

TERMS OF REFERENCE

SUPPLY AND INSTALLATION OF AUTOMATIC FIRE DETECTION AND ALARM SYSTEM (DESIGN AND BUILD)

- A. Project Name** : **SUPPLY AND INSTALLATION OF AUTOMATIC FIRE
DETECTION AND ALARM SYSTEM
(DESIGN AND BUILD)**
- B. Implementing Agency** : Food Terminal, Inc.
- C. Location** : FTI Admin. Building, FTI Complex, East Service Road,
South Super Highway, Taguig City
- D. Project Description** : The project is about the supply of labor, materials,
tools, equipment, and technical supervision necessary for the
Installation of Automatic Fire Detection and Alarm System at
FTI Admin. Building.
- E.** :To enhance fire safety measures within FTI Administration
Building by implementing a comprehensive and fire detection
and alarm system.
To minimize the risk of fire-related incidents, protect lives and
property and ensure a swift and effective response to potential
fire emergencies.
- F. Expected Completion/Commissioning Time** : 3rd Quarter of 2024
- G. Project Estimated Cost** : ₱ 4,090,363.00 VAT Inclusive
- H. Bidders Classifications** : Size Range, Small B
License Category C & D
- I. Time Frame/Project Duration** : 90 Calendar Days
- J. Terms of Payment** : 15% Mobilization
Two (2) Monthly Progress Billings
and Final Billing for 100% Completion
- K. Warranty** : The project shall have one (1) year warranty to be free from
any defects in materials and workmanship after 100% completion
and turn-over. Any defects and poor workmanship that may arise
during the warranty period shall be repaired at the Contractor's
expense.

L. Scope of Work:

1. Division 1:

1.1 Definitions

1.1.1 Owner - Whenever the term "Owner" is used in the bid and Contract documents, it refers to **Food Terminal Inc.** All correspondence to the Owner will be directed to the Vice-President for Operations.

1.1.2 Contractor - Whenever the term "Contractor" is used in the documents, it refers to the person or company, including their representative, named in the Contract Agreement, who was employed by the Owner to execute and complete the Works.

1.1.3 **Estate Engineering and Maintenance Unit** - Whenever the term "Estate Engineering and Maintenance Unit" is used in the documents, it refers to Engineering Unit who's in charge in construction works.

1.1.4 **Project Name and Location** - The project is known as the **SUPPLY AND INSTALLATION OF AUTOMATIC FIRE DETECTION AND ALARM SYSTEM AT THE FTI ADMIN. BUILDING** Whenever the term "Site" is used, it refers to the area defined by the boundaries of the Project at **FTI Admin. Building, FTI Complex, East Service Road, South Super Highway, Taguig City**

1.2 General Provisions

1.2.1 Mobilization/Demobilization

1.2.1.1. The Contractor shall remove all temporary facilities, debris and excess materials upon completion of the project.

1.2.2 Permits, Clearances and Taxes

1.2.2.1. Secure BUILDING PERMIT from the Local Government Unit (LGU).

1.2.2.2. Secure Permit/Clearance for Fire Safety Installation Certificate from the Bureau of Fire Protection (BFP)

1.2.2.3. Provide a complete set of FDAS plans, signed and sealed by Professional Electronics Engineer / Fire Protection System.

1.2.2.4. The Contractor shall secure all necessary permits, unless otherwise stated, to complete the works. The cost related to all fees, licenses and permits, demandable under laws, decrees, ordinances, regulations, acts, charter, executive orders and rules set by the Government of the Philippines shall be deemed included in the cost proposal. Provide a breakdown of permits and licenses.

1.2.2.4.1. Government Fees and Taxes

1.2.2.4.2. Building Permit

1.2.2.4.3. Occupancy Permit

1.2.2.4.4. Others

1.2.3 Permits, Bonds and Insurances

1.2.3.1. Prior to the Commencement of The Works, General Contractor shall submit all documentary evidence and/or policies and receipts for the insurance required by the Contract Agreement, to the Construction Project Managers. All bonds and insurances shall be secured

1.2.3.1.1. Contractor's All Risk Insurance:

100% of Contract Price

1.2.3.1.2. Surety Bond (Down / Advance Payment Guarantee):

15% of Contract Price

1.2.3.1.3. Performance Bond:

30% of Contract Price

1.2.3.1.4. Retention Bond or Guarantee Bond:

10% of Contract Price

1.2.3.2. The Owner shall not be liable for or in respect of any damages or compensation payable at law in respect of or in consequence of any accident or injury to any workman or other person whether in the employment of the Contractor. The Contractor shall indemnify and keep indemnified the Owner against all such damages or compensation and

against all claims, demands, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

1.2.4 Environment, Health and Safety Requirements

1.2.4.1. The Contractor is to provide and enforce the wearing of efficient safety helmets, and where necessary, face masks, eye goggles, ear protectors, safety harnesses and other personal protection equipment for all personnel. The Contractor shall submit for approval detailed proposals for emergency procedures and safety regulations. The Contractor shall provide all Owner's representatives and consultants employed necessary safety gadgets i.e. safety helmets, safety shoes, etc.

1.2.4.2. The Contractor shall allow the pro-active dissemination of emergency procedures that covers typhoon, earthquake, fire, environmental and other emergencies to the project organization.

1.2.4.3. The Contractor is to take every precaution necessary to protect the public from injury or death during the course of the works.

1.2.4.4. The Contractor shall be responsible for the safety of the people and security on the jobsite and shall regularly report status to the Owner.

1.2.5 Shop Drawings

1.2.5.1. The Contractor shall submit shop drawings for the Owner's approval. Such drawings shall include the manner and methodology of which it will be installed. **No work shall commence until the shop drawings are approved.** Any rejected works executed without prior Owner's Approval shall be at the expense of the Contractor.

1.2.5.2. Sample catalogs, technical specifications, and shop-drawings of the offered FDAS equipment and devices, wires and all other materials must be submitted for FTI's review and evaluation. EEMU will need to approve the catalogs and technical specifications prior to delivery and installation process.

1.2.6 As - Built Drawings

1.2.6.1. The Contractor shall submit five copies of accurate as built drawings at the completion of the works. The Owner may require the contractor to submit as built drawings on certain portions of works in advance.

1.2.6.2. The Contractor shall maintain a whole set of construction records easily accessible to the Owner and must be kept up to date. As-built drawings should be maintained both in the Contractor's and Owner representative's office.

1.2.7 Progress Report

1.2.7.1. The Contractor shall report on-site activities by printed pictures, properly labeled and identified. Such reports shall be submitted to the Owner on a weekly basis. The Owner has the right to suspend work with non-compliance of this clause.

1.2.7.2. The Contractor shall submit to the Owner before each meeting an agenda listing site problems, variations or extra works instructed by the Owner, the progress of the Works and any other matters for discussion during the meeting.

1.2.7.2.1. **Notes:** Weekly coordination meetings will be held every Wednesday afternoon.

1.2.8 Representation

1.2.8.1. The Contractor's Project Manager and staff shall be required to attend all meetings, inspections and walk-thru as called by the Owner or its representatives. The Project Manager must be empowered to make decisions on behalf of the Contractor.

1.2.8.2. The Contractor shall provide for cost/s associated with the repair and reinstatement of damaged areas caused by construction. No claims shall be accepted for damages attributed to the Contractor's work.

1.2.9 Housekeeping

1.2.9.1. Noise and dust should be minimized on the entire duration of the works. The Contractor shall ensure a plan is in place to address noise and dust pollution.

1.2.9.2. The Contractor must ensure that no debris, excess material will be accumulated or dumped illegally.

1.2.9.3. The Contractor shall ensure that the permanent works are cleaned and fit for occupancy prior to issuance of Taking over Certificate (Turn-over) from the Owner.

1.2.10 Material Testing/ Testing and Commissioning

1.2.10.1. The Contractor shall allow the Owner to check the quality, compliance and accuracy of the works by providing the tools to verify completed work. The Owner reserves the right to reject any work that is not conforming to the stipulated tolerances and quality requirements. The contractor specifications, shall allow for material testing on site and third party laboratories on work items requiring material testing.

1.2.10.2. The contractor shall conduct all the testing and commissioning activities with the presence of owner's representatives. Submit a complete commissioning datasheet and test results.

1.2.10.3. The contractor shall provide training of Fire Safety Personnel and Fire Detection and Alarm System

1.2.11 Scaffolding

1.2.11.1. The Contractor shall provide and maintain suitable & safe scaffolding, supports, platforms and the like for the Owner and its Consultants inspect thoroughly any portion of the work, with complete safety.

1.2.12 Site Management

1.2.12.1. The Contractor shall provide an on-site Project Staff working in full time capacity and shall be in-charge of all the works on site.

1.2.12.2. The Project & Construction Manager shall be licensed Mechanical Engineer or a Professional Electronics Engineer with at least FIVE (5) years of relevant experience in projects similar or comparable projects in different locations. The Contractor shall provide an on-site Safety Officer. The Safety Officer must be an accredited safety practitioner by the Department of Labor and Employment (DOLE) and must have undergone the prescribed forty (40) hour Construction Safety and Health Training (COSH).

1.2.12.3. The Contractor shall provide on-site Admin/Document Controller. The Admin/Document Controller records, controls, facilitate the timely flow of documents not limited to those related to time, budget and quality management.

1.2.12.4. The above key personnel listed is the minimum requirement. Tenderers shall attach each individual's CV, PRC license of the professional staff, certificates of training and all other pertinent documents proving the said professional expertise.

1.2.12.5. Provide a project organizational chart showing designations, responsibilities, qualifications, experience, age, profession and other relevant information.

1.2.12.6. Conduct thorough site assessment to identify existing structures, utilities, and potential hazards.

1.2.12.7. Implement safety measures, including fencing, warning signs, and proper personal protective equipment for workers.

1.2.12.8. Follow environmentally friendly demolition practices, recycling materials whenever possible.

1.2.13 Temporary Facilities

1.2.13.1. All temporary facilities should include conference room and site offices for the contractor.

1.2.13.2. The Contractor shall provide temporary housing for workers, project staff with bed and Kitchen provisions.

1.2.14 Temporary Utilities

1.2.14.1. The Contractor shall provide for temporary power and lighting not in compliance with the capacity available or existing at site.

1.2.14.2. The Contractor shall provide for temporary water, drainage and sewer utilities.

1.3 Project Billboard

1.4 COA Billboard

2. Division 2: Site Construction

2.1 Site Preparation

2.1.1 Site survey and layout

2.1.2 Site Clearing

2.2 Site Restoration

3. Division 3: Electrical, equipment and accessories

3.1 Supply, Delivery and Installation of Fire Detection and Alarm System complete with testing and commissioning and necessary accessories. These shall be shown on drawings and in accordance with specifications required to make the system operational.

3.1.1 Conduits & Fittings

3.1.2 Boxes

3.1.3 Wires and Cables

3.1.4 Supply and installation of the following equipment and accessories,:

3.1.4.1. Addressable Fire Alarm Control Panel LCD Display

3.1.4.2. Supply and Installation of smoke detectors, heat detector, control module, monitor module, manual pull station, siren with strobe, fireman's telephone, Fire Alarm Control Panel (FACP), Fireman Communication System (FCS), Fire Alarm Technical Block (FATB).

3.1.4.3. Mini Module 1 Monitor Input - (MetroBank)

3.1.4.4. Mini Module 1 Monitor Input - (PNB)

3.1.4.5. Mini Module 1 Monitor Input - (BPI)

3.1.4.6. Mini Module 1 Monitor Input - (Land Bank)

3.1.4.7. Mini Module 1 Monitor Input - (Water Flow Switch)

3.1.4.8. Mini Module 1 Monitor Input - (Fire Pump)

3.1.4.9. Mini Module 1 Monitor Input - (Jockey Pump)

3.1.4.10. Module 1 Monitored Output with Isolator - (Elevator)

3.1.4.11. Addressable Smoke Detector with Isolator & Base

3.1.4.12. Addressable Manual Call Point with Isolator

3.1.4.13. Loop Power Sounder/Beacon with Isolator & Base

3.1.5 Hangers and Supports

4. General Notes

1. The FDAS including wirings must be furnished and installed by a certified and experienced supplier and supervised by an experienced Electronics Engineer.
2. All strobe are synchronized during an alarm and follow the specified sequence of operation.
3. The notification appliance circuit (NAC) support NFPA Class "A" style 4 wiring.
4. All initiating devices are connected thru the signal line circuit (SLC) and supports Class "A" style 6 wiring.
5. All devices are monitored for integrity and shall initiate a supervisory alarm in the panel once the device is disconnected from the line.
6. Short circuit isolators shall be provided for the intelligent devices through out the SLC loop as recommended and required by the manufacturer.
7. FDAS system conforms with all applicable codes and standards (NFPA72, National Electrical Code and AHJ).

5. INTERFACE AND INTEGRATION PLAN

1. The FDAS shall interface to:

- Elevator Control Panel
- Sprinkler Alarm Control Panel
- Smoke Control System Panel
- Kitchen Hood Suppression System
- Door Locking Mechanism
- Access Control System
- PA/EVAC/BGM
- IP-PBX
- Commercial Banks FDAS

2. Contractor must coordinate with respective trades on the exact location of each module required to integrate elevator recall, water flow switch, fire pump, jockey pump, motorized dampers, ventilation/aircondition, kitchen hood suppression, sprinkler alarm control panel, door locking mechanism/access control, smoke extraction and stair pressurization.

6. Submissions:

- Submission of hard copy (A3 size) of the conceptual design and plan, FIDAS layout from Ground Floor to 4th Floor of the FTI Administration building.
- Submit sample catalog and technical specifications of the offered equipment, monitor/control modules, smoke detector, heat detector, siren with strobes and etc.
- Submit hard copy of detailed Cost Estimates.
- Submit hard copy of detailed engineering design including details of installations, schedule of alarm system, installations on site of fire alarm cables, control and monitor cables, wiring and monitor conduits etc., to be signed and sealed by a Professional Electronics Engineers.
- Submit As-Built Plans.
- Submit operations/maintenance training manuals after completion and acceptance.

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