

**SECTION 27 41 33
TELEVISION CABLING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Television distribution equipment.
- B. Cable and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 26 05 26 - Grounding and Bonding.
- B. Section 26 05 33.13 - Conduit.
- C. Section 26 05 33.16 - Boxes.

1.03 REFERENCE STANDARDS

- A. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 SYSTEM DESCRIPTION

- A. Premises wiring for broadband distribution of television signal, including individual outlets.
- B. Provide a broadband television distribution system as described herein. The system shall support the distribution of broadband signals from various sources including but not limited to programming from local cable provider, city offices, satellite receivers as well as programming generated locally.
- C. The contractor shall provide all necessary amplifiers, cables, connectors and hardware for a complete and functional broadband television distribution system.
- D. Signal at each outlet: 3 dBmV across 75 ohms, minimum, plus 5 dB, minus 0 dB.

1.05 SUBMITTALS

- A. Shop Drawings: Indicate electrical characteristics and connection requirements. Show installation details, cable routing, and system configuration.
- B. Product Data: Provide showing electrical characteristics and connection requirements for each component.
- C. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, installation, and starting of product.
- D. Project Record Documents: Record actual locations of outlets, devices, and cable routing.
- E. Maintenance Data: Basic trouble-shooting procedures.

1.06 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70 and cable television utility company.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience with service facilities within 100 miles of Project.
- C. Supplier Qualifications: Authorized distributor of specified manufacturer with minimum three years documented experience.
- D. Products: Listed, classified and labeled as suitable for the purpose intended.

1.07 MAINTENANCE SERVICE

- A. Furnish service and maintenance of television system for one year from Date of Substantial Completion.

PART 2 PRODUCTS

2.01 ACCESSORIES

- A. Splitter:
 - 1. Blonder Tongue SXRS series.
 - 2. Frequency Response: 5 - 1000 MHZ.
 - 3. Isolation: 21 dB minimum.
 - 4. Return Loss: 16 dB minimum.
 - 5. Insertion Loss: 6.8 dB maximum.
 - 6. RFI shielding: 120 dB minimum.
 - 7. Quantity as required for Television locations as shown on Drawings. Provide a cable from each outlets to the racks as indicated on the drawings.
- B. Receptacles:
 - 1. Manufacturer: Systimax M12 Series faceplate with label ID window.
 - 2. Straight F-connector insert.
- C. Main Distribution Cable:
 - 1. Description: RG 11/F. Plenum rated jacket, 14 AWG copper steel center conductor, duofoil and 65% braided shield.
 - 2. Manufacturer:
 - a. Belden 89292 Series.
 - b. Approved Equal.
- D. Branch Distribution Cable:
 - 1. Description: RG 6/F. Plenum rated, solid copper center conductor, foil + 95% braid shield.
 - 2. Product:
 - a. Belden 9248
 - b. Approved Equal.
- E. Coaxial cable fittings:
 - 1. One piece, compression style F connectors compatible with the furnished cable.
 - 2. Equal to Belden Pro SNS Series.
- F. Conduit
 - 1. Size: Minimum 3/4 inch with larger sizes where noted on Drawings.
- G. Outlet boxess
 - 1. Four-inch square box with single gang plaster ring.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Provide proper grounding of television system components and wiring. Bond outdoor components to lightning protection system.
- C. Provide raceway system or utilize cable tray system for all cable.
- D. Provide cable continuous from the outlets to the data rack locations. Provide a trunk cable from the incoming terminal board to each distribution location as shown on the drawings.
- E. System connections will be made to provide the features described and specified herein.
- F. Cabling terminated at each piece of equipment shall be cut to length and terminated with the appropriate connector. The use of tie wraps is necessary to maintain the cabling in a neat manner.
- G. Equipment utilizing screw terminals shall have the conductors tinned prior to tightening into the terminals.
- H. Cable shall be run in one piece without splices made.

- I. All National, State and Local Electrical, Fire and Building Codes apply to this project. The contractor must be aware of and adhere to these codes. The Owner shall not be liable for failure of the contractor in the following code. Any portion of the installation that does not meet code shall be removed and re-installed up to code shall be removed and re-installed up to code by the contractor at their own expense.
- J. All cables and T.V. outlet plates shall be labeled by number or origination and termination designation. Labels must be permanent and legible. Peel off numbers are not acceptable unless clear heat shrink is used over the numbers.

END OF SECTION