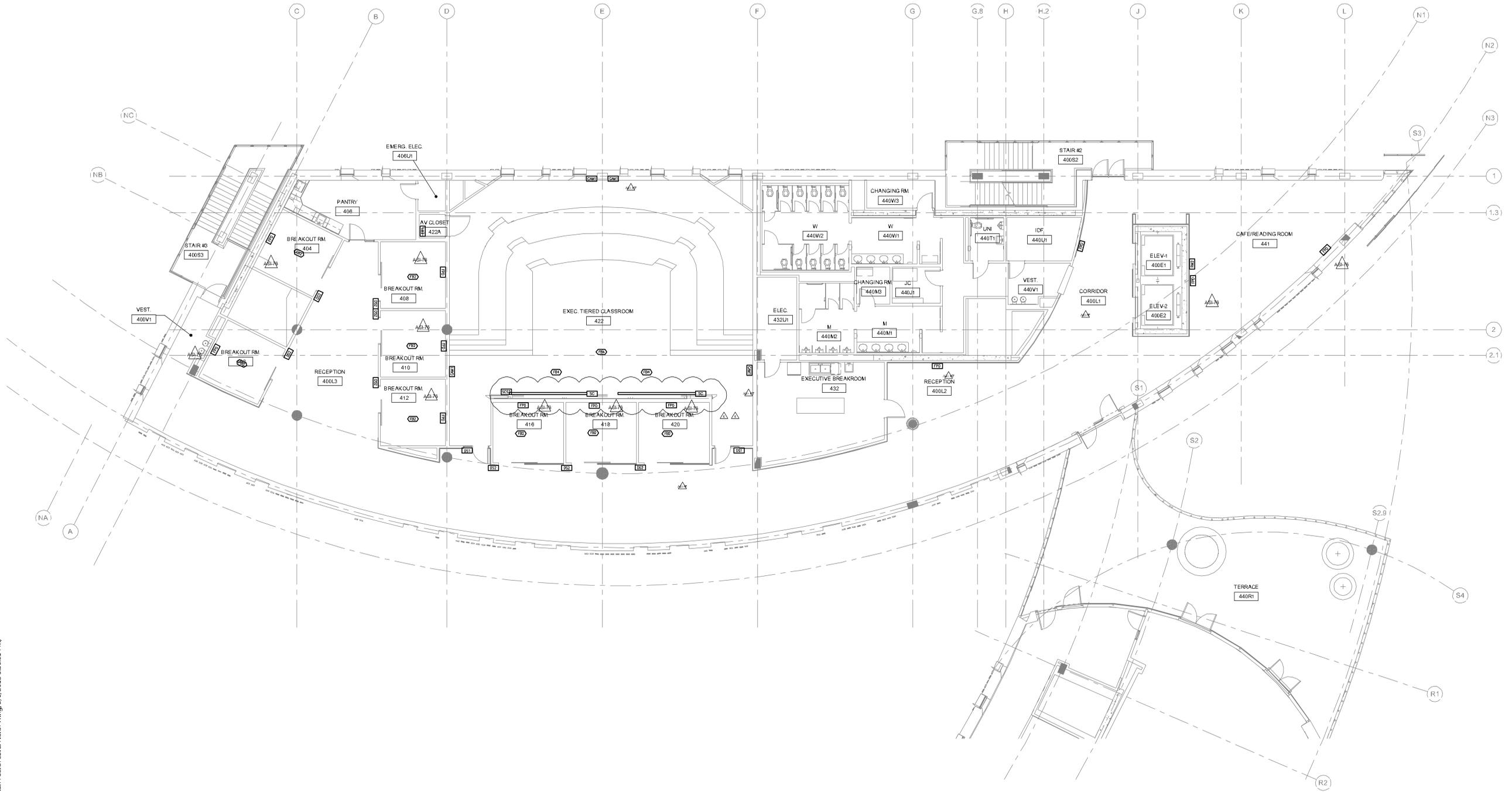


**Project Status**

**Issue Date:** 10/31/11  
**Scale:** As indicated  
**Project No:** 1279.013.00  
**Drawn By:** LRM  
 1/8" = 1'-0"

**AV PLAN FOURTH LEVEL NORTH WING**

**AV-114.1**



D:\Dropbox\ASU\_NBSFA\Drawings\AV-114.1.dwg, AV-114.1\_AV\_Plan\_Fourth\_Level\_North\_Wing, 3/6/2013 9:50:01 PM, Bluebeam PDF, ARCH\_EL\_(30.00\_X\_42.00\_inches)



**ASU New Business School Facility**  
 Arizona State University  
 450 E. Lemon Street  
 Tempe, AZ 85287

**Client**  
 Arizona Board of Regents  
 for and on behalf of  
 Arizona State University  
 P.O. Box 875512  
 Tempe, AZ 85287-5512

**Architect**  
 Kohn Pedersen Fox Associates PC  
 11 West 43rd Street  
 New York, New York 10036  
 Tel: 212.977.6300 Fax: 212.956.2526

**Architect of Record**  
 RSP Architects  
 502 S. College Ave. Suite 203  
 Tempe, AZ 85281  
 Tel: 408.889.2022 Fax: 408.889.2099

**Structural Engineer**  
 Meyer Borgman & Johnson, Inc.  
 1438 W. Broadway Road, Suite 212  
 Tempe, AZ 85282-1125  
 Tel: 480.747.6737 Fax: 480.747.6727

**MEP Engineer**  
 Energy Systems Design Inc.  
 7135 E. Camelback Road, Suite 275  
 Scottsdale, AZ 85251  
 Tel: 480.481.4900 Fax: 480.481.4903

**Civil Engineer**  
 Wood, Patel & Associates  
 2051 W. Northern Avenue, Suite 100  
 Phoenix, AZ 85021  
 Tel: 480.834.3300

**Landscape Architect**  
 GBTwo Landscape Architecture, Inc.  
 6115 N. Camelback Road  
 Scottsdale, AZ 85250  
 Tel: 480.991.3384 Fax: 480.452.1878

**Telecomm Systems Designer**  
 Jeremiah & Associates  
 10573 N. 114th Street, Suite 103  
 Scottsdale, AZ 85259  
 Tel: 480.722.0100

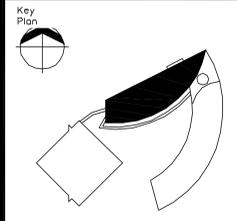
**AV Systems / Acoustical**  
 McKay Conant Hoover, Inc.  
 7435 E. Stetson Drive, Suite A  
 Scottsdale, AZ 85251  
 Tel: 480.947.3335

**Lighting**  
 Lann Partners  
 84 Sherman Street  
 Cambridge, MA 02140  
 Tel: 617.354.4502

**Certification**

Revisions

No.	Date	Description
1	09/14/12	REVISED
2	01/02/13	ISSUED FOR BID
3	01/02/13	UTILITY COORDINATION ASH/07
4	02/28/13	ASH-108
5	03/07/13	BID ADDENDUM

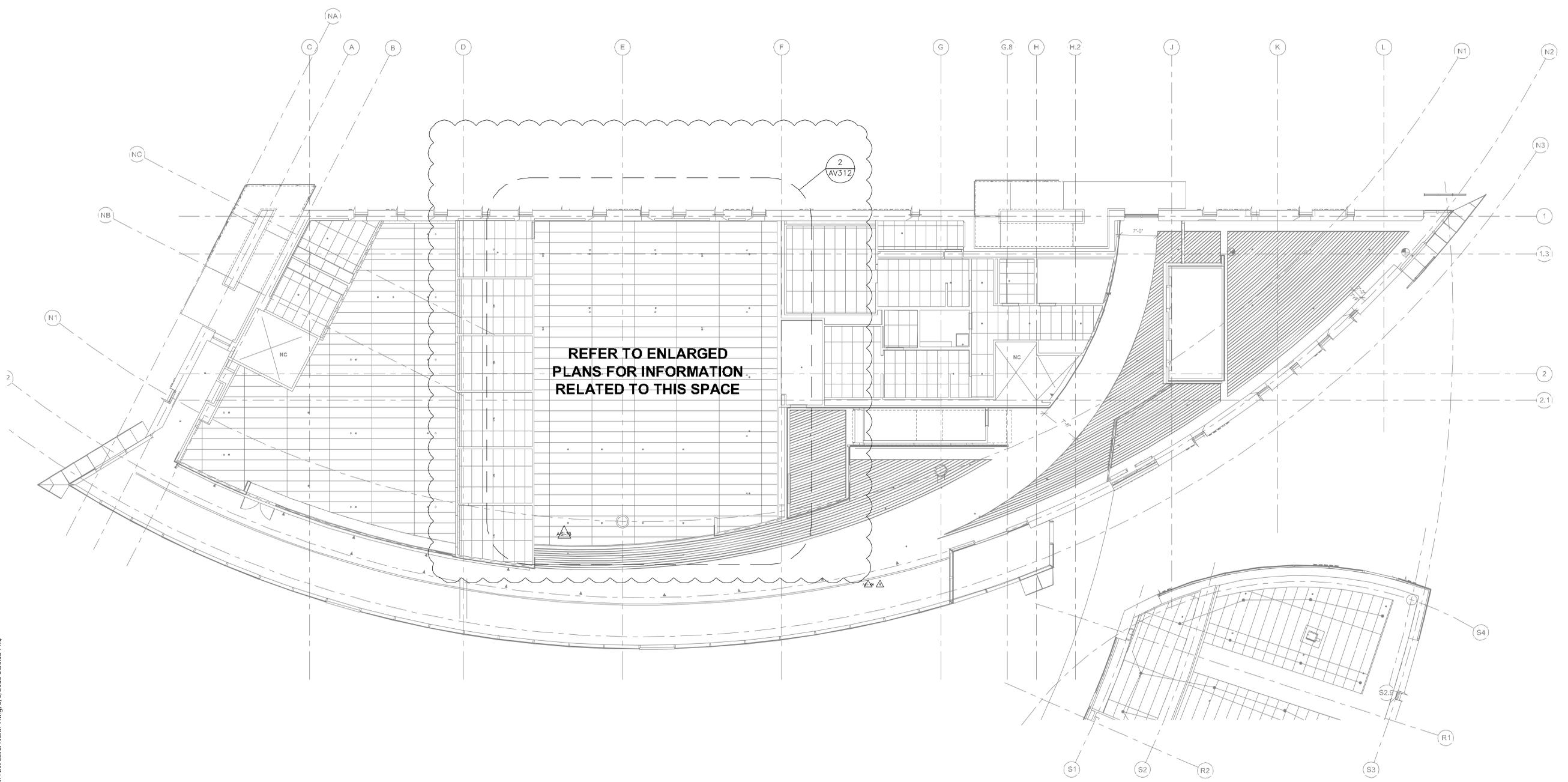


Project Status

Issue Date: 10/31/11  
 Scale: As indicated  
 Project No: 1279.013.00  
 Drawn By: LRM  
 1/8" = 1'-0"

REFLECTED CEILING AV PLAN  
 FIRST LEVEL NORTH WING

**AV-121.1**



D:\Dropbox\ASU\_NBSA\Drawings\AV-121.1.dwg, AV-121.1 Reflected Ceiling AV Plan First Level North Wing, 3/6/2013 9:50:05 PM, Bluebeam PDF, ARCH\_EL\_130.00\_X\_42.00\_inches































**ASU New Business School Facility**  
 Arizona State University  
 450 E. Leman Street  
 Tempe, AZ 85287

**Client**  
 Arizona Board of Regents  
 for and on behalf of  
 Arizona State University  
 P.O. Box 875512  
 Tempe, AZ 85287-5512

**Architect**  
 Kohn Pedersen Fox Associates PC  
 11 West 43rd Street  
 New York, New York 10036  
 Tel: 212.977.6300 Fax: 212.956.2526

**Architect of Record**  
 RSP Architects  
 502 S. College Ave. Suite 203  
 Tempe, AZ 85281  
 Tel: 408.889.2022 Fax: 408.889.2099

**Structural Engineer**  
 Meyer Borgman & Johnson, Inc.  
 1438 W. Broadway Road, Suite 212  
 Tempe, AZ 85282-1125  
 Tel: 480.747.6737 Fax: 480.747.6727

**MEP Engineer**  
 Energy Systems Design Inc.  
 7135 E. Camelback Road, Suite 275  
 Scottsdale, AZ 85251  
 Tel: 480.481.4900 Fax: 480.481.4903

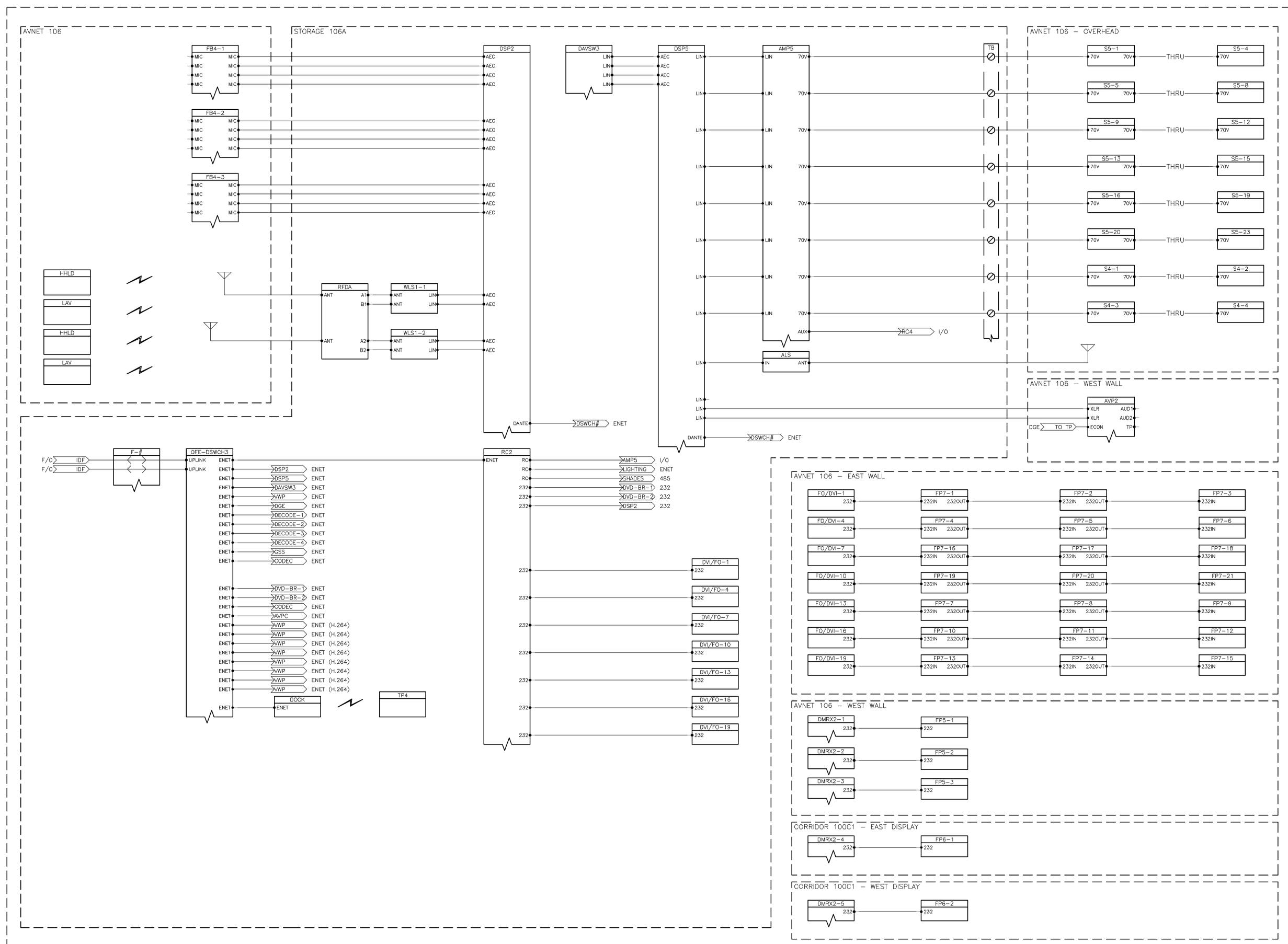
**Civil Engineer**  
 Wood, Patel & Associates  
 6115 N. Northern Avenue, Suite 100  
 Phoenix, AZ 85021  
 Tel: 480.834.3300

**Landscape Architect**  
 GB Two Landscape Architecture, Inc.  
 6115 N. Camelback Road  
 Scottsdale, AZ 85250  
 Tel: 480.991.3384 Fax: 480.452.1878

**Telecomm Systems Designer**  
 Jeremiah & Associates  
 10573 N. 114th Street, Suite 103  
 Scottsdale, AZ 85259  
 Tel: 480.722.0100

**AV Systems / Acoustical**  
 McKay Conant Hoover, Inc.  
 7435 E. Stetson Drive, Suite A  
 Scottsdale, AZ 85251  
 Tel: 480.947.3335

**Lighting**  
 Lam Partners  
 84 Sherman Street  
 Cambridge, MA 02140  
 Tel: 617.354.4502



**1 AVNET AV SINGLE-LINE DIAGRAM**  
 SCALE: NONE

Revisions

No.	Date	Description
1	02/25/13	ADD
2	03/07/13	REVISED

Project Status

Issue Date: 10/31/11  
 Scale: As indicated  
 Project No: 1279.013.00  
 Drawn By: LRM  
 NA

AVNET AV SINGLE-LINE DIAGRAM

D:\Dropbox\ASU\_NBSA\Drawings\AV-50x.dwg, AV-515 AVNET AV Single-Line Diagram, 3/6/2013 9:51:14 PM, Bluebeam PDF, ARCH\_EI\_(30.00\_x\_42.00\_inches)





**ASU New Business School Facility**  
 Arizona State University  
 450 E. Leman Street  
 Tempe, AZ 85287

**Client**  
 Arizona Board of Regents  
 for and on behalf of  
 Arizona State University  
 P.O. Box 875512  
 Tempe, AZ 85237-5512

**Architect**  
 Kohn Pedersen Fox Associates PC  
 11 West 43rd Street  
 New York, New York 10036  
 Tel: 212.977.6300 Fax: 212.956.2526

**Architect of Record**  
 RSP Architects  
 502 S. College Ave. Suite 203  
 Tempe, AZ 85281  
 Tel: 408.889.2022 Fax: 408.889.2099

**Structural Engineer**  
 Meyer Borgman & Johnson, Inc.  
 1438 W. Camelback Road, Suite 212  
 Tempe, AZ 85283-1125  
 Tel: 480.747.6737 Fax: 480.747.6727

**MEP Engineer**  
 Energy Systems Design Inc.  
 7135 E. Camelback Road, Suite 275  
 Scottsdale, AZ 85251  
 Tel: 480.481.4900 Fax: 480.481.4903

**Civil Engineer**  
 Wood, Patel & Associates  
 2051 W. Northern Avenue, Suite 100  
 Phoenix, AZ 85021  
 Tel: 480.834.3300

**Landscape Architect**  
 GB Two Landscape Architecture, Inc.  
 6115 N. Camelback Road  
 Scottsdale, AZ 85250  
 Tel: 480.991.3384 Fax: 480.452.1878

**Telecom Systems Designer**  
 Jeremiah & Associates  
 10575 N. 114th Street, Suite 103  
 Scottsdale, AZ 85259  
 Tel: 480.722.0100

**AV Systems / Acoustical**  
 McKay Conant Hoover, Inc.  
 7435 E. Stetson Drive, Suite A  
 Scottsdale, AZ 85251  
 Tel: 480.947.3335

**Lighting**  
 Lam Partners  
 84 Sherman Street  
 Cambridge, MA 02140  
 Tel: 617.354.4502

Certification

Revisions		
No.	Date	Description
1	09/23/12	MOCKUP REVISIONS
2	01/02/13	ISSUED FOR BID
3	01/02/13	UTILITY COORDINATION ASH-07
4	02/20/13	BID ADDENDUM ASH-107
5	02/26/13	ASH-108
6	03/07/13	BID ADDENDUM

Project Status

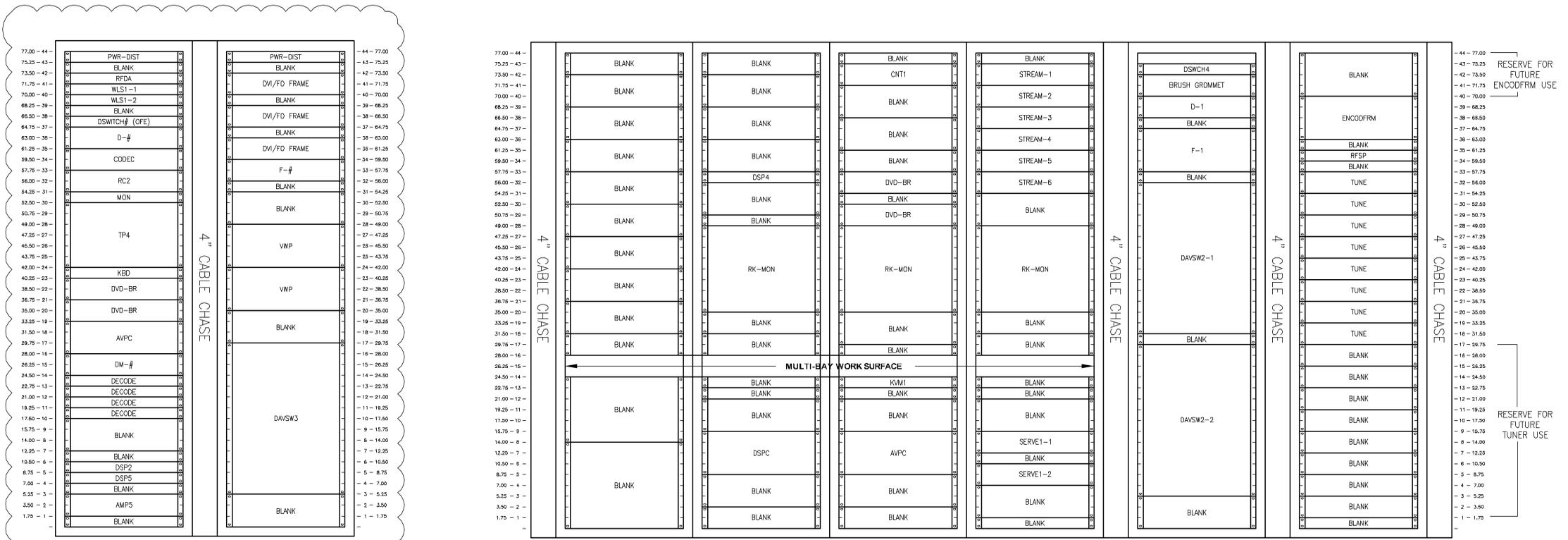
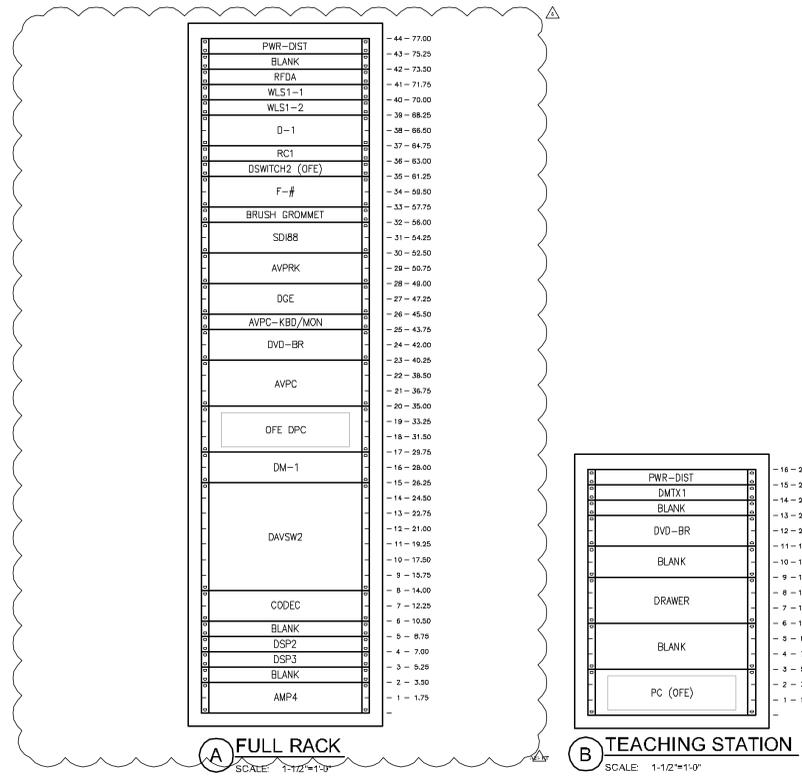
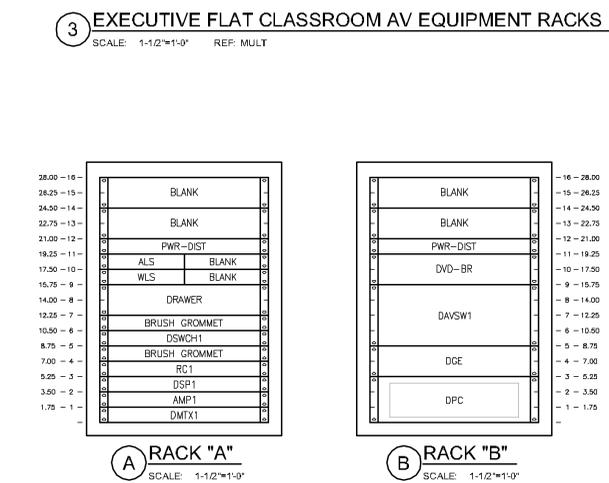
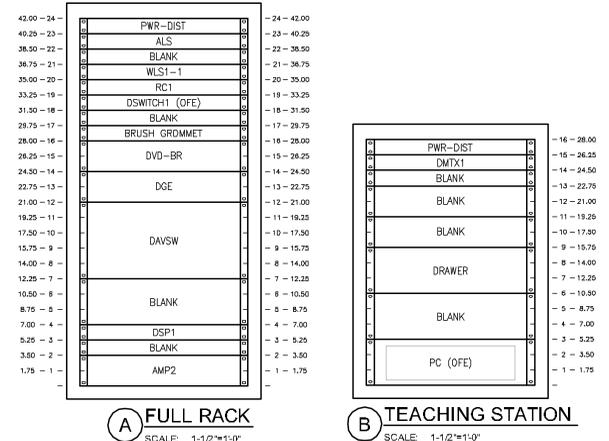
Issue Date: 10/31/11  
 Scale: As indicated

Project No: 1279.013.00

Drawn By: LRM  
 NA

AV EQUIPMENT RACK ELEVATIONS

**AV-701**



RESERVE FOR FUTURE ENCODFRM USE

RESERVE FOR FUTURE TUNER USE



