

**DEPARTMENT OF VETERANS AFFAIRS**

**Justification and Approval**

**For**

**Other Than Full and Open Competition**

**1. Contracting Activity:**

Department of Veterans Affairs  
Lebanon VA Medical Center  
1700 S. Lincoln Ave.  
Lebanon, PA 17042

**2. Nature and/or Description of the Action Being Processed:**

Contractor shall furnish management, supervision, labor transportation, equipment, and materials, and perform work to include general construction, alterations, mechanical and electrical work, and certain other items as required by project drawings and specifications for:

**PROJECT NO. #595-109**

**VACO – LEBANON VA MEDICAL CENTER**

**BEHAVIORAL HEALTH COMPLEX**

This acquisition is a firm-fixed price construction buy.

**3. Description of Supplies/Services Required to Meet the Agency's Needs:**

- a. Fire Safety – Edwards EST – REFER TO SPECIFICATION SECTION 28 31 00 FIRE DETECTION AND ALARM: The furnishing, installation, and connection of an EST-3, Edwards, Signature E Series Fire Alarm System, including alarm initiating devices, alarm notification appliances, control units, fire safety control devices, annunciators, power supplies, and wiring.

**PART 2 - PRODUCTS**

**2.1 EQUIPMENT AND MATERIALS, GENERAL**

- A. All equipment and components shall be new and the manufacturer's current model. All equipment shall be tested and listed by Underwriters Laboratories, Inc. or Factory Mutual Research Corporation for use as part of a fire alarm system. The authorized representative of the manufacturer of the major equipment shall certify that the installation complies with all manufacturers' requirements and that satisfactory total system operation has been achieved.

**2.2 CONDUIT, BOXES, AND WIRE**

- A. Conduit shall be in accordance with Section 28 05 28.33 CONDUIT AND BACKBOXES FOR ELECTRONIC SAFETY AND SECURITY and as follows:
  1. All new conduits shall be installed in accordance with NFPA 70.
  2. Conduit fill shall not exceed 40 percent of interior cross sectional area.
  3. All new conduits shall be 3/4 inch (19 mm) minimum.
- B. Wire:
  1. Wiring shall be installed in conduit throughout.

2. Wiring shall be in accordance with NEC article 760, Section 28 05 13, CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY, and as recommended by the manufacturer of the fire alarm system. All wires shall be color coded. Number and size of conductors shall be as recommended by the fire alarm system manufacturer, but not less than 18 AWG for initiating device circuits and 14 AWG for notification device circuits.
  3. Addressable circuits and wiring used for the multiplex communication loop shall be twisted and shielded unless specifically accepted by the fire alarm equipment manufacturer in writing. Wiring used shall be approved by fire alarm system manufacturer.
  4. Any fire alarm system wiring that extends outside of a building shall have additional power surge protection to protect equipment from physical damage and false signals due to lightning, voltage and current induced transients. Protection devices shall be shown on the submittal drawings and shall be UL listed or in accordance with written manufacturer's requirements.
  5. All wire or cable used in underground conduits including those in concrete shall be listed for wet locations.
- C. Terminal Boxes, Junction Boxes, and Cabinets:
1. Shall be galvanized steel in accordance with UL requirements.
  2. All boxes shall be sized and installed in accordance with NFPA 70.
  3. covers shall be repainted red in accordance with Section 09 91 00, PAINTING and shall be identified with white markings as "FA" for junction boxes and as "FIRE ALARM SYSTEM" for cabinets and terminal boxes. Lettering shall be a minimum of 3/4 inch (19 mm) high.
  4. Terminal boxes and cabinets shall have a volume 50 percent greater than required by the NFPA 70. Minimum sized wire shall be considered as 14 AWG for calculation purposes.
  5. Terminal boxes and cabinets shall have identified pressure type terminal strips and shall be located at the base of each riser. Terminal strips shall be labeled as specified or as approved by the COTR.
- D. Remote Transmissions:
1. Provide capability and equipment for transmission of alarm, supervisory and trouble signals to the main fire alarm control unit.
  2. Transmitters shall be compatible with the systems and equipment they are connected to such as timing, operation and other required features.
- E. Audio Amplifiers:
1. Audio Amplifiers shall provide a minimum of 50 Watts at either 25 or 70.7 VRMS output voltage levels.
  2. Amplifiers shall be continuously supervised for operational status.
  3. Amplifiers shall be configured for either single or dual channel application.
  4. Each audio output circuit connection shall be configurable for Style X.
  5. A minimum of 50 percent spare output capacity shall be available for each amplifier.

## 2.3 ALARM NOTIFICATION APPLIANCES

### A. Speakers:

1. Shall operate on either 25 VRMS or 70.7 VRMS with field selectable output taps from 0.5 to 2.0W and originally installed at the 1/2 watt tap. Speakers shall provide a minimum sound output of 80 dBA at 10 feet (3,000 mm) with the 1/2 watt tap.
2. Frequency response shall be a minimum of 400 HZ to 4,000 HZ.
3. Four inches (100 mm) or 8 inches (200 mm) cone type speakers ceiling mounted with white colored baffles in areas with suspended ceilings and wall mounted in areas without ceilings.

### B. Strobes, Addressable:

1. Provide both white/clear and amber strobes compatible with existing Edwards EST-3 fire alarm system.
2. White/clear strobes shall activate upon fire evacuation alarms.
3. Amber strobes shall activate upon mass notification alarms.
4. Xenon flash tube type minimum 15 candela in toilet rooms and 75 candela in all other areas with a flash rate of 1 HZ. Strobes shall be synchronized where required by the National Fire Alarm Code (NFPA 72).
5. Backplates for white/clear fire alarm strobes shall be white with 1/2 inch (13 mm) permanent red letters. Lettering to read "Fire", be oriented on the wall or ceiling properly, and be visible from all viewing directions.
6. Back plates for amber mass notification strobes and for combination white/amber strobes shall be white with 1/2 inch (13 mm) permanent red letters. Lettering to read "Alert", be oriented on the wall or ceiling properly, and be visible from all viewing directions.
3. Each strobe circuit shall have a minimum of 20 percent spare capacity.
4. Strobes may be combined with the audible notification appliances specified herein.

## 2.8 ALARM INITIATING DEVICES

### A. Manual Fire Alarm Stations:

1. Shall be non-breakglass, address reporting type.
2. Station front shall be constructed of a durable material such as cast or extruded metal or high impact plastic. Stations shall be semi-flush type.
3. Stations shall be of single action pull down type with suitable operating instructions provided on front in raised or depressed letters, and clearly labeled "FIRE."
4. Operating handles shall be constructed of a durable material. On operation, the lever shall lock in alarm position and remain so until reset. A key shall be required to gain front access for resetting, or conducting tests and drills.
5. Unless otherwise specified, all exposed parts shall be red in color and have a smooth, hard, durable finish.

### B. Smoke Detectors:

1. Smoke detectors shall be photoelectric type and UL listed for use with the fire alarm control unit being furnished.
2. Smoke detectors shall be addressable type complying with applicable UL Standards for system type detectors. Smoke detectors shall be installed in accordance with the manufacturer's recommendations and NFPA 72.
3. Detectors shall have an indication lamp to denote an alarm condition. Provide remote indicator lamps and identification plates where detectors are concealed from view.

Locate the remote indicator lamps and identification plates flush mounted on walls so they can be observed from a normal standing position.

4. All spot type and duct type detectors installed shall be of the photoelectric type.
5. Photoelectric detectors shall be factory calibrated and readily field adjustable. The sensitivity of any photoelectric detector shall be factory set at 3.0 plus or minus 0.25 percent obscuration per foot.
6. Detectors shall provide a visual trouble indication if they drift out of sensitivity range or fail internal diagnostics. Detectors shall also provide visual indication of sensitivity level upon testing. Detectors, along with the fire alarm control units shall be UL listed for testing the sensitivity of the detectors.

C. Heat Detectors:

1. Heat detectors shall be of the addressable restorable rate compensated fixed-temperature spot type.
2. Detectors shall have a minimum smooth ceiling rating of 2,500 square feet (230 square meters).
3. Ordinary temperature (135 degrees F (57 degrees C)) heat detectors shall be utilized in elevator mechanical rooms.
4. Provide a remote indicator lamp, key test station and identification nameplate (e.g. "Heat Detector - Elevator P-\_\_\_\_\_) for each elevator group. Locate key test station in plain view on elevator machine room wall.

D. Water Flow and Pressure Switches:

1. Wet pipe water flow switches and dry pipe alarm pressure switches for sprinkler systems shall be connected to the fire alarm system by way of an address reporting interface device.
2. All new water flow switches shall be of a single manufacturer and series and non-accumulative retard type. See Section 21 12 00, FIRE-SUPPRESSION STANDPIPES and Section 21 13 13, WET-PIPE SPRINKLER SYSTEMS for new switches added. Connect all switches shown on the approved shop drawings.
3. All new switches shall have an alarm transmission delay time that is conveniently adjustable from 0 to 60 seconds. Initial settings shall be 30-45 seconds. Timing shall be recorded and documented during testing.

## 2.9 SUPERVISORY DEVICES

A. Alternate No. 2: Indoor Duct Smoke Detectors:

1. Duct smoke detectors shall be provided and connected by way of an address reporting interface device. Detectors shall be provided with an approved duct housing mounted exterior to the duct, and shall have perforated sampling tubes extending across the full width of the duct (wall to wall). Detector placement shall be such that there is uniform airflow in the cross section of the duct.
2. Interlocking with fans shall be provided in accordance with NFPA 90A and as specified hereinafter under Part 3.2, "TYPICAL OPERATION".
3. Provide remote indicator lamps, key test stations and identification nameplates (e.g. "DUCT SMOKE DETECTOR AHU-X") for all duct detectors. Locate key test stations in plain view on walls or ceilings so that they can be observed and operated from a normal standing position.

B. Base Bid: Outdoor Duct Smoke Detectors:

1. Duct smoke detectors for HVAC ducts run in outdoor locations shall be photoelectric spot type detectors pendant mounted inside ductwork. Access doors shall be provided,

as specified under Division 23, for in-duct detectors. Access doors shall be provided with signs with 2 inch high lettering to read: "Maintenance Access Door for In-duct Smoke Detector". Detector placement shall be such that there is uniform airflow in the cross section of the duct.

2. Interlocking with fans shall be provided in accordance with NFPA 90A and as specified hereinafter under Part 3.2, "TYPICAL OPERATION".

**C. Sprinkler and Standpipe System Supervisory Switches:**

1. Each sprinkler system water supply control valve, riser valve or zone control valve, and each standpipe system riser control valve shall be equipped with a supervisory switch. Standpipe hose valves, and test and drain valves shall not be equipped with supervisory switches.
2. Valve supervisory switches shall be connected to the fire alarm system by way of address reporting interface device. See Section 21 13 13, WET-PIPE SPRINKLER SYSTEMS for new switches to be added. Connect tamper switches for all control valves shown on the approved shop drawings.
3. The mechanism shall be contained in a weatherproof die-cast aluminum housing that shall provide a 3/4 inch (19 mm) tapped conduit entrance and incorporate the necessary facilities for attachment to the valves.
4. The entire installed assembly shall be tamper-proof and arranged to cause a switch operation if the housing cover is removed or if the unit is removed from its mounting.

**2.10 ADDRESS REPORTING INTERFACE DEVICE**

- A. Shall have unique addresses that reports directly to the building fire alarm panel.
- B. Shall be configurable to monitor normally open or normally closed devices for both alarm and trouble conditions.
- C. Shall have terminal designations clearly differentiating between the circuit to which they are reporting from and the device that they are monitoring.
- D. Shall be UL listed for fire alarm use and compatibility with the panel to which they are connected.
- E. Shall be mounted in weatherproof housings if mounted exterior to a building.

**2.12 UTILITY LOCKS AND KEYS:**

- A. All key operated test switches, control units, annunciator panels and lockable cabinets shall be provided with a single standardized utility lock and key.
- B. Key-operated manual fire alarm stations shall have a single standardized lock and key separate from the control equipment.
- C. All keys shall be delivered to the COTR.

**4. Statutory Authority Permitting Other than Full and Open Competition:**

- (X) (1) Only One Responsible Source and No Other Supplies or Services Will Satisfy Agency Requirements per FAR 6.302-1;
- ( ) (2) Unusual and Compelling Urgency per FAR 6.302-2;
- ( ) (3) Industrial Mobilization, Engineering, Developmental or Research Capability or Expert Services per FAR 6.302-3;
- ( ) (4) International Agreement per FAR 6.302-4
- ( ) (5) Authorized or Required by Statute FAR 6.302-5;
- ( ) (6) National Security per FAR 6.302-6;
- ( ) (7) Public Interest per FAR 6.302-7;

**5. Demonstration that the Contractor's Unique Qualifications or Nature of the Acquisition Requires the Use of the Authority Cited Above (applicability of authority):**

- a. Fire Safety – Edwards EST – REFER TO SPECIFICATION SECTION 28 31 00 FIRE DETECTION AND ALARM: Restriction of sources for this acquisition is justified in accordance with FAR 6.302.1, the item is peculiar to one manufacturer. Although there are manufacturers of fire alarm equipment, that equipment is not compatible with the system currently in place throughout the medical center. The Edwards EST fire alarm system is exclusively used at this facility and it is in the VA's best interest to maintain consistency of the life safety system. Use of other manufacturers would lead to storing additional inventory, functioning issues due to non compatibility with existing equipment, multiplicity of service contracts, and increased training and operator requirements.

**6. Description of Efforts Made to ensure that offers are solicited from as many potential sources as deemed practicable:**

The AE designing this project made every effort to specify generic items, however in design process only the products listed above meet the unique design criteria of this construction project. There is no restriction on suppliers of the products specified, only on the manufacturer. While these products are specified, most can be procured from multiple sources.

**7. Determination by the Contracting Officer that the Anticipated Cost to the Government will be Fair and Reasonable:**

It is anticipated that the prime construction contractor will obtain multiple quotes from various suppliers for the specified items, thus ensuring fair and reasonable price determination.

**8. Description of the Market Research Conducted and the Results, or a Statement of the Reasons Market Research Was Not Conducted:**

No market research was conducted as the prime contractor for these products is responsible for purchase/procurement of specified products. It is anticipated that prime construction contractor will be able to obtain price competition for these items.

**9. Any Other Facts Supporting the Use of Other than Full and Open Competition:**

These items are specified as design criteria to complete a unique atmosphere and work environment. Deviation from these products would jeopardize the aesthetic feel and functionality of the design.

**10. Listing of Sources that Expressed, in Writing, an Interest in the Acquisition:**

See Section VI above.

**11. A Statement of the Actions, if any, the Agency May Take to Remove or Overcome any Barriers to Competition before Making subsequent acquisitions for the supplies or services required:**

The products specified for this construction project are the only products that meet the Government's needs for the specified design. There is no restriction on suppliers of the products specified, only on the manufacturer. In the future the VA will continue to urge AE design firms to write specifications that allow for more diverse product placement and less restrictive requirements.

12. **Requirements Certification:** I certify that the requirement outlined in this justification is a Bona Fide Need of the Department of Veterans Affairs and that the supporting data under my cognizance, which are included in the justification, are accurate and complete to the best of my knowledge and belief.



Thaddeus Kocuba  
Chief of Engineering  
Lebanon VA Medical Center

7/6/2012

Date

13. **Approvals in accordance with FAR 6.304**

- a. **Contracting Officer's Certification (required):** I certify that the foregoing justification is accurate and complete to the best of my knowledge and belief.

Seth J. Custer  
Chief of Contracting  
Lebanon VA Medical Center

Date