

## SECTION 270523

### TELEVISION DISTRIBUTION SYSTEM

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Television service entrance.
- B. Television distribution equipment.
- C. Cable and accessories.

##### 1.2 RELATED SECTIONS

- A. Section 26 05 26 - Grounding and Bonding.
- B. Section 26 05 33 - Conduit.
- C. Section 26 05 34 - Boxes.
- D. Section 26 35 53 - Transient Voltage Surge Suppression.
- E. Section 26 41 00 - Lightning Protection System.

##### 1.3 REFERENCES

- A. NFPA 70 - National Electrical Code.

##### 1.4 SYSTEM DESCRIPTION

- A. Service entrance from local cable utility.
- B. Premises wiring for broadband distribution of television signal, including individual outlets.

##### 1.5 PERFORMANCE REQUIREMENTS

- A. Television Channels: 2-13, VHF-TV.

##### 1.6 SUBMITTALS

- A. Submit under the provisions of Division 01.
- B. Shop Drawings: Indicate electrical characteristics and connection requirements. Show installation details, cable routing, and system configuration.
- C. Product Data: Provide showing electrical characteristics and connection requirements for each component.
- D. 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 the Product.

## 1.7 PROJECT RECORD DOCUMENTS

- A. Submit under the provisions of Division 01.
- B. Record actual locations of outlets, devices, and cable routing.

## 1.8 OPERATION AND MAINTENANCE DATA

- A. Submit under the provisions of Division 01.
- B. Operation Data: Instructions for setting and tuning channels.
- C. Maintenance Data: Basic trouble-shooting procedures.

## 1.9 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the Products specified in this section with a minimum of three (3) years' documented experience, and with service facilities within 100 miles of Project.
- B. Supplier: Authorized distributor of specified manufacturer with a minimum of three (3) years' documented experience.
- C. Installer: Authorized installer of specified manufacturer with service facilities within 100 miles of the project.

## 1.10 REGULATORY REQUIREMENTS

- A. Conform to the requirements of NFPA 70.
- B. Furnish Products listed and classified by testing firm acceptable to authority having jurisdiction as suitable for purpose specified and indicated.
- C. Conform to requirements of cable television utility company.

## 1.11 MAINTENANCE SERVICE

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

# PART 2 PRODUCTS

## 2.1 BROAD BAND AMPLIFIER

- A. Manufacturers:
  - 1. Blonder-Tongue Model BIDA 450-50.
- B. Frequency Range (MHZ): 50-450.
- C. Gain (dB): 50.
- D. Power Requirements: 120VAC, 60 Hz, 0.28 amp.

## 2.2 ACCESSORIES

- A. Tap:
  - 1. Blonder-Tongue Model 4488.
  - 2. Channel-Master Model 7112.
  - 3. Substitutions: Under provisions of Division 01.
  - 4. Recessed, suitable for mounting with standard duplex receptacle wall plate, all channel, back-matched tap.
  - 5. Through Loss: 0.7 dB, maximum.
  - 6. Return Loss: 20 dB, maximum.
  - 7. Isolation: As required at each tap to meet specified performance.
  - 8. Connector: F type coaxial connector.
- B. Splitter:
  - 1. Blonder-Tongue Model MS-2U/V.
  - 2. Channel-Master 7300 Series.
  - 3. Substitutions: Under provisions of Section 01600.
  - 4. Inline, all channel, back-matched splitter.
  - 5. Through Loss: 3.5 dB for two-way; 6.7 dB for four-way.
  - 6. Isolation: 16 dB, minimum.
- C. Main Distribution Cable:
  - 1. West Penn Wire Corp. Model 821.
  - 2. Belden Model 9011.
  - 3. Substitutions: Under provisions of Division 01.
  - 4. Description: RG 11/U.
- D. Branch Distribution Cable:
  - 1. West Penn Wire Corp. Model 842.
  - 2. Belden Model 9114.
  - 3. Substitutions: Under provisions of Division 01.
  - 4. Description: RG 6/U.
- E. Television Lead Cable:
  - 1. West Penn Wire Corp. Model 843.
  - 2. Belden Model 9259.
  - 3. Substitutions: Under provisions of Division 01.
  - 4. Provide set-matched cord with 75–300-ohm transformer. Use RG 59/U coax cable, minimum length 6 feet.
- F. Cabinet: Provide surface mounted cabinet with adequate ventilation.
  - 1. Size: Selected by equipment manufacturer.
  - 2. Cabinet Finish: Black.

## 2.3 BROAD BAND AMPLIFIER

- A. Manufacturers:
  - 1. Blonder Torque Model B10A 450-50.
- B. Frequency Range (MHz): 50-450.
- C. Gain (dB): 50.
- D. Power Requirements: 120 VAC, 60 Hz, 2.8 amps.

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. Install in accordance with the manufacturer's instructions.
- B. Connect cable television service in accordance with cable Utility instructions.
- C. Provide proper grounding of television system components and wiring.

### 3.2 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under the provisions of Division 01.
- B. Measure signal level at each outlet.

### 3.3 MANUFACTURER'S FIELD SERVICES

- A. Prepare and start systems under the provisions of Division 01.
- B. Supervise final adjustments and tuning of system.

### 3.4 ADJUSTING

- A. Adjust work under the provisions of Division 01.
- B. Adjust work under the supervision of the manufacturer's field service personnel.
- C. Adjust each antenna using field strength meter to orient it for maximum signal reception.
- D. Adjust amplifier gain and make other system adjustments to achieve specified output levels at each outlet.
- E. Adjust traps to eliminate spurious interference.

### 3.5 DEMONSTRATION

- A. Provide systems demonstration under the provisions of Division 01.
- B. Demonstrate system operation and provide two hours of instruction with the manufacturer's training personnel.
- C. Conduct walking tour of Project and briefly describe function, operation, and maintenance of each component.
- D. Include demonstration of color television operation and specified signal level at two outlets selected by the Owner.

END OF SECTION