PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Furnish, install, and wire all equipment associated with the installation of an Audio-Visual Rescue Assistance Signal System to comply with ADA requirements. This work shall include a main annunciator panel, remote call stations, power supply, outlet boxes, cables and wiring as shown on the drawings and as specified herein.

1.2 SUBMITTALS

A. General
1. Data sheets on all equipment being provided as well recommended cable types. Internal control cabinet drawings showing internal block diagram connections shall be provided. Wiring diagrams showing typical field wiring connections as well as single line floor plan indicating equipment locations as well as cable routings and quantities.

B. Product Data
1. Submit product data, including manufacturer's (Spec-Data) product sheet, for specified products.

C. Shop Drawings
1. Submit shop drawings showing layout, profiles and product components, including anchorage and accessories. Include cabling diagrams, wiring diagrams, station 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.
3. Manufacturer's Field Reports: Manufacturer's field reports specified herein.

E. Closeout Submittals
1. Submit the following:
a. 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.
b. Warranty: Warranty documents specified herein.

F. Project Closeout
1. A one-year maintenance contract offering continued factory authorized service of this system shall be provided as part of this contract. Built drawings that include changes to wiring, wiring designations, junction box labeling and other pertinent information shall be supplied upon completion of the project.

2. The contractor shall furnish manufacturer's manuals of the completed system including individual specifications sheets, schematics, inter-panel and intra-panel wiring diagrams.
   a. All information necessary for the proper maintenance and operation of the system must be included.
   b. Provide four copies.
3. As built drawings that include changes to wiring, wiring designations, junction box labeling, and other pertinent information shall be supplied upon completion of the project.
4. Provide a minimum of two (2) hours of in-service training with the system.
   a. These sessions shall be broken into segments that will facilitate the training of the system users in operating station equipment.
   b. Operating manuals and user's guides shall be provided at the time of training.

1.3 WARRANTY

A. Project Warranty
   1. Refer to Conditions of the Contract for project warranty provisions.

B. Manufacturer's Warranty
   1. 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.
      a. Warranty Period: [Specify term.] years commencing on the Date of Completion.
      b. All materials and installation shall be guaranteed to be free of defects in material and workmanship for one year after final acceptance of installation and tests.

1.4 INSTALLATION STANDARDS

A. The system shall be installed in accordance with the 2013 CEC and ADA requirements.

B. The completed system shall be in compliance with state and local electrical codes.

C. All wiring shall test free from grounds and shorts.

1.5 SYSTEM OPERATIONS

A. Furnish, install and place into operation a Rescue Assistance System for this building as indicated on the drawings and as specified herein.

B. A common annunciator shall be provided at the main building entrance where shown on the drawings to indicate light and tone signals from multiple remote call stations.
   1. When the call station switch is activated, a red LED button illuminates and a one shot tone sounds.
   2. When the alarm signal is acknowledged, the remote call station is signaled with a flashing light and tone.
   3. Voice communication with the remote call can then be initiated from the annunciator.
   4. Optional access to a public telephone system shall be provided when specified.

PART 2 - PRODUCTS

2.1 RESCUE ASSISTANCE-VISUAL EQUIPMENT

A. Manufacturer: Cornell Communications, Inc.

B. Contact: 7915 N 81st St., Milwaukee, WI 53223-3830; Telephone: 800- 558-8957; (414) 351-4660; Fax: (414) 351-4657.

2.2 PRODUCT SUBSTITUTIONS

A. Substitutions: Provide equal or better equipment than the specified manufacture subject to review by the Architect and Engineer.
   1. Tek-Safe
   2. Jeron

2.3 CORNELL 4200 RESCUE ASSISTANCE-AUDIO/VISUAL SYSTEM AND COMPONENTS

A. Equipment
   1. This system shall consist of multiple remote call stations, which will share a common annunciator panel and optional access to a public telephone system for external alarm notification.

B. Annunciator
   1. The annunciator panel shall be a CORNELL Model A4200/XX or A4225/XX, with capacity for 200 to 225 zones, surface mounted at the Main Fire Department Entrance to the building.
      a. Verify location with the Local Fire Marshal and the Architect.
   2. An alternate action switch with internal LED indicator shall be included for each zone.
      a. A yellow LED light on the zone switch shall illuminate and the alarm shall emit a repeating sound if the supervised wiring is faulted.
   3. An audible alarm shall be mounted on the annunciator panel, which will emit a minimum sound level of 90 db at 30 cm when a remote station calls.
      a. Depressing the zone switch will answer a zone and open the intercom line to the zone.
   4. The front panel shall have silk-screened zone designations and operating directions as well as zone designation strips.
   5. The power supply shall be a 120 volt emergency battery backup, CORNELL model B-5243A or P-512243A.
   6. The optional, TAK-4200 telephone access kit will place a call to a designated location via a dedicated public telephone line to notify them of the alarm.

C. Remote Call Stations
   1. The remote call station shall be CORNELL Model 4201B/V or Model 4201B/VM vandal resistant with one momentary switch with LED and loudspeaker.
   2. The station shall have hands free voice communication with the annunciator.
   3. The station shall have silk-screened operating instructions.
   4. The station shall be flush wall mounted on a 2-gang stainless steel plate with a 48" maximum mounting height for forward reach, and a 54” maximum for side reach.

2.4 SOURCE QUALITY

A. Source Quality
1. Obtain rescue assistance 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 technical bulletins, product catalog installation instructions, and product carton instructions for installation.

3.2 EXAMINAITON

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. Cabling Requirements
1. Wiring from the annunciator to the call station shall be CORNELL CB-4200 custom cable.
2. Wiring from the annunciator to the power supply shall be 18-gauge, 2 conductor.
3. Verify cable types with the Rescue Assistance System Manufacturer.
4. The optional telephone access kit requires a 120V AC outlet and dedicated external telephone line.

B. Rescue Assistance Signal System - Audio/Visual Installation
1. Complete system shall be installed in strict accordance with manufacturer's recommendations.
2. Wiring shall be installed in raceways throughout the building.
a. Conduit, if required, shall be 1/2" minimum.

3.4 FIELD QUALITY REQUIREMENTS

A. Site Tests (Post Installation Testing)
1. Checkout final connections to the system shall be made by a factory technician authorized by the manufacturer of the products installed.
a. Factory authorized technicians shall demonstrate operation of the complete system and each major component to the staff.
b. System field wiring diagrams shall be provided to this subcontractor by the system prior to installation.

B. Inspection
1. Perform a complete functional test of the system upon completion of the installation and instruct the staff in the operation and maintenance of the system.

C. Cleaning

1. 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.

END OF SECTION