SECTION 231216 - FACILITY GASOLINE DISPENSING PUMPS

This Section includes gasoline dispensers, pumps, and accessories which transfer gasoline or other vehicle fuels from storage tank to vehicle or portable container.

Manufacturers found in SpecAgent for this Section were identified as representative and not as an endorsement for meeting the requirements of this Specification.

This Section includes performance, proprietary, and descriptive type specifications. Edit to avoid conflicting requirements.

This Section includes the term "Architect/Engineer." "Architect" is used in AIA contract documents; "Engineer" is used in EJCDC contract documents. Retain appropriate term.

See Drawing Coordination Considerations for information needed to coordinate this Specification Section with Drawings.

1. GENERAL
   * + 1. SUMMARY
          1. Section Includes: Gasoline dispensers and accessories.
          2. Related Requirements:

List other Sections directly related to or affecting Work of this Section. Include Sections specifying information expected to be found in this Section as well as Sections required to describe complete system or assembly requirements.

Section 230513 - Common Motor Requirements for HVAC Equipment: Product requirements for motors required by this Section.

* + - 1. DEFINITIONS

Limit list of definitions to terms unique to this Section and not provided elsewhere.

* + - * 1. B20 Biodiesel Fuel: A vegetable oil- or animal fat-based diesel fuel. "B20" refers to a blend of 20 percent biodiesel and 80 percent petrodiesel.
      1. REFERENCE STANDARDS

List reference standards included within text of this Section, with designations, numbers, and complete document titles.

* + - * 1. National Fire Protection Association:

NFPA 30A - Code for Motor Fuel Dispensing Facilities and Repair Garages.

NFPA 70 - National Electrical Code.

* + - * 1. UL:

UL 87 - Power-Operated Dispensing Devices for Petroleum Products.

* + - 1. COORDINATION
         1. Section 013000 - Administrative Requirements: Requirements for coordination.
         2. Coordinate Work of this Section with Work of other Sections.
      2. PREINSTALLATION MEETINGS
         1. Section 013000 - Administrative Requirements: Requirements for preinstallation meeting.
         2. Convene minimum [**one week] [<\_\_\_\_\_\_\_\_> weeks**] prior to commencing Work of this Section.
      3. SUBMITTALS

Only request submittals needed to verify compliance with Project requirements.

* + - * 1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
        2. Manufacturer’s installation instructions shall be provided along with product data.
        3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
        4. Section 013300 - Submittal Procedures: Requirements for submittals.
        5. Product Data: Submit manufacturer's information regarding materials of construction and fabrication, wiring diagrams, performance charts, and other details.
        6. Manufacturer's Certificate: Certify that [**products**] <\_\_\_\_\_\_\_\_> meet or exceed [**specified** **requirements**] <\_\_\_\_\_\_\_\_>.

Include separate paragraphs for additional certifications.

* + - * 1. Manufacturer's Instructions: Submit detailed instructions on installation requirements, including storage and handling procedures.
        2. Source Quality-Control Submittals: Indicate results of shop tests and inspections.
        3. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
        4. Manufacturer Reports:

Certify that [**equipment has been installed according to manufacturer's instructions**] <\_\_\_\_\_\_\_\_>.

Indicate activities on Site, adverse findings, and recommendations.

* + - * 1. Qualifications Statements:

Coordinate following subparagraphs with requirements specified in QUALIFICATIONS Article.

Submit qualifications for manufacturer and installer.

Submit manufacturer's approval of installer.

* + - 1. CLOSEOUT SUBMITTALS
         1. Requirements for submittals.
         2. Project Record Documents: Record actual locations of gasoline dispensers and appurtenances.
      2. MAINTENANCE MATERIAL SUBMITTALS
         1. Requirements for maintenance materials.
         2. Spare Parts:

Furnish [**one set] [two sets**] of manufacturer's recommended spare parts.

\*\*\*\*\*\* [OR] \*\*\*\*\*\*

Furnish [**two**] <\_\_\_\_\_\_\_\_> of <\_\_\_\_\_\_\_\_>.

* + - * 1. Tools: Furnish special [**wrenches**] <\_\_\_\_\_\_\_\_> and other devices required for Director’s Representative to maintain and calibrate gasoline dispensers and accessories.
      1. QUALITY ASSURANCE

Include this Article to specify compliance with overall reference standards affecting products and installation included in this Section.

In following paragraph insert "State of \_\_\_\_\_\_\_\_ Department of Transportation," "Municipality of \_\_\_\_\_\_\_\_ Department of Public Works," or other agency as appropriate.

* + - * 1. Perform Work according to <\_\_\_\_\_\_\_\_> standards.

Include following paragraph only when cost of acquiring specified standards is justified.

* + - * 1. Maintain [**one copy] [<\_\_\_\_\_\_\_\_> copies**] of each standard affecting the Work of this Section on Site.
      1. QUALIFICATIONS

Coordinate following paragraphs with requirements specified in SUBMITTALS Article.

* + - * 1. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum [**three**] <\_\_\_\_\_\_\_\_> years' [**documented**] experience.
        2. Installer: Company specializing in performing Work of this Section with minimum [**three**] <\_\_\_\_\_\_\_\_> years' [**documented**] experience [**and approved by manufacturer**].
      1. DELIVERY, STORAGE, AND HANDLING
         1. Requirements for transporting, handling, storing, and protecting products.
         2. Inspection: Accept materials on Site in manufacturer’s original packaging and inspect for damage.
         3. Store materials according to manufacturer's instructions.
         4. Protection:

Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.

Provide additional protection according to manufacturer's instructions.

* + - 1. EXISTING CONDITIONS
         1. Field Measurements:

Verify field measurements prior to fabrication.

Indicate field measurements on Shop Drawings.

* + - 1. WARRANTY

This Article extends warranty period beyond one year. Extended warranties may increase construction costs and Owner enforcement responsibilities. Specify warranties with caution.

* + - * 1. Requirements for warranties.
        2. Furnish [**five**] <\_\_\_\_\_\_\_\_>-year manufacturer's warranty for gasoline dispensers.

1. PRODUCTS
   * + 1. GASOLINE DISPENSERS
          1. Manufacturers: Subject to compliance with requirements, [provide products by the following] [provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following]:

Gilbarco-Veeder-Root

Wayne Fueling Systems

Tokheim

Approved equivalent.

Insert descriptive specifications below to identify Project requirements and to eliminate conflicts with products specified above.

* + - * 1. Description:

Comply with NFPA 30A “Code for Motor Fuel Dispensing Facilities and Repair Garages”, NFPA 70 “Standard for Electrical Safety in the Workplace”, and UL 87 “Power-Operated Dispensing Devices for Petroleum Products”.

Electronically controlled gasoline fuel dispenser.

Compatible with kerosene, diesel, and B20 biodiesel fuels.

Fuel Nozzle Orientation: [**Side for use from either lane] [Lane**].

Fuel Delivery Speed: [**5] [11] [22**] <\_\_\_\_\_\_\_\_> gpm

Discharge End Connections: [1**]** <\_\_\_\_\_\_\_\_> inch, with [**3/4**] <\_\_\_\_\_\_\_\_>-inch adapter for conversion to diesel fuel.

* + - * 1. Cabinet:

Material: [**Heavy-duty galvanized steel] [Stainless steel**].

Finish: [**Powder coat**] <\_\_\_\_\_\_\_\_>.

Color: [**Manufacturer's standard**] <\_\_\_\_\_\_\_\_>.

Doors: Hinged.

* + - * 1. Display:

[**LCD] [LED**] <\_\_\_\_\_\_\_\_>.

Location: [**Each side of cabinet] [One side of cabinet**].

Configurable, [**four**] <\_\_\_\_\_\_\_\_>-digit display to right of decimal point.

Programmable gallons or liters.

Uninterruptable Power: In event of power loss, display remains visible for [15] <\_\_\_\_\_\_\_\_> minutes.

Lighted product identification.

* + - * 1. Totalizer: Electromechanical, [**seven**] <\_\_\_\_\_\_\_\_>-digit.
        2. Meter:

Type: Positive displacement.

Calibration: Electronic.

* + - * 1. Pump:

Type: Positive displacement, self-priming.

Furnish bypass valve.

* + - * 1. Operation:

Select one or more of the following subparagraphs appropriate to equipment requirements.

Electrical Characteristics:

Rated Load: <\_\_\_\_\_\_\_\_> A.

Voltage: <\_\_\_\_\_\_\_\_> V, [**single] [three**] phase, 60 Hz.

Maximum [**Fuse Size] [Circuit Breaker Size] [Overcurrent Protection**]: <\_\_\_\_\_\_\_\_> A.

Minimum Circuit Ampacity: <\_\_\_\_\_\_\_\_>.

Motors: As specified in Section 230513 - Common Motor Requirements for HVAC Equipment.

Disconnect Switch: Factory-mounted on equipment.

* + - * 1. Accessories:

Handheld remote for configuring and diagnosing without opening dispenser.

Electronic calibration.

Second hose on same side of dispenser to simultaneously fill twin vehicle fuel tanks.

Hose retractor.

Hose mast and hanger.

Vertical strainer.

Internal filter.

Flow control valve.

Price display.

Heater for electronics.

External light.

* + - 1. SOURCE QUALITY CONTROL
         1. Requirements for testing, inspection, and analysis.
         2. Provide shop inspection and testing of completed assembly.

Include one or both of following paragraphs to require Owner's inspection or witnessing of test at factory.

* + - * 1. Director’s Representative Inspection: Make completed gasoline dispensers available for inspection at manufacturer's factory prior to packaging for shipment. Notify Director’s Representative at least [**seven**] <\_\_\_\_\_\_\_\_> days before inspection is allowed.
        2. Director’s Representative Witnessing: Allow witnessing of factory inspections and tests at manufacturer's test facility. Notify Director’s Representative at least [**seven**] <\_\_\_\_\_\_\_\_> days before inspections and tests are scheduled.

Include following paragraph if reliance on fabricator's approved quality-control program is sufficient for Project requirements.

* + - * 1. Certificate of Compliance: If fabricator is approved by authorities having jurisdiction, submit certificate of compliance indicating Work performed at fabricator's facility conforms to Contract Documents.

Specified shop tests are not required for Work performed by approved fabricator.

1. EXECUTION
   * + 1. EXAMINATION
          1. Requirements for installation examination.
          2. Verify that Site concrete and electrical work are ready to receive dispensers.
          3. Verify that dimensions and elevations are as indicated on [**Drawings] [layout drawings**].
       2. INSTALLATION
          1. Install gasoline dispenser according to manufacturer's instructions.
       3. FIELD QUALITY CONTROL
          1. Requirements for inspecting and testing.

\*\*\*\*\*\* [OR] \*\*\*\*\*\*

* + - * 1. Requirements for testing, adjusting, and balancing.
        2. Manufacturer Services: Furnish services of manufacturer’s representative experienced in installation of products furnished under this Section for not less than <\_\_\_\_\_\_\_\_> [**days] [hours**] on Site for installation, inspection, startup, field testing, and instructing Director’s Representative’s personnel in maintenance of equipment.
        3. Equipment Acceptance:

Adjust, repair, modify, or replace components failing to perform as specified and rerun tests.

Make final adjustments to equipment under direction of manufacturer's representative.

* + - * 1. Furnish installation certificate from manufacturer's representative attesting that equipment has been properly installed and is ready for startup and testing.
      1. DEMONSTRATION
         1. Requirements for demonstration and training.
         2. Demonstrate equipment startup, shutdown, routine maintenance, and emergency repair procedures to Director’s Representative's personnel.
      2. MAINTENANCE
         1. Requirements for maintenance service.

Evaluate need for maintenance and emergency service based Project requirements. If desired, retain following paragraph.

* + - * 1. Provide service and maintenance of gasoline dispensers for [**one year] [<\_\_\_\_\_\_\_\_> years**] from date of Substantial Completion.

END OF SECTION 231216