HIGH SCHOOL MEDIA CENTER

New Construction

I. PROGRAM PHILOSOPHY

Education today is faced with the challenge of preparing students for a world that will exist in an entirely different form when they are adults. School media centers provide the total school population with teaching and learning experiences for developing self-directed, lifelong learners. The media information program must be at the core of the curriculum by supporting Student Expectations based on the Sunshine State Standards and providing services that will aid in the positive utilization of their various resources.

The mission of the school media program is to ensure that students and staff are effective users of ideas and information. This mission is accomplished:

- by providing intellectual and physical access to materials in all formats
- by providing instruction to foster competence and stimulate interest in reading viewing, and using information and ideas
- by working with other educators to design learning strategies to meet the needs of individual students

II. PROGRAM GOALS

The goals of the school media information program include:

1. To provide intellectual access to information through systematic learning activities which develop cognitive strategies for selecting, retrieving, analyzing, evaluating, synthesizing, and creating information at all age levels and in all curriculum content areas

2. To provide physical access to information through

    - by providing intellectual and physical access to materials in all formats
    - a carefully selected and systematically organized collection of diverse learning resources
    - access to information and materials outside the media center and the school building

3. To provide learning experiences that encourage users to become discriminating consumers and skilled creators of information through introduction to the full range of communications media and use of the new emerging information technologies

4. To provide leadership, instruction, and consulting assistance in the use of instructional and information technology and the use of sound instructional design principles

5. To provide resources and activities that contribute to lifelong learning

6. To provide a facility that functions as the information center of the school, as a focus for integrated, interdisciplinary, intergrade and school wide learning activities

7. To provide resources and learning activities that represent a diversity of experiences, opinions, social, and cultural perspectives

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II. PROGRAM ACTIVITIES

A wide variety of educational opportunities will take place in the media center. Independent learners will be guided in the use of the electronic card catalog to access print and non-print resources. A quiet atmosphere will be established for the recreational reading of magazines, fiction, and nonfiction. Computerized reading management programs will motivate students to read more and better quality books while building higher order thinking and reading skills. Independent research will be encouraged using CD-ROM based reference materials with online links. Interactive distance learning opportunities will be made available via voice and/or video conferencing, satellite transmission, and the internet.

Small group instruction will include storytelling to promote the love of reading and to improve listening skills. Student groups will produce a local television show and instructional videotapes for broadcast over the school's television distribution system.

Classroom instruction will include an orientation to the organization and proper use of resources available in the media center. Schoolwide reading motivation programs will be encouraged. A class can come to the media center to assemble their prerecorded videotaped segments and still digital photography into presentation software using non-linear editing at the multimedia workstation. In addition, all students will critically evaluate information sources as to their appropriate use, reliability, and awareness of persuasive language.

III. ORGANIZATIONAL NOMENCLATURE

Teacher – Student Ratio	N/A
Student Capacity per Period	N/A
Total No. of Teachers	2
Total No. of Aides	(If applicable)
Grade Levels or Age Levels for Which Program is Intended	9, 10, 11 and 12
Hours per Day Space Will Be Used	

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IV. INNOVATIONS, EXPERIMENTAL IDEAS, OTHER PLANNED USES

A multimedia studio will be created in a separate room of the media center, preferably adjacent to the TV Studio or in a conference room. The multimedia studio will consist of a Power Macintosh with AV capability, digital camera, color scanner, camcorder, laser disc player, videocassette recorder, color laser printer, 27" color television, satellite feed, cable television access, and internet access. The creation and assembly of raw footage imported into presentation software on the computer can be recorded to videotape and incorporated into school-produced broadcasts for schoolwide distribution.

Distance learning is an emerging technology including satellite delivery of information, internet access, and interactive communication (voice and/or video conferencing). All schools need satellite transmission to make remote learning available for student course work or teacher training. Internet access must be available across the local area network to all computer workstations at a school site. Through voice and/or video conferencing, students can interact with peers across the world, communicate with experts in a field study, or experience scientists currently doing field work.

Other trends to watch include the rise of high-definition digital television; the merging of telephone, television, and computer; the compact format of digital video discs; the mix of music production and computer technology, and the eventual networking of information devices on local area networks.

The media specialists, media assistant, and technology specialist should be working as a team to provide a quality educational program for students.

V. SQUARE FOOTAGE CHANGES EXPLANATION THAT VARIES FROM APPROVED FACILITIES LIST

Request permission to add Textbook Storage to all new media centers because of year-round air conditioning.

Maintenance Repair and Copying Room not used.

Staff restroom from General Allocation.

The placement of conference rooms within the school will be determined at the time of construction. Options could include some in administration and some in the media center or all conference facilities in one area.

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VI. PROGRAM FURNITURE AND EQUIPMENT REQUEST FORM

* All items to be shown on schematic and preliminary drawings
# indicates items to be furnished and installed by contractor

Optional Items: A school may opt to automate the Card Catalog; therefore, they will not need a Card Catalog.

Space or Area	Number of Items	Description of Furniture/Equipment
READING ROOM/STACKS		
	1	Atlas Stand
	4	Dictionary Stands: Swivel (table top)
	6	Book Trucks: Metal, colored end panel, 5" swivel castors
	1	Shelf-List
	4	Four-Drawer Lateral File Cabinets
	1	Flat File: 10 drawer unit, top, closed base
	1	Newspaper Rack (with shelving bid)
	1	Paperback Displayer: For 450 paperbacks
	30	Tables: Laminate tops, adjustable legs (any combination of shapes and sizes)
	10% of Student Population	Chairs: 18" sled base, stackable
	10	Chairs: occasional, upholstered
	2	Secretary's Chairs
	35	Network Computers
	4	Laser Printers
	4	Televisions: Color, 27"
	30	Computer Tables
	1	Book Security System (provided and installed by owner)
	1	Electric Pencil Sharpener
Shelving Books:		3' wide and 6' wide sections, adjustable divider shelves, in sufficient quantity to provide 10 books per student (or meet SAC standards) selected to meet need and flexibility from the following 9" and 11" deep, 42" high (1 base, 2 adjustable divider shelves) to 72" high (1 base, 5 adjustable divider shelves) single or double faced, steel or wood
Periodicals:		3' wide sections, slanted shelves 15" deep, (Provision for 120 periodicals or 40 shelves)
Newspaper Shelving		
OFFICE		
	3	Network Computers
	2	Secretary's Desks
	2	Secretary's Chairs
	2	Four-Drawer File Cabinets, Horizontal
	1	Typewriter, Electronic
	1	Television Receiver, Color
	1	Laser Printer, Color

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VIII. PROGRAM FURNITURE AND EQUIPMENT REQUEST FORM

* All items to be shown on schematic and preliminary drawings
\# indicates items to be furnished and installed by contractor

Optional Items: A school may opt to automate the Card Catalog; therefore, they will not need a Card Catalog.

Space or Area	Number of Items	Description of Furniture/Equipment
AUDIO VISUAL STORAGE		
	5	Videocassette Recorders
	12	Student Laptop Computers
	2	54" Projection Carts
	2	42" Projection Carts
	2	34" Projection Carts
	2	26" Projection Carts
	2	Color Television Receivers, 25"
	2	Record Players, Stereo
	1	16mm Projector
	4	Projection Screens: Tripod, 70' x 70'
	2	PA Systems: Portable with Microphones
	20	Audiocassette Recorders: Classroom
	4	Overhead Projectors
	10	Camcorders: Video with Tripods
	5	Laser Disk Players
	3	Slide Projectors: Carousel
		Along wall without cabinets, heavy duty adjustable metal shelving 24" deep x 72" high
	7	VHS Videocassette Recorders
	1	Color Television Receiver, 19"
	2	Projectors: Data/Video
MEDIA TECHNICAL PROCESSING		
	1	Roll Laminator, 25"
	1	Paper Cutter (31" x 31")
	4	Stools: Adjustable
	1	Color Television Receiver, 27"
	1	Camera: 35mm, Manual with Macro Lens
	*2	VHS Videocassette Recorders (optional – See Note)
	1	Desktop Transparency Master
	2	Computers/Printers/Scanners
	1	Poster Printer
	1	Ellison Machine/Dies
	1	Label Maker
	1	Copier
TV STUDIO		
	2	Studio Configured SVHS Cameras
	2	SVHS Camcorders
	4	Spare Camcorder Batteries
	2	Ni-Cad Battery Chargers
	2	Tripods with Dolly (Tripod must support Teleprompter)
	2	Teleprompters
	1	Teleprompter Compatible Computer
	1	27" Color Television

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VIII. PROGRAM FURNITURE AND EQUIPMENT REQUEST FORM

* All items to be shown on schematic and preliminary drawings
# indicates items to be furnished and installed by contractor

Optional Items: A school may opt to automate the Card Catalog; therefore, they will not need a Card Catalog.

Space or Area	Number of Items	Description of Furniture/Equipment
TV STUDIO (continued)		
	5	Lavalier Microphones
	5	Hand-Held Microphones
	2	Wireless Microphones
	2	Shotgun (boom) Microphones (with Stands)
	2	Portable Lighting Kits
	1 Set	500 Watt Lamps
	1 Set	750 Watt Lamps
	1 Set	1000 Watt Lamps
	1	Studio Lighting System (including Controller)
	1	Cyclorama
	1	Blue Screen Background
	1 Set	Furniture
TV CONTROL ROOM		
	2	SVHS Videotape Players (Compatible with Controller)
	1	SVHS Videotape Recorder (Compatible with Controller)
	1	A/B Roll Edit Controller
	1	Cuts Only SVHS Edit System (include VTR and VTP)
	1	Digital Video Effects System (DVE)
	1	DVE Compatible Computer
	1	Nonlinear Editing System (NLS) (including SVHS VTR)
	1	NLS Compatible Computer
	1	Multimedia Computer
	4	9” Color Monitors
	1	13” Monitor
	2	14” Monitors
	1	Vector Scope
	1	Waveform Analyzer
	1	16 Channel Audio Mixer
	1	Intercom System (8 Station)
	1	Compact Disc Player
	1	Non-Copyright Music Source
	1	Power Amplifier
	1	Stereo Speaker System
	2	Portable Lighting Kits
	1 Set	500 Watt Lamps
	1 Set	750 Watt Lamps
	1 Set	1000 Watt Lamps
	4	Portable Dimmers
	1	Studio Lighting System (including Controller)
GROUP PROJECTS (COMPUTER)		
	6	Tables: Laminated Tops with Adjustable Legs
	36	Chairs, 18” Sled Base
	1	Teacher’s Desk
	1	Secretary’s Chair

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IX. SPECIAL CONSIDERATIONS

- Heating/Cooling Ventilation

  All areas shall be climate and humidity controlled. Ventilation noise control in conference rooms. CCTV distribution system shall have separate AC for climate control on weekends, vacation times, etc.

- Acoustics

  Conference and multimedia rooms should be soundproof.

  T.V. Studio/Control Room must be acoustically treated.

  All classrooms and student-occupied spaces shall have the transfer of noise limited so that the educational process will not be affected.

- Floor

  AV storage areas, T.V. Studio/Control Room, and Distribution System shall have reinforced vinyl floor finish. All other areas shall be carpeted.

- Walls

  Conference rooms shall be divided in half by high sound rated folding wall.

  Construction and finish of all walls shall comply with S.R.E.F. and the District Design Guidelines.

- Ceiling

  T.V. Studio ceiling should allow for maximum utilization between support structures – painted black.

  Standard – acoustically designed

- Lighting

  Reading room shall have area controlled fluorescent lighting. All other areas shall have standard fluorescent lighting. Multimedia shall have light level controls.

- Windows

  Conference rooms shall have observation window 40” from the floor. Walls of office/processing adjoining reading room shall have observation windows 40” from floor. Wall of group projects area and media production lab adjoining reading room shall have observation window 40” from floor. View window from control room into T.V. Studio.

  All exterior windows in educational spaces shall have vertical blinds to provide light control.

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IX. SPECIAL CONSIDERATIONS (continued)

- Doors

  A.V. storage exterior doors shall be wide to accommodate moveable carts. All doors entering onto reading room shall be 3' wide. Doors to include vision panels, in media production and technical processing areas.

  Door between textbook and A.V. storage areas shall be wide to accommodate moveable carts. Reading room main entry doors to be solid with small vision lites at latch side.

  Electronic security system to be installed at main entrance to the reading room, and alarm system on all secondary exits.

- Plumbing

  Hot and cold water with single sink shall be located in technical processing area.

  All drinking fountains inside buildings shall be electric water coolers providing chilled water.

- Electrical

  A. Typical throughout media center: Provide electrical plugmold strips continuous (40" above finish floor) above all cabinet tops and work counters (excluding circulation counter). Receptacles to be 120 volt type spaced at 16' on center.

  B. Conference room shall have one duplex outlet on each opposite wall. Reading room shall have power provided in the floor at 16' centers each way. Power shall be served electrically from the floor.

  C. Single duplex receptacle to be placed in each kneespace and each open space below circulation counter. Double duplex receptacle (clean circuit) in knee space for computer use.

  D. Architect to coordinate with the Supervisor of Library/Media Technology for additional electrical requirements throughout media centers.

  E. Location of outlet for Book Security System to be determined by Supervisor of Library/Media Technology.

  F. Provide power for light grid in Television Studio.

- Service Drives

  Protected paved access from AV storage areas to rest of school. Utilize ramps, not steps.

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IX. SPECIAL CONSIDERATIONS (continued)

- Built-in Cabinetry

A. Built-in work counter

Circulation desk and matching book return truck with self adjusting top to be constructed and installed by contractor. See Appendix A for specifications.

B. Built-in cabinets/shelving

Typical all cabinets:
Plywood with plastic laminate on all exposed faces and edges.

Typical:
"Top shelves" throughout are not to be higher than 7'0" above the finish floor.

Technical Processing/Office:
Each cabinet section should be 3' high x 3' wide x 24" deep, 1 drawer 5" deep each section, with doors below drawers. Provide wall cabinets continuous above all base cabinets 3' wide x 12" deep. Include one adjustable shelf in each wall and base cabinets. Provide 24 lineal feet minimum of base cabinets. Wall with vision window shall not have any cabinets.

Production/Professional Library:
Provide one wall with 6 linear feet of cabinets preferably continuous. Each section should be 3' high x 3' wide x 24" deep, 1 drawer 5" deep each section doors below drawers.

Adjustable shelving should be above cabinets. Each shelf section should be 3' wide x 12" deep.

AV Storage/T.V. Studio:
Provide a continuous 12' work counter along one wall 3' high; above cabinet 30" high x 12' wide x 14" deep above work counter with lock.

Control Room:
Countertop for studio equipment and lockable storage.

Media Production:
Line two walls with cabinets. Most cabinet sections shall be 3' high x 3' wide x 24" deep, 1 drawer 5" deep in each section, doors below drawers. One cabinet shall be 7' high x 5' wide x 24" deep with lock. Provide wall cabinets continuous above all base cabinets 3' wide x 12" deep. All cabinets shall have adjustable shelving. Wall with vision window shall not have any cabinets.

Group Projects (Computer Lab and Multimedia Lab):
Line walls with formica-topped base storage cabinets. Each section shall be 3' high x 3' wide x 24" deep, one drawer each section, doors below drawers. Additionally, one wall will have countertop for computers with storage above.

Communications Equipment Room:
Storage Cabinet 7' high x 6' wide x 24" deep with adjustable shelves, lockable. Countertop for computers 30" high x 20' wide x 24" deep. Wall Cabinet above counter (allow for height of computers) 30" high x 20' wide x 12" deep with adjustable shelves and lockable.

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IX. SPECIAL CONSIDERATIONS (continued)

C. Built-in Instructional Aids

48 sq. ft. of Tackboard

One pull-down projection screens 60” high x 60” wide

- Other Considerations

Location and number of all cabinet locks will be determined by Supervisor of Library/Media Technology.

Book Security System to be aligned with entry provisions must be made for Electronic Card Catalog in schools not having schoolwide networks. Location of Electronic Card Catalog to be determined.

Consideration should be given to designing the T.V. Studio to have a length to width ratio of 5 to 4.

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APPENDIX A

CIRCULATION COUNTER (INCLUDING SUPPORT CABINETS):

MATERIAL: Plywood with laminated plastic on all exposed faces and edges.

COUNTER TOP:

(1) Maximum 3'-6" high x 2'-8" across (deep) x 20 lineal feet minimum.

(2) Countertop to extend 6" beyond outer (Reading Room) side of cabinet base except at book return area.

(3) All exterior corners of countertop to have minimum 6" radii.

(4) A video display monitor unit will be positioned on the countertop near the keyboard, facing the "service side" of the counter. Openings for computer cables will be provided where needed by the technical support personnel in the Library Supervisor.

CABINET BODY (SUPPORTING THE CIRCULATION COUNTER):

(1) All Reading Room-side surfaces to be closed. Toe space with resilient base material on all exposed faces.

(2) A pull-out tray to accommodate the computer keyboard should be installed beneath the open knee space.

(3) Thirty inch (30") wide open knee spaces to occur below both the book-card file recess and the computer keyboard space. */***

(4) A cabinet section 40" high, 36" long and 26" deep (inside measurements) is to occur immediately on both sides of the computer knee space. Both are to include adjustable shelving. Cabinet body to be secured with side-hinged doors and keyed cupboard locks.

(5) Two (2) base cabinet sections 2' long x 2'-2" deep x 40" high with four (4) drawers each. Top and middle drawers to be minimum five inches (5") deep. Bottom two (2) drawers to be ten inches (10") deep each.* One top drawer to have key lock.

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APPENDIX B

BOOK-RETURN CABINET AND TRUCK

(1) Construction: Same as indicated for countertop and base cabinets. Cabinet unit to be constructed integrally with the circulation counter.*

(2) An open “book-return” slot, 12” wide by 4” high should occur on vertical center line of room side face of base cabinet. Bottom of “book-return” slot opening to be 2’-8” above finish floor. Service-side face of “book-return” cabinet to have clear opening 35” wide by 40” high. Cabinet inside depth to be minimum 24” clear to receive portable book-receptor cart.** Exterior dimensions of cabinet should integrate properly with the adjacent circulation counter.*

(3) Contractor will build or purchase a Book Return Truck similar to attached specification and operational with the Book Return slot in the above cabinet. Truck must have self-adjusting top.

* Architect to consult with the Director Library, Technology, Instructional Materials and Digital Learning for final arrangement of various base cabinets indicated in order to establish a satisfactory, workable arrangement and circulation counter configuration.

** See (11) Electric” for build-in electrical requirements.

*** Architect to consult with the Director Library, Technology, Instructional Materials and Digital Learning regarding the specific dimensions required to adequately facilitate the particular computer equipment the school system will be furnishing for use in this area.

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EDUCATIONAL SPECIFICATIONS
C.A.T.V. TELEVISION DISTRIBUTION SYSTEM
HIGH SCHOOLS
Revised 8/2/90

PART 1 GENERAL

1.01 DESCRIPTION

The television distribution system shall consist of:

1. a head end
2. a radio frequency (rf) section
3. a distribution system

A head end system shall consist of either a Master Antenna Television System (M.A.T.V.) or a Cable Antenna Television System (C.A.T.V.). An M.A.T.V. shall be capable of receiving broadcast channels 3, 8, 10, 13, 14, 16, 28, and 44. C.A.T.V. channels are specified by the local C.A.T.V. franchise. C.A.T.V. systems shall include an antenna capable of receiving the School Board of Pinellas County T.V. channel 14 on a separate antenna.

The radio frequency section shall consist of seven (7) rf channels. Appropriate modulators and demodulators shall be provided which will allow two (2) channels of distribution of the school's educational channel, and/or public broadcast channel and two (2) local channels capable of recording and playing video tapes.

The distribution system shall consist of the appropriate equipment necessary to provide reception of the radio frequency channels referenced above in classrooms and other designated areas.

1.02 QUALITY ASSURANCE

A. All equipment shall be approved by Underwriters Laboratory (UL) and be clearly labeled as such.

B. All equipment shall be as specified.

C. All equipment shall be installed and grounded in such a manner that the environment shall not cause any deterioration of performance or safety.

D. The system shall be demonstrated to be functional and in compliance with this specification prior to approval by the Director Library, Technology, Instructional Materials and Digital Learning.

1.03 SUBMITTALS

A. Shop drawings shall be submitted to the Director Library, Technology, Instructional Materials and Digital Learning for approval. Drawings shall include wiring diagrams and specification data sheets.

B. Complete operating instructions and maintenance manual shall be provided to the school media department.

C. Certificate of compliance delineating results of system performance tests.

PART 2 CABLE TELEVISION PRODUCTS

2.01 MANUFACTURERS

A. Components of the C.A.T.V. system shall be standard General Instrument (Jerrold) products. Catalog numbers of General Instrument (Jerrold) are used as a standard and constitute the type and quality of equipment required.

B. Blonder-Tongue components of equivalent performance and quality may be substituted for the General Instrument (Jerrold) components.

2.02 EQUIPMENT

A. Quantity two (2) Jerrold Model S450P Frequency Agile Heterodyne Processor

B. Quantity five (5) Jerrold Model S450M Frequency Agile Modulators

C. Quantity one (1) Jerrold J-275D-14 Yagi Antenna

D. Quantity one (1) Jerrold DSU-587 Broadband Amplifier shall be supplied in low signal areas

E. Quantity One (1) coaxial switch Jerrold DCS – A/B

F. Quantity as required 2-way splitters Jerrold SWS-2uv

G. Quantity as required 4-way splitter Jerrold 1597-B

H. Quantity as required 4-way directional coupler taps Jerrold DCT-4 ( )

I. Quantity as required directional couplers DCT ( ) B

J. Quantity as required UHF/VHF amplifier Jerrold 4545

K. Quantity as required Beldon RG-591U downlead cable

L. Quantity one (1) television cabinet: Television cabinets shall be constructed of galvanized, code gauge sheet metal, of minimum dimensions indicated on the drawings. Surface mounted cabinets shall have manufacturer's standard lacquer or enamel finish.

Trim shall be surface or flush as required, equipped with doors, attached by concealed hinges and flush chrome plated combination locks and catches, all keyed alike. Deliver two (2) keys to the owner for each cabinet installed. Finish of trims and doors shall be manufacturer's standard lacquer or enamel except as follows: Cabinets in corridors or other "exposed to public" locations shall receive prime coat only. Finish painting by General Contractor.

Provide each television cabinet with ¾" plywood backing for mounting of equipment.

M. Quantity as required directional coupler flush tap Jerrold DFT – ( ).

N. Quantity one (1) per directional coupler flush tap.

EDUCATIONAL SPECIFICATIONS
C.A.T.V. TELEVISION DISTRIBUTION SYSTEM - EQUIPMENT (continued)

O. 6'0" jumper cable, Jerrold CAC-6, with matching transformer, Jerrold T-6000.

P. Quantity as required coaxial cable, Jerrold CAC-6, shall be used to interconnect all indoor TV outlets.

Q. Quantity as required coaxial cable, Jerrold CAC-11, shall be used to interconnect C.A.T.V. head-end to cabinet, C.A.T.V. head-end cabinet to each building and any other outdoor run.

PART 3 SYSTEM SPECIFICATIONS

3.01 GENERAL

A. The system shall provide for the distribution of cable TV channels 2 through 53 and Sub-Band T-7 through T-13. All TV outlets shall be capable of receiving a color or monochrome TV signal which is equal to that obtainable by a single receiver connected directly to the C.A.T.V. feed.

B. The system shall meet or exceed all standards set forth in the FCC rules, part 76.

3.02 BANDWIDTH

All passive devices shall have a bandwidth of 54 MHZ to 400 MHZ with a flatness response of +/- 2db. The reverse bandwidth shall be 5 MHZ to 30 MHZ.

3.03 CROSS MODULATION AND NOISE

The system shall have a carrier-to-noise ratio of better than 46 db and cross modulation shall be less than -57 db.

3.04 RADIATION

System radiation shall not be in excess of the values listed below:

5 MHZ to 54 MHZ – 15 microvolts/meter @ 100 feet
54 MHZ to 216 MHZ – 20 microvolts/meter @ 100 feet
216 MHZ to 400 MHZ – 15 microvolts/meter @ 100 feet

3.05 ISOLATION

Isolation between any two outlets shall be better than 28 db for the Sub-band through the Super-band (7 MHZ-300 MHZ). Isolation in the Hyper-band (300 MHZ – 400 MHZ) shall be better than 20 db.

3.06 SIGNAL STRENGTH

All outlets shall provide a minimum level of +3 dbmv with a flatness of response of -3 db to +6 db. The difference between any two (2) adjacent outlets shall not be greater than 2 db.

EDUCATIONAL SPECIFICATIONS
C.A.T.V. TELEVISION DISTRIBUTION SYSTEM (continued)

PART 4 PROOF OF PERFORMANCE

4.01 GENERAL

A. After the contractor has submitted a Certificate of Performance and test data per Section 1.03, the contractor shall demonstrate system performance. The test shall be performed in the presence of an authorized representative of the Library Supervisor. The contractor shall furnish all instrumentation and personnel for the demonstration.

B. The system will be physically inspected to assure that all equipment is in compliance with the specifications. Workmanship will be verified for conformance with acceptable installation standards and practices.

4.02 SIGNAL STRENGTH TEST

Using a Jerrold 727 Field Strength Meter (or equivalent) measure the signal strength on several randomly selected outlets on each feed line. The signal strength shall be between 0 dbmv and +9 dbmv. Several channels per outlet will be selected.

4.03 CROSS MODULATION TEST

A. Select a channel in the low-band or high-band (other than 4, 5, 6) and replace its source with an unmodulated CW carrier. Connect a TV receiver to the most remote outlet in the system. Tune the TV to the CW carrier. Observe that there are no visible components of cross modulation.

B. The source of CW carrier shall be an existing modulator which is driven by a video camera with either its lens capped or its aperture set closed. The audio shall be the camera microphone which is in a silent environment.

4.04 CARRIER-TO-NOISE TEST

Connect the Field Strength Meter to the most remote outlet in the system. Measure and record the signal strength of at least 2 channels. Remove the normal source of video at the Head-end and terminate it with 75 ohms. Measure and record the signal level on the previously measured channels. The difference between the readings is the carrier-to-noise ratio. It shall not exceed 46 db after the appropriate meter connection factor has been applied.

4.05 PICTURE QUALITY

Connect a TV receiver to several outlets (at least one (1) per feedline) and verify an acceptable TV image and noise free audio.

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EDUCATIONAL SPECIFICATIONS
M.A.T.V. TELEVISION DISTRIBUTION SYSTEM
HIGH SCHOOLS
Revised 7/25/90

PART 1 GENERAL

1.01 DESCRIPTION

The television distribution system shall consist of:

1. a head end
2. a radio frequency (rf) section
3. a distribution system

A head end system shall consist of either a Master Antenna Television System (M.A.T.V.) or a Cable Antenna Television System (C.A.T.V.). An M.A.T.V. shall be capable of receiving broadcast channels 3, 8, 10, 13, 14, 16, 28, and 44. C.A.T.V. channels are specified by the local C.A.T.V. franchise. C.A.T.V. systems shall include an antenna capable of receiving the School Board of Pinellas County T.V. channel 14 on a separate antenna.

The radio frequency section shall consist of seven (7) rf channels. Appropriate modulators and demodulators shall be provided which will allow two (2) channels of distribution of the school's educational channel, and/or public broadcast channel and five (5) local channels capable of recording and playing video tapes.

The distribution system shall consist of the appropriate equipment necessary to provide reception of the radio frequency channels referenced above in classrooms and other designated areas.

1.02 QUALITY ASSURANCE

A. All equipment shall be approved by Underwriters Laboratory (UL) and be clearly labeled as such.

B. All equipment shall be as specified.

C. All equipment shall be installed and grounded in such a manner that the environment shall not cause any deterioration of performance or safety.

D. The system shall be demonstrated to be functional and in compliance with this specification prior to approval by the Director Library, Technology, Instructional Materials and Digital Learning.

1.03 SUBMITTALS

A. Shop drawings shall be submitted to the Director Library, Technology, Instructional Materials and Digital Learning for approval. Drawings shall include wiring diagrams and specification data sheets.

B. Complete operating instructions and maintenance manual shall be provided to the school media department.

C. Certificate of compliance delineating results of system performance tests.

EDUCATIONAL SPECIFICATIONS
M.A.T.V. TELEVISION DISTRIBUTION SYSTEM (continued)

PART 2 MASTER ANTENNA TELEVISION PRODUCTS

2.01 MANUFACTURERS

A. Components of the M.A.T.V. system shall be standard General Instrument (Jerrold) products. Catalog numbers of General Instrument (Jerrold) are used as a standard and constitute the type and quality of equipment required.

B. Blonder-Tongue components of equivalent performance and quality may be substituted for the General Instrument (Jerrold) components.

2.02 EQUIPMENT

A. Quantity one (1) Jerrold JS55-( ) log-periodic antenna capable of receiving Channel 3

B. Quantity three (3) Jerrold J105-( ) log-periodic antennas capable of receiving Channels 8, 10, and 13

C. Quantity four (4) Jerrold J275D-( ) Yagi antennas capable of receiving Channels 14, 16, 28, and 44

D. Quantity one (1) antenna mixing network consisting of one (1) Jerrold AMN-LO, one (1) Jerrold AMN-HI and two (2) Jerrold UMN-3

E. Quantity as required Beldon RG-591U downlead cable

F. Quantity one (1) per UHF antenna DSU-587 Broadband amplifier shall be supplied in low signal areas

G. Quantity one (1) per VHF antenna DSB-587 Broadband amplifier shall be supplied in low signal areas

H. Quantity two (2) Jerrold S450P Frequency Agile Heterodyne Processor

I. Quantity five (5) Jerrold S450M Frequency Agile Modulators

J. Quantity as required 2-way splitter Jerrold SWS-2UV

K. Quantity as required 4-way splitter Jerrold 1597-B

L. Quantity as required 4-way directional coupler taps Jerrold DCT-4 ( )

M. Quantity as required directional couplers DCT-( ) B

N. Quantity as required UHF/VHF amplifier Jerrold 4545

O. Quantity one (1) television cabinet: Television cabinets shall be constructed of galvanized, code gauge sheet metal, of minimum dimensions indicated on the drawings. Surface mounted cabinets shall have manufacturer’s standard lacquer or enamel finish.

Trim shall be surface or flush as required, equipped with doors, attached by concealed hinges and flush chrome plated combination locks and catches, all keyed alike. Deliver two (2) keys
to the owner for each cabinet installed. Finish of trims and doors shall be manufacturer's standard lacquer or enamel except as follows: Cabinets in corridors or other "exposed to public" locations shall receive prime coat only. Finish painting by General Contractor.

P. Quantity as required directional coupler flush tap Jerrold DFT-( )

Q. Quantity one (1) per directional coupler flush tap

R. 6'0" jumper cable Jerrold CAC-6 with matching transformer Jerrold T-6000

S. Quantity as required coaxial cable Jerrold CAC-6 shall be used to interconnect all indoor TV outlets.

T. Quantity as required coaxial cable, Jerrold CAC-11 shall be used to interconnect head-end to cabinet, head-end cabinet to each building and any other outdoor run.