

**SECTION 27 52 24**  
**RESIDENT CALL SYSTEM**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Section Includes: Resident call equipment using lamp and electronic tone annunciation at a central annunciator station to register calls from patient to other call-in stations.
- B. Related Documents and Sections:
  - 1. Electrical: Division 16 Electrical Sections.
  - 2. Communications: Division 27 Communications General.

**1.2 REFERENCES**

- A. General: Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by issuing authority. Standards subsequently referred to by issuing authority abbreviation and standard designation.
- B. Underwriters Laboratories, Inc:
  - 1. UL 1069 Hospital Signaling and Resident Call Equipment.
- C. National Fire Protection Association (NFPA):
  - 1. NFPA 70 National Electric Code.

**1.3 SYSTEM DESCRIPTION**

- A. Performance Requirements: Provide resident call equipment, which has been manufactured and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

**1.4 SYSTEM OPERATION**

- A. Resident Requests Assistance Using a Call Station: Presses the emergency call button within their room.
- B. Call are then Communicated to the Staff. An annunciator panel will light up indicating the location of the call and emit a tone indicating a call. In addition, corridor lamp lights along with duty station assist with the location.
- C. Staff Addresses the Call: Staff addresses the call quickly, using the corridor lights to locate and identify the issue at a glance.

**1.5 SUBMITTALS**

- A. General: Submit listed submittals in accordance with Conditions or the Contract and Division 1 Submittal Procedures Section.

- B. Product Data: Submit product data, including manufacturer's product sheet, for specified products.
- C. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage and accessories. Include cabling diagrams, wiring diagrams, stations installation details, and equipment cabinet details.
- D. Quality Assurance Submittals: Submit the following:
  - 1. Test Reports: Certified test reports showing compliance with specified performance characteristics.
  - 2. Manufacturer's Instructions: Manufacturer's installation instructions.
- E. Closeout Submittals: Submit the following:
  - 1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance. Include troubleshooting guide, wiring terminal identification and equipment parts list.

## **1.6 QUALITY ASSURANCE**

- A. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
- B. Regulatory Requirements: See paragraph 1.2.
- C. Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.

## **1.7 DELIVERY, STORAGE & HANDLING**

- A. General: Comply with Division 1 Product Requirements Sections.
- B. Ordering: Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
- C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.

## **1.8 WARRANTY**

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

## **1.9 OWNER'S INSTRUCTION**

- A. Owner's Instruction: Instruct Owner's personnel in operation and maintenance of installed units. Provide manufacturer's installation, operation, and maintenance instructions for installed units.

## **1.10 MAINTENANCE**

- A. Extra Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals (Maintenance Materials) Section.
  - 1. Quantity: Furnish quantity of lamps for corridor dome lights and zone light units equal to 20% of amount installed.
  - 2. Delivery, Storage, and Protection: Comply with Owner's requirements for delivery, storage, and protection or extra materials.

## **PART 2 - PRODUCTS**

### **2.1 RESIDENT CALL EQUIPMENT**

- A. Manufacturer: Cornell Communications, Inc.
  - 1. Contact: 7915 N 81<sup>st</sup> St. Milwaukee, WI 53223-3830; Telephone: 800-558-8957; (414) 351-4660; Fax: (414) 351-4657.
- B. Proprietary Product System: Cornell 4000 Series Resident Call System.
  - 1. Product System Testing: System electrical components, devices and accessories shall be listed and labeled according to UL 1069 as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction, and marked for intended use.

### **2.2 PRODUCT SUBSTITUTION**

- A. Substitutions: No substitutions allowed

### **2.3 CORNELL 4000 SERIES RESIDENT CALL SYSTEM AND COMPONENTS**

- A. Annunciators: Manufacturer's standard lamp type.
  - 1. Station Model: E-101
    - a. Mounting: Flush mount or surface mount
  - 2. Panel Model: A-4020M/XX
  - 3. Lamp Legends: L-101A
  - 4. Power-on Indicator: Light-emitting diode or lamp test toggle switch.
  - 5. Audible Signal: Electronic tone.
- B. Duty Stations: Manufacturer's standard duty station
- C. Staff Stations: Manufacturer's standard staff station
- D. Emergency Stations: Manufacturer's standard call cords.
- E. Corridor Lights: Manufacturer's standard corridor lights.
- F. Power Supply: Manufacturer's standard power supply.

- G. Control Module: Manufacturer's standard control module.
- H. Station Face Plates: Type 302 Stainless steel, 0.0375" (0.95 mm) minimum, on brushed finish. Silk-screened labeling identifies indicator lamps and controls; optional plastic plates are available in 6 standard colors.

## **2.4 SOURCE QUALITY**

- A. Source Quality: Obtain resident call equipment and system from a single manufacturer.

## **PART 3 - EXECUTION**

### **3.1 MANUFACTURER'S INSTRUCTIONS**

- A. Compliance: Comply with manufacturer's product data, including product carton instructions for installation.

### **3.2 EXAMINATION**

- A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

### **3.3 INSTALLATION**

- A. Resident Call Equipment Installation:
  - 1. Wiring Method: Install wiring in raceway as recommended by manufacturer.
  - 2. Separation of Wires: Provide separation as recommended by equipment manufacturer.
  - 3. Splices, Taps and Terminations: Make splices, taps and terminations on numbered terminal strips in junction, pull and outlet boxes, terminal cabinets and equipment enclosures.
  - 4. Identification of Conductors and Cables: Retain color-coding of conductors, and apply wire and cable marking tape to designate wires and cables so all media are identified in coordination with system wiring diagrams. Label stations, controls, and indications using approved consistent nomenclature.
- B. Grounding: Ground cable shields and equipment to eliminate shock hazard.
  - 1. Signal Ground Terminal: Locate at main equipment cabinet. Isolate from power system and equipment grounding except at connection to main building ground bus.
  - 2. Grounding Provisions: Comply with requirements in Division 16 Electrical. Grounding Section,.

### **3.4 FIELD QUALITY REQUIREMENTS**

- A. Site Tests [Post Installation Testing]: comply with the following:
  - 1. Schedule Tests: Schedule test a minimum of 7 days in advance of performance of tests.
  - 2. Report: Submit a written record of test results.
  - 3. Operational Test: Perform an operational system test to verify compliance of system with these specifications. Perform test that include originating station-to-station and all-call messages and pages at each resident call station. Verify proper routing, volume levels, and freedom from noise and distortion. Test each available message path from each station on the system.

4. Retesting: Rectify deficiencies indicated by tests and completely retest work affected by such deficiencies. Verify by the system that the total system meets these specifications and complies with applicable standards. Report results in writing.
- B. Inspection: Verify that units and controls are labeled and interconnecting wires and terminals are identified in accordance with NFPA and UL 1069 requirements.
- C. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

### **3.5 CLEANING**

- A. Cleaning: Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.

### **3.6 PROTECTION**

- A. Protection: Protect installed product and finish surfaces from damage during construction.

**END OF SECTION**