

## SPECIFICATIONS:

- 1.1 Project Identification: The project name is: Summerville Fire & Rescue Hurricane Protection System. The Owner of the property is: The Town of Summerville. The Owner Representative is: Fire Chief Richard Waring:  
  
300 West 2<sup>nd</sup> North Street  
Summerville, SC 29483  
Work phone: 843-873-5107  
Email: [rwaring4@summervillesc.gov](mailto:rwaring4@summervillesc.gov)
- 1.2 Project Specifications for Proposal Purposes: All items contained in these specifications are for assisting the preparation of a complete set of specifications for approval by the Owner. These specifications are not to be considered as complete and should not be considered permanent specifications for the project. They should be used only as a tool to give an idea of what the Owner desires within this project. *Each bidder shall provide the Owner with additional and as much detail of specification items with their proposal.*
- 1.3 Project Close-Out: Contractor shall provide to the Owner all resources, instruction manuals, warranties, etc. for their portion of the project responsibility.
- 1.4 Proposal Submission: All proposals shall include as much detail as possible to aid the Owner in understanding and deciphering their submission. Where and when applicable, provide the Owner with the manufacturer, style, size and or other descriptions of materials proposed. The Contractor shall make the Owner aware of any other items necessary to complete this project prior to figuring costs of the construction, and shall provide this information to the Owner with their proposal submission.
- 1.5 Pre-Bid Site Meeting with Question and Answer Period: A mandatory pre-bid site meeting will be planned for and held by the Owner. See the Proposal Package Information for further detail.
- 1.6 Questions and Clarifications During Proposal Process: All questions and requests for clarification or information during the proposal process may be asked during the pre-bid site meeting or submitted to the following person via email only: Fire Chief Richard Waring (see email address in section 1.1). See the Proposal Package Information for further detail.
- 1.7 Construction Permits: The Contractor shall submit drawings, obtain and pay for all business license prior to starting work on the project. Permits will be required at no cost to the Contractor.
- 1.8 Insurance: Contractor shall pay for, and maintain for the duration of the project: general liability insurance and Worker' Compensation Insurance.

- 1.9 Performance and Payment Bond: The selected Contractor at time of contract acceptance, shall have a performance bond and payment bond, in an amount equal to 100% of the contract price.
- 1.10 Project Bid Bond: Contractor should include a bid bond with proposal submission.
- 1.11 Project Contract: Contract between Owner and selected Contractor will be an AIA format. Contract must also include the completed Contract Provisions for Non-Federal Entity Contracts Under Federal Awards form found with the proposal documents.
- 1.12 Contractor License: All Contractors submitting a proposal for this project shall be properly licensed for this work at the time of the submission. Submit copies and or license numbers for all licensing that would apply to perform this work, with the proposal submission. Provide all numbers, classifications, and expiration dates.
- 1.13 Project Clean Up: The Contractor shall maintain a clean work site and remove all unwanted debris daily. Prior to the completion of the project, the Contractor shall remove all waste materials and debris arising from the performance of the work, and shall present all construction areas in a broom clean condition. Contractor will also provide a final cleanup of the building to include vacuuming, cleaning windows, mopping floors prior to turning over the building to the Owner.
- 1.14 Payment: Payment will be reviewed and based on percentage of work values completed and invoiced stored materials will either be approved for payment or denied and returned to the Contractor for correction of items deemed questionable within 5 days of original submittal. Payment shall be made to the Contractor no more than 30 days after the approved submitted pay voucher is received. There will be a 10% retainage deducted from all payments which will be reduced to 5% at time of Substantial Completion. Substantial completion shall be determined and agreed upon by the Owner and the Contractor once the project is approved by the owner. The remaining 5% will be paid to the Contractor upon completion of the project including punch list items, warranty information, and close out documents.
- 1.15 Materials Stored on Site: Materials stored on site remain the responsibility of the Contractor. Replacement of stored materials due to damage or theft remains the responsibility of the Contractor.
- 1.16 Changes (Change Orders): All work shall be completed in a workmanlike manner within standard practices. Any alterations or deviations from the specifications or contract involving extra cost or credits will be executed as mutually agreed upon and be verified by a written change order signed by the Contractor and the Owner. No change orders will be allowed until discussed with the Owner, a negotiated price is agreed upon, and a signed change order is executed.

## I. DESIGN/PERFORMANCE REQUIREMENTS

- A. Contractor shall provide for design, fabrication, testing and installation of hurricane wind abatement and impact protection system products and materials

specified herein as required to meet the most up to date building code, hurricane rated and structural envelope / opening requirements by FL 812 & HVHZ by NOA 07-0424.04, FL320 or FL8363. Barrier to be transparent and rain resistant.

- B. Design of the System shall be performed to standards verifiable by a professional engineer registered in the State of South Carolina, and experienced in this application.
- C. Generally configure screen system to maintain the integrity and contiguity of structure envelope for hurricane related purposes, and as required by the applicable regulations. At door openings, configure screen system to allow egress from the building.
- D. System must meet the following standards: Florida Building Code and HVHZ TAS 201, TAS 202, TAS 203, ASTM E 1886, ASTM E 1996 Level E, ASTM E 330, SSTD 12, IBC, IRC and ASCE-7.

## II. QUALITY ASSURANCE

- A. Products provided under this section shall meet or exceed requirements of Miami-Dade NOA quality certification program and National Accreditation Management Institute (NAMI) quality assurance program as instituted pursuant to Florida Building Code.
- B. Field Measurements: Verify size and location of each opening to be protected prior to fabrication.
- C. Installer Qualifications: Engage an experienced installer, trained by the manufacturer, to perform work on this section who has specialized in installing the system provided and who is approved, authorized, or licensed by the system manufacturer to install manufacturer's product.
- D. Inspections: Provide on-site inspections by primary material manufacturer's representative during and after installation of hurricane protection system.

## III. SUBMITTALS

- A. Product Data: Manufacturer's specifications, test data, and installation instructions.
- B. Shop Drawings: For fabrication and erection of screen system units and fasteners. Include plan view layout, elevations, wind load calculation sheet(s)

and details specific to each project condition and screen. These details should include location by name and/or screen number corresponding to the plan layout, diagram showing the style of screen(s), types of anchors / fasteners, minimum required PSF and anchor spacing.

- C. Samples: 12 inch by 24 inch sample of screen material complete with hemmed perimeter edges, top attachment loops and bottom attachment strap with buckle. Include typical identification tag.
- D. Product/Code Certification: Provide verifiable documentation demonstrating conformance to all of the following standards: Miami-Dade NOA, ASTM E1886, ASTM E1996 Level E, SSTD 12-99, Florida Building Code, and that the hurricane protection products, including screen and anchoring devices be provided and installed as a system or assembly in this project meet or exceed requirements.
- E. Inspection Report: Satisfactory pass any inspections required by applicable regulations.

#### IV. WARRANTY

- A. System Warranty: Submit a written warranty signed by the system manufacturer agreeing to promptly repair or replace units damaged due to defects in materials or manufacturer.
- B. Provide 10 year pro-rated warranty on defects in manufacture that lead to failure, 1 year on labor. User must notify of defects immediately.

#### PRODUCTS

##### I. Hurricane Protection System

- A. The transparent system shall be resistant to wind, rain, and large and small missiles, and may provide additional benefits such as compact, easy storage and protection for unconventional spaces. The system shall be versatile and able to be installed as a removable product, an unobtrusive roll-up or horizontal track system. Various aluminum extrusions may be incorporated as permanent or removable anchor attachments. The system shall be approved by Miami-Dade NOA in the HVHZ to 136.5 PSF design pressure and 24' unsupported span between opposing anchored edges or the Florida Building Code approval for 115.5 PSF with a 192" span (FL 8363). Maximum allowable distance between

unanchored edges shall be unlimited. When the opening is protected all around, the system shall be approved under the Florida Building Code as a hurricane rated building envelope product.

- B. System shall incorporate a flexible, transparent membrane designed to deflect under the strongest hurricane force but not rupture, nor allow penetration by large or small missiles. The barrier is to be manufactured from a lightweight, extremely tough geosynthetic textile, tested by ASTM D4355, D4533, D4751, D5261, D3884 and D3786 and meeting manufacturer's requirements. The weave shall be tight enough for surface tension of water to create a barrier resistant to driving rain, and open enough to be transparent. The standard system shall require no independent frame, and effectively attach to pre-installed anchors. Quick and simple deployment can be staged well before the potential threat without significantly affecting the usability of the structure.

## II. Fabrication

- A. Factory fabricates screen barrier panels complete and ready for installation without field adjustment.
- B. Identify each separate panel with an identification tag indicating installed location descriptive reference such as "north side entry, etc." To implement deployment outshout location plan. Provide back-up location plan where appropriate.
- C. Provide custom storage bags for screen storage, as appropriate.
- D. Fabricate screen panels of similar size and shape to be interchangeable to reduce the number of different sized units.

## EXECUTION

### I. Examination and Preparation

- A. Examine substrates for conditions that would prevent quality installation of system.
- B. Do not proceed until defects are corrected.
- C. Coordinate drawing, diagrams, templates, instructions and directions for installation of anchorages which are embedded in concrete or masonry construction. Coordinate delivery of such items to project site.

## II. Installation

- A. Comply with manufacturer's instructions and recommendations for installation.
- B. Provide anchors, inserts and accessories required for a complete installation.
- C. Install each screen until in its described location to verify proper installation of anchors then immediately remove and store in location within building as designated by Owner.

## III. Field Quality Control

- A. When directed, install all screen units at the same time, or verification and review by the Owner, Manufacturer and Building Inspector.
  - 1. Notify all attendee at least 5 working days in advance of the date and time of meeting / deployment.
- B. Immediately following meeting / deployment, remove screen units and store as designated by Owner within building.