DRAWING LIST

AV.00 - AUDIOVISUAL DRAWING LIST, LEGEND & NOTES
AV.01 - AUDIOVISUAL EQUIPMENT LAYOUT FITNESS ROOM - 3330

SYMBOLS LEGEND

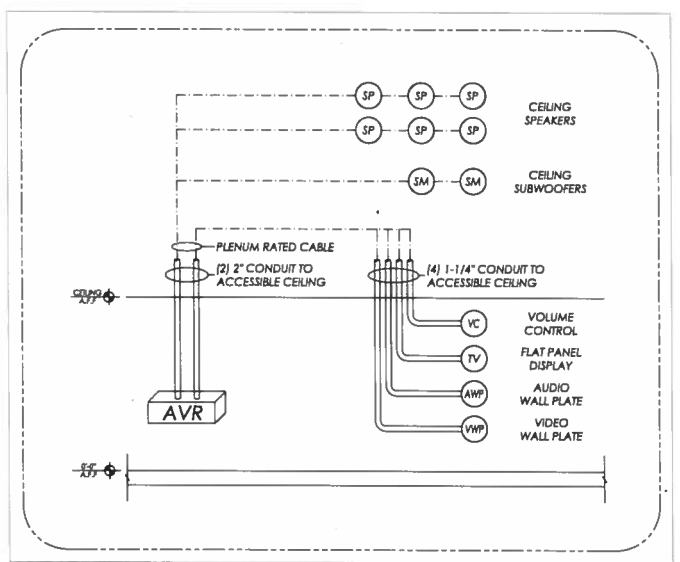
SP	CEILING MOUNTED SPEAKER
SUB	CEILING MOUNTED SUBWOOFER
TV	WALL MOUNTED FLAT PANEL DISPLAY REQUIRES 2 GANG JUNCTION BOX
VC	WALL MOUNTED VOLUME CONTROL REQUIRES 1 GANG JUNCTION BOX
AVR	AUDIOVISUAL RACK REQUIRES 2 GANG JUNCTION BOX
	WALL MOUNTED QUAD POWER OUTLET
	WALL MOUNTED DUPLEX POWER OUTLET
AWP	AUDIO WALL PLATE REQUIRES 1 GANG JUNCTION BOX
VWP	VIDEO WALL PLATE REQUIRES 1 GANG JUNCTION BOX

GENERAL NOTES:

1. THESE DRAWINGS ARE INTENDED AS DESIGN INPUT TO THE ARCHITECT AND THE MEP ENGINEER. THEY ARE INTENDED ONLY AS A REFERENCE FOR FIELD USE.
2. ANY DISCREPANCIES OCCURRING BETWEEN THESE DOCUMENTS AND OTHER CONSTRUCTION DRAWINGS ARE TO BE REFERRED TO THE ARCHITECT.
3. EXACT LOCATIONS OF ALL DEVICES SHALL BE VERIFIED BY THE DESIGN TEAM PRIOR TO INSTALLATION.
4. ALL AUDIOVISUAL EQUIPMENT SHALL BE INSTALLED AS DIRECTED BY THE MANUFACTURER.
5. REFER TO ELECTRICAL DRAWINGS FOR ALL OTHER 120 VAC CIRCUITRY AND LIGHTING REQUIREMENTS.

ELECTRICAL NOTES:

1. ALL JUNCTION BOXES, CONDUIT, WIRE WAYS, POWER, RECEPTACLES & FLOOR BOXES ARE PART OF THE ELECTRICAL CONTRACT
2. LOCATE ALL AV CIRCUITS IN ELECTRICAL PANEL(S) W/OTHER SIMILAR "CLEAN" POWER CIRCUITS.
3. ALL AV JUNCTION BOXES TO BE MINIMUM OF 2.5" DEEP.
4. LABEL EACH END OF EACH AV CONDUIT WITH ITS ASSOCIATED TERMINAL LOCATION.
5. CONDUIT SPECIFIED FOR AUDIOVISUAL USE ONLY.
6. CONDUIT RUNS ON THIS DRAWING SHOW ONLY INTERCONNECTION BETWEEN THE TERMINATION POINTS. THE EXACT PATH OF THE CONDUIT IS TO BE DETERMINED BY THE ELECTRICAL ENGINEER. THERE SHALL BE A MINIMUM OF ONE PULL BOX FOR EVERY 100 FEET OF STRAIGHT EMPTY CONDUIT.
7. PROVIDE MINIMUM 18" HEAD RADIUS FOR 90° TURNS.
8. ALL AV SYSTEM CONDUIT SHALL BE DEBURRED, CLEANED, CAPPED, TAGGED AND FURNISHED WITH PULL WIRES INSTALLED (BY GC)
9. POWER RECEPTACLES SHOWN ON THESE DRAWINGS ARE DEDICATED TO SPECIFIC AUDIOVISUAL EQUIPMENT. ADDITIONAL UTILITY POWER RECEPTACLES TO MEET CODE OR CONVENIENCE REQUIREMENTS ARE NOT SHOWN. REFER TO ELECTRICAL DRAWINGS.



AUDIOVISUAL RISER DIAGRAM
FITNESS ROOM - 3330

MDP MILLER, BEAM & PAGANELLI, INC.
CONSULTING ENGINEERS • SECURITY • TELECOMMUNICATIONS
12000 SOUTH LAKES DRIVE
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DRAWINGS ARE FOR INFORMATION ONLY

ATTACHMENT B

IBI GROUP
Architects, Planners & Interior Designers
1505 Prince Street - Suite 200
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tel 703 838 9600 fax 703.836.2484
ibigroup.com

ARCHITECT

PROJECT

Project Title: Design Intent Documents for Interior Improvement to: Interim Security Office and Multi-Purpose Room

Client Name: District of Columbia Courts

Building Address: H. Carl Moultrie I Courthouse, 500 Indiana Avenue, Washington, DC 20001

KEYPLAN

SUBMISSION

ISSUED FOR	DATE
AV BID DOCUMENTS	12.14.2016

APPROVALS	DATE

REVISIONS

NO.	DESCRIPTION	DATE	BY

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Accepted By:
Joseph E. Sanchez, Jr.
Capital Projects and Facilities Management Officer
Contracting Officer
District of Columbia Courts

TITLE

AUDIOVISUAL DRAWING LIST, LEGEND & NOTES

Date: 12.14.2016
Scale: NONE
Checked by: BOP
Drawn by: BHP
Planned By: BOP

DESIGN INTENT DOCUMENTS ONLY: NOT FOR CONSTRUCTION

Contractors to Verify Dimensions on Site
Do Not Scale this Drawing

SHEET

XX.XXXX.XX

AV.00

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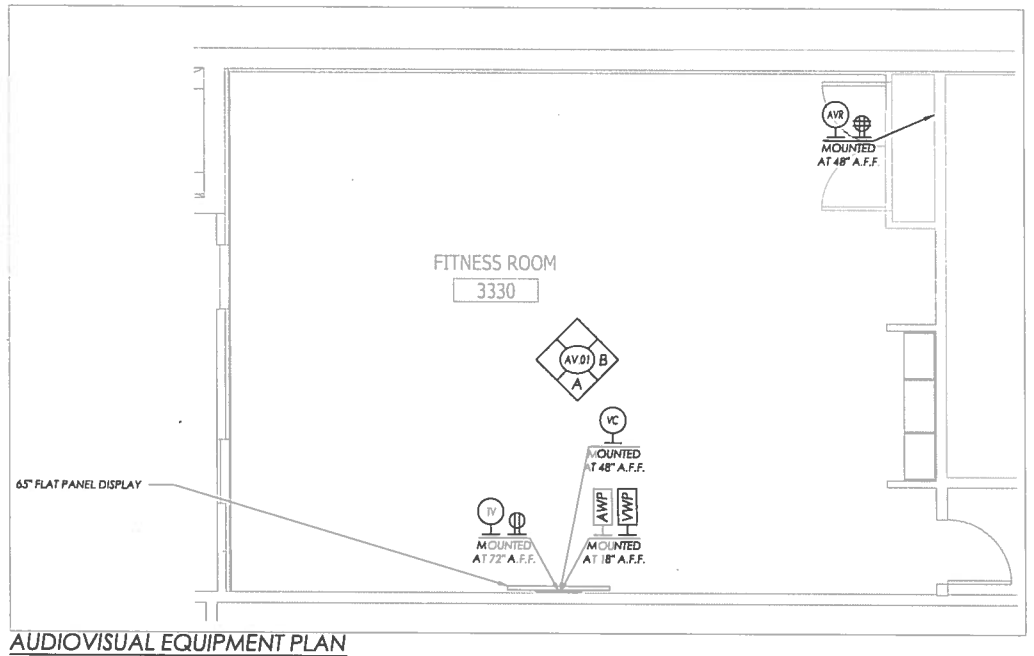
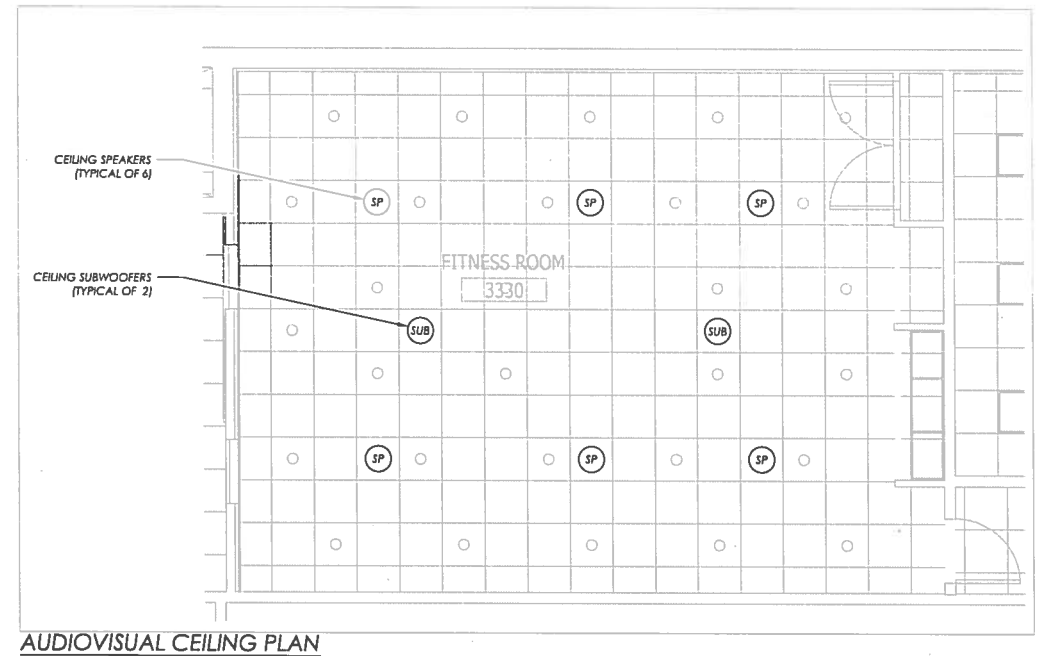
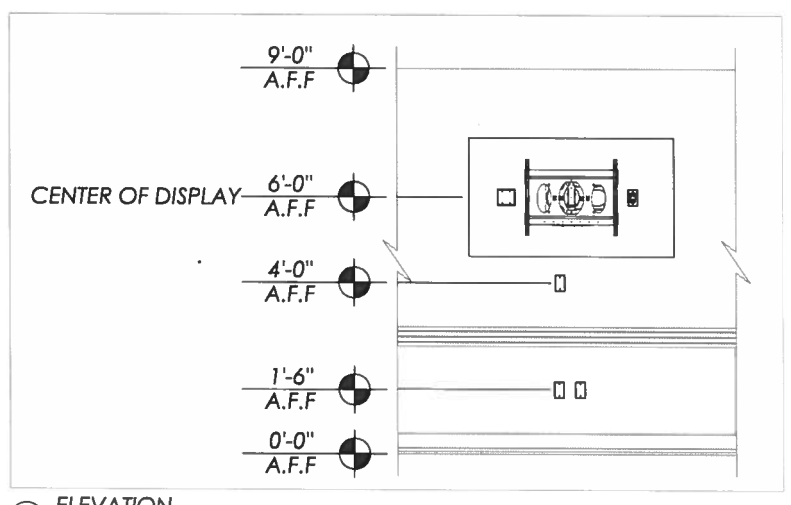


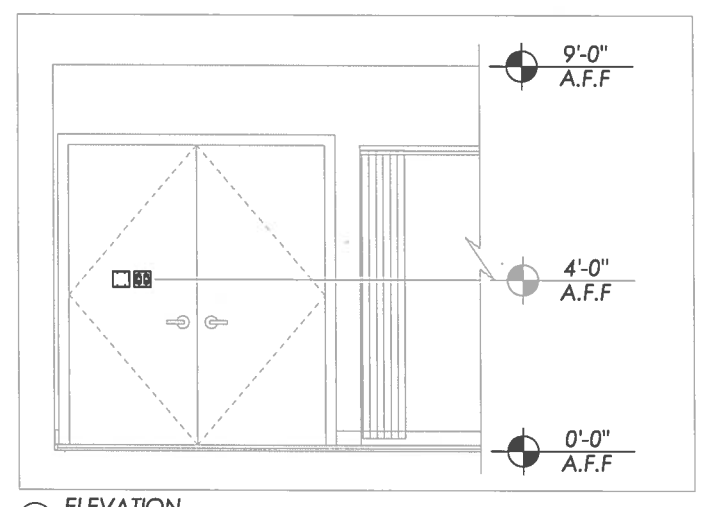
AUDIOVISUAL EQUIPMENT PLAN
FITNESS ROOM - 3330
1/4" = 1'-0"



AUDIOVISUAL CEILING PLAN
FITNESS ROOM - 3330
1/4" = 1'-0"



A ELEVATION
FITNESS ROOM - 3330
1/2" = 1'-0"



B ELEVATION
FITNESS ROOM - 3330
1/2" = 1'-0"

N

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Accepted By:
Joseph E. Sanchez, Jr.
Capital Projects and Facilities Management Officer
Contracting Officer
District of Columbia Courts

TITLE

AUDIOVISUAL
EQUIPMENT LAYOUT
FITNESS ROOM - 3330

Date: 12.14.2016
Scale: AS SHOWN
Checked by: BOP
Drawn by: BHP
Planned By: BOP

DESIGN INTENT DOCUMENTS ONLY: NOT FOR CONSTRUCTION

Contractors to Verify Dimensions on Site
Do Not Scale this Drawing

SHEET

XX.XXXX.XX

AV.01

WOW Fitness Room		
Qty.	Item	Product Used for Basis of Design
	Audio Equipment:	
6	6" Recessed Ceiling Speaker, 70 V	JBL Control 16C/T
1	3 Input, 100 W @ 70 Volt, Mixer Amp for Above	Atlas Sound AA100PHD
1	Wall Plate Remote for Above	Atlas Sound WPD-RISRL
2	8" Recessed Ceiling Subwoofer	JBL 19CS
1	300 W @ 4 Ohm Stereo Amplifier for Above	Samson Servo 600
1	Wallplate with Dual RC and 1/8" Input, Summed to Mono Balanced Audio	RDL D-CIJ3
	Video Equipment:	
1	55" LED Smart TV, 1080P	Samsung UN55J6200AFXZA
1	Swingout Wall Mount for Above	Premier Mounts AM80
1	Blu-Ray Player	Samsung BD-J5700/ZA
1	Stereo Unbalanced to Mono Balanced Audio Adapter for TV	RDL TX-J2
1	HDMI Over Cat5 Extender with IR Extender for Blu-Ray Player	Monoprice 8123
1	HDMI Wall Plate	Monoprice 7330

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. See Division 1 Specifications.

1.2 SUMMARY

A. Bid Submittal includes. All labor, materials, tools, transportation services, supervision, coordination, etc., necessary to provide and install a fully functional audiovisual system, as described in this specification and on the associated contract drawings. The system includes, but is not limited to the following:

1. *Audio equipment: Speakers, mixers, amplifiers, signal processing equipment, and source equipment.*
2. *Video Equipment: Flat panel displays, video source equipment, video switching equipment Remote Control Equipment: interface hardware, software, and programming.*
3. *Equipment racks and associated hardware.*
4. *Cables, connectors, plates, and wiring.*
5. *Mounts, rigging, trapezes and required hardware for above items such as all-thread, unistrut, chains, and cables.*

B. Audiovisual schematics provided with the contract drawings are intended to represent design intent only and are not to be considered actual wiring details.

1.3 SUBMITTALS

A. Bid Submission: Submit a complete and accurate listing of all equipment to be used in assembling the system(s). Clearly identify equipment not listed in the Specification (either substitute equipment or additional equipment required to meet the design intent).

B. Separate the cost for the specified systems into a minimum of the following categories.

1. *Itemized cost of equipment and associated installation.*
2. *Itemized cost of any optional equipment (cost shall be valid for a period of 60 days from the date of bid acceptance).*
3. *Itemized cost of any optional equipment installation (cost shall be valid for a period of 60 days from the date of bid acceptance).*
4. *Cost of an extended warranty. Refer to Section 3.5.*

C. Shop & Field Drawings: Submit the following for approval before actual purchase, assembly, or installation of equipment:

1. *Schematic drawings of any custom circuitry or proposed system modifications.*
2. *Block diagrams indicating the proposed interconnection of all equipment to be furnished.*
3. *Actual equipment rack layouts.*
4. *Shop drawings for custom fabricated plates or panels. Drawings shall include locations and types of connectors, engraving information, and plate material and color.*
5. *Other information as appropriate or as required in other sections of this Specification.*

D. As-Built Drawings: Submit "as-built" versions of all shop & field drawings for approval prior to final acceptance testing. Include cable numbers for all equipment interconnection drawings. See Section 3.

1.4 QUALITY ASSURANCE

A. Contractor Qualifications:

1. *The Contractor shall be licensed in the District of Columbia to perform the work specified in this Specification.*
2. *The Contractor shall provide to the owner's representative five (5) references with contact names and valid telephone numbers regarding similar projects successfully completed within the last three (3) years.*
3. *The Contractor shall be capable of providing manufacturer-specified installation, programming, training, maintenance and repair for all equipment provided.*
4. *The Contractor will be responsible for any required low voltage permits.*

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

A.Specifications and drawings indicate audiovisual equipment based on specific products indicated. Other manufacturer's equipment with equal size and performance characteristics may be considered. Refer to the attached equipment list.

B.Submit substitution requests during the bid submission phase of the project with manufacturer data sheets indicating the appropriate performance specifications of the equipment. Submit all requests to the Architect minimum of five days prior to the bid due date.

C.Miller, Beam & Paganelli, prior to approval, may require evaluation of substitute equipment. The Contractor shall be responsible for the costs of any required evaluation and testing.

D.Any use of substitute equipment shall be at no extra cost to the Courts.

2.2 EQUIPMENT

A.See attached equipment list for each room and associated wiring diagrams located with the Contract Drawings. The equipment list shall be used as the basis of design for preliminary pricing purposes. All equipment selections and wiring schematics shall be reviewed by Miller, Beam and Paganelli prior to purchase by the AV Contractor to incorporate the latest technology and design requirements.

B.Substitute equipment shall meet or exceed the performance specifications of the basis of design equipment and shall be at no additional cost to the Owner.

C.Substitute equipment shall not impact the existing architectural or electrical designs.

D.Coordinate the final color/finish of any exposed equipment prior to purchase. Where possible remove all visible product labels.

2.3 SYSTEM WIRING

A.All wiring runs shall be unspliced where possible. Splices shall not occur in conduit.

B.Provide plenum-rated cable where required by code.

C.Utilize minimum 22 gauge twisted pair shielded wire for all unbalanced line level connections. Utilize minimum 22 gauge twisted pair shielded wire with a minimum 24 gauge drain wire for all balanced line-level or microphone level connections. Multi-conductor cable shall provide a 100% shield for each pair.

D.Utilize minimum 18 gauge twisted pair unshielded wire for all speaker level connections. Size and run wire to provide a line loss of less than .5 dB.

E.Acceptable cable manufacturers include Extron, Belden, Liberty, Mogami, Canare, Monster, Comprehensive and West Penn.

F.Arrange, route, and isolate wiring according to signal level to minimize crosstalk, hum, or spurious signals. Wiring categories shall consist of: microphone level (-80 dBm to -20 dBm), line level (-20 dBm to +30 dBm), loudspeaker level (+30 dBm and above), AC power, and DC control or emergency power.

G. Install all cabling in an orderly and professional manner. Provide service loops to allow access to the rear of equipment.

H.Label each and every cable in the system (on both ends) in a clear and permanent manner. Use a logical labeling system that maintains the same circuit designation from origin to destination.

2.4 System Description

A.See drawing notes.

PART 3 - EXECUTION

3.1 INSTALLATION

A.Coordinate the installation of all equipment, wiring, and associated hardware to be compatible with the work of other trades and with the overall construction completion schedule.

B.Perform installation in strict accordance with standard broadcast practices, the National Electrical Code, and any other governing codes.

C.Keep a complete and accurate set of installation drawings at the job site. Note any changes made during installation on the drawings. Include a final set of as-built drawings with the Operation and Maintenance manuals.

D.Install all equipment following the manufacturers' recommendations and broadcast standards. Adjust and test to assure that all components are functioning properly by themselves and in conjunction with their associated components.

E.Install all equipment in appropriate cabinets or consoles at the locations designated in this document or on the associated contract drawings.

F.Securely fasten and support all equipment without hindering equipment operation. Utilize security screws for all rack mounted hardware. Utilize security hardware for all exposed devices.

G. Securely fasten and support all equipment without hindering equipment operation.

H.Permanently label all system controls, equipment, switches, connectors, wall/floor plates, etc. for easy identification. Document all equipment settings that normally do not require readjustment on rack cabinet doors and in the Operation and Maintenance manuals.

I. Utilize signal and power grounding techniques in accordance with established industry standards, such as set forth in Sound System Engineering by Don Davis.

J. Field-verify the final location of all equipment prior to installation.

3.2 ACCEPTANCE TESTS

A.After preliminary system installation and adjustment, conduct an Acceptance Test with representatives from the Courts and Miller, Beam & Paganelli present.

B.Demonstrate the overall operation of each individual piece of equipment in the system, and of the system as a whole. Demonstrate that equipment functions according to manufacturer's specifications, industry standards, and as stated in this Specification Section.

C.Maintain documentation of all performance tests.

D.Establish and mark normal settings for all level controls and record these settings in the Operating Instructions.

E.Following the acceptance testing, Miller, Beam & Paganelli will issue a system punch list to be completed by the installer for final completion of the specified scope of work.

3.3 SYSTEM TRAINING AND OPERATION ASSISTANCE

A.Conduct on-site training programs to instruct the Owner on overall system and individual equipment operation, basic preventative maintenance, and basic system troubleshooting.

B.Provide a nominal 4 hours of training which may be scheduled at the Owner's request at any time up to a year following system acceptance.

C.Provide a minimum of two training sessions:

1. The first session shall occur immediately after the acceptance of the systems and cover the basic operation of each system.
2. Provide the second training session approximately four weeks from the first session. The operation and maintenance manuals for the equipment shall be completed and presented to the client at this time. This training session will be used to train additional people and/or to answer questions/resolve issues developed within the first month of system use.

D.Provide in the bid submittal an hourly rate, valid for one year from the acceptance date of the system installation, for any requested additional training or operation assistance (above and beyond the 4 initial hours).

3.4 OPERATING INSTRUCTIONS

A.Upon acceptance of the system, provide six manuals detailing the installation, operation, and service of each audiovisual system. Provide three hard copies and three electronic copies (CD ROM).

1. The manuals shall be clearly indexed and contain a minimum of the following as applicable:
   a. As-built drawings as described in Section 1.3 above. Drawings shall be of an appropriate size to allow all text to be clearly legible. Electronic copies shall be in AutoCAD (DWG) and PDF formats.
   b. List of provided equipment. List shall be organized by room # and shall include quantities, rack locations, and serial numbers.
   c. Manufacturer's instruction manuals.
   d. Manufacturer's service instructions.
   e. Manufacturer's warranty information.
   f. IP addresses of all equipment.
2. Each manual shall also contain a contractor-generated system operation guide that details the proper use of each system in all its normal functions. The operation guide shall contain information such as a general description of the overall system(s), a glossary of frequently used terms, instructions for general system operation such as turning the system on and off, selecting various video sources for display, routing various audio sources to the speaker systems, etc. The intent is for this manual to be a supplement to the system training specified above.
3. A draft copy of this guide shall be submitted for review and comment prior to the second training session.
4. Unless otherwise noted, all information on the CD ROMs shall be in PDF format.
5. Upon termination of the warranty period, the Contractor shall provide three CD ROMs to the Owner with the uncompiled remote control system source code and touch panel page layouts.

B.The operation guide shall be completed by and used for the second training session.

C.Post one additional copy of system specific equipment interconnection drawings inside the front or rear door of the main equipment for each individual audiovisual system. These drawings shall be laminated or in a plastic cover to prevent damage.

D.Submit according to Division 1 - General Requirements

3.5 WARRANTY AND MAINTENANCE

A.Guarantee the system for a period of one year from the date of final system acceptance against defective materials, design, workmanship, and improper adjustment. Repair or replace any defective material at no expense to the Owner, provided it does not show abuse. During the warranty period, respond to any service calls within 24-hours including Saturdays, Sundays, and holidays). Where possible, provide substitute equipment to maintain system operation during repair.

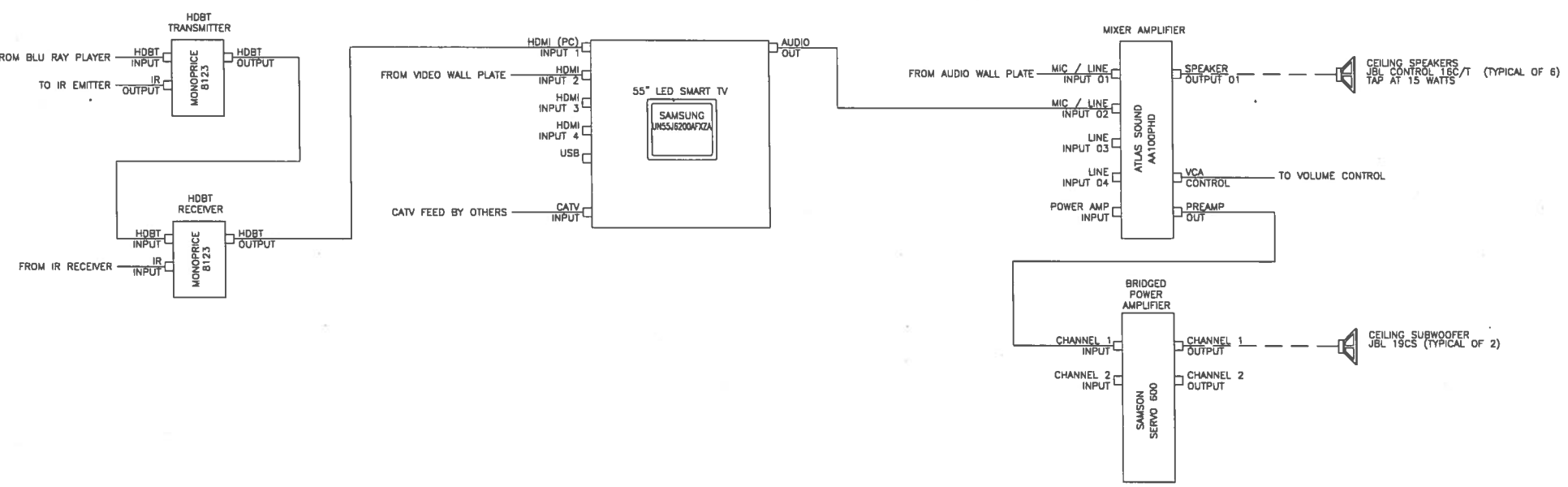
B.Provide service calls at quarterly intervals throughout the warranty period to perform routine system maintenance and adjustment. Update firmware of all equipment during service calls.

C.The above warranty shall not void warranties issued by individual equipment manufacturers. Individual warranties valid for greater than one year shall remain in full effect.

D.The above warranty shall not void any rights guaranteed to the Owner by law.

E.The above warranty shall not pertain to existing Owner-provided equipment.

F.Provide the cost for an extended service contract valid for one year from the date of the conclusion of the initial warranty. The service contract shall include quarterly site visits to conduct preventative maintenance, firmware updates, and Owner directed service adjustments. Include control system programming updates as part of this service contract, providing an updated editable copy of the source code.



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AUDIOVISUAL EQUIPMENT LIST, SCHEMATIC DIAGRAM & SPECIFICATIONS

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