# FUEL FARM AND GENERATOR

## WAUCHULA MUNICIPAL AIRPORT

**WAUCHULA, FLORIDA**

# PROJECT MANUAL

## FOR BIDDING ONLY

## APRIL 2026

**Prepared for**

**CITY OF WAUCHULA**


**Prepared for**

**AVCON, INC.**

5555 E. Michigan Street, Suite 200
Orlando, FL 32822
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407.599.1133
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2025.0052.01

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**REFERENCE SPECIFICATIONS:** The following FAA Advisory Circular(s) and FDOT Specifications are not included in the Project Manual, but form a part of the executed contract by reference. FAA Advisory Circulars may be downloaded from www.faa.gov.

Operational Safety on Airports During Construction ..... 150-5370-2G
Aircraft Fuel Storage, Handling, Training, and Dispensing on Airports ..... 150/5230-4C

# CONTRACT FORMS

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# ADVERTISEMENT

**LOCATION:** **WAUCHULA MUNICIPAL AIRPORT**
**WAUCHULA, FLORIDA**

**PROJECT:** **FUEL FARM AND GENERATOR**
**FAA AIP 3-12-0084-021-2025 / FDOT FPN 452061-1**

## 1. DESCRIPTION OF WORK

The work identified in the Advertisement for Bids consists of Airport Construction to be performed by qualified contractors as follows:

**FUEL FARM AND GENERATOR**

**This project consists of two primary elements:**

1. Design\Build Fuel Farm – consisting, but not limited to, the design, permitting, provision, installation, construction, testing, and training in the use of one each (1) new double wall steel 12,000 gallon AVGAS tank and one each (1) new double wall steel 12,000 gallon Jet-A tank on existing concrete apron. Project item includes the removal and legal disposal of one (1) existing 10,000 gallon tank and electronic self-pay dispenser system. Project includes any additional tertiary containment required. Project includes all design drawings, permitting, and close-out documentation with all Authorities Having Jurisdiction. Project includes civil and electrical site improvements per project drawings, to be finalized by the Design \ Builder. Project includes full tank of initial fuel for each tank. Project includes all labor, materials, taxes, fees, delivery, tariffs, incidentals, equipment, coordination, permits, licenses, bonds, insurances necessary for a completed turnkey facility, accepted by the Owner and Owner's representatives, tested, certified, and in place.

2. Electrical Backup Engine Generator Set (Construction) – consisting, but not limited to, the construction of an engine generator, housing, fuel supply, full tank of initial fuel, support pad, stub ups, trenching, conduit, grounding, detection tape, connections, and building \ electrical site improvements to supply backup emergency power for the existing Airfield Light Vault and existing\new Fuel Farm. Project includes all labor, materials, taxes, fees, delivery, tariffs, incidentals, equipment, coordination, permits, licenses, bonds, insurances necessary for a completed turnkey facility, accepted by the Owner and Owner's representatives, tested, certified, and in place.

Pursuant to all local and state laws, and codes, and Florida Department of Transportation rules and regulations. The engineer has\will obtain FAA and SWFWMD permits prior to Notice to Proceed as applicable and necessary.

2. No pre-bid conference will be held. See below for procedures on site visits and questions.

3. SEALED BIDS will be received and opened by the City of Wauchula, Florida, at City Hall, 126 South 7th Avenue, Wauchula, Florida, 33873 on **Thursday, June 11, 2026 until 2:00 PM (Local Time)**.

   The Owner reserves the right to hold all bids for a maximum period of **210** calendar days prior to awarding the contract or rejecting all bids.

4. At the time mentioned above, bidding will be closed and those proposals received on time will be publicly opened and read aloud in the Office. Any proposals received after the designated bid opening time will be returned to the bidder unopened.

5. All proposals shall be submitted on the forms furnished by the Owner. Submit one (1) original and one (1) hardcopy, together with a USB drive, CD, or DVD with a scan of your entire signed complete bid price proposal, by the closing date and time in a sealed envelope with the bid title, and FDOT FPN number clearly marked on the outside of the envelope. Bids received after the closing date and time will not be considered and will be returned to the bidder. Each proposal submitted shall be placed with all required attachments in a sealed envelope, and this envelope shall in turn be placed in a 9 x 12-inch envelope. Both envelopes must be sealed and marked as follows:

   **Bids for the Project:** **FUEL FARM AND GENERATOR**
   **FAA AIP 3-12-0084-021-2025 / FDOT FPN 452061-1**
   **Wauchula Municipal Airport**
   **Wauchula, Florida**
   **To Be Opened:** **Thursday, June 11, 2026 until 2:00 PM (Local Time).**

   **Firm Submitting Bid:** _____

6. On and after **Wednesday, May 13, 2026**, Bid Documents will be available electronically and may be obtained by contacting Sue Finney, phone: (407) 599-1122; email: sfinney@avconinc.com. **Bidders must be registered through AVCON, Inc. to be eligible to submit a Bid for the project.** A complete examination of the site and understanding of the drawings and specifications contained in the Bid Documents is necessary in order for the Bidder to properly submit a Bid. The Bid Documents also include a detailed set of Instructions to Bidders. All Bids shall be prepared in accordance with the Instructions to Bidders. The failure to comply with any requirement contained in the Bid Documents may result in the rejection of the Bid as non- responsive or a finding that the Bidder is not qualified for this Project.

7. Any questions related to this Project shall be submitted no later than **Wednesday, June 3, 2026, at 5:00 pm local time** in writing only via letter, fax, or email, to AVCON, Inc. 5555 East Michigan Street, Suite 200, Orlando, Florida 32822. Attention: Sue Finney, email sfinney@avconinc.com, Fax 407-599-1133. Copies of written responses will be provided to all prospective Bidders **who are registered with AVCON** via the Addendum process. **Do not contact the City or Airport with questions.** The final Addendum will be issued not later than **Friday June 5, 2026, 5 pm local time**, as necessary.

8. A certified check, drawn upon a state or national bank, or a bid bond issued by a corporate Surety licensed to conduct business in the State of Florida, in a sum not less than five percent (5%) of the total amount bid, made payable to the City of Wauchula, Florida is required with each bid.

9. A Performance Bond for an amount not less than 100% of the bid price and a Payment Bond for an amount not less than 100% of the bid prices will be required from the selected bidder at the time he/she enters into a contract with the City. The contractor must carry the required insurances in accordance with the bid documents.

10. The apparent low bidder will be announced based on the Total Bid Price equaling the addition of all the Bid Schedules and Alternates (if any). The contract will be awarded to a successful bidder based on a review of all bids received on all bid schedules and alternates in accordance with the contract documents. Bid Schedules or Alternates may or may not be awarded depending upon the available grant funds. The Owner reserves the right to award any combination of Bid Schedules/Alternates, or to reject all Bid Schedules/Alternates, or to reject any combination of Bid Schedules/Alternates, which are most advantageous to the Owner, price and all other factors considered, and as specified in accordance with the Contract Documents. The apparent low bidder, therefore, may not be the successful bidder, depending on the actual Bid Schedules and/or Alternates awarded.

11. The Contract is subject to the State E-Verify requirements. On January 4, 2011, Governor Rick Scott signed Executive Order Number 11-02, which requires state agencies to require use of the Department of Homeland Security's E-Verify system to verify employment eligibility of employees to work in the United States. The E-Verify requirement is mandated to be included in this Contract for the Contractor's and subcontractor's employees. Therefore, the Contractor agrees to use the E-Verify system and provide such compliance information as may be required by the City and/or the State of Florida."

12. Liquidated damages for delay in completion of the contract will be in accordance with the Contract Documents.

13. Bids must be submitted on an exact reproduction of the bid forms supplied, indicating any addenda which may be issued, in sealed envelopes and Description(s) in bold as specified above.

14. Bidders shall submit a general one-year project warranty certificate on workmanship and labor, in addition to any product, equipment, and/or materials-specific manufacturer's warranties prior to final payment.

15. After bidding, but prior to award of a contract, the successful bidder will be required to provide a detailed Schedule of Values for all lump sum construction items based on Divisional specifications in the provided bid documents, and upon which the Total Bid Price has been based, for inspection by the Owner and Owner's Representatives. This is in addition to any other information required by the contract documents prior to award. The Schedule of Values shall be first broken into the Bid Schedules and Alternates (if any) main pay items. The Schedule of Values shall subsequently list all detailed line items for all of the construction components of the project with the associated dollar

value the contractor has assigned to the line item and generally based on the specifications. The Owner and Owner's Representatives shall examine the Schedule of Values, and it shall be subject to their approval prior to award of the contract. The successful bidder shall provide as much detail as necessary for the Owner and Owner's Representatives to adequately evaluate the Schedule of Values, in the Owner's sole opinion. Subsequent pay applications by the Contractor will be based on a percentage of completion of the individual line items as completed and verified by the Owner. Such line items will also be used for inspection verification of quantities for payment.

16. The FAA, along with other federal agencies, removed requirements for non-segregated facilities and EEO/affirmative action clauses following President Trump's Executive Order 14173 ("Ending Illegal Discrimination and Restoring Merit-Based Opportunity"). This order revoked the 1965 Executive Order 11246, which previously mandated these provisions, to prioritize "merit-based" hiring and reduce administrative burdens on contractors. While the specific contract clauses are removed, contractors are still obligated to comply with general anti-discrimination laws under Title VII of the Civil Rights Act. These changes were initiated through GSA Class Deviations in February 2025 to align with the new administration's policies.

17. The FAA, FDOT and the Florida State Attorney General have paused the Disadvantaged Business Enterprise (DBE) program established by Airports and other public entities based on the above referenced federal action. As such, the Airport's DBE program has been suspended and the goal set to 0.0% for this project. See Appendix IIA for more information.

18. Site visits may be scheduled during the bidding period by contacting the Airport Manager prior to bidding and a minimum 24 hours in advance. It will be the responsibility of the contractor to provide transportation for any site visit.

19. The proposed contract is subject to the Buy American provisions under Section 9129 of the Aviation Safety and Capacity Expansion Act of 1990 and Title 49 U.S.C., Chapter 501. Details of such requirements are contained in the Contract Documents. The Contract is subject to the regulations and orders of the Secretary of Labor, OFCCP and FAR 152.61 and requires notices numbered (1) through (4), which can be found in the Contract Documents.

CITY OF WAUCHULA, FLORIDA

BY_____
Mr. John Eason, Deputy City Manager

# INSTRUCTIONS TO BIDDERS

## 1. DESCRIPTION OF WORK

The work identified in the Advertisement for Bids consists of Airport Construction to be performed by qualified contractors as follows:

**FUEL FARM AND GENERATOR**

This project consists of two primary elements:

1. Design\Build Fuel Farm – consisting, but not limited to, the design, permitting, provision, installation, construction, testing, and training in the use of one each (1) new double wall steel 12,000 gallon AVGAS tank and one each (1) new double wall steel 12,000 gallon Jet-A tank on existing concrete apron. Project item includes the removal and legal disposal of one (1) existing 10,000 gallon tank and electronic self-pay dispenser system. Project includes any additional tertiary containment required. Project includes all design drawings, permitting, and close-out documentation with all Authorities Having Jurisdiction. Project includes civil and electrical site improvements per project drawings, to be finalized by the Design \ Builder. Project includes full tank of initial fuel for each tank. Project includes all labor, materials, taxes, fees, delivery, tariffs, incidentals, equipment, coordination, permits, licenses, bonds, insurances necessary for a completed turnkey facility, accepted by the Owner and Owner's representatives, tested, certified, and in place.

2. Electrical Backup Engine Generator Set (Construction) – consisting, but not limited to, the construction of an engine generator, housing, fuel supply, full tank of initial fuel, support pad, stub ups, trenching, conduit, grounding, detection tape, connections, and building \ electrical site improvements to supply backup emergency power for the existing Airfield Light Vault and existing\new Fuel Farm. Project includes all labor, materials, taxes, fees, delivery, tariffs, incidentals, equipment, coordination, permits, licenses, bonds, insurances necessary for a completed turnkey facility, accepted by the Owner and Owner's representatives, tested, certified, and in place.

… pursuant to all local and state laws, and codes, and Florida Department of Transportation rules and regulations. The engineer has\will obtain FAA and SWFWMD permits prior to Notice to Proceed.

## EXAMINATION OF PLANS, SPECIFICATIONS, SITE AND OTHER PROVISIONS

The following information is furnished in addition to and not in conflict with "General Provisions,"* Section 20, paragraph 20-06.

The Bidder is required to examine carefully the site of the Work and the Drawings, Specifications and other Contract Documents for the work contemplated at the Wauchula Municipal Airport, Wauchula, Florida. By submitting a Bid, the Bidder represents to the Owner that it has investigated and is fully informed of the conditions to be encountered, of the character, quality and quantities of Work to be performed and materials to be furnished and of all the requirements of the Plans, Specifications and other Contract Documents. A complete listing of the plan sheets may be found in **Volume 3 – Construction Plans.**

*** "General Provisions" referenced in this Contract Document is provided in Volume 2 "Technical Specifications."**

## 2.1 SILENCE OF SPECIFICATIONS

The apparent silence of this specification and any supplemental specifications attached to the project manual as to any details or the omission from same of any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail and that only materials of first quality and correct type, size, and design are to be used. All workmanship is to be first quality. All interpretations of these specifications shall be made upon the basis of this statement.

## 2.2 CONFLICT OF INTEREST

The award hereunder is subject to the provisions of Chapter 112, Florida Statutes. All Bidders must disclose with their bid the name of any officer, director, or agent who is also an employee of the City or any of its agencies. Further, all Bidders must disclose the name of any City employee or volunteer working at the behest of the City, who owns, directly or indirectly, any interest of any amount in the Bidder's firm or any of its branches.

## 2.3 GENERAL SAFETY STANDARDS

Unless otherwise stipulated in the bid, all manufactured items and fabricated assemblies shall comply with all applicable requirements of the Occupational Safety and Health Act (OSHA) and carry evidence of all applicable Underwriters Laboratories (UL) listings. All work in and around Airport property shall conform to the Site and Safety Plan(s) and notes portions of the drawings, as well as FAA AC 150/5370-2 (latest edition), which is available on the world-wide web at www.faa.gov, if not attached to the project manual.

## 2.4 MEETS SPECIFICATIONS

All equipment, accessories, and fabricated assemblies furnished under these specifications shall be new, the latest model in current production, and shall be of good quality workmanship and materials. The Bidder represents that all equipment, accessories, and fabricated assemblies shall meet or exceed the minimum requirements specified. Delivery, inspection, testing, labeling, and installation specifications per the manufacturer's recommendations shall be strictly adhered to.

## 2.5 QUALITY ASSURANCE VERSUS QUALITY CONTROL

The Bidder will provide complete Quality Control testing, inspection, and daily supervision to satisfy itself that all constructed items as specified and bid conform to the contract documents and manufacturer's recommendations and requirements. All equipment, accessories, materials, fabricated assemblies, and any other products used on the project shall be tested and inspected according to the manufacturer's recommendations, the specifications, ASTM standards, and/or UL requirements. See other sections of the project manual for more detail on quality control and quality control programs.

The Owner or Owner's representative will provide Quality Assurance (also known as Quality Acceptance) testing at its discretion to assure itself that the project items are being constructed as represented by the Bidder. The Bidder will notify the Owner's Representative when it is ready for Quality Assurance testing by the Owner for each stage of construction, for each separate item to be constructed and tested according to the Technical Specifications, whether the specifications are performance in nature or not. The Bidder shall not proceed to cover up, backfill, or start (as applicable) the item in question until the Owner or Owner's Representatives have been first notified that the item is ready for QA testing (if testing is required by the specifications). The Owner or Owner's Representative will avail itself of the necessity of QA testing for its own purposes and notify the Bidder that it may or may not proceed. The Bidder will pay for all failing tests, operations, and remedies necessary to bring the item(s) up to the specification's standards.

## 2.6 MANUFACTURER'S NAMES AND APPROVED EQUIVALENTS

Any manufacturer's names, trade names, brand names, information and/or catalog numbers listed in a specification, with or without the words "or approved equal" or "or approved equivalent", shall be interpreted as determining a standard of quality and shall not be construed as limiting of competition.

## 2.7 SAMPLES

Samples of items, when called for, must be furnished free of expense and may upon request, be returned at the Bidder's expense. Each individual sample must be labeled with the Bidder's name, manufacturer's brand name and number, bid number, and item reference. Samples of successful Bidders' items may remain on file with the City for the term of the contract. Requests for return of samples shall be accompanied by instructions which include shipping authorization and name of carrier and must be received within ninety (90) calendar days after bid opening date. If instructions are not received within this time, the commodities shall be retained by the City indefinitely.

## 3. REGULAR CONSTRUCTION MEETINGS

The Contractor shall provide a designated superintendent to be available at all times and shall attend a regular construction meeting held at the airport. The specific location, dates, and times shall be determined at the Pre-Construction Conference. The Contractor shall be represented by the superintendent and shall be knowledgeable of the day to day construction activities. The Contractor shall submit at the meetings an anticipated schedule of work for the following meeting. The Contractor's superintendent shall be on-site daily during the actual construction period.

## 4. RECORD DRAWINGS

Record drawings shall be submitted by the Contractor within five (5) working days of the last working day of the contract. Record drawings shall be performed by a licensed surveyor in the state in which the work is being performed. The record drawings shall meet all guidelines established in Section 1A, paragraph 60-09 of the Technical Specifications. Failure to submit record drawings to the engineer in the time specified above will delay final payment to the Contractor.

## 5. OBLIGATION OF BIDDERS

The Bidder must inform itself fully of the construction and labor conditions under which the Work is to be performed. The Bidder shall not be relieved of its obligation to furnish all material, equipment and labor necessary to carry out the provisions of the Contract Documents and to complete the contemplated Work for the consideration set forth in its Bid by reason and having failed to inform itself with respect to those matters.

## 6. ADDENDA - CHANGES WHILE BIDDING

No interpretation of the Plans, Specifications or other Contract Documents or correction of any apparent ambiguity, inconsistency or error therein, will be made orally to any Bidder. Every request for such interpretation or corrections must be made in writing, addressed to the Engineer, AVCON, Inc., 5555 E. Michigan Street, Suite #200, Orlando, Florida 32822, and must be received at least seven (7) calendar days prior to the date fixed for the opening of Bids in order to be given consideration. All such interpretations, corrections and supplemental instructions will be in the form of written Addenda to the Contract Documents which, if issued, will be mailed, emailed, sent by facsimile, or delivered by a reputable courier/delivery service to all prospective Bidders (to the address furnished to the Owner by the prospective Bidder for such purposes) not later than 24 hours prior to the date fixed for the opening of Bids. If the Bidder fails to acknowledge receipt of any such Addendum in the space provided in the Bid Form, its Bid will nevertheless be construed as though the Addendum had been received and acknowledged, and the submission of its Bid will constitute acknowledgment of the receipt of the same.

Only the interpretation or correction so given by the Engineer in writing shall be binding, and prospective Bidders are warned that no other source is authorized to give information concerning, or to explain or interpret, the Contract Documents.

## 7. PREPARATION OF PROPOSAL

The following information is furnished in addition to and not in conflict with General Provision, Section 20, paragraph 20-7.

Bids shall be submitted on a reproduced copy of the attached Bid Form and shall include the following:

1. Statement of Bidder's Qualifications (Section SBQ 1-2) and any attachments
2. Bid Forms (Section BF 1-8)
3. Sworn Statement on Public Entity Crimes (Section SS 1-3)
4. Tax Delinquency\Felony Convictions Certification (Section TD -1 -2)
5. Required Bid Guarantee (Section BB 1-2)
6. Proof of Insurances
7. Powers of Attorney

All blank spaces in the Bid Form shall be completed legibly and correctly in ink. The Bidder shall specify the Total Bid Price for the entire Work described in the Contract Documents.

If the Bid is made by an individual, it must be signed in the name of the individual and identify the individual's post office address and the name and address of every person interested in the Bid as principal. If the Bid is made by a firm or partnership, its name and address must be stated, together with the name and address of each member of the firm, or partnership. If the Bid is made by a

Corporation, the Bid must be signed by an authorized officer or agent, on behalf of the Corporation and the corporate seal must be affixed thereto. The officer or agent must also prove the state in which the Corporation is incorporated, the names and business addresses of the President, Secretary, and Treasurer, evidence that the Corporation is in good standing in its state of incorporation and in Florida, and evidence that the Corporation has registered with the Secretary of State of the State of Florida, as a foreign corporation for doing business in the State of Florida.

## 8. BID GUARANTY

Each Bid shall be accompanied by a Bid Guaranty in the form of a cashiers' check made payable to the Owner or a Bid Bond in the form contained in the Contract Documents, duly executed by the Bidder as Principal having a Surety thereon a surety company fulfilling the qualifications described in Paragraph entitled "Guaranty of Faithful Performance and Payment". The Bid Bond shall be written through a licensed Florida agency on behalf of a surety company licensed to do business in the State of Florida. The Bid Guaranty shall be in the amount not less than five percent (5%) of the amount of the Total Bid Price. The cashier's check, or Bid Bond shall be submitted with the understanding that it shall guarantee that the Bidder will not withdraw the Bid for a period of one hundred twenty (120) days after the time and date fixed for the opening of Bids, **that if the Bidder is provided with a Notice of Intent to Award the Contract, the Bidder will enter into a formal Contract with the Owner in the form contained in the Contract Documents, that the Bidder will supply evidence of the authority of the person executing the Contract and Bonds to do so, that the required Contract Bonds, Certificates of Insurance, certifications and submissions will be provided on the same day the contract is executed,** given, that all other Contract Documents will be executed in the form provided therein. If any of the foregoing requirements are not met, the Owner shall be entitled to the full amount of the Bid Guaranty as damages to the Owner resulting from the Bidder's failure to meet those requirements. Cashier's checks or Bid Bonds will be returned to all except the three apparent low, qualified, responsible, responsive Bidders within ten (10) days after the opening of Bids, and the remaining cashier's checks or Bid Bonds will be returned within three (3) days after the Owner and successful Bidder have executed the Contract Documents required by the owner for the Work. Cash will not be accepted as a Bid Guaranty.

## 9. DELIVERY OF PROPOSALS

The following information is furnished in addition to and not in conflict with General Provision, Section 20, paragraph 20-10.

All proposals shall be submitted in sealed envelopes bearing on the outside the name of the Bidder, the Bidder's address, the name of the Project for which the Proposal is submitted, and the time and date fixed for the opening of Proposals. The Bid Guaranty specified in Paragraph 10 above, recognition of addendum, shall be enclosed in the sealed envelope with the Bid. The Bid shall be delivered by hand, by registered mail, or by overnight package service to the **City of Wauchula, 126 South 7th Avenue, Wauchula, FL 33873 (see Page ADV-1)**. Bids submitted by facsimile transmission will not be accepted. Proposals received after the time and date specified in the Advertisement for Proposals will not be considered, but will be returned unopened.

## 10. WITHDRAWAL OR REVISION OF PROPOSALS

A bidder may withdraw or revise his proposal in accordance with General Provision, Section 20, paragraph 20-11 reproduced as follows:

*A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the owner in writing or by telegram before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.*

## 11. DISQUALIFICATION OF BIDDERS

General Provision, Section 20, paragraph 20-13 (a-c) is reproduced here for clarity with subparagraphs "d", "e", and "f" added as additional reasons for disqualifications.

*20-13 DISQUALIFICATION OF BIDDERS. A bidder shall be considered disqualified for any of the following reasons:*

*a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.*

*b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the owner until any such participating bidder has been reinstated by the owner as a qualified bidder.*

*c. If the bidder is considered to be in "default" for any reason specified in the subsection titled ISSUANCE OF PROPOSAL FORMS of this section.*

d. Work for which the Bidder is committed by contract, which, in the Owner's judgment and sole discretion, might hinder or prevent the prompt completion of the Work under this contract if awarded to the Bidder;

e. Being behind on the approved completion schedule for any existing contracts with the Owner, in litigation with the owner or having defaulted on a previous contract with the Owner;

f. Any other cause which, in the Owner's judgment and sole discretion, is sufficient to justify disqualification of a Bidder or the rejection of its Bid.

## 12. REJECTION OF IRREGULAR PROPOSALS

The following information is furnished in addition to and not in conflict with General Provision, Section 20, paragraph 20-08.

Bids will be considered irregular and may be rejected if they show omissions, alterations of form, additions not called for, conditions, limitations, unauthorized alternate bids or other irregularities of any kind.

The owner shall have the right to waive any informalities or irregularities of Bids, or to reject any or all Bids.

## 13. NOTICE OF INTENT TO AWARD CONTRACT

Unless all Bids are rejected, a Notice of Intent to Award the Contract will be provided to the qualified, responsible Bidder whose Bid is responsive to the invitation and is most advantageous to the Owner, price and other factors considered.

If a conflict exists between the words and numerals of each Bid amount, the words shall govern.

## 14. GUARANTY OF FAITHFUL PERFORMANCE AND PAYMENT

The following information is furnished in addition to and not in conflict with General Provision, Section 30, paragraph 30-05.

a. A Performance Bond and a Payment Bond satisfactory to the Owner and in the form attached hereto, each in an initial amount of not less than the Total Contract Price, will be required of the successful Bidder for, among others, the following purposes:

1. To guarantee faithful performance of the requirements of the Contract Documents, including all applicable warranties.

2. To guarantee the payment of all labor, materials, or supplies used directly or indirectly in the prosecution of the Work provided for in the Contract.

The Penal Sum of the Performance Bond and the Payment Bond shall be increased or decreased during the course of the Work in the event that modifications, change orders or addenda increase or decrease the Total Contract Price so that the Penal Sum of each bond shall be in an amount equal to the completed Contract Price at the completion of the Work.

b. The Bonds shall be exactly in the forms contained in the Contract Documents, and written through a licensed Florida agency on behalf of a surety company licensed to do business in the State of Florida, meeting the following requirements:

1. Qualification - Management and Strength: The Surety must be rated no less than "A" as to management and no less than XII as to strength, by the latest edition of Best's Insurance Guide, published by A.M. Best Company, Post Office Box 1107, Summit, New Jersey 07901.

2. Qualification – Federal Project Approval: The Surety company executing the Bonds shall be on the current list of the U.S. Treasury Department as being approved by and for writing bonds for Federal projects in the amount not less than the Penal Sum of the bonds provided to the Owner.

3. Bonds shall be on the current list of the U.S. Treasury Department as being approved by and for writing bonds for Federal projects in the amount not less than the Penal Sum of the bonds provided to the Owner.

4. Bonding Limit - Any One Risk: The bonding limit of the Sureties shall not exceed five percent (5%) of the policy holder surplus (capital and surplus) as listed by the aforementioned Best's Insurance Guide.

The completed Bonds shall be delivered to the Owner with the executed Contract as required hereinafter in these Instructions to bidders, at the same time the executed contract is delivered.

Provisions for liquidated damages are provided in the Bid Form and Contract Documents.

## 15. POWER OF ATTORNEY AND COUNTERSIGNATURE

Attorneys-in-fact who sign Bid Bonds, Performance Bonds and Payment Bonds, must file with such Bonds a certified copy of their power-of-attorney to sign the bonds. All bonds must be countersigned by a resident Florida agent of the Surety, with proof of agency attached.

## 16. EXECUTION OF CONTRACT

The following information is furnished in addition to and not in conflict with General Provision, Section 30, paragraph 30-06.

The Bidder who received a Notice of Intent to Award the Contract shall, execute and deliver to the Owner the Contract Agreement, the completed Bonds listed above, satisfactory evidence of all required insurance coverage, and shall prove satisfactorily to the Owner of the authority of the person or persons executing the Contract Agreement and the Performance Bond and the Payment Bond on behalf of the Bidder. The above documents must be furnished, executed and delivered before the Contract Documents will be executed by the Owner. The Contract shall not be binding upon the Owner until it has been executed and approved by the Owner, and a copy of the fully executed Contract Documents is delivered to the Contractor. The Owner shall have the right to rescind its Notice of Intent to Award without liability, except for the return of the Bid Guaranty to the Bidder, at any time before the Contract Documents have been fully executed by all parties and delivered to the Contractor.

## 17. FAILURE TO EXECUTE CONTRACT - BID GUARANTY FORFEITED

The following information is furnished in addition to and not in conflict with General Provision, Section 30, paragraph 30-08. If the Bidder receiving a Notice of Intent to Award the Contract fails to execute and deliver to the Owner the Contract Agreement, the completed Bonds listed in Paragraph 16 above, the required evidences of insurance coverage, and the evidence of authority to execute required in Paragraph 17 above, the Owner may elect to rescind the Notice of Intent to Award and shall be entitled to the full amount of the Bid Guaranty, not as a penalty, but in liquidation of and compensation for damages sustained. A Notice of Intent to Award may then be provided to the next most qualified, responsible Bidder whose Bid is responsive to the invitation and is most advantageous to the Owner, price and other factors considered. Otherwise, all Bids may be rejected.

## 18. NOTICE AND SERVICE THEREOF

All notices given by the Owner or the Engineer, under the provisions of the Contract Documents, shall be in writing and service of same may be by either of the following methods:

a. By delivery of the notice to the Bidder or to any officer of the Bidder if Bidder is a corporation, or to any agent of the Bidder.

b. By mailing the notice by United States mail to the address of the Bidder shown on the Bid.

Notices given by the Owner or Engineer shall be effective upon mailing, if mailed.

## 19. FLORIDA SALES AND OTHER TAXES

Work under this Contract is subject to the provisions of Chapter 212, Florida Statutes, Tax on Sales, Use and Other Transactions. Other state, local or federal taxes may be applicable. The Bidder is responsible to remit to the appropriate governmental entity all applicable taxes. Any applicable tax shall be included in the Total Bid Price by the Bidder.

## 20. TIME OF COMPLETION

The time of the completion is of the essence of the Contract and, each Bidder, if delivered an executed Contract, shall proceed with the Work in accordance with the approved schedule and within the Contract time period specified in the Contract Documents. In the event of failure to complete the Work within the time specified, the Owner may assess damages as provided by law or the Contract Documents, unless an appropriate extension of time has been granted.

**The time of completion for the entire project shall be 180 calendar days, regardless of the bid schedules awarded:**

**A.** City Executes Contract with Successful Bidder
**B.** Contractor Submits Shop Drawings for Approval to Engineer
**C.** Engineer Issues Shop Drawing Approval
**D.** City Issues Notice to Procure for Fabrication and Delivery of Materials – Contract Time Begins
**E.** Contractor Takes Possession of the Materials
**F.** City Issues Notice to Proceed – Construction Time Begins

**180** Calendar Days Total

The bidder's attention is directed to the Project Phasing or Site and Safety Plans for more detailed information on construction sequencing.

## 21. RECORD DOCUMENTS

The Contractor shall keep one record copy of the Contract Documents, Shop Drawings and samples at the site, in good order and annotated daily to show all changes made during the construction process. These shall be available to the Engineer for examination and shall be delivered to the Engineer for the City upon completion of the Work. Failure to maintain record documents current may be cause to withhold partial payment.

## 22. ADDITIONAL INSTRUCTIONS FOR APPARENT LOW, QUALIFIED, RESPONSIBLE, RESPONSIVE BIDDER

Contractor assistance is essential to execute specific documents promptly to execute a Contract with the Owner and to prepare for a Contractor's Notice to Proceed.

Contractor is instructed to carefully examine the General Provisions and to understand what is expected during each phase of the Project's construction. The Owner will maintain the original Bid Form and Bid Bond on file for record purposes. The Contractor will furnish six (6) executed copies of the Contract Documents for the Owner. The Contractor shall complete, execute and submit all required documentation to the Owner. Specific items that must be completed and executed are:

BID ITEMS - The Contractor shall confirm with the Owner Bid Items to be awarded in the final Contract, to confirm Total Contract Price.

CONTRACT, PAYMENT, PERFORMANCE AND GUARANTY BONDS - Complete in the amount of Total Contract Price, effective upon Owner execution of Contract.

EVIDENCE OF REQUIRED INSURANCE COVERAGE AND AUTHORITY TO EXECUTE - Complete.

Upon Owner's notification of concurrence in Contract award by Insurance Underwriters, Re-Insurers, and FEMA representatives, the following items must be completed prior to issuance of a Notice to Proceed according to Paragraphs 80-02 and 80-03 of the GENERAL PROVISIONS:

**Owner:** Execute Contract Documents and forward copies to Contractor, Funding Agencies, and Engineer.

**Contractor:** Prepare detailed procurement and construction schedule for immediate submittal to the Owner and Engineer. Confirm all subcontractor names and material suppliers. Schedule shall be submitted to the Owner and Engineer for review at the scheduled date of the Preconstruction Conference.

## 23. NOTIFICATION TO ALL BIDDERS – PERMITS REQUIRED

**Design-Bid Projects:**
Approvals for the design permitting are forthcoming from the Southwest Florida Water Management District, the Florida Department of Environmental Protection, and the Federal Aviation Administration, as necessary and applicable to the project. Issuance of the Notices to Procure/Proceed may be withheld until such time that the City of Wauchula receives these agencies' approvals.

The Contractor is responsible for all City of Wauchula site permits, NPDES permits, and any other construction-related permits and fees.

**Design-Build Projects:**
All approvals and reviewing or impact fees for the design permitting are the complete responsibility of Bidder/Contractor EXCEPT the Federal Aviation Administration Airspace Checklist and Safety approvals and the Southwest Florida Water Management District (SWFWMD) permits. No construction shall take place without ALL of the necessary permits required for 100% design approval by all applicable agencies.

The Contractor is also responsible for all City of Wauchula permits, Hardee County Building Department and Fire permits, NPDES permits, and any other design and construction-related permits and fees. All fees, with the exception of those specifically listed above, shall be included in the contractor's bid.

## 24. CONTRACTOR'S LIABILITY INSURANCE REQUIREMENTS

The bidder shall provide with the Proposal a listing of both automobile and personal liability insurance coverage currently in force, along with a copy of a Certificate of Insurance as verification of that coverage. In addition, the bidder shall provide a statement of premium cost issued by the agent or insurance carrier for that coverage.

In the event the Owner determines that the low bidder's coverage in force is inadequate, the Owner may require the low bidder to procure additional coverage in amounts specified by the Owner. The cost of premiums for such additional coverage shall be paid by the Owner in the form of a reimbursement under the contract.

Third Party Coverage. In the event the bidding documents require the contractor to name the consultant and/or the Owner as additional insured, the bidder shall show the premium cost for the additional insured in the Proposal in the item for additional coverage. The amount shown in the bid item for additional premium cost shall be that amount of additional premium above the premium for the coverage shown in the Certificate of Insurance submitted with the bid.

See Section 70 of the “Part 1A – Supplemental General Provisions” and “General Provisions” for detailed requirements for required Insurance coverage (amounts). All insurance shall comply with local ordinances. No relief from insurance coverage is allowed in any case.

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# STATEMENT OF BIDDER'S QUALIFICATIONS

**(Must Be Completed and Submitted with the Bid)**

## QUALIFICATIONS OF FUEL SYSTEMS CONTRACTOR, FUELING EQUIPMENT INSTALLER, AND PERSONNEL

1. The fuel systems Contractor whether as acting as prime contractor or a sub-contractor shall be a qualified Aviation Fueling Contractor and/or Aviation Fueling Equipment Fabricator/Manufacturer, having not less than five (5) years' experience in aviation fueling fabrication and/or installations. Aviation fueling systems are defined as Avgas and Jet-A fuel storage and dispensing tanks and equipment. During bidding, the Contractor shall provide a list of five (5) previous aviation fuel system customers along with the associated airport location, contact names and telephone numbers. The five (5) customers shall be of similar tank sizes and systems to this project. Additionally, the Contractor shall be a licensed Pollutant Storage System Contractor registered with the Florida Department of Business and Professional Regulation.

2. Installation of tanks shall be performed only by personnel who have a minimum of two (2) years' continuous experience installing this type of equipment and who have attended a training seminar conducted by the tank manufacturer within the past two (2) years.

**Coordinate Experience and Qualifications Requirements with Section FF-101.**

Each proposer shall furnish with his proposal the following completed and signed statements on "evidence of competency" and "evidence of financial responsibility" in accordance with General Provision 20-02. In addition, the Owner reserves the right to conduct such additional investigation into the competency and responsibility of the proposers (or any particular proposer) as the Owner may deem necessary.

1. Name of Proposer: _____

2. Business address: _____

   _____

3. Telephone number: _____

4. When organized: _____

5. Where incorporated: _____

6. How many years have you been engaged in the contracting business under the present firm name?

   _____

7. What is the type of construction work in which you are principally engaged?

   _____

8. On separate sheet, list major contracts in past ten years.

9. On separate sheet, list equipment and plant available for this project.

10. Enclose evidence of financial responsibility per General Provisions Section 20-02.

11. Credit available for this Contract $_____

12. On a separate sheet, list all projects over $50,000 presently under contract by name, gross amount, and percent complete.

13. Have you ever refused to sign a contract at your original proposal? _____

14. Have you ever been declared in default on a contract? _____

15. Total amount of bonding capacity $_____

16. Total bonding capacity available for the project $_____

17. Remarks:

_____

_____

_____

(The above statements must be subscribed and sworn to before a Notary Public.)

Date: _____

Firm Name: _____

By: _____
(Signature)

Title: _____

STATE OF _____

COUNTY OF _____

PERSONALLY APPEARED BEFORE ME, the undersigned authority,

_____
(Name of individual signing)

who, after first being sworn by me, affixed his/her signature in the space provided above on the ____ day of _____ 20___.

**NOTARY PUBLIC**
My Commission expires: _____

**END OF SECTION**

**BID FORM**
**(Must Be Completed and Submitted with the Bid)**

**PROJECT**:

**Fuel Farm and Generator**

Name of Bidder: (Type or Print)

_____

_____

TO:

The undersigned declares that no person in the employ the City of Wauchula, Florida, (herein referred to as OWNER) is pecuniarily interested in this proposal, or in the contract or the work which he proposed to do; that he has carefully examined the contract and the specifications and has informed himself fully in regard to all conditions pertaining to the site where the work is to be done and carefully estimated on the work. He understands that the OWNER, its agents, and employees, are not to be in any manner held responsible for the accuracy of, or bound by, any estimates or plans of underground structures relating to the work, and that if only have been given or made, they are to be considered solely as a base for filling out and preparing several proposals.

The undersigned proposes to furnish all labor, equipment material required for the above outlined construction at the airport known as Wauchula Municipal Airport located in the City of Wauchula, Florida, in accordance with the accompanying specifications and plans prepared for the OWNER for the sums specified herein, subject to additions and deductions according to the specifications and in all respects to the terms thereof.

It is understood that all workmanship and materials under all items of work are guaranteed for one year from the date of final acceptance, unless otherwise specified. It is understood that the OWNER reserves the right to accept or reject any or all bids and waive formalities.

It is agreed that the description under each item, being stated, implies although it does not mention, all incidentals and that the prices stated are intended to cover all such work, materials, and incidentals and constitute bidder's obligations as described in the specifications, and any details not specifically mentioned, by evidently included in the contract shall be compensated for in the item which most logically includes it.

It is understood that this proposal is submitted for the purpose of obtaining the work included in the subject project at the Wauchula Municipal Airport, City of Wauchula, Florida. Said work includes, but is not limited to, the following two primary elements:

**FUEL FARM AND GENERATOR**

This project consists of two primary elements:

1. Design\Build Fuel Farm – consisting, but not limited to, the design, permitting, provision, installation, construction, testing, and training in the use of one each (1) new double wall steel 12,000 gallon AVGAS tank and one each (1) new double wall steel 12,000 gallon Jet-A tank on existing concrete apron. Project item includes the removal and legal disposal of one (1) existing 10,000 gallon AVGAS tank and electronic self-pay dispenser system. Project includes any additional tertiary containment required. Project includes all design drawings, permitting, and close-out documentation with all Authorities Having

Jurisdiction. Project includes civil and electrical site improvements per project drawings, to be finalized by the Design \ Builder. Project includes full tank of initial fuel for each tank. Project includes all labor, materials, taxes, fees, delivery, tariffs, incidentals, equipment, coordination, permits, licenses, bonds, insurances necessary for a completed turnkey facility, accepted by the Owner and Owner's representatives, tested, certified, and in place.

2. Electrical Backup Engine Generator Set (Construction) – consisting, but not limited to, the construction of an engine generator, housing, fuel supply, full tank of initial fuel, support pad, stub ups, trenching, conduit, grounding, detection tape, connections, and building \ electrical site improvements to supply backup emergency power for the existing Airfield Light Vault and existing\new Fuel Farm. Project includes all labor, materials, taxes, fees, delivery, tariffs, incidentals, equipment, coordination, permits, licenses, bonds, insurances necessary for a completed turnkey facility, accepted by the Owner and Owner's representatives, tested, certified, and in place.

The bidder expressly agrees that should environmental permits not be granted for items contingent on their receipt, the OWNER may delete those items from the Contract without Supplemental Agreement or Change Order. In this event, the bidder agrees that the unit prices for non-environmentally contingent items will remain unchanged and that no claims relating to the deletion of items contingent on environmental permitting will be made.

The bidder's attention is called to the fact that the estimate of quantities of work to be done and materials to be furnished under these Specifications, as shown on the proposal form is approximate and is given only as a basis of calculation upon which the award of the contract is to be made. The OWNER reserves the right to increase or diminish any or all of the above-mentioned quantities or work and to omit any of them as it may deem necessary. The Contractor further agrees to accept the "Unit Bid" prices in compensation for any additions or deductions caused by variation in quantities due to more accurate measurement, or by any changes or alterations in the plans or specifications of the work.

The bidder agrees that this proposal will remain valid and in full force and effect for a minimum period of **two hundred and ten (210) calendar** days following the official bid opening date.

The bidder agrees that within **fifteen (15) calendar** days of receipt of written notice of an award of the contract that bidder will execute the standard contract form, in accordance with the bids as accepted, and will furnish the required performance bond, a payment bond and insurance affidavits with good and sufficient surety or sureties, as required by the Specifications.

The bidder further agrees that if awarded the contract, he will commence work within ten (10) days of the date of receipt of a "Notice to Proceed" and he will fully complete the work ready for use within contract time specified following the date of receipt of a "Notice to Proceed."

It is understood that for each calendar day that any work remains uncompleted after the contract time has expired (including all extensions and adjustments as provided in the subsection titled DETERMINATION AND EXTENSION OF CONTRACT TIME) the sum of Five Hundred ($500) Dollars per calendar day as liquidated damages will be deducted from any money due or to become due to the Contractor or his surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages that will be incurred by the OWNER should the Contractor fail to complete the work in the time provided in his contract.

Enclosed is security as required, consisting of (cash, certified check or bid bond)_____ payable to the City of Wauchula, Florida in the amount of $_____. This amount equals five percent of the total amount bid.

Acknowledgement of Receipt of Project Addenda:

Addendum No. 1 Received _____ (Date)

Addendum No. 2 Received _____ (Date)

Addendum No. 3 Received _____ (Date)

Addendum No. 4 Received _____ (Date)

Addendum No. 5 Received _____ (Date)

Addendum No. 6 Received _____ (Date)

Dated, _____, 20___.

_____
Legal Name of Person, Firm, or Corporation

By:_____

_____
(Title)

_____
(Business Address)

## TOTAL BID

For all work required in accordance with the applicable drawings, Specifications and other Contract Documents including the cost of the required Bonds and Insurance, the undersigned submits a Total Bid Price of:

_____and

_____/100 DOLLARS ($_____)

Based on the unit prices set forth in the following pages. The Total Bid Price represents the total amount of the Bid Schedules. It is the Owner's intent to award the Total Bid, should sufficient funding be available. Based on the actual amount of funding made available to complete the work, the project amount awarded may be less than the Total Bid Price.

Enclosed is security as required, consisting of (cash, certified check or bid bond) payable to the City of Wauchula in the amount of $_____. This amount equals five percent of the total amount of the Total Bid Price.

Dated _____, 20___.

IF A CORPORATION

| NAME | | ADDRESS |
|---|---|---|
| _____ | President | _____ |
| _____ | Secretary | _____ |
| _____ | Treasurer | _____ |

IF A PARTNERSHIP OR INDIVIDUAL

| NAME | ADDRESS |
|---|---|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

## AFFIDAVIT

The following affidavit must be executed in order that your quotation may be considered.

STATE OF _____
COUNTY OF _____

_____of lawful age, being first duly sworn, upon his oath deposes and says: That he executed the accompanying Quotation of behalf of the Contractor therein named, and that he had lawful authority so to do, and said Contractor has not directly or indirectly, entered into any agreement, expressed or implied, with any Contractor or Contractors, having to its object the controlling of the price or amount of such quotation or any quotations, the limiting of the Quotation or Contractors, the parceling or farming out to any Contractor or Contractors, to other persons of any part of the contract or any of the subject matter or the Quotations, or of the profits thereof, and that he has not and will not divulge the sealed Quotation to any person whomsoever, except those having a partnership or other financial interest with him in said Quotation or Quotations, until after the sealed Quotation or Quotations are opened.

Signed _____

Subscribed and sworn to before me this ____day of _____, 20__.

My Commission Expires:

_____
Notary Public

**END OF PROPOSAL**

Bidder: _____

**LIST OF PROPOSED SUBCONTRACTORS**
**(Must be completed and submitted with the Bid)**

Responsible for: _____

Name: _____

Address: _____

Responsible for: _____

Name: _____

Address: _____

Responsible for: _____

Name: _____

Address: _____

**LIST OF PROPOSED SUPPLIERS**
(Must be completed and submitted with the Bid)

Responsible for: _____

Name: _____

Address: _____

Responsible for: _____

Name: _____

Address: _____

Responsible for: _____

Name: _____

Address: _____

(Use additional pages if necessary)

**BUY AMERICAN CERTIFICATE (JAN 1991)**

**(Must be completed and submitted with the Bid)**

By submitting a bid/proposal under this solicitation, except for those items listed by the offeror below or on a separate and clearly identified attachment to this bid/proposal, the offeror certifies that steel and each manufactured product, is produced in the United States (as defined in the clause *Buy American - Steel and Manufactured Products* or *Buy American - Steel and Manufactured Products for Construction Contracts* **Title 49 U.S.C., Chapter 501**) and that components of unknown origin are considered to have been produced or manufactured outside the United States.

Offerors may obtain a listing of articles, materials, and supplies excepted from this provision from Appendix 1, Section G of the bid documents.

Contractor shall list any and all steel and manufactured products below NOT manufactured in the United States.

| PRODUCT | COUNTRY OF ORIGIN |
|---|---|
| | |
| | |
| | |
| | |

# WAUCHULA MUNICIPAL AIRPORT
## FUEL FARM AND GENERATOR
## FAA AIP 3-12-0084-021-2025 / FDOT FPN 452061-1
## BID SCHEDULE A - DESIGN \ BUILD FUEL FARM

**CONTRACTOR:**

| INDEX | PAY ITEM | DESCRIPTION | QTY | UNIT | UNIT PRICE | EXTENSION |
|---|---|---|---|---|---|---|
| 1 | C-100-1 | Contractor Quality Control Program (CQCP) and Testing | 1 | LS | | $0.00 |
| 2 | C-105-1 | Mobilization (Limited to 10%) | 1 | LS | | $0.00 |
| 3 | C-105-2 | Dewatering | 1 | LS | | $0.00 |
| 4 | C-105-3 | Construction Surveys/As-Builts | 1 | LS | | $0.00 |
| 5 | C-105-4 | Construction Safety and Phasing/MOT | 1 | LS | | $0.00 |
| 6 | C-105-5 | Construction Permits, Licenses, Fees, AHJ Coordination | 1 | LS | | $0.00 |
| 7 | C-105-6 | Utility Service Development Charges, City\County, FDEP Inspections | 1 | LS | | $0.00 |
| 8 | FF-101-1 | Final EOR Design Documents | 1 | LS | | $0.00 |
| 9 | FF-101-2 | Fabricate, Furnish and Install (Construct) One (1) Double Wall 12,000 Gallon AVGAS Self-Service Fuel Tank and Pay Management/Dispenser System, with All Equipment, Complete Turnkey Facility | 1 | LS | | $0.00 |
| 10 | FF-101-3 | Fabricate, Furnish and Install (Construct) One (1) 12,000 Gallon Jet-A Self-Service Fuel Tank and Pay Management/Dispenser System and All Equipment, Complete Turnkey Facility | 1 | LS | | $0.00 |
| 11 | FF-101-4 | Civil Site Construction | 1 | LS | | $0.00 |
| 12 | FF-101-5 | Electrical Site Construction (Division 26 and Electrical Drawings) | 1 | LS | | $0.00 |
| 13 | FF-101-6 | Design Build Permitting Fees | 1 | AL | $20,000.00 | $20,000.00 |
| 14 | FF-101-7 | SPCC Plan, Fuel System Operation and Training, Certification | 1 | LS | | $0.00 |
| 15 | FF-101-8 | AVGAS – Full Tank of Fuel | 10,200 | GAL-AL | $10.00 | $102,000.00 |
| 16 | FF-101-9 | Jet-A – Full Tank of Fuel | 10,200 | GAL-AL | $10.00 | $102,000.00 |
| | | | | | **TOTAL BID** | **$224,000.00** |

**TOTAL BID (IN WORDS)**

PLEASE USE EXCEL SPREADSHEET

# WAUCHULA MUNICIPAL AIRPORT
## FUEL FARM AND GENERATOR
## FAA AIP 3-12-0084-021-2025 / FDOT FPN 452061-1
## BID SCHEDULE B - EMERGENCY ENGINE GENERATOR SET

**CONTRACTOR:**

| INDEX | PAY ITEM | DESCRIPTION | QTY | UNIT | UNIT PRICE | EXTENSION |
|---|---|---|---|---|---|---|
| 1 | C-100-1 | Contractor Quality Control Program (CQCP) and Testing | 1 | LS | | $0.00 |
| 2 | C-105-1 | Mobilization (Limited to 10%) | 1 | LS | | $0.00 |
| 3 | C-105-2 | Dewatering | 1 | LS | | $0.00 |
| 4 | C-105-3 | Construction Surveys/As-Builts | 1 | LS | | $0.00 |
| 5 | C-105-4 | Construction Safety and Phasing/MOT | 1 | LS | | $0.00 |
| 6 | C-105-5 | Construction Permits, Licenses, Fees, AHJ Coordination | 1 | LS | | $0.00 |
| 7 | C-105-6 | Utility Service Development Charges, City\County, FDEP Inspections | 1 | LS | | $0.00 |
| 8 | L-109-1 | Airfield Electrical Vault Modifications | 1 | LS | | $0.00 |
| 9 | L-109-2 | Short Circuit/Coordination/Device Evaluation/ Arc Flash Analysis | 1 | LS | | $0.00 |
| 10 | L-109-3 | Airfield Lighting Vault Emergency Power Engine Generator | 1 | LS | | $0.00 |
| 11 | L-109-4 | Deisel Fuel Tank - Full Tank of Fuel | 500 | GAL-AL | $10.00 | $5,000.00 |
| | | | | | **TOTAL BID** | **$5,000.00** |

**TOTAL BID (IN WORDS)**

PLEASE USE EXCEL SPREADSHEET

**CERTIFICATION OF OFFERER/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS**
**(Must be completed and submitted with the Bid)**

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (__) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications:

1. The applicant represents that it is (__) is not (__) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

2. The applicant represents that it is (___) is not (___) is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

The undersigned swear or affirm that the foregoing statements are correct and include all material information necessary to identify and explain the terms and operation of our joint venture and the intended participation by each joint venture in the undertaking. Further, the undersigned covenant and agree to provide to the Owner current, complete and accurate information regarding actual joint venture work and the payment therefore and any proposed changes in any of the joint venture arrangements and to permit the audit and examination of the books, records and files of the joint venture, or those of each joint venture relevant to the joint venture, by authorized representatives of the Owner or the Federal funding agency. Any material misrepresentation will be grounds for terminating any contract which may be awarded and for initiating action under Federal or State laws concerning false statements.

_____
Name of Firm

_____
Signature

_____
Name

_____
Title

Date _____

State of_____

County of_____

On this _____ day of _____, 20____, before me appeared (name) _____, to me personally known, who, being duly sworn, did execute the foregoing affidavit, and did state that he or she was properly authorized by (name of firm) _____ to execute the affidavit and did so as his or her free act and deed.

Notary Public _____

Commission Expires _____

(Seal)

**SWORN STATEMENT UNDER SECTION 287.133 (3) (a),**
**FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES**
**(Must Be Completed and Submitted with the Bid)**

**THIS FORM MUST BE SIGNED AND SWORN IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.**

**1.** This sworn statement is submitted to _____
**City of Wauchula, Florida**

by_____
**[print individuals name and title]**

for_____
**[print name of entity submitting sworn statement]**

whose business is _____
and (if applicable) its Federal Employer Identification Number (FEIN) is _____
_____(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement:_____.)

**2.** I understand that a "public entity crime" as defined in Paragraph 287.133 (1) (g), **Florida Statutes**, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

**3.** I understand that "convicted" or "conviction" as defined in Paragraph 287.133 (1) (b), **Florida Statutes**, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

**4.** I understand that an "affiliate" as defined in Paragraph 287.133 (1) (a), **Florida Statutes**, means:

**A.** A predecessor or successor of a person convicted of a public entity crime;
OR
**B.** An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

**5.** I understand that a "person" as defined in Paragraph 287.133 (1) (e) **Florida Statutes**, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, and employees, members, and agents who are active in management of an entity.

**6.** Based on information and belief, the statement which I have marked below is true and in relation to the entity submitting this sworn statement. **[Indicate which statement applies.]**

___ Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

___ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

___ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the submitting this sworn statement on the convicted vendor list. **[attach a copy of the final order]**

**I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THOROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.107, FLORIDA STATUTES FOR CATEGORY TWO ON ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.**

_____
**[Signature]**

_____
**[Date]**

STATE OF

COUNTY OF

**PERSONALLY APPEARED BEFORE ME**, the undersigned authority, _____ _____ who, after first being sworn by me, affixed his/her signature in the space provided above on this ___day of _____, 20__.
**[name of individual signing]**

_____
**NOTARY PUBLIC**

My Commission expires:

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**BID BOND**
**(Must Be Completed and Submitted with the Bid Unless Certified Check is Submitted)**

**WAUCHULA MUNICIPAL AIRPORT**

**KNOW ALL MEN BY THESE PRESENTS: THAT WE, THE UNDERSIGNED**_____, as principal, and surety in the state of Florida to do business in the state of Florida and authorized to write this type of bond through a resident agent of the corporation located in the state of Florida, as surety, are held and firmly bound unto the City of Wauchula, Florida in the sum of _____dollars ($_____), which equals five percent of the amount bid, for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of the above obligation is such that if the attached proposal of _____ for the improvement of the airport facilities stipulated in said proposal in accordance with the plans and specifications provided therefore, is accepted and the contract awarded to the above-named bidder. The said principal shall within fifteen (15) days after notice of said award enter unto a contract in writing and furnish the required payment and performance bonds with surety, or sureties, to be approved by the City of Wauchula, Florida, this obligation shall be void: otherwise, the same shall be in full force and virtue of law, and the full amount of this proposal bond will be paid to the City of Wauchula, Florida, as stipulated for liquidated damages.

Signed this __ Day of _____, 20__.

(Principal must indicate whether corporation, partnership, company or individual)

_____

This person signing shall in his own handwriting sign the principal's name, and his title. Where the person signing for a corporation is other than the president or vice-president, he must, by affidavit, show his authority to bind the corporation.

_____
Principal

By:_____

_____
Title

_____
Surety

**WAUCHULA MUNICIPAL AIRPORT**

**BOND AFFIDAVIT**

STATE OF _____

COUNTY OF _____

**BEFORE ME, THE UNDERSIGNED AUTHORITY, PERSONALLY APPEARED** _____ _____, who being duly sworn, deposes and says that he is a duly authorized (resident) (nonresident) insurance agent, properly licensed under the laws of the state of _____, and the state of Florida, to represent _____ of _____ _____ a company authorized to make corporate surety bonds under the laws of the state of Florida. Said _____further certifies that as attorney-in-fact for the said _____ _____ he has signed the attached bond in the sum of _____ (U.S. $_____) on behalf of _____covering the **Wauchula Municipal Airport,** said _____ further certifies that the premium on the said bond is _____, which will be paid in full direct to his as attorney-in-fact, and included in his regular accounts to said _____ and that he will receive his regular commission of ____ percent as attorney-in-fact for the execution of said bond and that his commission will not be divided with anyone except as follows, _____ percent to _____, who is duly authorized resident insurance agent and properly licensed under the laws of the state of Florida.

Countersigned

_____ _____
Florida resident agent Agent and Attorney-in-Fact

Acknowledgement for Attorney-in-Fact

Sworn and subscribed before me this _____ day of _____, 20__.

_____ Notary public, state of _____

My commission expires:

# CONTRACT AGREEMENT

THIS CONTRACT is entered by and between City of Wauchula, Florida (hereinafter called the "City"), and _____. of _____, Florida (hereinafter called the "Contractor"), on this ____ day of _____, 20___.

WHEREAS, it has been determined that the execution of this contract is beneficial to the people of Wauchula, Florida;

WITNESSETH,

The City and the Contractor for TEN DOLLARS ($10.00) and other good and valuable consideration hereby covenant and agree as set forth below:

## ARTICLE I.

## THE CONTRACT DOCUMENTS

**1.** The Contractor shall perform all the work required by the Contract Documents to complete the Project as described and detailed in the drawings entitled: **"FUEL FARM AND GENERATOR"** prepared by AVCON, Inc., and dated **April 2026** and in accordance with the Technical Specifications Manual prepared by AVCON, INC. all as pertaining to the City's property described in the Contract Documents. The Project comprises the completed construction required by the Contract Documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

**2.** Contractor represents and agrees that it has carefully examined and understands this Contract and the Contract Documents, has investigated the nature, locality and site of the Project and the conditions and difficulties under which it is to be performed, and that it enters into this Contract on the basis of its own examination, investigation and evaluation of all such matters and not in reliance upon any opinions or representations of the City, or of any of the City's agents, consultants or employees.

## ARTICLE III.

## TIME OF COMMENCEMENT AND COMPLETION DATE

**1.** The work to be performed under this Contract shall be commenced upon or immediately after delivery of notice from the City to Contractor to proceed ("Notice to Proceed"), Contractor shall thereafter diligently proceed with the completion of the Project within the number of calendar days specified in the contract documents, after Notice to Proceed (the "Completion Date").

**2.** Notwithstanding anything else contained herein, if the City in its sole judgment, shall deem it advisable to terminate this Contract before delivery of Notice to Proceed, then the City shall deliver written Notice of Termination of the Contract to the Contractor, the Contract shall be rendered null and void, and neither party shall be entitled to any damages or compensation in connection with such termination of the Contract.

**3.** Inasmuch as failure of the Contractor to complete the Project by the Completion Date may cause grave injury and damage to the City, time is of the essence in the performance of this Contract. Accordingly, the Contractor must commence work and complete the Project when and as required by this Contract.

**4.** In the event of delay in the completion of the Project by the Completion Date, the parties hereto acknowledge that the calculation of the actual damages to the City would be difficult, if not impossible, to determine. Consequently, should the Contractor fail to timely meet the work requirement of the Project by the Completion Date, the parties hereto agree that as liquidated damages, and not as penalty the Contractor will pay the City Five Hundred Dollars ($500) for each calendar day after the Completion Date, until the Project is Completed, all as certified by the Engineer or the City representatives as may be designated by the City hereunder.

**5.** In the event that the Contractor shall fall behind in schedule at any time, for any reason, and such delay is adversely affecting the City's ability to timely occupy and use the Project for its intended purpose, the City shall be entitled to direct acceleration or re-sequencing of the work to bring the project back on schedule. The Contractor shall reserve in each of its subcontracts entered into in connection with the Project, a right to accelerate consistent with the Contractor's obligations hereunder. In the even the Contractor determines that the Completion Date cannot be met by re-sequencing the work, then the Contractor shall immediately provide the City and in any event within three (3) calendar days after the date of receipt of the City's instruction for re-sequencing or accelerating, a plan to complete the Project in the shortest possible time. No approval by the City of any plan for re-sequencing or accelerating of the work submitted by the Contractor pursuant to this clause shall constitute a waiver by the City of its rights of recovery from damages or losses which the City may suffer by reason of delayed Project Completion.

**6.** Contractor agrees to provide the City with each application for progress payment pursuant to Article V hereof, the Contractor's best estimate of any anticipated revision to the Completion date for the purpose of the City's planning, provided, however, and notwithstanding the making of any progress payments, no anticipated revisions to the Completion Date shall be effective and binding on the City and the Contractor without a written Change Order executed by the City in accordance with the procedure set forth in Article VI hereof.

## ARTICLE IV.

## CONTRACT SUM

**1.** In consideration of the performance of the Contract, the City agrees to pay the Contractor, by City's check, the contract sum of _____ **Dollars (_____)**.

**2.** For changes in the work, ordered by the City, the contract sum shall be adjusted accordingly. Article VI stipulates the conditions governing changes in the work.

**3.** The Contractor shall be paid ninety percent (95%) of the proportional amount of the contract sum with each progress payment, (such payments to be in proportion to the percentage completion of the Project) and the balance of the contract sum shall be paid at the time of Final Payment as described in Article VII hereof.

## ARTICLE V.

## PROGRESS PAYMENTS

**1.** Based upon applications for payment submitted to the Engineer by the Contractor and certificates of payment assured by the Engineer and approved by the City, the City shall make progress payments to the Contractor as provided in the Contract Documents and as specified hereunder.

**2.** Applications for progress payments will be submitted not more often than monthly and shall be submitted on or before the twenty-fifth (25th) day of each month during the performance of the Contract for the Engineer's approval. Each such application for payment shall set forth the value of all work completed according to the Schedule of Values, including the sum of all prior payments. Quantities and other information shown on the Schedule of Values are for payment purposes only and are not to be construed as work description or limitation of quantities of materials required for completion of the Project. The Contract includes all labor and materials to complete the Project as described in the Contract Documents.

**3.** In each application for progress payment, the Contractor shall certify as follows: (A) "There are no known mechanic's or materialmen's liens outstanding at the date of this application other than those for which the Contractor has provided a bond or the approved security pursuant to the provisions of Article VII, paragraph 3, of the Construction Contract between City and the Contractor; all due and payable bills with respect to the Project have been paid to date or shall be paid from the proceeds of this application for payment; there is no known basis for the filing of any mechanic's or materialmen's liens on the Project, and waivers from all subcontractors and material men employed by the Contractor, have been or will be obtained in such form as to constitute an effective waiver of lien under the applicable laws of the State of Florida"; (B) "All improvements have been installed in accordance with the Contract Documents (except where noted or agreed upon in writing by the City pursuant to an approved Change order)".

**4.** Beginning with the second application for progress payment, the Contractor shall also deliver with each such application, as a condition precedent to payment thereof, waivers of lien for each of its subcontractors, current through the effective date of the previous application for payment. The Contractor may, if any subcontractor or supplier refuses to furnish a release in full, furnish a bond satisfactory to the City, against any lien.

**5.** The City shall promptly review each application for progress payment and make such exceptions as the City reasonable deems necessary or appropriate under the state of circumstances then prevailing.

**6.** On or about the fifteenth ($15^{th}$ or $25^{th}$) day of the month following application of progress payment, the City shall make payment to the Contractor in the amount approved, subject, however, to Article V, paragraph 8 hereof. The payment of any application for progress payment by the City, including the final application, does not constitute approval or acceptance of that part of the Project to which such payment relates or relieve the Contractor of any of its obligations hereunder with respect hereto.

**7.** The Contractor shall provide the City with each application for progress payment as an "as-built" diagram, drawing or an adequate number of photographs showing all improvements currently in place (foundations, roads, drives, water/sewer lines, etc.) including setbacks, rights of way and other restrictions governing the installation of improvements.

**8.** Any provisions hereof to the contrary notwithstanding, the City shall not be obligated to make current payment to the Contractor hereunder if any one of the following conditions exists:

**A.** the Contractor fails to diligently prosecute the work in an efficient, timely and workmanlike manner and in strict accordance with the provisions of the Contract Documents;

**B.** the Contractor fails to use an adequate number of qualified personnel and sufficient equipment to complete the Project without undue delay.

**C.** the Contractor fails to make prompt payments to its subcontractors, suppliers, material men or laborers;

**D.** any part of such payment to the Contractor is attributable to the work which is defective or not performed in accordance with the drawings and specifications; provided, however, such payment shall be made as to part thereof attributable to work which is performed in accordance with the drawings and specifications and is not defective;

**E.** the Contractor is otherwise in default of any of its obligations hereunder or otherwise is in default under any of the contract requirements; or

**F.** the Contractor fails to provide the City with an updated as-built diagram, as provided in Article V, paragraph 7, above.

## ARTICLE VI.

## CHANGES

**1.** The City may at any time, without notice to the sureties, make changes within the general scope of the project, issue additional instructions, require additional work or direct the omission of portions of the work; provided, however, that the Contractor shall not proceed with any change involving an increase or decrease in contract sum, without prior written authorization from the City in accordance with the procedure outlines hereunder.

**2.** The City shall order changes in the Project by giving the Contractor a written change order request ("Change Order Request"), receipt of a Change Order Request, the Contractor shall forthwith, but in no event later than 10 days thereafter, furnish to the City setting forth in detail, with a suitable breakdown by trades and work classifications, the Contractor's estimate of the changes in the contract sum attributable to the changes set forth in such Change Order Request, and a proposed adjustment to the Completion Date resulting from such changes and any adjustment of time and costs applicable to unchanged work resulting from such Contractor, such Change Order Request and such estimate shall constitute a Change Order, and the contract sum, and the Completion Date shall be adjusted as set forth in such estimate. The foregoing procedure shall apply to both additive and deductive settlement on all items covered therein, subject to performance thereof and payment thereof pursuant to the terms of this Contract. If the City and the Contractor cannot agree on the cost of any Change order work, then the City may direct the Contractor to proceed with the Change Order work and the cost will be determined in accordance the procedures established in the General Provisions of the Contract.

**3.** The price estimates for Change Order Requests shall be made on the basis of the actual cost of labor and materials involved in such work. Additional provision for determining the price of change orders are included in the General Provisions of the Contract.

## ARTICLE VII.

## FINAL PAYMENT

**1.** Final payment constituting the entire unpaid balance of the amount due to the Contractor under this Contract shall not be paid by the City to the Contractor until the Project has been completed, the Contract fully performed, and a final certificate for payment has been issued by the Engineer.

**2.** Anything to the contrary in this Contract or elsewhere in the Contract Documents notwithstanding, fifteen (15) days after final completion of the Project, including final punch-list items and acceptance thereof by the City or as soon thereafter as possible, the Contractor shall submit Final Application for payment ("Final Application") which shall set for the all amounts due to the Contractor and remaining unpaid. The City shall pay to the Contractor the amount due under such final application no sooner than twenty (20) days and not later than sixty (60) days following final completion of the Project (including final punch list items).

**3.** The Final Application shall not be made until the Contractor delivers to the City, a complete release of all liens arising out of this Contract in a form acceptable to the City and an affidavit that so far as the Contractor has knowledge or information, the release includes and covers all materials and services for which a lien could be filed, but the Contractor may, if any subcontractor or supplier refuses to furnish a release in full, furnish a bond satisfactory to the City, to properly indemnify the City against any lien.

**4.** In the event of a bona fide dispute by the City of any sums for which payment has been requested, no interest shall be due on disputed sums until such dispute is resolved, provided that all undisputed sums shall have been paid in due course.

## ARTICLE VIII.

## TERMINATION

**1.** The performance of work under this Contract may be terminated by the City in accordance with this clause in whole, or from time to time in part, whenever the City shall determine that such termination is in the best interest of the City. Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective.

**2.** After receipt of a Notice of Termination, and except as otherwise directed by the City, the Contractor shall:

**A.** Stop work under the Contract on the date and to the extent specified in the Notice of Termination.

**B.** Place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the work under the contract as it is not terminated.

**C.** Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination.

**D.** Assign to the City, in the manner, at the times and to the extent directed by the City, all of the rights, title, and interest of the Contractor under the orders and subcontracts so terminated, in which case the City shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts.

**E.** Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the City, to the extent the City may require, which approval or ratification shall be final for all the purposes of this clause.

**F.** Transfer title and deliver to the City, in the manner, at the times, and to the extent, if any, directed by the City:

**(1)** the fabricated or unfabricated parts, components of work in process, completed work, supplies, equipment and other materials produced as a part of or acquired in connection with the performance of the work terminated by the Notice of Termination; and

**(2)** the completed or partially completed "as built" drawings, information, and other property which, if the Contract had been completed, would have been required to be furnished to the City.

**G.** Complete performance of such part of the Contract as shall not have been terminated by the Notice of Termination.

**3.** After a receipt of Notice of Termination, the Contractor shall submit to the City its termination claim, in the form and with certification prescribed by the City. Such claim shall be submitted promptly but in no event later than thirty (30) days form the effective date of termination, unless one or more extension, in writing, are granted by the City upon request of the Contractor made in writing within such thirty (30) days period or authorized extension thereof. Upon failure of the Contractor to submit its termination claim within the time allowed, the City may determine on the basis of information available to it, the amount, if any, due to the Contractor by reason of the termination and shall thereupon pay to the Contractor the amount so determined.

**4.** Subject to the provisions of Article VIII, paragraph 3 above, the Contractor and the City may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of work pursuant to this clause, which amount or amounts may include a reasonable allowance for profit on work done; provided, that such agreed amount or amounts exclusive of settlement costs, shall not exceed the total contract sum as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not terminated. The Contract shall be amended accordingly and the Contractor shall be paid the agreed amount. Nothing in paragraph 5 hereof, prescribing the amount to be paid to the Contractor in the event of failure of the Contractor and the City to agree upon the whole amount to be paid to the Contractor by reason of the termination of work pursuant to this clause, shall be deemed to limit, restrict, or otherwise determine or affect the amount or amounts which may be agreed upon to be paid to the Contractor pursuant to this paragraph.

**5.** In the event of the failure of the Contractor and he City to agree upon the whole amount to be paid to the Contractor by reason of the termination of work pursuant to this clause, as provided in paragraph 4 above, the city shall pay to the Contractor the amounts determined by the City as follows, but without duplication of any amount agreed upon in accordance with Article VIII, paragraph 4 above:

**A.** For completed work and services accepted by the City, the price or prices specified in the contract Document for such work, less any payments previously made.

**B.** The total of:

**(1)** the costs incurred in the performance of the work and services terminated, including initial costs and reparatory expenses allocable thereto, but exclusive of any costs attributable to the work and services paid or to be paid for under paragraph 5(a) hereof;

**(2)** a sum, as profit on (i) above, determined by the City to be fair and reasonable.

**6.** In the event the Contract is terminated because of the Contractor's default, the City may take over the work and services and complete the same by contract or otherwise, and the Contractor shall be liable to the City for any increased cost of the project.

**7.** If the Contractor's failure to perform and default arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor (such causes may include, but are not restricted to act of God, acts of the public enemy, acts of the City in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes and unusually severe weather; but in every case the failure to perform must be beyond the control and without the fault or negligence of the Contractor) and the Contractor, within ten (10) days from the beginning of any such delay notifies the City in writing of the causes of delay, then the City shall ascertain the facts and the extent of delay and extend the time for completing the Project within the findings of fact justify such an extension.

**8.** If, after Notice of Termination of the Contract for default, it is determined for any reason that the Contractor was not in default or that the default was excusable under the provisions of paragraph 7 above, the rights and obligations of the parties shall be the same as if the Notice of Termination had been issued pursuant to the stipulations of Article VIII paragraph 1, hereof.

## ARTICLE IX

## MISCELLANEOUS PROVISIONS

**1.** Terms used in the Contract which are defined in the General Provisions of the Contract shall have the meanings designated in those Provisions.

**2.** The Contractor shall provide insurance coverage in the amounts, type and classification required by the City, as provided in the Contract Documents, prior to commencement of the work. He shall provide all policies and certificates evidencing such insurance coverage for City's review and approval.

**3.** The City shall require and the Contractor shall provide separate payment and performance bonds each in the amount of the contract sum, appearing in Article IV hereof, in such form as the City requires and with a surety acceptable to the City. The cost thereof is included in the contract sum. Upon approval by the City of any Change Order increasing the contract sum, Contractor shall provide new bonds reflecting the adjustment in Penal Sums, accordingly.

**4.** All references herein and in the General Provisions to "Engineer" in the context of supervisor/inspecting authority, including review of change orders and applications for payment, shall refer to any City's representative authorized as such by the City.

**5.** All covenants and agreements herein contained shall extend to and be obligatory on the successors and assigns of the Contractor and of the City, but the Contractor shall not assign this agreement or any payments to become due thereunder except with the prior written consent of the City. The Contractor agrees that its rights to payment hereunder and

the rights of any assignee shall be subject to the rights of the City arising prior to such payment. The City shall have the right to assign its rights hereunder without prior notice to the Contractor and, in the event of such assignment, the Contractor shall continue to perform its obligations hereunder for the account of the assignee; provided, however, that such obligation shall be conditioned upon such assignee covenanting to make all payments required by the Contract Documents and not paid prior to the date of such substitution.

**6.** The Contractor hereby assigns to the City (and its assigns) all its interest in any subcontracts and purchase orders now existing or hereinafter entered into by the Contractor for performance of any part of the work which assignment will be effective upon acceptance by the City in writing and only as to those subcontracts and purchase orders which the City designates in said assignment at any time during the course of construction prior to final completion. IT IS FURTHER UNDERSTOOD AND AGREED THAT ALL SUBCONTRACTS AND PURCHASE ORDERS SHALL PROVIDE THAT THEY ARE FREELY ASSIGNABLE BY THE CONTRACTOR TO THE CITY AND/OR ITS ASSIGNS. THIS ASSIGNMENT IS PART OF THE CONSIDERATION FOR ENTERING INTO THIS CONTRACT WITH THE CONTRACTOR AND MAY NOT BE WITHDRAWN PRIOR TO FINAL COMPLETION OF THE PROJECT.

**7.** For purposes of verifying that cost or pricing data submitted, in conjunction with the negotiation of this Contract or any contract change or other modification, are accurate, complete, and current, the City or its authorized representatives, shall -- until the expiration of three (3) years from the date of Final Payment under this Contract -- have the right to examine those books, records, documents and other supporting data which will permit adequate evaluation of the cost or pricing data submitted, along with the computation and projections used therein, which are prepared by the Contractor prior to and after the date of execution of the Contract, but relating to the Contract. The Contractor agrees to insert the substance of this clause in all subcontracts hereunder so as to apply until three (3) years after Final subcontracts hereunder so as to apply until three (3) years after Final Payment under the subcontract, unless the price is based on established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices are set by law or regulation.

**CONTRACT**

IN WITNESS WHEREOF, the parties have made and executed this Agreement, the day and year first above written.

BY: _____ (Seal)

_____
(Title)

Date: _____

ATTEST:
_____

---

CITY OF WAUCHULA

BY: CITY OF WAUCHULA, FLORIDA (Seal)

BY: CITY COMMISSION OF WAUCHULA, FLORIDA

BY: _____
(MAYOR)

Date: _____

ATTEST:
_____

---

APPROVED AS TO FORM

_____
CITY ATTORNEY

Date _____

TECHNICAL PROVISIONS OF CONTRACT APPROVED:

_____
CITY MANAGER

Date _____

# PERFORMANCE BOND

STATE OF FLORIDA
COUNTY OF _____

KNOW ALL MEN BY THESE PRESENTS that _____ a Principal, hereinafter called Contractor, and _____ as Surety, hereinafter called Surety, are held and firmly bound unto the City of Wauchula, Florida as Obligee, hereinafter called Owner, in the amount of _____ Dollars ($_____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____, 20____, entered into a Contract with Owner for: **FUEL FARM AND GENERATOR** in accordance with Contract Documents, Drawings, and Specifications prepared by the City's consultant, which Contract is by reference made a part hereof and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION ARE SUCH, that, if the Principal shall in all respects promptly and faithfully perform and comply with the terms and conditions of said Contract and his obligations thereunder and shall indemnify the Owner and the Consulting Engineer and save either or all of them against and from all costs, expenses and damages arising from the performance of said Contract or the repair of any work there under, then this obligation shall be void; otherwise, this Bond shall remain in full force and effect, in accordance with the following terms and conditions:

**1.** The Principal and Surety jointly and severally agree to pay the Owner any difference between the sum to which the said Principal would be entitled on the completion of the Contract, and that sum which the Owner may be obliged to pay for the completion of said work by Contract or otherwise, and any damages, direct or indirect or consequential, including without limitation those for delay, expenses, costs, and attorney's fees including appellate proceedings, which the said Owner may sustain on account of such work, or on account of the failure of said Contractor to properly and in all things, keep and execute all of the provisions of said Contract.

**2.** And this Bond shall remain in full force and effect for a period of one (1) year from the date of acceptance of the project by the Owner and shall provide that the Contractor guarantees to repair or replace for said period of one (1) year all work performed and materials and equipment furnished that were not performed and materials and equipment furnished that were not performed or furnished according to the terms of the Contract, and shall make good, defects thereof which have become apparent before the expiration of said period of one (1) year. If any part of the project, in the judgment of the Owner, for the reasons above stated needs to be replaced, repaired or made good during that time, the Owner shall so notify the Contractor in writing. If the Contractor refuses or neglects to do such work within five (5) days from the date of service of such Notice, the Owner shall have the work done by others an the cost thereof shall be paid by the Contractor or his Surety.

**3.** And the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligations on this bond, and it does hereby waive Notice of any change, extension of time, alteration or addition to the terms of the Contract or to the work or to the Specifications.

**4.** The Surety presents and warrants to the Owner that they have a Best's Key Rating Guide General Policyholder's Rating of "_____" and Financial Category of "Class__".

IN WITNESS WHEREOF, the above bounded parties executed this instrument under their several seals, this ____ day of _____, 20__, A.D., the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

WITNESS:
(If Sole Ownership or Partnership, two (2) Witnesses required).
(If Corporation, Secretary Only will attest and affix seal).

PRINCIPAL:

_____

_____

_____
Authorized Officer (Affix Seal)

WITNESSES:

_____ _____
Title

_____ _____
Title

Business Address

_____
City State

SURETY:

_____
Corporate Surety

_____
Attorney-in-Fact (Affix Seal)

WITNESS:

_____ _____
Title

Business Address

_____
City State

_____
Name of Local Insurance Agency

## CERTIFICATES AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the Secretary of the Corporation named as Principal in the within bond; that _____ who signed the said bond on behalf of the Principal, was then of said Corporation; that I know his signature, and his signature hereto is genuine; and that said bond was duly signed, sealed, and attested for and in behalf of said Corporation by authority of its governing body.

_____
Secretary (Corporate Seal)

STATE OF FLORIDA
COUNTY OF _____

Before me, a Notary Public, duly commissioned, qualified and acting, personally appeared to me well known, who being my first duly sworn upon oath, says that he is the Attorney-in-Fact, for the _____ and that he has been authorized by _____ to execute the foregoing bond on behalf of the Contractor named therein in favor of the City of Wauchula, Florida.

Subscribed and sworn to before me this _____ day of _____, 20_____, A.D.

[Attach Power of Attorney to Original Bid Bond and Financial Statement from Surety Company]

_____
Notary Public
State of Florida-at-Large

My Commission Expires:
_____

**END OF PERFORMANCE BOND**

# CONSTRUCTION PAYMENT BOND

STATE OF FLORIDA
COUNTY OF _____

BOND NO: _____

KNOW ALL MEN BY THESE PRESENTS that _____ a Principal, hereinafter called Contractor, and _____ as Surety, hereinafter called Surety, are held and firmly bound unto the City of Wauchula, Florida as Obligee, hereinafter called Owner, in the amount of _____ Dollars ($_____) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated _____, 20____, entered into a Contract with Owner for the project "**FUEL FARM AND GENERATOR**" in accordance with Drawings and Specifications prepared by the City Engineers office, which Contract is by reference made a part hereof and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION ARE SUCH, that, if the Principal shall promptly make payments to all claimants, as hereinbelow defined, then this obligation shall be void; otherwise, this Bond shall remain in full force and effect, subject to the following terms and conditions:

**1.** A claimant is defined as any person supplying the Principal with labor, material and supplies, used directly or indirectly by the said Principal of any subcontractor in the prosecution of the work provided for in said Contract.

**2.** The above-named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after performance of the labor or after complete delivery of materials and supplies by such claimant, may sue on the Bond for the use of such claimant, prosecute the suite to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of the costs or expenses of any such suit.

**3.** No suit or action shall be commenced hereunder by any claimant:

- **A.** Unless claimant, other than one having a direct contract with the Principal, shall within ninety (90) days after such claimant's performance of the labor or complete delivery of materials and supplies, deliver to the Principal written notice of the performance of such labor or delivery of such material and supplies and the nonpayment therefor.
- **B.** After the expiration of one (1) year from the performance of the labor or completion of delivery of the materials and supplies; it being understood, however, that if any limitation embodied in this Bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

**C.** Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.

**4.** The Principal and the Surety jointly and severally, shall repay the Owner any sum which the Owner may be compelled to pay because of any lien for labor or materials furnished for any work included in or provided by said Contract.

**5.** The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration of or addition to the terms of the Contractor r to the work to be performed thereunder or the Specifications applicable thereto shall in anywise affect its obligation on this Bond, and the Surety hereby waives notice of any such change, extension of time, alterations of or addition to the terms of the Contract, or to the work or the Specifications.

**6.** The Surety represents and warrants to the Owner that they have a Best's Key Rating Guide General Policyholder's Rating of "_____" and Financial Category of "Class _____".

IN WITNESS WHEREOF, the above bounded parties executed this instrument under their several seals, this ____ day of _____, 20____, A.D., the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

WITNESS:
(If Sole Ownership or Partnership, two (2) Witnesses required).
(If Corporation, Secretary Only will attest and affix seal).

PRINCIPAL:

_____

_____

_____
Authorized Officer (Affix Seal)

WITNESSES:

_____ _____
Title

_____ _____

Business Address

_____
City State

SURETY:

_____
Corporate Surety

_____
Attorney-in-Fact (Affix Seal)

WITNESS:

_____ _____
Title

Business Address

_____
City State

_____
Name of Local Insurance Agency

## CERTIFICATES AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the Secretary of the Corporation named as Principal in the within bond; that _____ who signed the said bond on behalf of the Principal, was then of said Corporation; that I know his signature, and his signature hereto is genuine; and that said bond was duly signed, sealed, and attested for and in behalf of said Corporation by authority of its governing body.

_____
Secretary (Corporate Seal)

STATE OF FLORIDA
COUNTY OF _____

Before me, a Notary Public, duly commissioned, qualified and acting, personally appeared to me well known, who being my first duly sworn upon oath, says that he is the Attorney-in-Fact, for the _____ and that he has been authorized by _____ to execute the foregoing bond on behalf of the Contractor named therein in favor of the City of Wauchula, Florida.

Subscribed and sworn to before me this _____ day of _____, 20_____, A.D.

[Attach Power of Attorney to Original Bid Bond and Financial Statement from Surety Company]

_____
Notary Public
State of Florida-at-Large

My Commission Expires:
_____

**END OF PAYMENT BOND**

## OPINION OF ATTORNEY

This is to certify that I have examined the attached Contract Documents, that after examination, I am of the opinion that such Documents conform to the laws of the State of Florida, that the execution of the construction contract and the Performance and Payment Bonds are in due and proper form, and that the representatives of the respective contracting parties have pull power and authority to execute such construction contract and bond on behalf of the respective contracting parties and that the foregoing agreements constitute valid and binding obligations on such parties.

_____
Attorney for the City of Wauchula, Florida

THIS _____ DAY OF _____, 20_____.

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# NOTICE OF INTENT TO AWARD

**DATE:** **See Signing Date(s) Below**

**TO:**

PROJECT: **FUEL FARM AND GENERATOR**
**WAUCHULA MUNICIPAL AIRPORT – WAUCHULA, FLORIDA**

The Owner has reviewed the Bid submitted by your firm for the above described work in response to its Advertisement for Bids dated the _____ day of _____, 20__ and the contract documents.

You are hereby notified that your Bid is being considered for acceptance for the PROJECT, in the Total Amount _____ **Dollars ($_____)** for the work, subject to the availability of funds, and less any items not to be constructed.

You are required by the Instructions to Bidders to execute five (5) copies of the Contract Documents and furnish the required Contractor's Performance Bond, Payment Bond, evidences of all required insurance coverage and authority to execute plus satisfactory evidence of compliance with the Bid Conditions pertaining to the Disadvantaged Business Enterprise Program within fifteen (15) calendar days from the date of this Notice to you.

If you fail to execute said Contract Documents and to furnish said Bonds and other required documents and information within the time specified, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your Bid as abandoned and as a forfeiture of your Bid Bond. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Intent to Award to the Owner.

Dated this ____day of _____20_____.

City of Wauchula
Owner

By: _____
Ms. Olivia Minshew

Title: City Manager

ACCEPTANCE OF NOTICE
Receipt of the above Notice of Intent
to Award is hereby acknowledged by:

_____

on this _____ day of _____ 20____.

Signed: _____
(Name) (Title)

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# NOTICE TO PROCEED

**DATE:**

**TO:**

**PROJECT: FUEL FARM AND GENERATOR**
**WAUCHULA MUNICIPAL AIRPORT**
**WAUCHULA, FLORIDA**

You are hereby given notice to commence Work on the Project in accordance with the Contract Agreement dated on the ____ day of _____ on or before the ____ day of _____, 20__ and you are to substantially complete the Work within the times stipulated in the Special Provisions. The date of substantial completion of all Work is therefore the ____ day of _____, 20___.

You are required to return an acknowledged copy of this Notice to Proceed to the Owner.

Owner: City of Wauchula

By: _____
Olivia Minshew

Title: City Manager

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged by:

_____

on this ____ day of _____ 20____.

Signed: _____

Title: _____

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# NOTICE TO PROCURE

**DATE:**

**TO:**

**PROJECT: FUEL FARM AND GENERATOR**
**WAUCHULA MUNICIPAL AIRPORT**
**WAUCHULA, FLORIDA**

You are hereby given notice to commence procurement of materials in accordance with the Contract Agreement dated the _____ day of _____, 20___ for the contracted work. All materials necessary for the completion of the work shall be stored on site and/or immediately available for installation in-place within _____ calendar days of this Notice to Procure, unless extension has been granted by Owner in writing.

You are required to return an acknowledged copy of this Notice to Procure to the Owner.

Owner: City of Wauchula

By: _____
Ms. Olivia Minshew

Title: City Manager

ACCEPTANCE OF NOTICE

Receipt of the above Notice to
Procure is hereby acknowledged by:

_____

on this _____ day of _____ 20__.

Signed: _____

Title: _____

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**FINAL RELEASE OF LIEN**

**CITY OF WAUCHULA**

KNOW ALL MEN BY THESE PRESENTS, that the undersigned, for and in consideration of the payment of the sum of _____ Dollars ($_____ ), paid by the City of WAUCHULA, Florida, hereinafter referred to as "Owner", receipt of which is hereby acknowledged as total compensation for performance of the below-described Contract for the Project, does hereby fully and completely discharge and release the owner from and waives any and all debts, accounts, promises, damages, liens, encumbrances, causes of action, suits, bonds, judgments, claims and demands whatsoever, in law or in equity, which the undersigned ever had, now has or might hereafter have on account of labor performed, material furnished or services rendered, directly or indirectly, for the Contract between the parties dated _____ , 20 ___, known as **FUEL FARM AND GENERATOR** except for those claims, disputes and other matters arising out of or relating to said Contract which have been raised by written demand in accordance with the Contract Documents prior to this date and identified by the Contractor as unsettled in the final Application for Payment and are either in arbitration or court litigation, as the case may be, in accordance with the Contract Documents.

The undersigned further covenants that subcontractors, suppliers, and material suppliers, and any or all other persons supplying materials, supplies, service or labor used directly or indirectly in the prosecution of the work provided for in the Contract, have been paid in full for all work under this contract.

The undersigned agrees to maintain in full force and effect the provisions of the Contract Documents respecting the guaranty against defective work, and any other special guaranties required by the Contract Documents, for the terms provided in the Contract Documents, which terms shall begin to run from the date specified in the Contract Documents.

The undersigned represents and warrants that the statements contained in the foregoing Release are true and correct.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this _____ day of

_____, 20___,

WITNESSES:

_____
CONTRACTOR

_____
By: _____

Title:_____

STATE OF _____ _____

COUNTY OF _____

Sworn to and subscribed before me this _____ day of _____ 20_____

_____
NOTARY PUBLIC

(NOTARY SEAL) My Commission Expires:_____

# PROJECT CLOSEOUT

Project closeout is hereby defined to include general requirements near end of contract time, in preparation for final acceptance, final payment, normal termination of contract, occupancy by Owner, and similar actions evidencing completion of the work. Specific requirements for individual units of work are specified in other sections. Time of closeout is directly related to substantial completion and, therefore, may be a single time period for entire work or a series of time periods for individual parts of the work which have been certified as substantially complete at different dates. The time variation, if any, shall be applicable to other provisions of this contract and the specifications.

## PREREQUISITES TO FINAL ACCEPTANCE

A. General

Prior to requesting final payment, as required by General Conditions, complete the following and list known exceptions in request:

1. Submit final payment request with Final Release of Lien and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.

2. Submit one year project warranty, equipment and materials-specific manufacturer's warranties, workmanship-maintenance bonds, maintenance agreements, final certifications, and similar documents. Certificate of Warranty form follows this page.

3. Submit lien waivers from all subcontractors and suppliers.

4. Submit consent of surety.

5. Submit red lined drawings and electronic as-built survey drawings on USB drive in AutoCAD version 2026 or earlier to the Engineer.

# CERTIFICATE OF WARRANTY

Project Name: _____

Project Number: _____

Contractor: _____

Date of Substantial Completion: _____

I, _____, being the _____

_____ of _____ do hereby certify that the one (1) year warranty called for in the Contract Specifications is now in force and effect until after such time one (1) year has passed after the date of Final Completion.

Signed: _____

Title: _____

STATE OF _____

COUNTY OF _____

Subscribed and sworn to before me, a Notary Public, in and for the County and State aforesaid by

_____ duly authorized so to sign this

_____day of _____, 20___.

Notary Public_____

My commission expires:_____

# APPENDIX I – WAGE AND LABOR PROVISIONS

## SECTION A
## WAGE, LABOR, EEO, SAFETY AND GENERAL REQUIREMENTS

A-1 Airport and Airway Improvement Program Project.

The work in this contract may be included in an Airport Improvement Project (FAA AIP 3-12-0084-021-2025 / FDOT FPN 452061-1). If this is indeed the case, the project is being undertaken and accomplished by the Sponsor in accordance with the terms and conditions of a grant agreement between the Sponsor and the United States, under the Airport and Airway Improvement Act of 1982 (P.L. 97-248) as amended by the Airport and Airway Safety and Capacity Expansion Act of 1987 (P.L. 100-223) and Part 152 of the Federal Aviation Regulations (14 CFR Part 152), pursuant to which the United States has agreed to pay a certain percentage of the costs under those Acts. The United States is not a party to this contract and no reference in this contract to the FAA/FDOT or any representative thereof, or the United States, by the contract, makes the United States a party to this contract.

The work in this contract may be included in a Florida Department of Transportation Work Program Project (FDOT FPN 450840-1). If this is indeed the case, the project is being undertaken and accomplished by the Sponsor in accordance with the terms and conditions of a Public Transportation Grant Agreement (PTGA) between the Sponsor and the State of Florida, pursuant to which the State of Florida has agreed to pay a certain percentage of the costs under the JPA. The State of Florida is not a party to this contract and no reference in this contract to the FDOT or any representative thereof, or the State of Florida, by the contract, makes the State of Florida a party to this contract.

A-2 Consent to Assignment.

The contractor shall obtain the prior written consent of the Sponsor to any proposed assignment of any interest in or part of this contract.

A-3 Convict Labor.

No convict labor may be employed under this contract.

A-4 Veterans Preference.

It shall include in all contracts for work on any project funded under this grant agreement which involve labor, such provisions as are necessary to insure that, in the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to Vietnam era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns owned and controlled by disabled veterans as defined in Section 47112 of Title 49, United States Code. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

A-5 Withholding: Sponsor from Contractor.

Whether or not payments or advances to the Sponsor are withheld or suspended by the FAA/FDOT, the Sponsor may withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics employed by the contractor or any subcontractor on the work, the full amount of wages required by this contract.

A-6 Nonpayment of Wages.

If the contractor or subcontractor fails to pay any laborer or mechanic employed or working on the site of the work any of the wages required by this contract, the Sponsor may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment or advance of funds until the violations cease.

A-7 FAA/FDOT inspection and review.

The contractor shall allow any authorized representative of the FAA/FDOT to inspect and review any work or materials used in the performance of this contract.

A-8 Subcontracts.

The contractor shall insert in each of his subcontracts the provisions contained in paragraphs A-1, A-3, A-4, A-5, A-6, and A-7 requiring the subcontractors to include these provisions in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

A-9 Contract termination.

Any violation or breach of the terms of this contract on the part of the contractor or subcontractor may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement. (49 CFR Part 18).

A-10 Inspection of Records.

The contractor shall maintain an acceptable cost accounting system. The Sponsor, the FAA/FDOT, and the Comptroller General of the United States shall have access to any books, documents, paper, and records of the contractor which are directly pertinent to the specific contract for the purposes of making an audit, examination, excerpts, and transcriptions. The contractor shall maintain all required records for three years after the Sponsor makes final payment and all other pending matters are closed. (49 CFR Part 18).

A-11 Rights to Inventions.

All rights to inventions and materials generated under this contract are subject to regulations issued by the FAA/FDOT and the Sponsor of the Federal grant under which this contract is executed. Information regarding these rights is available from the FAA/FDOT and the Sponsor. (49 CFR Part 18).

A-12 General Civil Rights Provisions.

The contractor assures that it will comply with pertinent statutes, Executive orders and such rules as are promulgated to assure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or handicap be excluded from participating in any activity conducted with or benefiting from Federal assistance. This provision binds the contractor from the bid solicitation period through the completion of the contract. (Section 520, Airport and Airway Improvement Act of 1982).

## SECTION B

## DAVIS-BACON ACT REQUIREMENTS
## (29 CFR PART 5)

B-1 Minimum Wages.

(a) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to laborers or mechanics, subject to the provisions of paragraph (B-1)(d) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (B-1)(b) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(b) (1) The contracting officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determinations; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140).

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140).

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (B-1)(b)(2) or (3) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(c) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(d) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140).

B-2 Withholding.

The Federal Aviation Administration or the Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to David-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation

Administration may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

B-3 Payrolls and basic records.

(a) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (29 CFR 5.5(a)(3)(i) (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017).

(b) (1) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration (if requested). The payrolls submitted shall set out accurately and completely all of the information required to be maintained under paragraph 5.5(a)(3)(i) above. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, D.C.20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149).

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be maintained under paragraph B-3 (a) above and that such information is correct and complete;

(ii) That each laborer and mechanic (including each helper, apprentice and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph B-3 (b)(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(c) The contractor or subcontractor shall make the records required under paragraph B-3 (a) of this section available for inspection, copying or transcription by authorized representatives of the Sponsor, the Federal Aviation Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

B-4 Apprentices and Trainees.

(a) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship

Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(b) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(c) EEO. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

B-5 Compliance with Copeland Act Requirements.

The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

B-6 Subcontracts.

The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

B-7 Compliance with Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

B-8 Disputes Concerning Labor Standards.

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the

procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

B-9 Certification of Eligibility.

(a) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(b) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(c) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

B-10 Contract Termination: Debarment.

A breach of the contract clauses in paragraph B-1 through B-9 of this section and paragraphs C-1 through C-5 of Section C may be grounds for termination of the contract, and for the debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

B-11 Minimum Wage Rates by Trade in Covered Area,

General Decision Number: FL20260014 01/02/2026

Superseded General Decision Number: FL20250014

State: Florida

Construction Type: Building

County: Hardee County in Florida.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Modification Number Publication Date
0 01/02/2026

ELEC0915-006 12/01/2025

| | Rates | Fringes |
|---|---|---|
| ELECTRICIAN | $ 33.11 | 14.59 |

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ENGI0487-031 06/01/2023

| | Rates | Fringes |
|---|---|---|
| POWER EQUIPMENT OPERATOR | | |
| Group 1 | | |
| 150 ton lattice, 250 ton hydro, friction, tower and luffing cranes, 300+ ft boom | $ 39.01 | 16.85 |
| Group 2 | | |
| Lattice under 150 ton, 100 ton up to 250 ton hydro cranes | $ 38.01 | 16.85 |
| Group 3 | | |
| Cranes not described above. | $ 37.01 | 16.85 |

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IRON0397-005 07/01/2024

| | Rates | Fringes |
|---|---|---|
| IRONWORKER, REINFORCING AND STRUCTURAL | $ 35.25 | 17.32 |

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PAIN0088-005 06/01/2021

| | Rates | Fringes |
|---|---|---|
| PAINTER: Brush Only | $ 18.00 | 12.36 |

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SFFL0821-001 07/01/2025

| | Rates | Fringes |
|---|---|---|
| SPRINKLER FITTER (Fire Sprinklers) | $ 35.03 | 24.00 |

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SHEE0015-002 07/01/2023

| | Rates | Fringes |
|---|---|---|
| SHEET METAL WORKER (HVAC Duct Installation Only) | $ 25.75 | 16.92 |

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SUFL2009-050 05/22/2009

| | Rates | Fringes |
|---|---|---|
| CARPENTER | $ 15.08 | 5.07 |
| CEMENT MASON/CONCRETE FINISHER | $ 12.45 | 0.00 |
| FENCE ERECTOR | $ 9.94 | 0.00 |
| LABORER: Common or General | $ 8.62 | 0.00 |
| LABORER: Pipelayer | $ 10.45 | 0.00 |
| OPERATOR: Backhoe/Excavator | $ 16.98 | 0.00 |
| OPERATOR: Paver (Asphalt, Aggregate, and Concrete) | $ 9.58 | 0.00 |
| OPERATOR: Pump | $ 11.00 | 0.00 |
| PAINTER: Roller and Spray | $ 11.21 | 0.00 |
| PLUMBER | $ 12.27 | 3.33 |
| ROOFER: Built Up, Composition, Hot Tar and Single Ply | $ 14.33 | 0.00 |
| TRUCK DRIVER, Includes Dump and 10 Yard Haul Away | $ 8.00 | 0.15 |

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information

on contractor requirements and worker protections under the EO is available at: https://www.dol.gov/agencies/whd/government-contracts.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

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The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

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WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division

U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION

General Decision Number: FL20260238 01/02/2026

Superseded General Decision Number: FL20250238

State: Florida

Construction Type: Highway

Counties: De Soto, Glades, Hardee, Hendry, Monroe and Okeechobee Counties in Florida.

HIGHWAY CONSTRUCTION PROJECTS

Modification Number Publication Date
0 01/02/2026

SUFL2022-007 06/27/2024

| | Rates | Fringes |
|---|---|---|
| CARPENTER | $ 15.61 | 0.00 |
| CEMENT MASON/CONCRETE FINISHER | $ 20.00 | 0.82 |
| ELECTRICIAN | $ 21.13 | 3.31 |
| LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor | $ 14.90 | 0.00 |
| LABORER: Common or General | $ 14.10 | 0.00 |
| LABORER: Pipelayer | $ 17.00 | 0.70 |
| LABORER: Grade Checker | $ 14.67 | 0.00 |
| OPERATOR: Backhoe/Excavator/Trackhoe | $ 17.23 | 0.74 |
| OPERATOR: Bobcat/Skid Steer/Skid Loader | $ 17.19 | 1.45 |
| OPERATOR: Broom/Sweeper | $ 14.60 | 0.00 |
| OPERATOR: Bulldozer | $ 15.91 | 0.00 |
| OPERATOR: Crane | $ 32.96 | 0.00 |
| OPERATOR: Grader/Blade | $ 18.46 | 0.00 |
| OPERATOR: Loader | $ 15.63 | 0.00 |
| OPERATOR: Mechanic | $ 16.10 | 0.68 |

OPERATOR: Milling Machine..... .....$ 18.31 2.22

OPERATOR: Paver (Asphalt, Aggregate, and Concrete)..... .....$ 16.51 0.00

OPERATOR: Roller..... .....$ 15.38 0.00

OPERATOR: Screed..... .....$ 18.29 0.00

TRAFFIC CONTROL PERSON..... .....$ 15.00 0.64

TRUCK DRIVER: Dump Truck.....$ 15.89 3.75

TRUCK DRIVER: Lowboy Truck.....$ 20.99 0.95

TRUCK DRIVER: Water Truck.....$ 17.87 0.00

TRUCK DRIVER: Distributor Truck..... .....$ 19.84 0.00
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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

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The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION

## SECTION C

## CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS (29 CFR PART 5)

C-1 Overtime Requirements.

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

C-2 Violation; Liability for Unpaid Wages; Liquidated Damages.

In the event of any violation of the clause set forth in paragraph C-1 above, the contractor or any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph C-1 above, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph C-1 above.

C-3 Withholding for Unpaid Wages and Liquidated Damages.

The Federal Aviation Administration or the Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph C-2 above.

C-4 Subcontractors.

The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs C-1 through C-4 and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs C-1 through C-4.

C-5 Working Conditions.

No contractor or subcontractor may require any laborer or mechanic employed in the performance of any contract to work in surroundings or under working conditions that are unsanitary, hazardous or dangerous to his health or safety as determined under construction safety and health standards (29 CFR Part 1926) issued by the Department of Labor.

## SECTION D

## CLEAN AIR AND WATER POLLUTION CONTROL REQUIREMENTS

D-1 Any other provision herein to the contrary notwithstanding, the contractor in carrying out work under this contract, shall at all times comply with all applicable state and federal air and water quality standards; with all pollution control laws; and with such rules, regulations, and directives as may be lawfully issued by a local, state, or federal agency having within its jurisdiction the protection of the environment in the area surrounding where work under this contract will be performed. In addition, the contractor shall comply with directives given by the Project Engineer in implementation of the letter and intent of FAA/FDOT Advisory Circular 150/5370-10, Item P-156, Temporary Air and Water Pollution, Soil Erosion and Siltation Control.

D-2 Contractors and subcontractors agree:

a. That any facility to be used in the performance of the contract or subcontract or to benefit from the contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities;

b. To comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42 U.S.C. 1857 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 and Section 308 of the Acts, respectively, and all other regulations and guidelines issued thereunder;

c. That, as a condition for the award of this contract, the contractor or subcontractor will notify the awarding official of the receipt of any communication from the EPA indicating that a facility to be used for the performance of or benefit from the contract is under consideration to be listed on the EPA List of Violating Facilities;

d. To include or cause to be included in any construction contract or subcontract which exceeds $100,000 the aforementioned criteria and requirements.

## SECTION E

## CONTRACTUAL REQUIREMENTS PURSUANT TO CIVIL RIGHTS ACT OF 1964, TITLE VI (49 CFR PART 21)

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. Compliance with Regulations: The Contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. Nondiscrimination: The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin), creed, sex, age, or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21 including amendments thereto.
3. Solicitations for Subcontracts, including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the contractor's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.
4. Information and Reports: The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. Sanctions for Noncompliance: In the event of a Contractor's noncompliance with the non-discrimination provisions of this contract, the Sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

    a. Withholding payments to the Contractor under the contract until the Contractor complies; and/or
    b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Sponsor to enter into any litigation to protect the interests of the Sponsor. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

## SECTION F

## TERMINATION OF CONTRACT
## (49 CFR PART 18)

1. The Sponsor may, by written notice, terminate this contract in whole or in part at any time, either for the Sponsor's convenience or because of failure to fulfill the contract obligations. Upon receipt of such notice services shall be immediately discontinued (unless the notice directs otherwise) and all materials as may have been accumulated in performing this contract, whether completed or in progress, delivered to the Sponsor.

2. If the termination is for the convenience of the Sponsor, an equitable adjustment in the contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed services.

3. If the termination is due to failure to fulfill the contractor's obligations, the Sponsor may take over the work and prosecute the same to completion by contract or otherwise. In such case, the contractor shall be liable to the Sponsor for any additional cost occasioned to the Sponsor thereby.

4. If, after notice of termination for failure to fulfill contract obligations, it is determined that the contractor had not so failed, the termination shall be deemed to have been effected for the convenience of the Sponsor. In such event, adjustment in the contract price shall be made as provided in paragraph 2 of this clause.

5. The rights and remedies of the sponsor provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

## SECTION G

## BUY AMERICAN - STEEL AND MANUFACTURED PRODUCTS FOR CONSTRUCTION CONTRACTS
**(Aviation Safety and Capacity Expansion Act of 1990)**

(a) The Contractor agrees that only domestic steel and manufactured products will be used by the Contractor, subcontractors, materialmen, and suppliers in the performance of this contract, as defined in (b) below.

(b) The following terms apply to this clause:

1. Steel and manufactured products. As used in this clause, steel and manufactured products include (1) those produced in the United States or (2) a manufactured product produced in the United States, if the cost of its components mined, produced or manufactured in the United States exceeds 60 percent of the cost of all its components and final assembly has taken place in the United States.

2. Components. As used in this clause, components means those articles, materials, and supplies incorporated directly into steel and manufactured products.

3. Cost of Components. This means the cost for production of the components, exclusive of final assembly labor costs.

(c) The successful bidder assures that only domestic steel and manufactured products will be used by the Contractor, subcontractors materialmen, and suppliers in the performance of this contract, except those

(1) that the U.S. Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality;

(2) that the U.S. Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, that domestic preference would be inconsistent with the public interest; or

(3) that inclusion of domestic material will increase the cost of the overall project contract by more than 25 percent.

**List of supplies and materials that the U.S. Government has determined are not produced in the United States in sufficient and reasonably available quantities and of sufficient quality. (Jan 1991)**

Acetylene, black
Agar, bulk
Anise
Antimony, as metal or oxide
Asbestos, amosite, chrysolite, and Crocidolite
Bananas
Bauxite
Beef, corned, canned
Beef extract
Bephenium Hydroxynapthoate
Bismuth
Books, trade, text, technical, or scientific; newspapers; pamphlets; magazines; periodicals; printed briefs and films; not printed in the United States and for which domestic editions are not available.
Brazil nuts, unroasted
Cadmium, ores and flue dust
Calcium cyanamide
Capers
Cashew nuts
Castor beans and castor oil
Chalk, English
Chestnuts
Chicle
Chrome ore or chromite
Cinchona bark
Cobalt, in cathodes, rondelles, or other primary ore and metal forms.
Cocoa beans
Coconut and coconut meat, unsweetened, in shredded, desiccated or similarly prepared form.
Coffee, raw or green bean
Colchicine alkaloid, raw
Copra
Cork, wood or bark and waste
Cover glass, microscope slide
Cryolite, natural
Dammar gum
Diamonds, industrial, stones and abrasives
Emetine, bulk
Ergot, crude
Erthrityl tetranitrate
Fair linen, altar
Fibers of the following types: abaca, abace, agave, coir, flax, jute, jute burlaps, palmyra and sisal.
Goat and kidskins
Graphite, natural, crystalline, crucible grade
Handsewing needles
Hemp yarn
Hogbristles for brushes
Hyoscine, bulk
Ipecac, root
Iodine, crude
Kaurigum
Lac
Leather, sheepskin, hair type
Lavender oil
Manganese
Menthol, natural bulk
Mica
Microprocessor chips (brought onto a construction site as separate units for incorporation into building systems during construction or repair and alteration of real property.)
Nickel, primary, in ingots, pigs, shots, cathodes, or similar forms; nickel oxide and nickel salts.
Nitroguanidine (also known as picrite)
Nux vomica, crude
Oiticica oil
Olive oil Olives (green), pitted or unpitted, or stuffed, in bulk.
Opium, crude
Oranges, mandarin, canned
Petroleum, crude oil, unfinished oils, and finished products (see definitions at the end)
Pine needle oil
Platinum and related group metals, refined as sponge, powder, ingots, or cast bars.
Pyrethrum flowers
Quartz crystals
Quebrancho
Quinidine
Quinine
Rabbit fur felt
Radium salts, source and special nuclear materials
Rosettes
Rubber, crude and latex
Rutile
Santonin, crude
Secretin
Shellac
Silk, raw and unmanufactured
Spare and replacement parts for equipment of foreign manufacture, and for which domestic parts are not available.
Spices and herbs, in bulk
Sugars, raw
Swords and scabbards
Talc, block, steatite
Tantalum
Tapioca flour and cassava
Tartar, crude; tartaric acid and cream of tartar in bulk.
Tea in bulk
Thread, metallic (gold)
Thyme oil
Tin in bars, blocks, and pigs
Triprolidine hydrochloride
Tungsten
Vanilla beans
Venom, cobra
Wax, canauba
Woods; logs, veneer, and lumber of the following species: Alaskan yellow cedar, angelique, balsa, ekki greenhart, lignum vitae, mahogany, and teak.
Yarn, 50 Denier rayon

**List of Supplies/Materials that the U.S. Government Has Determined Are Not Produced In the United States In Sufficient and Reasonably Available Quantities And of Sufficient Quality (Jan 1991) (CONTINUED)**

Petroleum terms are used as follows:

"Crude oil" means crude petroleum, as it is produced at the wellhead, and liquids (under atmospheric conditions) that have been recovered from mixtures of hydrocarbons that existed in a vaporous phase in a reservoir and that are not natural gas products.

"Finished products" means any one or more of the following petroleum oils, or a mixture or combination of these oils, to be used without further processing except blending by mechanical means:

(A) "Asphalt" - a solid or semi-solid cementitious material that (1) gradually liquefies when heated, (2) has bitumens as its predominating constituents, and (3) is obtained in refining crude oil.

(B) "Fuel oil" - a liquid or liquefiable petroleum product burned for lighting or for the generation of heat or power and derived directly or indirectly from crude oil, such as kerosene, range oil, distillate fuel oils, gas oil, diesel fuel, topped crude oil, or residues.

(C) "Gasoline" - a refined petroleum distillate that, by its consumption, is suitable for use as a carburant in internal combustion engines.

(D) "Jet fuel" - a refined petroleum distillate used to fuel jet propulsion engines.

(E) "Liquefied gases" - hydrocarbon gases recovered from natural gas or produced from petroleum refining and kept under pressure to maintain a liquid state at ambient temperatures.

(F) "Lubricating oil" - a refined petroleum distillate or specially treated petroleum residue used to lessen friction between surfaces.

(G) "Naphtha" - a refined petroleum distillate falling within a distillation range overlapping the higher gasoline and the lower kerosenes.

(H) "Natural gas products" - liquids (under atmospheric conditions) including natural gasoline, that -

(1) are recovered by a process of absorption, adsorption, compression, refrigeration, cycling, or a combination of these processes, from mixtures of hydrocarbons that existed in a vaporous phase in a reservoir, and

(2) when recovered and without processing in a refinery, definitions of products contained in subdivision (B), (C), and (G) above.

(I) "Residual fuel oil" - a topped crude oil or viscous residuum that, as obtained in refining or after blending with other fuel oil, meets or is the equivalent of MILSPEC Mil-F-859 for Navy Special Fuel Oil and any more viscous fuel oil, such as No. 5 or Bunker C.

"Unfinished oils" means one or more of the petroleum oils listed under "Finished products" above, or a mixture or combination of these oils, that are to be further processed other than by blending by mechanical means.

## SECTION H

### EQUAL EMPLOYMENT OPPORTUNITY
### (41 CFR PART 60-1.4(b))

During the performance of this contract, the contractor agrees as follows:

H-1 The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

H-2 The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

H-3 The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

H-4 The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

H-5 The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

H-6 In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedure authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

~~H-7 The contractor will include the portion of the sentence immediately preceding paragraph D-1 and the provisions of paragraphs D-1 through D-7 in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provision, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.~~

## SECTION I

## STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS
## (41 CFR 60-4.3)

1. As used in these specifications:

a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;

c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;

d. "Minority" includes:

(1) Black (all) persons having origins in any of the Black African racial groups not of Hispanic origin);

(2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);

(3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

(4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the contractor has a collective bargaining agreement to refer either minorities or women shall excuse the contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.

6. In order for the non working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the contractor during the training period and the contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the contractor may have taken.

d. Provide immediate written notification to the Director when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a minority person or female sent by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.

e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under 7b above.

f. Disseminate the contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such a superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor's EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally,) the contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

10. The contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

## SECTION J

## MANDATORY REQUIREMENT FOR ALL AIP FUNDED CONSTRUCTION PROJECTS INVOLVING ELECTRICAL ENERGY OR OTHER HAZARDOUS ENERGY SOURCES

For projects involving electrical energy or other hazardous energy source, the contractor shall submit a copy of their Lockout/Tagout program which meets the requirements of 29 CFR 1910.331, Safety Related Work Practices (OSHA). During the performance of electrical work, it is recommended than an unannounced inspection be performed by the airport sponsor or his agent to determine if the Lockout/Tagout program is being followed. Immediate action shall be taken to correct noncompliance, including suspension of work when necessary.

**APPENDIX II**
**BID CONDITIONS, DISADVANTAGED BUSINESS ENTERPRISE PROGRAM**

1. Contract Assurance.

The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

2. Prompt Payment.

The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than 30 days from the receipt of each payment the prime contractor receives from the City of Wauchula. The prime contractor agrees further to return retainage payments to each subcontractor within 30 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the City of Wauchula. This clause applies to both DBE and non-DBE subcontractors.

**B. Other Contract Provisions.**

1. Good Faith Efforts.

The requirements of 49 CFR Part 26, Regulations of the U.S. Department of Transportation, apply to this contract. It is the policy of the City of Wauchula to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. All firms qualifying under this solicitation are encouraged to submit bids/proposals. Award of this contact will be conditioned upon satisfying the requirements of this bid specification. These requirements apply to all bidders/offerors, including those who qualify as a DBE. A DBE contract goal of **0 percent** has been established for this contract. The bidder/offeror shall make good faith efforts, as defined in Appendix A, 49 CFR Part 26 (Attachment 1), to meet the contract goal for DBE participation in the performance of this contract.

The bidder/offeror will be required to submit the following information: (1) the names and addresses of DBE firms that will participate in the contract; (2) a description of the work that each DBE firm will perform; (3) the dollar amount of the participation of each DBE firm participating; (4) written documentation of the bidder/offeror's commitment to use a DBE subcontractor whose participation it submits to meet the contract goal; (5) written confirmation from the DBE that it is participating in the contract as provided in the commitment under (4); and (6) if the contract goal is not met, evidence of good faith efforts.

*"The bidder/offeror shall submit the information in (4) and (5) prior to a commitment by the City of Wauchula to award the contract to the apparent successful competitor, at a time to be specified by the City of Wauchula as a condition of responsibility."*

All other submissions are required at the time of bidding, as specified in the Instructions to Bidders, and Bid Form. DBE participation in this contract may be in form of a prime contract, subcontract, joint venture, or another arrangement that qualifies under 49 CFR Sections 26.55, "How is DBE participation counted toward goals?" or 26.53(g), both of which are included as Attachment 2.

Appendix A to Part 26

I. When, as a recipient, you establish a contract goal on a DOT-assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere *pro forma* efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.

III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring *bona fide* good faith efforts.

IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Soliciting through all reasonable and available means (e.g., attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the project goal.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

~~49 CFR - Subtitle A - PART 26.55~~

~~(a) When a DBE participates in a contract, you count only the value of the work actually performed by the DBE toward DBE goals.~~

~~(1) Count the entire amount of that portion of a construction contract (or other contract not covered by paragraph (a)(2) of this section) that is performed by the DBE's own forces. Include the cost of supplies and materials obtained by the DBE for the work of the contract, including supplies purchased or equipment leased by the DBE (except supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate).~~

~~(2) Count the entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a DOT-assisted contract, toward DBE goals, provided you determine the fee to be reasonable and not excessive as compared with fees customarily allowed for similar services.~~

~~(3) When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the DBE's subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.~~

~~(b) When a DBE performs as a participant in a joint venture, count a portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work of the contract that the DBE performs with its own forces toward DBE goals.~~

~~(c) Count expenditures to a DBE contractor toward DBE goals only if the DBE is performing a commercially useful function on that contract.~~

~~(1) A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, you must evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.~~

~~(2) A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, you must examine similar transactions, particularly those in which DBEs do not participate.~~

(3) If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, you must presume that it is not performing a commercially useful function.

(4) When a DBE is presumed not to be performing a commercially useful function as provided in paragraph (c)(3) of this section, the DBE may present evidence to rebut this presumption. You may determine that the firm is performing a commercially useful function given the type of work involved and normal industry practices.

(5) Your decisions on commercially useful function matters are subject to review by the concerned operating administration, but are not administratively appealable to DOT.

(d) Use the following factors in determining whether a DBE trucking company is performing a commercially useful function:

(1) The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.

(2) The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.

(3) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.

(4) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.

(5) The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement. The DBE does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by a DBE.

(6) For purposes of this paragraph (d), a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

(e) Count expenditures with DBEs for materials or supplies toward DBE goals as provided in the following:

(1) (i) If the materials or supplies are obtained from a DBE manufacturer, count 100 percent of the cost of the materials or supplies toward DBE goals.

(ii) For purposes of this paragraph (e)(1), a manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.

(2) (i) If the materials or supplies are purchased from a DBE regular dealer, count 60 percent of the cost of the materials or supplies toward DBE goals.

(ii) For purposes of this section, a regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

(A) To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.

(B) A person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business as provided in this paragraph (e)(2)(ii) if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis.

(C) Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of this paragraph (e)(2).

(3) With respect to materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, toward DBE goals, provided you determine the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services. Do not count any portion of the cost of the materials and supplies themselves toward DBE goals, however.

(f) If a firm is not currently certified as a DBE in accordance with the standards of subpart D of this part at the time of the execution of the contract, do not count the firm's participation toward any DBE goals, except as provided for in § 26.87(i).

(g) Do not count the dollar value of work performed under a contract with a firm after it has ceased to be certified toward your overall goal.

(h) Do not count the participation of a DBE subcontractor toward a contractor's final compliance with its DBE obligations on a contract until the amount being counted has actually been paid to the DBE.

~~49 CFR - Subtitle A - PART 26.53(g)~~

~~(g) You must apply the requirements of this section to DBE bidders/offerors for prime contracts. In determining whether a DBE bidder/offeror for a prime contract has met a contract goal, you count the work the DBE has committed to performing with its own forces as well as the work that it has committed to be performed by DBE subcontractors and DBE suppliers.~~

END OF APPENDIX II

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# STATE OF FLORIDA

**JAMES UTHMEIER**
**ATTORNEY GENERAL**

January 19, 2026

Racial discrimination is wrong. It is also unconstitutional. Yet Florida maintains several laws on its books that promote and require discrimination on its face. Therefore, I requested, and I am now giving, an official opinion in writing on a question of law relating to my official duties.[1] As Florida's chief legal officer, the constitutionality of laws that seek to mandate discrimination based on race relates to my official duties as Attorney General.

The question of law presented here is: Are Florida laws that mandate discrimination based on race by giving preferences to certain racial groups, using race-based classifications, or employing racial quotas, constitutional? In short, the answer is no. Any laws requiring race-based state action are presumptively unconstitutional under the Fourteenth Amendment's Equal Protection Clause and Article I, section 2, of Florida's Constitution.[2]

## I. Constitutional Framework for Race-Based State Action

The Equal Protection Clause of the Fourteenth Amendment provides that "[n]o State shall . . . deny to any person within its jurisdiction the equal protection of the laws."[3] Article I, section 2 of Florida's Constitution similarly guarantees that all residents of Florida "are equal before the law" and prohibits any person from being "deprived of any right because of race, religion, national origin, or physical disability." "The central purpose of the Equal Protection Clause of the Fourteenth Amendment is the prevention of official conduct discriminating on the basis of race."[4] Our country and our Constitution are therefore committed to "treat[ing] citizens as individuals, not as simply components of a racial, religious, sexual, or

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[1] *See* § 16.01(3), Fla. Stat.

[2] In addition to the statutes and rules cited throughout this Opinion, see the **Appendix** to this Opinion for a non-exhaustive list of other state laws that require race-based discrimination.

[3] U.S. Const. amend. XIV § 1.

[4] *Washington v. Davis*, 426 U.S. 229, 239 (1976); *see also Palmore v. Sidoti*, 466 U.S. 429, 432 (1984) ("A core purpose of the Fourteenth Amendment was to do away with all governmentally imposed discrimination based on race."); *Loving v. Virginia*, 388 U.S. 1, 10 (1967) ("The clear and central purpose of the Fourteenth Amendment was to eliminate all official state sources of invidious racial discrimination in the States.").



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national class."[5] Were it otherwise, we would "effectively assur[e] that race will always be relevant in American life, and that the ultimate goal of eliminating entirely from governmental decision making such irrelevant factors as a human being's race will never be achieved."[6]

For government officials, the path forward is simple: "The way to stop discrimination on the basis of race is to stop discriminating on the basis of race."[7] The Supreme Court recently reaffirmed as much in *Students for Fair Admissions, Inc. v. President & Fellows of Harvard College* (*SFFA*), 600 U.S. 181 (2023). There, the Supreme Court invalidated Harvard College's and the University of North Carolina's race-based admissions procedures because they violated the Equal Protection Clause and Title VI of the federal Civil Rights Act. In doing so, the Court explained that such racial preferences are "by their very nature odious to a free people whose institutions are founded upon the doctrine of equality."[8] The Court further explained that "[a]ny exception to the Constitution's demand for equal protection must survive a daunting two-step examination known . . . as 'strict scrutiny.'"[9]

Strict scrutiny requires that any race-based state action be: (1) "used to 'further compelling governmental interests'" and (2) "'narrowly tailored'—meaning 'necessary'—to achieve that interest."[10] The Supreme Court has identified only two compelling interests that permit race-based state action: (1) "remediating specific, identified instances of past discrimination that violated the Constitution or a statute" and (2) "avoiding imminent and serious risks to human safety in prisons, such as a race riot."[11] These constitutional justifications are narrow and may not be extended lightly.

Narrow tailoring also requires race-based state action to be limited in duration because "all governmental use of race must have a logical end point."[12] Finally, race-based state action cannot be undertaken—and can never be narrowly tailored—if race-neutral alternatives have not been considered before a state resorts to utilizing race.[13] Putting this all

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[5] *Parents Involved in Cmty. Sch. v. Seattle Sch. Dist. No. 1*, 551 U.S. 701, 730 (2007) (quoting *Miller v. Johnson*, 515 U.S. 900, 911 (1995)).

[6] *Id.* (quotation marks omitted).

[7] *Id.* at 748.

[8] *SFFA*, 600 U.S. at 208 (quoting *Rice v. Cayetano*, 528 U.S. 495, 517 (2007)).

[9] *Id.* at 206 (citing *Adarand Constructors, Inc.* v. *Peña*, 515 U.S. 200, 227 (1995)).

[10] *Id.* at 206-07.

[11] *Id.* at 207.

[12] *Grutter v. Bollinger*, 539 U.S. 306, 342 (2003); *see also SFFA*, 600 U.S. at 221 (explaining that the colleges' admission procedures "also lack a 'logical end point'" (quoting *Grutter*, 539 U.S. at 342)).

[13] *See Fisher v. Univ. of Tex. at Austin*, 579 U.S. 365, 377 (2016) (reasoning that narrow tailoring requires the government to show that no workable race-neutral alternatives would achieve its compelling interest). The Supreme Court in *SFFA* permitted states to consider race-neutral alternatives. "The entire point of the Equal Protection Clause is that treating someone differently because of their skin color is *not* like treating them differently because they are from a city or from a suburb." 600 U.S. at 220, 230 (emphasis in original) (explaining that "nothing in [*SFFA*] should be construed as prohibiting universities from considering an applicant's discussion of how race affected his or her life, be it through discrimination, inspiration, or otherwise"); *see also Bos. Parent Coal. for Acad. Excellence Corp. v. Sch. Comm. for City of Bos.*, 89 F.4th 46, 62 (1st Cir. 2023) (explaining that "treating students differently based on the zip codes in which they reside was not like treating them differently because of their skin color"). Consequently, there would likely be no constitutional issues if a state, like Florida, were to replace racially biased language in policy or laws with language giving preferences to groups

together, the "moral imperative of racial neutrality" ensured by the Fourteenth Amendment demands that racial classifications are permitted only "as a last resort."[14]

These principles are "universal in [their] application."[15] *SFFA*'s reasoning and strict scrutiny analysis applies equally to race-based state action occurring in any context—whether it be in government contracting, business, healthcare, appointments, or other areas.[16] Indeed, the Florida Supreme Court recently applied *SFFA* outside of the educational context,[17] as have several federal courts.[18] Courts are therefore clear that honoring and enforcing the Fourteenth Amendment's promise to root out all forms of racial discrimination must be uniform throughout contexts and circumstances. After more than a century, it appears that American jurisprudence has finally caught up with Justice John Marshall Harlan's dissent in *Plessy*:

> Our constitution is color-blind, and neither knows nor tolerates classes among citizens. In respect of civil rights, all citizens are equal before the law. The humblest is the peer of the most powerful. The law regards man as man, and takes no account of his surroundings or of his color when his civil rights as guaranteed by the supreme law of the land are involved.[19]

## II. Florida Laws That Discriminate Based on Race

Despite the principles discussed above, Florida still has numerous race-based discrimination laws on its books.[20] These discriminatory laws generally come in the form of race-based classifications, preferences, or quotas. But as the Supreme Court directed in *SFFA*, "[e]liminating racial discrimination means *eliminating all of it*."[21] Accordingly, for the reasons explained below, Florida laws that mandate race-based discrimination violate the U.S. and Florida Constitutions. Consistent with the Fourteenth Amendment, the Florida Constitution, and my oath of office, my studied opinion is that these laws are unconstitutional.

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based on factors such as geography or socioeconomic status, so long as they are not proxies for race. *See SFFA*, 600 U.S. at 230-31.

[14] *Bartlett v. Strickland*, 556 U.S. 1, 21 (2009).

[15] *SFFA*, 600 U.S. at 206.

[16] *See Ultima Servs. Corp. v. U.S. Dep't of Agric.*, 683 F. Supp. 3d 745, 770 n.8 (E.D. Tenn. 2023) ("The facts in [*SFFA*] concerned college admissions programs, but its reasoning is not limited to just those programs.").

[17] *Black Voters Matter Capacity Bldg. Inst., Inc. v. Sec'y of Fla. Dep't of State*, 415 So. 3d 180, 196 (Fla. 2025).

[18] *See, e.g.*, *Ultima Servs. Corp.*, 683 F. Supp. 3d at 764-74 (applying the *SFFA* analysis to a contract award program administered by the U.S. Department of Agriculture and the Small Business Administration); *Mid-Am. Milling Co., LLC v. United States Dep't of Transp.*, 2024 WL 4267183, at *9 (E.D. Ky. Sept. 23, 2024), *opinion clarified*, 2024 WL 4635430 (E.D. Ky. Oct. 31, 2024) (applying *SFFA* to the Department of Transportation's Disadvantaged Business Enterprise Program); *Fellowship of Christian Athletes v. D.C.*, 2024 WL 3400104, at *87-88 (D.D.C. July 11, 2024) (applying *SFFA* when evaluating an anti-discrimination policy applied against a high school chapter of the Fellowship of Christian Athletes); *Smyer v. Kroger Ltd. P'ship I*, 2024 WL 1007116, at *7-8 (6th Cir. Mar. 8, 2024) (Boggs, J., concurring) (considering *SFFA's* application in the context of employment discrimination).

[19] *Plessy v. Ferguson*, 163 U.S. 537, 559 (1896) (Harlan, J., dissenting).

[20] *See* **Appendix**.

[21] *SFFA*, 600 U.S. at 206 (emphasis added).

### A. Race-Based Classifications

Florida law currently employs a system of race-based classifications that seeks to compel state agencies and other entities to discriminate based on race.[22] None of these laws withstands strict scrutiny. First, these laws do not further a compelling governmental interest because none of these laws identifies any of the limited, recognized constitutional justifications for race-based classifications—namely remedying specific instances of past discrimination or avoiding imminent and serious risks to human safety.[23] These laws further fail strict scrutiny because none are limited in duration and because they preclude race-neutral alternatives.[24]

One of the most egregious examples of race-based discrimination is section 110.112, Florida Statutes, which mandates state-wide participation in "programs of affirmative and positive action." Under section 110.112(2), the head of every executive agency must "develop and implement an affirmative action plan" which includes goals for race-based hires. Heads of agencies must also establish "annual goals for ensuring full utilization of groups underrepresented in the agency's workforce, including women, minorities, and individuals who have a disability, as compared to the relevant labor market."[25] To implement section 110.112, the Department of Management Services further promulgated detailed requirements for the content of each affirmative action plan: one such requirement is the listing of an organizational profile depicting the agency's organizational structure and "demographic information for all supervisors and employees within each unit and ... a total employee count ... by race or ethnicity."[26] The affirmative action plan must also describe the agency's auditing procedure used to measure and determine the agency's progress toward meeting its goals[27] and requires each agency to report race-based metrics, ostensibly as evidence of progress in meeting numeric goals outlined in each agency's plan.[28]

Neither section 110.112 nor Rule 60L-40.002 would survive strict scrutiny. First, compliance with the statute or the Rule would not achieve a compelling public interest because the policy does not address either of the constitutionally recognized race-based justifications. And neither section 110.112 nor Rule 60L-40.002 are narrowly tailored because they are not limited in duration and disregard other potential means of achieving diversity in a workforce through race-neutral alternatives like geographic residence or socioeconomic status.

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[22] *See, e.g.*, § 288.1167(1)-(3), Fla. Stat. (giving preferences to minorities in sports franchise contracting); § 1002.32(4), Fla. Stat. (requiring laboratory schools to create and utilize admissions programs considering race); § 1006.20(6)(a), Fla. Stat. (requiring a minority principal to be placed on every public liaison advisory committee).

[23] *SFFA*, 600 U.S. at 207.

[24] *Id.* at 221.

[25] § 110.112(2)(b), Fla. Stat.

[26] Rule 60L-40.002(2)(c), Fla. Admin. Code (titled, "Equal Employment Opportunity and Affirmative Action").

[27] Rule 60L-40.002(2)(i), Fla. Admin. Code.

[28] Rule 60L-40.002(2)(o)-(p), Fla. Admin. Code.

In sum, Florida law contains numerous race-based classifications that seek to compel state agencies and other entities to discriminate based on race. Because these laws compel discriminatory race-based state action and fail strict scrutiny, these and any other similar Florida laws are unconstitutional.

### B. Race-Based Preferences in Government Contracting

Like the race-based classifications, Florida law also contains a variety of discriminatory provisions for government contracting.[29] Because these provisions are simply another form of race-based state action, these government contracting laws are subject to the same strict scrutiny review discussed in *SFFA*. In *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989), the Supreme Court provided additional instruction on the issue of discriminatory contracting provisions. There, the Court struck down a city's plan requiring contractors awarded city construction contracts to subcontract at least 30% of the dollar amount of their contracts to minority businesses, stating that an amorphous claim of past discrimination made by the city could not justify such quotas.[30] Instead, the Court noted that the Constitution requires a "strong basis in evidence" for any race-based remedial action.[31]

Like the race-based contracting plan in *Croson*, Florida's discriminatory contracting provisions earmark certain opportunities for minority contractors without providing any "strong basis in evidence" to support this race-based action. For example, section 287.09451, Florida Statutes, provides "spending goal[s]" based on race for state contracts:

a. For construction contracts: 4 percent for black Americans, 6 percent for Hispanic-Americans, and 11 percent for American women.

b. For architectural and engineering contracts: 9 percent for Hispanic-Americans, 1 percent for Asian-Americans, and 15 percent for American women.

c. For commodities: 2 percent for black Americans, 4 percent for Hispanic-Americans, 0.5 percent for Asian-Americans, 0.5 percent for Native Americans, and 17 percent for American women.

d. For contractual services: 6 percent for black Americans, 7 percent for Hispanic-Americans, 1 percent for Asian-Americans, 0.5 percent for Native Americans, and 36 percent for American women.

As justification, the Legislature simply pointed to "a systematic pattern of past and continuing racial discrimination against minority business enterprises and a disparity in the availability and use of minority business enterprises in the state procurement system."[32] This hat-tip to the racial lingo du jour falls woefully short of evidencing "specific, identified instances of past discrimination."[33] This and other provisions fail to satisfy strict scrutiny under *SFFA* because they are not tied to a compelling governmental interest, are not limited in

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[29] *See, e.g.*, § 288.706, Fla. Stat.; § 1013.46(1)(c), Fla. Stat.

[30] *Croson*, 488 U.S. at 497-99.

[31] *Id.* at 510 (quoting *Wygant v. Jackson Bd. of Educ.*, 476 U.S. 267, 277 (1986)).

[32] § 287.09451(1).

[33] *SFFA*, 600 U.S. at 207.

duration, and do not appear to have considered any race-neutral alternatives.[34] Accordingly, any Florida law that seeks to compel race-based discriminatory provisions through government contracting is unconstitutional.

### C. Race-Based Quotas

Finally, Florida law contains various explicit and implicit quota requirements for minority representation on different boards, councils, and other similar entities.[35] Like the other forms of race-based state action, race-based quotas are subject to strict scrutiny. The Supreme Court has addressed race-based quotas in the past and held that such quotas cannot satisfy strict scrutiny review.[36]

Specifically, in *Regents of University of California v. Bakke*, the Supreme Court reviewed an admissions policy that reserved 16 out of 100 seats in a medical school class for members of certain minority groups.[37] Under this racial spoils system, non-minorities were ineligible for the reserved minority seats, while minorities were eligible for both the reserved minority seats and the remaining 84 unreserved seats.[38] The Court struck down the policy because it violated the Fourteenth Amendment.[39] And the Court has reaffirmed *Bakke* time and again.[40]

Like the quotas at issue in *Bakke*, Florida's explicit quota provisions reserve a proportional share of opportunities for minorities alone. For example, at least four members of the Florida Cancer Control and Research Advisory Council must be minorities.[41] Those statutes mention no remedial justifications for the discriminatory provisions. These and other similar quotas fail to comply with the Equal Protection Clause. They are tied to no compelling interests, are unlimited in duration, and have not considered any race-neutral alternatives. Accordingly, all race-based quota requirements in Florida law are unconstitutional.

## III. Conclusion

Any Florida law that seeks to mandate discrimination based on race by giving preferences to certain racial groups, using race-based classifications, or by employing racial quotas is unconstitutional.[42] The Supreme Court has spoken directly and clearly on this

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[34] A Florida federal court has already held that section 287.09451 violates the Fourteenth Amendment. *Fla. A.G.C. Council, Inc. v. Florida*, 303 F. Supp. 2d 1307, 1316 (N.D. Fla. 2004) (holding "that § 287.09451 *et seq.* is not narrowly tailored to serve a compelling governmental interest, and consequently violates the Equal Protection Clause of the Fourteenth Amendment").

[35] *See, e.g.*, § 420.622(2), Fla. Stat. (requiring minority representation to be considered in the appointment of members to the Council on Homelessness).

[36] *See* 438 U.S. 265, 319-20 (1978).

[37] *Id.* at 289.

[38] *Id.* at 319-20.

[39] *Id.* at 320.

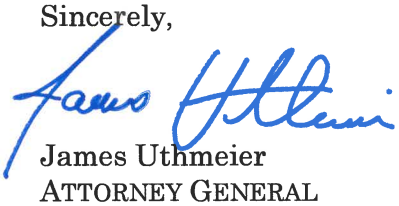
[40] *See, e.g.*, *Grutter*, 539 U.S. at 334 (holding that race-based quota programs are not narrowly tailored and are thus incapable of surviving strict scrutiny review).

[41] § 1004.435(4)(a), Fla. Stat.

[42] To be clear, this Opinion does not purport to discuss every race-based discriminatory law in the State of Florida. The laws cited herein are examples of *some* of these discriminatory laws. The

issue: "Eliminating racial discrimination means *eliminating all of it.*"[43] As Attorney General, I and my office must honor the U.S. and Florida Constitutions' guarantee of equal protection under the law. Because enforcing and obeying these discriminatory laws would violate those bedrock legal guarantees, those laws are unconstitutional. "The law regards man as man, and takes no account of his surroundings or of his color when his civil rights as guaranteed by the supreme law of the land are involved."[44] My office, therefore, will not defend or enforce any of these discriminatory provisions.

Sincerely,



James Uthmeier
ATTORNEY GENERAL

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Appendix to this opinion contains additional laws that—for reasons expressed herein—are unconstitutional as applied in a racial context.

[43] *SFFA*, 600 U.S. at 206 (emphasis added).

[44] *Plessy*, 163 U.S. at 559 (Harlan, J., dissenting).

## APPENDIX[45]

**AHCA § 395.807, Fla. Stat.**: the family practice retention advisory committee is required to develop a program for recruiting minority physicians into family practice residency programs and to promote further efforts to retain and place minority physicians into local communities.

**AHCA § 409.901, Fla. Stat.**: defines "minority physician network" as a network of primary care physicians with experience managing Medicaid or Medicare recipients that are predominantly owned by minorities and have a partnership with a public college/university.

**AHCA § 409.920, Fla. Stat.**: includes minority physician networks in the definition of "managed care plans."

**AHCA § 641.217, Fla. Stat.**: requires any entity contracting with AHCA to provide services to Medicaid recipients or state employees to submit a plan outlining its plan for recruitment and retention of minority providers.

**Commerce § 20.60, Fla. Stat.**: requires the Secretary of the Department of Commerce to promote minority businesses.

**Commerce § 288.001, Fla. Stat.**: provides that minority status must be taken into consideration when making appointments to the Florida Small Business Development Center Network advisory board.

**Commerce § 288.0065, Fla. Stat.**: the annual report provided on annual incentives as part of the commercial development and capital improvements plan must include a description of the trends relating to business interest in and usage of incentives by minority-owned businesses receiving incentives.

**Commerce §§ 288.702-288.706, Fla. Stat.**: establishes the "Florida Small and Minority Business Assistance Act," which includes a loan program for minority businesses.

**Commerce § 288.7094, Fla. Stat.**: provides that black business investment corporations are eligible to participate in the Black Business Loan Program established under § 288.7102 and shall receive priority consideration.

**Commerce § 288.7102, Fla. Stat.**: Establishes the "Black Business Loan Program."

**Commerce §§ 288.7103 and 288.714, Fla. Stat.**: establishes the conditions of the black business loan program.

**Commerce § 288.1167, Fla. Stat.**: sets aside 15% of contracts for sports franchise food and beverage concessions for minority businesses.

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[45] The state agency or branch primarily affected by the statute is listed next to the applicable statute along with a general description of the statute.

**Commerce § 288.12266, Fla. Stat.**: creates the Targeted Marketing Assistance Program to enhance the tourism business marketing of small, minority, rural, and agritourism businesses in the state.

**Commerce § 288.1229, Fla. Stat.**: the Florida Sports Foundation's board of directors is required to contain representatives of all regions of the state and must represent ethnic diversity.

**Commerce § 288.124, Fla. Stat.**: authorizes the "Florida Tourism Industry Marketing Corporation" to establish a convention grants program to attract minority conventions.

**Commerce § 288.7015, Fla. Stat.**: requires the Governor to appoint a rules ombudsman who—among other things—reviews rules for any disproportionate impact on small and minority businesses.

**Commerce § 288.776, Fla. Stat.**: provides that minority representation must be taken into consideration when making appointments to the Florida Tourism Industry Marketing Corporation.

**Commerce § 290.0056, Fla. Stat.**: provides that minority representation in enterprise zone development agencies must be taken into account when making appointments.

**Commerce § 290.0057, Fla. Stat.**: requires strategic plans for new enterprise zones to identify the amount of private/public partnerships which may include cooperation with black business investment corporations.

**Commerce § 290.046, Fla. Stat.**: as part of the application for grants in the urban redevelopment program, the "needs score" may take into account the use of minority-owned enterprises in previous grants.

**Commerce § 625.3255, Fla. Stat.**: "An insurer may invest in any capital participation instrument or evidence of indebtedness issued by the Department of Commerce pursuant to the Florida Small and Minority Business Assistance Act."

**Commerce § 658.67, Fla. Stat.**: "up to 10 percent of the capital accounts of a bank or trust company may be invested in any capital participation instrument or evidence of indebtedness issued by the Department of Commerce pursuant to the Florida Small and Minority Business Assistance Act."

**DBPR § 320.63, Fla. Stat.**: motor vehicle applicants and licensees must report annually to DBPR on its efforts to add new minority dealer points.

**DBPR § 473.3065, Fla. Stat.**: establishes the "Clay Ford Scholarship Program" to assist minority people in becoming Certified Public Accountants.

**DBPR § 489.111, Fla. Stat.**: requires DBPR to establish "a sensitivity review committee" made of representatives of various ethnic and minority groups to ensure that no discriminatory questions are present in the contracting licensing exam.

**DEP § 373.1135, Fla. Stat.**: authorizes water management districts to implement a program to encourage minority owned businesses to participate in district procurement and contract activities.

**DEP § 373.607, Fla. Stat.**: authorizes water management districts to implement recommendations to achieve minority business enterprise procurement goals.

**DEP § 376.84, Fla. Stat.**: provides for incentives for minority business enterprises program for brownfield redevelopment.

**DFS § 17.11, Fla. Stat.**: requires the Chief Financial Officer to submit a report regarding disbursements to minority-owned businesses.

**DFS § 626.2415, Fla. Stat.**: authorizes DFS to provide life insurance examinations providers demographic information on applications relating to examinations taken to qualify for an insurance agent license if DFS requires the provider to review and analyze examination results in conjunction with the race or ethnicity and native language of examinees.

**DHSMV § 320.605, Fla. Stat.**: declares it the intent of the Legislature to provide minorities with opportunities for full participation as motor vehicle dealers.

**DHSMV § 322.292, Fla. Stat.**: when considering applications for DUI program licenses, the Department of Highway Safety and Motor Vehicles is required to take into account if the program will provide improved services for minority clients.

**DMS § 110.112, Fla. Stat.**: declares the policy of this state is to assist in providing the assurance of equal opportunity through programs of affirmative and positive action that will allow the full utilization of minorities.

**DMS § 110.211, Fla. Stat.**: requires state employment recruitment efforts to place special emphasis on attracting minorities and other groups that are underrepresented in the workforce of the employing agency.

**DMS § 110.605, Fla. Stat.**: requires DMS to develop an affirmative action program to ensure the "full utilization" of minorities in Selected Exempt Service positions in the state.

**DMS § 255.101, Fla. Stat.**: cross references to §§ 287.093 and 287.09451, which relate to affirmative action in contracts for public construction works.

**DMS § 255.102, Fla. Stat.**: establishes affirmative action programs in construction contracts for state universities capital projects.

**DMS § 255.20, Fla. Stat.**: provides that the local government may further consider the impact on local economic development, the impact on small and minority business owners as part of their consideration of bids for public construction work.

**DMS § 287.012, Fla. Stat.**: defines "minority business enterprise" and "office" (Office of Supplier Diversity).

**DMS § 287.042, Fla. Stat.**: the Office of Supplier Diversity within DMS may monitor to ensure that opportunities are afforded for contracting with minority businesses as part of state contracts for commodities and contractual services. DMS must explore "reasonable and economical" ways to use certified minority businesses.

**DMS § 287.055, Fla. Stat.**: acquisition of professional architectural, engineering, landscape architectural, or surveying and mapping services—when securing professional services, an agency must endeavor to meet goals set by § 287.09451. One of the requirements agencies must consider as part of the procurement process is whether the vendor is a minority business.

**DMS § 287.057, Fla. Stat.**: procurement of commodities or contractual services—several provisions related to the use of minority businesses and the Office of Supplier Diversity.

**DMS § 287.059, Fla. Stat.**: one of the characteristics that agencies are "encouraged" to consider when hiring outside counsel is the law firm's minority status.

**DMS § 287.093, Fla. Stat.**: authorizes counties, municipalities, community colleges, and district school boards to set aside up to 10% of funds allocated for the procurement of personal property and services for the purpose of entering into contracts with minority business enterprises.

**DMS § 287.0931, Fla. Stat.**: state and local government agencies are encouraged to offer at least 20% participation to minority firms in bond underwriting.

**DMS § 287.094, Fla. Stat.**: establishes the certification of minority business enterprises.

**DMS § 287.0943, Fla. Stat.**: creates a task force to establish criteria to increase minority business participation in the procurement process.

**DMS § 287.09431, Fla. Stat.**: statewide and local government agreement to "remedy social and economic disadvantage suffered by certain groups."

**DMS § 287.09451, Fla. Stat.**: creates the Office of Supplier Diversity within DMS to assist minority businesses in becoming suppliers of commodities, services, and construction to the state. Establishes racial quotas for several professions who may contract with the state, such as construction workers, architects, engineers, and other contracted services.

**DMS § 287.0947, Fla. Stat.**: creates the Florida Advisory Council on Small and Minority Business Development. The council researches and reviews the role of small and minority businesses in the state, reviews emerging issues relating to small and minority business development, and assesses the reasonableness and effectiveness of agency actions to assist minority businesses.

**DOE § 446.041, Fla. Stat.**: establishes the duties of DOE in administering apprenticeship programs; requires DOE to ensure that "minority ... diversity" is considered in administering the program.

**DOE § 1001.216, Fla. Stat.**: establishes the Council on the Social Status of Black Men and Boys. The Council's goal is to make a systematic study of the conditions affecting black men and boys, including homicide rates, arrest and incarceration rates, poverty, violence, drug abuse, death rates, disparate annual income levels, school performance, and health issues.

**DOE § 1001.452, Fla. Stat.**: requirements for district and school advisory councils to be representative of the "ethnic, racial, and economic" community served by the school; requires councils to appoint additional member to ensure proper representation; requires the Commissioner of Education to determine that each council has maximized their efforts to include minority persons and persons of lower socioeconomic status.

**DOE § 1002.32, Fla. Stat.**: requires lab schools to promote and encourage the student admissions process to result in a representative sample of public-school enrollment based on race, socioeconomic status, and academic ability, notwithstanding non-discrimination requirements in schools, set forth ins. 1000.05.

**DOE § 1004.42, Fla. Stat.**: establishes the FSU College of Medicine with a principal focus on recruiting and training professionals to meet the primary health care needs of the state, especially the needs of the state's elderly, rural, minority, and other underserved citizens. Clinical exposures are programmed with a focus on that goal. The College is directed to increase recruitment of minority students by participating in outreach efforts like the Program in Medical Sciences targeting middle and high school students.

**DOE § 1006.20, Fla. Stat.**: the Florida High School Athletic Association's public liaison advisory committee is required to include a member school principal who is a member of a racial minority.

**DOE § 1007.34, Fla. Stat.**: creates a college reach-out program to increase the number of low- income educationally disadvantaged minority students to increase their likelihood of attending post-secondary institutions.

**DOH § 20.43, Fla. Stat.**: establishing within the Department of Health the Office of Minority Health and Health Equity.

**DOH § 383.216, Fla. Stat.**: mandating that the membership of any prenatal and infant health care coalition must represent a community's racial composition.

**DOE § 1007.35, Fla. Stat.**: creates the Florida Partnership for Minority and Underrepresented Student Achievement with the aim to "prepare, inspire, and connect" students to success in higher education with a particular emphasis on minority students.

**DOH § 383.402, Fla. Stat.**: appointments to the Child Abuse Death Review Committee must represent the regional and ethnic diversity of the state.

**DOH § 1004.435, Fla. Stat.**: four appointed members of the Florida Cancer Control and Research Advisory Council must be minorities.

**EOG § 187.201, Fla. Stat.**: state comprehensive plan includes the goal to promote entrepreneurship and minority owned business startup by providing technical and informational resources, facilitating capital formation, and removing regulatory restraints which are unnecessary for the protection of consumers and society.

**Elder § 430.502, Fla. Stat.**: a requirement for memory disorder clinics to receive above base-level funding to show that they are significantly increasing their outreach to low- income and minority populations.

**FCHR § 760.80, Fla. Stat.**: minority representation on boards, commissions, councils, and committees—requires that all appointments select among the best-qualified candidates those who would best represent the proportion of each minority group in the state. Applies to any statutorily created decision making or regulatory board, commission, council, or committee of the state.

**Gaming § 16.71, Fla. Stat.**: requires the Governor to take into consideration the state's racial and ethnic diversity when making appointments to the Florida Gaming Control Commission.

**Gaming § 551.104, Fla. Stat.**: the FGCC is required to create a written policy creating opportunities to purchase from vendors in this state "including minority vendors."

**Judiciary § 25.382, Fla. Stat.**: requires the Supreme Court to have written goals for the recruitment of minorities, including women, throughout the state courts system. The Chief Justice is to receive an annual report on the progress of this goal.

**Judiciary § 26.021, Fla. Stat.**: requires then Judicial Nominating Commissions ("JNC") of each circuit court to take into account racial and ethnic considerations when making judicial appointment recommendations.

**Judiciary § 43.291, Fla. Stat.**: requires the Governor to take into consideration the racial and ethnic diversity of the state when making appointments to the JNC.

**Lottery § 24.113, Fla. Stat.**: requires the Florida Lottery to promote minority business participation in Lottery retail.

**OIR § 627.3511, Fla. Stat.**: minority businesses may exempt up to $50 of the escrow requirements of the take-out bonus and the business may simultaneously file the business' proposed take-out plan with Citizens.

**Space Florida § 331.351, Fla. Stat.**: Space Florida is required to "involve and utilize women, minorities, and socially and economically disadvantaged business enterprises" in the operation of spaceports.

**State University System § 1001.706, Fla. Stat.**: the Board of Governors is required to ensure compliance with §§ 287.09451, 255.101, and 255.102 for most procurement and construction contracts (these sections relate to the usage of minority business enterprises).

**State University System § 1009.23, Fla. Stat.**: authorizes each Florida College System institution board of trustees to charge a fee up to 5% of the student tuition for the purposes of financial aid. The statute authorizes up to 25% of $600,000—whichever is greater—of those fees to be used to provide merit scholarships for students but also for students who "identify" as members of a targeted ethnic minority population.

**State University System § 1009.60, Fla. Stat.**: creates the minority teacher education scholars program, which provides scholarships for education majors who are African American, Hispanic American, Asian American, or Native American.

**State University System § 1009.605, Fla. Stat.**: creates the "Florida Fund for Minority Teachers."

**State University System § 1009.70, Fla. Stat.**: creates the Florida Education Fund which among other goals, aims to enhance access to higher education programs by minority and economically deprived individuals, with particular consideration given to the needs of both blacks and women. The funds were obtained through a grant from the McKnight Foundation.

**State University System § 1009.72, Fla. Stat.**: creates the Jose Marti Scholarship Challenge Grant Program for Hispanic American students.

**State University System § 1013.46, Fla. Stat.**: authorizes counties, municipalities, or boards to set aside up to 10% of funds allocated for capital construction project contracts to enter into contracts with minority business enterprises in order to redress present effects of past discriminatory practices.

**Transportation § 339.175, Fla. Stat.**: appointments to each metropolitan planning organization's citizens' advisory board must be made with the consideration that minorities, the elderly, and the handicapped are adequately represented.

**Workforce Development § 445.004, Fla. Stat.**: when making appointments to the CareerSource Florida Board the Governor must take into account the minority and geographic composition of the Board.

**Workforce Development § 445.007, Fla. Stat.**: appointments to the local workforce development board must take into account minority representation.

Rules and Regulations

Federal Register
Vol. 90, No. 190
Friday, October 3, 2025

This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.

The Code of Federal Regulations is sold by the Superintendent of Documents.

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

### 14 CFR Part 107

**[Docket No. FAA–2025–0412]**

## Accepted Means of Compliance for Small Unmanned (sUA) Aircraft Category 2 and Category 3 Operations Over Human Beings; Aerial Vehicle Safety Solutions Inc. (AVSS)

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Notification of availability.

**SUMMARY:** This document announces the acceptance of a means of compliance with FAA regulations for sUA Category 2 and Category 3 operations over human beings. The Administrator finds that AVSS's ''Means of Compliance with §§ 107.120(a) and 107.130(a) for Small Unmanned Aircraft,'' revision 6, dated January 7, 2025, provides an acceptable means, but not the only means, of showing compliance with FAA regulations.

**DATES:** The means of compliance is accepted effective October 3, 2025.

**FOR FURTHER INFORMATION CONTACT:**

*FAA Contact:* Kimberly Luu, Cabin Safety Section, AIR–624, Technical Policy Branch, Policy and Standards Division, Aircraft Certification Service, Federal Aviation Administration, 2200 South 216th Street, Des Moines, Washington 98198; telephone and fax 206–231–3414; email *Kimberly.H.Luu@faa.gov.*

*AVSS Contact:* Josh Ogden, CEO, AVSS, 570 Queen Street, Suite 600, Fredericton, New Brunswick, E3B–6Z6, Canada, +1 (650) 741–1326; *Info@avss.co.*

**SUPPLEMENTARY INFORMATION:**

### Background

Title 14, Code of Federal Regulations, part 107, subpart D, prescribes the eligibility and operating requirements for civil sUA to operate over human beings in the United States. To be eligible for use, the sUA must meet the requirements of § 107.120(a) for Category 2 operations or § 107.130(a) for Category 3 operations. These sections require the sUA to be designed, produced, or modified such that it will not cause injury to a human being above a specified severity limit, does not contain any exposed rotating parts that would lacerate human skin, and does not contain any safety defects. Section 107.155 requires that means of compliance with § 107.120(a) or § 107.130(a) be established and FAA-accepted. Section 107.160 requires an applicant to declare that sUA for Category 2 or Category 3 operations meet an FAA-accepted means of compliance.

### Means of Compliance Accepted

This notification of availability serves as a formal acceptance by the FAA of the AVSS's ''Means of Compliance with §§ 107.120(a) and 107.130(a) for Small Unmanned Aircraft,'' revision 6, as an acceptable means of compliance, but not the only means of compliance with §§ 107.120(a) and 107.130(a). Applicants may also propose alternative means of compliance for FAA review and possible acceptance.

### Revisions

Revisions to AVSS's ''Means of Compliance (MOC) with §§ 107.120(a) and 107.130(a) for Small Unmanned Aircraft (sUA),'' revision 6, will not be automatically accepted and will require further FAA acceptance for any revisions to be considered an accepted means of compliance.

Issued in Kansas City, Missouri, on September 30, 2025.

**Patrick R. Mullen,**

*Manager, Technical Policy Branch, Policy and Standards Division, Aircraft Certification Service.*

[FR Doc. 2025–19435 Filed 10–2–25; 8:45 am]

**BILLING CODE 4910–13–P**

## DEPARTMENT OF TRANSPORTATION

### Office of the Secretary of Transportation

### 49 CFR Parts 23 and 26

**[Docket No. DOT–OST–2025–0897]**

**RIN 2105–AF33**

## Disadvantaged Business Enterprise Program and Disadvantaged Business Enterprise in Airport Concessions Program Implementation Modifications

**AGENCY:** Office of the Secretary of Transportation (OST), U.S. Department of Transportation (DOT).

**ACTION:** Interim final rule.

**SUMMARY:** This interim final rule (IFR) ensures that the U.S. Department of Transportation (DOT or Department) operates its Disadvantaged Business Enterprise (DBE) and Airport Concession Disadvantaged Business Enterprise (ACDBE) Programs (collectively, Programs) in a nondiscriminatory fashion—in line with law and the U.S. Constitution. The IFR removes race- and sex-based presumptions of social and economic disadvantage that violate the U.S. Constitution.

**DATES:** This IFR is effective October 3, 2025. Comments must be received on or before November 3, 2025. To the extent practicable, DOT will consider late-filed comments.

**ADDRESSES:** You may submit comments identified by the docket number DOT–OST–2025–0897 by any of the following methods:

- *Federal Rulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

*Instructions:* All submissions must include the agency name, docket name, and docket number DOT–OST–2025–0897 or Regulatory Identifier Number

(RIN) 2105–AF33 for this rulemaking. DOT solicits comments from the public to inform its rulemaking process. DOT posts these comments, without edit, including any personal information the commenter provides, to *www.regulations.gov,* as described in the system of records notice (DOT/ALL–14 FDMS), which can be reviewed at *www.dot.gov/privacy.*

*Docket:* For access to the docket to read background documents or comments received, go to *http://www.regulations.gov* at any time or to U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20950, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

*Confidential Business Information:* Confidential Business Information (CBI) is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA; 5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this IFR contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this IFR, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as ''PROPIN.'' Submissions containing CBI should be sent to the individual listed in the **FOR FURTHER INFORMATION CONTACT** section below. Any commentary that OST receives that is not specifically designated as CBI will be placed in the public docket for this rulemaking.

**Electronic Access and Filing**

A copy of the IFR, all comments received, and all background material may be viewed online at *http://www.regulations.gov.* Electronic retrieval help and guidelines are available on the website. It is available 24 hours each day, 365 days each year. An electronic copy of this document may also be downloaded from the Office of the Federal Register's website at *http://www.ofr.gov* and the Government Publishing Office's website at *http://www.gpo.gov.*

**FOR FURTHER INFORMATION CONTACT:** Peter Constantine, Office of the General Counsel, Office of the Secretary, U.S. Department of Transportation, 1200 New Jersey Avenue SE, Washington, DC 20590 at (202) 658–9670 or *peter.constantine@dot.gov.*

**SUPPLEMENTARY INFORMATION:**

## I. Introduction

Spanning nearly 40 years, the Department's DBE and ACDBE programs are small business initiatives intended to level the playing field for businesses seeking to participate in federally assisted contracts and in airport concessions. Rooted in a desire to give small businesses a fair shake in the process, the Programs must balance a desire to help the small business community with an overriding government obligation to serve the public. The government must undertake all these efforts consistent with law—including constitutional nondiscrimination requirements that establish the conditions for national harmony and unity. This IFR advances the administration's goals of nondiscrimination, fairness, and excellence in serving the American public.

Although the Programs aim to assist small businesses owned and controlled by ''socially and economically disadvantaged individuals,'' Congress has mandated by statute that DOT treat certain individuals—women and members of certain racial and ethnic groups—as ''presumed'' to be disadvantaged.[1] Other individuals do not benefit from that statutory presumption. This means that two similarly situated small business owners may face different standards for entering the program, based solely on their race, ethnicity, or sex.

On September 23, 2024, the U.S. District Court for the Eastern District of Kentucky determined that the DBE program's statutory race- and sex-based presumptions likely do not comply with the Constitution's promise of equal protection under the law.[2] The Court held that the Government may only use a racial classification to ''further a compelling government interest'' and may only use race in a ''narrowly tailored fashion.'' It held that although courts have identified a compelling government interest in ''remediating specific, identified instance[s] of past discrimination that violated the constitution or a statute,'' the Government did not present evidence of such discrimination by DOT against each of the groups covered by the DBE program's presumptions. The Court held, moreover, that the presumptions were not narrowly tailored because Congress used an unexplained ''scattershot'' approach in identifying the covered groups, and because the presumptions had no ''logical end point.'' The Court also held that the sex-based presumptions failed heightened scrutiny. Accordingly, the Court issued a preliminary injunction that prohibits DOT from mandating the use of presumptions with respect to contracts on which the two plaintiff entities bid. DOT has implemented the injunction by requiring funding recipients to remove DBE contract goals from any contracts on which the plaintiffs intend to bid.

On January 20, 2025, the President issued Executive Order 14151, *Ending Radical and Wasteful Government DEI Programs and Preferencing,* which affirmed that ''Americans deserve a government committed to serving every person with equal dignity and respect'' and directed agencies to recommend actions to align their programs and activities with this policy. On January 21, 2025, the President issued Executive Order 14173, *Ending Illegal Discrimination and Restoring Merit-Based Opportunity,* which ordered agencies to ''terminate all discriminatory and illegal preferences, mandates, policies, programs, activities, guidance, regulations, enforcement actions, consent orders, and requirements.''

On March 21, 2025, the Attorney General issued a memorandum to all Federal agencies on implementing these Executive Orders.[3] The Attorney General noted that ''federal policies that give preference to job applicants, employees, or contractors based on race or sex trigger heightened scrutiny under the Constitution's equal protection guarantees and can only survive in rare circumstances.'' The Attorney General directed all Federal agencies immediately to ''[d]iscontinue any policies that establish numerical goals, targets, or quotas based on race or sex,'' and to ''[r]emove any contracting or

[1] Congress has provided that: (1) ''women shall be presumed to be socially and economically disadvantaged individuals''; and (2) the term ''socially and economically disadvantaged individuals'' should otherwise be given the meaning given by section 8(d) of the Small Business Act and its implementing regulations. *See* Infrastructure Investment and Jobs Act, Public Law 117–58, 11101(e)(2) (B) (2021) (DBE program for highway and transit funding); 49 U.S.C. 47107(e)(1) (ACDBE program); 49 U.S.C. 47113(a)(2) (DBE program for airport funding). Section 8(d) of the Small Business Act and its implementing regulations create a rebuttable presumption that ''Black Americans,'' ''Hispanic Americans,'' ''Native Americans,'' ''Asian Pacific Americans,'' and ''Subcontinent Asian Americans'' are disadvantaged. *See* 15 U.S.C. 637(d)(3); 13 CFR 124.103(b)(1).

[2] *Mid-America Milling Co.* v. *U.S. Dep't of Transp.,* No. 3:23–cv–00072, 2024 WL 4267183 (Sept. 23, 2024).

[3] Memorandum from the Attorney General for All Federal Agencies, *Implementation of Executive Orders 14151 and 14173; Eliminating Unlawful DEI Programs in Federal Operations* (March 21, 2025), available at *https://www.justice.gov/ag/media/1409556/dl?inline.*

funding requirement or guidance that induces, requires, or encourages private parties to adopt discriminatory practices.''

On February 19, 2025, the President issued Executive Order 14219, *Ensuring Lawful Governance and Implementing the President's ''Department of Government Efficiency'' Deregulatory Initiative,* which directed agencies to identify ''unconstitutional regulations and regulations that raise serious constitutional difficulties,'' and to target those regulations for repeal. On April 9, 2025, the President issued a memorandum directing that this effort should prioritize regulations that conflict with certain Supreme Court decisions, including *Students for Fair Admissions, Inc.* v. *Harvard (SFFA).*[4]

In accordance with the directives of the President and the Attorney General, DOT and the U.S. Department of Justice (''DOJ'') have evaluated the DBE and ACDBE programs. DOT and DOJ, consistent with the ruling of the District Court, have determined that the race- and sex-based presumptions of DOT's DBE programs are unconstitutional. In *SFFA,* the Supreme Court held that race-based admissions programs at universities violated the Equal Protection Clause of the Fourteenth Amendment—and, by corollary, Title VI of the Civil Rights Act. In light of *SFFA,* multiple Federal courts have held unlawful the use of presumptions similar to those used in the DBE and ACDBE programs. In *Ultima Serv. Corp.* v. *U.S. Dep't of Ag.,* the Eastern District of Tennessee held that a Small Business Act program violated the equal protection component of the Fifth Amendment's Due Process Clause to the extent that it used the exact same type of race-based presumptions used by the DBE and ACDBE programs.[5] And in *Nuziard* v. *Minority Business Development Agency,* the Northern District of Texas held that a race-based statutory presumption of disadvantage was unconstitutional and that the U.S. Department of Commerce's application of this statutory preference violated the equal protection principle of the Fifth Amendment.[6] As with the presumptions at issue in *Ultima* and *Nuziard,* there is not a strong basis in evidence that the race- and sex-based presumptions used by the DBE and ACDBE programs are necessary to support a compelling governmental interest, and the presumptions are not narrowly tailored. The government has no compelling justification for engaging in overt race or sex discrimination in the awarding of contracts in the absence of clear and individualized evidence that the award is needed to redress the economic effects of actual previous discrimination suffered by the awardee. For these reasons, the presumptions must be disregarded, and the Department's DBE and ACDBE programs must be administered in all other respects in accordance with the law and consistent with the U.S. Constitution.

On May 28, 2025, DOT (represented by DOJ), along with the plaintiffs in the litigation in the U.S. District Court for the Eastern District of Kentucky, asked the Court to enter a Consent Order resolving a constitutional challenge to the DBE program.[7] The motion is currently pending. In the proposed Consent Order, DOT stipulated and agreed that ''the DBE program's use of race- and sex-based presumptions of social and economic disadvantage . . . violates the equal protection component of the Due Process Clause of the Fifth Amendment of the U.S. Constitution.'' The parties asked the Court to declare that ''the use of DBE contract goals in a jurisdiction, where any DBE in that jurisdiction was determined to be eligible based on a race- or sex-based presumption, violates the equal protection component of the Due Process Clause of the Fifth Amendment,'' and to ''hold and declare that [DOT] may not approve any Federal, State, or local DOT-funded projects with DBE contract goals where any DBE in that jurisdiction was determined to be eligible based on a race- or sex-based presumption.''

On June 25, 2025, the Solicitor General wrote to the Speaker of the House, consistent with 28 U.S.C. 530D, to advise the Speaker that DOJ had concluded that the DBE program's presumptions violate the U.S. Constitution, that DOJ would no longer defend the presumptions in court, and that DOJ had taken that position in ongoing litigation.[8] The Solicitor General noted that DOJ ''had previously defended the DBE program's race-and sex-based presumptions by pointing to societal discrimination against minority-owned businesses generally.'' He stated, however, that ''[c]onsistent with *SFFA*'s rejection of a similar justification in the university-admissions context, [DOJ] has determined that an interest in remedying the effects of societal discrimination does not justify the use of race-and sex-based presumptions in the DBE program.'' The Solicitor General also reported that DOJ has determined that ''like the admissions programs at issue in *SFFA,* the DBE program relies on arbitrary, overbroad, and underinclusive racial categories and lacks any logical end point.'' DOT agrees with and adopts the Solicitor General's analysis.

In light of DOT and DOJ's determination that the DBE program's race- and sex-based presumptions are unconstitutional, DOT is issuing this IFR to remove the presumptions from the DBE program regulations set forth in 49 CFR part 26. Because the ACDBE presumptions are functionally identical and suffer the same constitutional infirmity, this IFR also removes the presumptions from the ACDBE regulations set forth in 49 CFR part 23. To ensure a level playing field between existing participants and new applicants, while also eliminating the effects of the unconstitutional presumptions and reliance in whole or in part on claims of disadvantage based on race or sex, this IFR requires each Unified Certification Program (UCP) to reevaluate any currently certified DBE or ACDBE, to recertify any DBE or ACDBE that meets the new certification standards, and to decertify any DBE or ACDBE that does not meet the new certification standards. The IFR includes certain requirements that apply during the pendency of this reevaluation process.

## II. Revisions

*Part 26*

Subpart A—General

1. Objectives (§ 26.1)

The Department amends § 26.1 to clarify the proper objectives of the DBE program. The Department's amendments replace references to the DBE program being ''narrowly tailored'' with an objective intended to ensure that the DBE program operates in a nondiscriminatory manner and without regard to race or sex, while maximizing efficiency of service. These amendments center the DBE program's purpose of leveling the playing field for businesses owned and controlled by socially and economically disadvantaged individuals while providing excellent service to the American people.

2. Definitions (§ 26.5)

The Department changes the definition of ''socially and economically disadvantaged individual'' in § 26.5 to

[4] 600 U.S. 181 (2023).

[5] *Ultima Servs. Corp.* v. *U.S. Dep't of Agric.,* 683 F. Supp. 3d 745 (E.D. Tenn. 2023).

[6] *Nuziard* v. *Minority Bus. Dev. Agency,* 721 F. Supp. 3d 431 (N.D. Tex. 2024).

[7] Joint Motion for Entry of Consent Order, *Mid-America Milling Co.* v. *U.S. Dep't of Transp.,* No. 3:23–cv–00072 (E.D. Ky. May 28, 2025).

[8] Letter from Solicitor General D. John Sauer to Hon. Mike Johnson (June 25, 2025), *https://www.justice.gov/oip/media/1404871/dl?inline.*

remove the race- and sex-based presumptions that DOT and DOJ and have found to violate the Fifth Amendment. Under the revised rule, any individual seeking to demonstrate that he or she is a ''socially and economically disadvantaged individual'' will be required to make the same individualized showing of disadvantage, regardless of the individual's race or sex.

In furtherance of these legal conclusions, the IFR also replaces the terms ''race-neutral'' and ''race-conscious'' in § 26.5 with ''DBE-neutral'' and ''DBE-conscious'' and modifies the definitions slightly for the same reasons.

3. Recordkeeping and Reporting (§ 26.11)

Similarly, the IFR eliminates the requirement in § 26.11(c)(2)(iv) for recipients to obtain bidders list information about the majority owner's race and sex for all DBEs and non-DBEs who bid as prime contractors and subcontractors on each of a recipient's federally assisted contracts, and then renumbers the requirements in current §§ 26.11(c)(v) through (c)(vii) as §§ 26.11(c)(iv) through (c)(vi).

The IFR also eliminates the requirement in § 26.11(e)(1) that recipients report and categorize the percentage of in-State and out-of-State DBE certifications by sex and ethnicity. The IFR also eliminates the requirements in §§ 26.11(e)(5) and (6) that recipients report the number of in-State and out-of-State applications for an ''individualized'' determination of social or economic disadvantage status, and the number of in-State and out-of-State applicants who made an individualized showing of social and economic disadvantaged status. This IFR requires all applicants to demonstrate social and economic disadvantage affirmatively to participate in the DBE program, which renders these reporting requirements unnecessary. The IFR further renumbers the reporting requirements in current §§ 26.11(e)(2) through (e)(4) as §§ 26.11(e)(1) through (e)(3).

Subpart B—Administrative Requirements for DBE Programs for Federally Assisted Contracting

4. Recipient Monitoring Responsibilities (§ 26.37)

For consistency, the IFR replaces the word ''race-neutral'' with ''DBE-neutral'' in § 26.37(b).

5. Fostering Small Business Participation (§ 26.39)

For consistency, the IFR replaces the word ''race-neutral'' with ''DBE-neutral'' in §§ 26.39(b)(1) and (5).

Subpart C—Goals, Good Faith Efforts, and Counting

6. Setting Goals (§ 26.45)

For consistency, the IFR replaces the phrase ''race-neutral DBE program'' with ''DBE-neutral program'' in § 26.45(a)(2).

For consistency, the IFR amends the second sentence of § 26.45(b) to replace the word ''discrimination'' with ''social and economic disadvantage'' so it will read as follows: ''The goal must reflect your determination of the level of DBE participation you would expect absent the effects of social and economic disadvantage.''

For consistency and to ensure recipients establish overall goals that include only DBEs who are ready, willing, and able to compete for and participate in DOT-assisted contracts, the Department amends § 26.45(c)(3) to clarify that any disparity studies utilized by recipients in setting their goals must provide a detailed capacity analysis, including the methodology used. The Department makes the same clarification regarding the use of disparity studies in § 26.45(d)(ii).

For consistency, the IFR amends § 26.45(f)(3) to remove references to race-neutral and race-conscious measures.

The IFR amends § 26.45(g)(1) to remove consultation requirements for minority and women's contractor groups, as well as the language related to posting proposed overall goals in minority-focused media.

The IFR amends § 26.45(h) by removing the existing language, as there will be no opportunity to create group-specific goals now that race and sex have been removed from the regulation. In its place, the IFR adds new language in § 26.45(h) to indicate that a recipient is not required to update its overall goal until its UCP completes the reevaluation process described in § 26.111.

7. Failing To Meet Overall Goals (§ 26.47)

For consistency, the IFR replaces the words ''race-conscious'' and ''race-neutral'' with ''DBE-conscious'' and ''DBE-neutral'' in in § 26.47(c)(4) and § 26.47(d).

The IFR adds § 26.47(e) to provide that until a Unified Certification Program (UCP) completes the reevaluation process described in § 26.111, the compliance provisions of § 26.47 will not apply to any recipient covered by that UCP. This requirement ensures fairness to recipients during the transition period.

8. Means Used To Meet Overall Goals (§ 26.51)

For consistency, the IFR replaces the words ''race-conscious'' and ''race-neutral'' with ''DBE-conscious'' and ''DBE-neutral'' throughout § 26.51 and the corresponding examples.

The IFR adds § 26.51(h) to provide that until a UCP completes the reevaluation process described in § 26.111, a recipient covered by that UCP may not set any contract goals. This provision ensures that existing DBEs do not continue to receive any benefits as a result of their certification under the old standards.

9. Counting DBE Participation Toward Goals (§ 26.55)

The IFR adds § 26.55(i) to provide that until a UCP completes the reevaluation process described in § 26.111, a recipient covered by that UCP may not count any DBE participation toward DBE goals. This provision ensures that existing DBEs do not continue to receive any benefits as a result of their certification under the old standards.

Subpart D—Certification Standards

10. Burden of Proof (§ 26.61)

The IFR eliminates § 26.61(b)(2), which imposed a burden of proof on certifiers with respect to individuals subject to the race- and sex-based presumptions that the IFR eliminates.

11. Social and Economic Disadvantage (§ 26.67)

The IFR revises § 26.67 to implement the removal of unconstitutional race- and sex-based presumptions. The IFR requires all small business concerns to demonstrate social and economic disadvantage based on their own experiences and circumstances without reliance in whole or in part on race or sex.

Subpart F—Compliance and Enforcement

12. Reevaluation Process (§ 26.111)

This IFR adds § 26.111 to require each UCP to reevaluate any currently certified DBE, to recertify any DBE that meets the new certification standards, and to decertify any DBE that does not meet the new certification standards or fails to provide additional information required for submission under the new certification standards. The IFR provides that decertification procedures of 49 CFR 26.87 do not apply to any

decertification decisions under this process. The IFR requires each UCP to complete the reevaluation process as quickly as practicable following issuance of this IFR. The Department will work with each UCP to minimize the practical impact of this rule change during the pendency of the reevaluation process. This reevaluation process will ensure a level playing field between existing participants and new applicants, while also eliminating the effects of the unconstitutional presumptions and reliance on claims of disadvantage based in whole or in part on race or sex. This process does not replace or restrict the Department's ability to conduct a review or take action under Title VI or other applicable law regarding compliance with equal protection principles. A companion provision has been added to part 23 with respect to reevaluation of ACDBEs.

*Part 23*

Subpart A—General

13. Aligning Part 23 With Part 26 Objectives (§ 23.1)

The IFR amends the program objectives for the ACDBE program in § 23.1 that are similar to the amendments to the DBE program objectives in § 26.1.

14. Definitions (§ 23.3)

The IFR amends the definition of the phrase ''socially and economically disadvantaged individual'' in § 23.3 to conform to the definition of the phrase in § 26.5. In addition, the IFR replaces the terms ''race-conscious'' and ''race-neutral'' with ''ACDBE-conscious'' and ''ACDBE-neutral'' in § 23.3.

Subpart B—ACDBE Programs

15. Measures To Ensure Nondiscrimination Participation of ACDBEs (§ 23.25)

For consistency, the IFR replaces the words ''race-neutral'' and ''race-conscious'' with ''DBE-neutral'' and ''DBE-conscious'' in §§ 23.25(d) and (e).

The IFR adds § 23.25(h) to provide that until a UCP completes the reevaluation process described in § 23.81, a recipient covered by that UCP may not set concession-specific goals or use any of the other methods described in § 23.25(e). This provision ensures that existing ACDBEs do not continue to receive any benefits as a result of their certification under the old standards.

16. Fostering Small Business Participation (§ 23.26)

For consistency, the IFR replaces the words ''race-neutral'' with ''DBE-neutral'' in § 23.26(b)(1).

For consistency, the IFR replaces the words ''minority and women owned'' with ''socially and economically disadvantaged'' in § 23.26(d)(5).

For consistency, the IFR replaces the word ''gender'' with ''sex'' in § 23.26(e).

17. Reporting and Recordkeeping (§ 23.27)

The IFR eliminates the requirement in § 23.27(c)(2)(iv) for recipients to obtain information about the majority owner's race and sex for all ACDBEs and non-ACDBEs who seek to work on each of a recipient's concession opportunities, and then renumbers the requirements in current §§ 23.27(c)(v) through (c)(vii) as §§ 23.27(c)(iv) through (c)(vi). The IFR also eliminates the requirement in § 23.27(d)(1) that recipients report and categorize the percentage of in-State and out-of-State ACDBE certifications by sex and ethnicity. The IFR also eliminates the requirements in §§ 23.27(d)(5) and (6) that recipients report the number of in-State and out-of-State applications for ''individualized'' determinations of social or economic disadvantage status, and the number of in-State and out-of-State applicants who made an individualized showing of social and economic disadvantaged status. This IFR requires all applicants to demonstrate social and economic disadvantage affirmatively to participate in the ACDBE program, which renders these reporting requirements unnecessary. The IFR further renumbers the reporting requirements in current §§ 23.27(d)(2) through (d)(4) as §§ 23.27(d)(1) through (d)(3).

Subpart D—Goals, Good Faith Efforts, and Counting

18. Goal and Consultation Requirements (§§ 23.41, 23.43)

The IFR amends § 23.41(d) by removing the existing language, as there will be no opportunity to create group-specific goals now that race and sex have been removed from the regulation. In its place, the IFR adds new language to indicate that a recipient is not required to update its overall goal until its UCP completes the reevaluation process described in § 23.81.

The IFR amends § 23.43(b) to remove consultation requirements for minority and women's contractor groups, as well as the language related to posting proposed overall goals in minority-focused media.

19. Setting Goals (§ 23.51)

For consistency, the Department amends § 23.51(a) to replace the words ''discrimination and its effects'' with ''social and economic disadvantage.'' For consistency, the IFR replaces the words ''race-neutral'' and ''race-conscious'' with ''ACDBE-neutral'' and ''ACDBE-conscious'' in §§ 23.51(f), (g), and (h), and in § 23.51(d)(5).

For consistency and to ensure recipients establish overall goals that include only DBEs who are ready, willing, and able to compete for and participate in DOT-assisted contracts, the Department amends § 23.51(c)(3) to clarify that any disparity studies utilized by recipients in setting their goals must provide a detailed capacity analysis, including the methodology used.

20. Counting ACDBE Participation During Transition Period (§§ 23.53, 23.55)

The IFR adds § 23.53(g) and § 23.55(m) to provide that until a UCP completes the reevaluation process described in § 23.81, recipients covered by that UCP, and car rental companies operating at airports covered by that UCP, may not count any ACDBE participation toward ACDBE goals. These provisions ensure that existing ACDBEs do not continue to receive any benefits as a result of their certification under the old standards.

21. Failing To Meet Overall Goals (§ 23.57)

For consistency, the IFR replaces the words ''race-conscious'' and ''race-neutral'' with ''DBE-conscious'' and ''DBE-neutral'' in in § 23.57(b)(4) and § 23.57(c).

The IFR adds § 23.57(d) to provide that until a UCP completes the reevaluation process described in § 23.81, the compliance provisions of § 23.57 will not apply to any recipient covered by that UCP. This requirement ensures fairness to recipients during the transition period.

22. Reevaluation Process (§ 23.81)

This IFR adds § 23.81 to require each UCP to reevaluate any currently certified ACDBE, to recertify any ACDBE that meets the new certification standards, and to decertify any DBE that does not meet the new certification standards or fails to provide additional information required for submission under the new certification standards. The IFR provides that decertification procedures of 49 CFR 26.87 do not apply to any decertification decisions under this process. The IFR requires each UCP to complete the reevaluation process as quickly as practicable following issuance of this IFR. The Department will work with each UCP to minimize the practical impact of this rule change during the pendency of the reevaluation process. This reevaluation

process will ensure a level playing field between existing participants and new applicants, while also eliminating the effects of the unconstitutional presumptions and reliance on claims of disadvantage based in whole or in part on race or sex. This process does not replace or restrict the Department's ability to conduct a review or take action under Title VI or other applicable law regarding compliance with equal protection principles. A companion provision has been added to part 26 with respect to reevaluation of DBEs.

**III. Public Proceedings**

The Administrative Procedure Act generally requires agencies to provide the public with notice of proposed rulemaking and an opportunity to comment prior to publication of a substantive rule. However, 5 U.S.C. 553(b)(B) authorizes agencies to publish a final rule without first seeking public comment on a proposed rule ''when the agency for good cause finds (and incorporates the finding and a brief statement of reasons therefor in the rules issued) that notice and public procedure thereon are impracticable, unnecessary, or contrary to the public interest.'' DOT finds that providing advance notice and an opportunity to comment on these regulatory changes pertaining to the DBE and ACDBE programs would be impracticable, unnecessary, and contrary to the public interest. Consistent with the letter authored by the Solicitor General and discussed elsewhere in the preamble,[9] DOT has determined that race- and sex-based presumptions of the DBE and ACDBE programs violate the U.S. Constitution. In the absence of this IFR, however, DOT's own regulations would continue to require funding recipients to apply those very same presumptions. Allowing this confusing and contradictory situation to continue during a notice-and-comment process would be impracticable and contrary to the public interest. Further, notice-and-comment is unnecessary where a regulatory action is required as a matter of law to ensure consistency with rulings of the United States Supreme Court. It is well-established that an agency is not required to continue to enforce a statutory provision that it has found to be unconstitutional.[10] By the same token, an agency is not required to subject the public to unconstitutional requirements. This IFR provides notice of the amendments to the regulations' provisions and invites the public to comment. DOT has determined, however, that it should not delay the effectiveness of the amendments and that it should act immediately to remedy the unconstitutional programs. For the foregoing reasons, the good cause exception in 5 U.S.C. 553(d)(3) also applies to DOT's decision to make this IFR effective upon publication.

**IV. Regulatory Analyses and Notices**

*A. Executive Order: 12866 (''Regulatory Planning and Review''), Executive Order 13563 (''Improving Regulation and Regulatory Review''), and DOT Regulatory Policies and Procedures*

The IFR is a significant regulatory action under Executive Order 12866, ''Regulatory Planning and Review,'' as supplemented by Executive Order 13563, ''Improving Regulation and Regulatory Review.'' Accordingly, the Office of Management and Budget (OMB) has reviewed it under that Executive Order.

The IFR amends reporting and eligibility requirements for the Department's Airport Concession Disadvantaged Business Enterprises (ACDBE) program and Disadvantaged Business Enterprise (DBE) program. These programs are implemented and overseen by recipients of certain Department funds. The changes to the requirements would affect businesses participating in the programs, recipients of Department funds who oversee the programs, and the Department.

The IFR replaces the race- and sex-based presumptions previously embedded in these programs with a requirement for individualized demonstrations of social and economic disadvantage. The IFR also modifies terminology and data reporting requirements to align with constitutional principles while maintaining the programs' statutory objectives.

Need for Regulatory Revisions

The IFR is being issued pursuant to legal determinations by DOT and DOJ that the race- and sex-based presumptions previously embedded in these programs are unconstitutional. In addition to legal compliance, this action corrects a regulatory failure—namely, reliance on presumptions that no longer withstand judicial scrutiny—by shifting to individualized determinations. The IFR aligns the programs with constitutional mandates.

Costs and Benefits

Costs

While DOT is unable to quantify all the economic costs and benefits of the IFR, the Department has identified both qualitative and quantitative impacts. Several provisions may lead to increased or decreased burdens for applicants, certifying agencies, and recipients related to transitional documentation requirements, the degree of technical rigor in disparity studies, and changes in program reporting. The magnitude of these costs and benefits would depend on the scope of the change; the likelihood of behavior adjustment; and potential legal, administrative, or programmatic effects.

Unquantified Costs

Key provisions of the IFR and their related cost impacts include:

• *Removal of race- and sex-based presumptions.* This provision eliminates presumptive eligibility based on race or sex and requires applicants to submit individualized evidence of social disadvantage, alongside the remaining required showing of economic disadvantage. Although the underlying economic disadvantage documentation (*e.g.,* Personal Net Worth, income verification) was already a component of many applications, the shift to a required narrative or case-specific justification for all applications, as opposed to just those that did not meet the presumption of eligibility, may introduce additional procedural burdens and time costs on some applicants. This may increase the complexity of preparing applications and even potentially deter participation among some eligible small businesses, especially those with limited administrative capacity or legal support. This may also implicate reliance interests for businesses that were previously certified based on presumptive eligibility. However, many eligible small businesses will continue efforts at applying for certification and assume the additional burden to apply because of the benefits to being certified and the potential opportunity it brings outweighs the added burden of the application process. All eligible businesses may apply for and potentially obtain certification under the new certification process, which mitigates any impact on reliance interests. In addition, businesses'

[9] Letter from Solicitor General D. John Sauer to Hon. Mike Johnson (June 25, 2025), *https://www.justice.gov/oip/media/1404871/dl?inline.*

[10] *See In re Aiken County,* 725 F.3d 255, 259 (D.C. Cir. 2013) (Kavanaugh, J.) (''If the President has a constitutional objection to a statutory mandate or prohibition, the President may decline to follow the law unless and until a final Court order dictates otherwise. . . . [This] basic constitutional principle[ ] appl[ies] to the President and subordinate executive agencies.''); Office of Legal Counsel Opinion, *Presidential Authority to Decline to Execute Unconstitutional Statutes,* 18 U.S. Op. Off. Legal Counsel 199 (1994).

reliance interests do not justify continuing to implement presumptions that DOT and DOJ have determined are unconstitutional.

• *Certification burden.* As the burden of production and persuasion shifts away from certifying officials to individual applicants, certifying agencies may experience increased numbers of intake inquiries and clarification requests as applicants navigate the new social disadvantage requirements, or face inconsistent application quality, especially during the transition period. This would require certifying agencies to spend time following up with applicants and guiding them through the application as they go through the re-certification process, which implicates certifying agencies' reliance interests. In the short-term, the increase in workload and support services on certifying agencies may temporarily elevate the demands on the recipients' staff demands or delay determinations, which could at least partially offset any cost savings from shifting this burden to applicants. However, in the long run, it is expected that after the initial review of each applicant, subsequent reviews of applicants will require minimal agency time and will not implicate agencies' reliance interests.

• *Reevaluation of all affected DBEs/ACDBEs.* DBE/ACDBE participants who have previously qualified based in whole or in part on their race or sex will incur additional costs to develop and provide the individualized narrative required by the IFR. In addition, all firms will temporarily lose certifications until the reevaluation process is complete, and some firms may lose the certifications that currently lead to opportunities for them to participate, potentially leading to a loss of business opportunities and implicating firms' reliance interests (though this would be offset by other firms who face increased access to the same opportunities). Additional administrative burdens will also fall on certifiers (UCPs) performing the reevaluations. This could also lead to delays in goal setting and program participation, resulting from the temporary pause in counting DBE participation while the reevaluation process is underway.

• *Clarified disparity study expectations.* The rule requires that disparity studies include detailed capacity analyses, which may necessitate additional economic modeling, data collection, and expert analysis beyond what is standard practice in many jurisdictions. These requirements could increase costs, particularly for large or multi-jurisdictional studies. While such studies are episodic rather than annual, the enhanced methodology could impose non-trivial compliance costs when undertaken.

• *Elimination of race/sex reporting in bidder lists.* The removal of demographic fields from bidder list reporting will reduce the administrative burden of data entry for participants and recipients, though the cost impact would likely be negligible.

• *Terminology changes and redefinitions.* These changes update program language to reflect constitutional terminology but do not alter administrative procedures or eligibility. The impact is purely semantic and is not expected to have any material cost impacts.

Quantified Costs: Information Collection Burden (Paperwork Reduction Act)

In addition to the above qualitative costs, the Department has quantified a portion of the expected compliance burdens as part of its Paperwork Reduction Act (PRA) package of the rule. These burdens represent the time and resources required to prepare, submit, and review program-related information.

| Requirement | Estimated cost burden | Timing |
|---|---|---|
| Certification narratives (firms) | $91.9 million | One-time. |
| UCP reevaluations | $3.4 million | One-time. |
| Interstate certification | $0.46 million | One-time. |
| Bidders' list reporting | $1.24 million | Annual. |
| ACDBE annual report | $0.58 million | Annual. |
| Goal setting (disparity studies) | $0.46 million (annual cost) | Every three years. |

These figures reflect fully loaded labor costs consistent with the Bureau of Labor Statistics data and DOT's standard methodology. One-time burdens primarily reflect transaction costs related to individualized certification requirements, while recurring burdens are associated with ongoing reporting and program administration. Overall, the IFR's primary quantified costs are transitional and one-time, totaling approximately $95 million, with recurring annualized burdens of about $1.8 million.

Benefits

With respect to benefits, the IFR will enhance constitutional compliance and reduce risks associated with constitutional litigation. It may also improve public trust by reinforcing fairness in eligibility determinations, which, although not easily quantifiable, represent important benefits from improved program integrity.

*B. Executive Order 14192 (''Unleashing Prosperity Through Deregulation'')*

This interim final rule is considered an E.O. 14219 deregulatory action because the unquantified cost-savings associated with constitutional compliance outweigh the quantified costs.

*C. Executive Order 13132 (''Federalism'')*

This IFR has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 (''Federalism''), and the rule satisfies the requirements of the Executive Order. While the rule may include provisions that impose substantial direct compliance costs on State and local governments, the Department has determined that consultation with State and local governments prior to promulgation of the rule is not practicable given the urgent need to cure constitutional infirmities with the existing DBE and ACDBE regulations. These changes are required not by statute, but to ensure that the DBE and ACDBE programs do not violate the U.S. Constitution. We seek comment from State and local governments on these burdens during the comment period for this IFR.

*D. Executive Order 13175 (''Consultation and Coordination With Indian Tribal Governments'')*

This rulemaking has been analyzed in accordance with the principles and criteria contained in Executive Order 13175 (''Consultation and Coordination with Indian Tribal Governments''). Because this rulemaking does not significantly or uniquely affect the communities of the Indian Tribal

governments or impose substantial direct compliance costs on them, the funding and consultation requirements of Executive Order 13175 do not apply.

*E. Unfunded Mandates Reform Act*

The Unfunded Mandates Reform Act (UMRA) of 1995 (Pub. L. 104–4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in expenditures by State, local, or tribal governments, in the aggregate, or by the private sector, of more than $100 million annually (adjusted annually for inflation with the base year of 1995). This rulemaking would not result in annual State expenditures exceeding the minimum threshold. The Department has determined that the requirements of the Title II of the Unfunded Mandates Reform Act of 1995 therefore do not apply to this rulemaking.

*F. National Environmental Policy Act*

The Department has analyzed the environmental impacts of this action pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 *et seq.*) and has determined that it is categorically excluded pursuant to DOT Order 5610.1D, available at *https://www.transportation.gov/mission/dots-procedures-considering-environmental-impacts.* Categorical exclusions are actions identified in an agency's NEPA implementing procedures that do not normally have a significant impact on the environment and therefore do not require either an environmental assessment (EA) or environmental impact statement (EIS). The purpose of this rulemaking is to amend the Department's DBE and ACDBE regulations. Section 9(f) of DOT Order 5610.1D states that a DOT Operating Administration can use the categorical exclusions developed by another Operating Administration. This action is covered by the categorical exclusion listed in the Federal Transit Administration's implementing procedures, ''[p]lanning and administrative activities that do not involve or lead directly to construction, such as: . . . promulgation of rules, regulations, directives . . .'' 23 CFR 771.118(c)(4). In analyzing the applicability of a categorical exclusion, the agency must also consider whether extraordinary circumstances are present that would warrant the preparation of an EA or EIS. The Department does not anticipate any environmental impacts, and there are no extraordinary circumstances present in connection with this rulemaking.

*G. Regulatory Flexibility Act*

The Regulatory Flexibility Act (RFA) of 1980 (5 U.S.C. 601 *et seq.*) requires agencies to evaluate the potential effects of their proposed and final rules on small businesses, small organizations, and small governmental jurisdictions. Whenever an agency is required by 5 U.S.C. 553, or any other law, to publish general notice of proposed rulemaking for any proposed rule, the agency must conduct and publish for public comment a regulatory flexibility analysis. Because the Department is not required to publish a proposed rulemaking for this action, an analysis under the RFA is not required.

*H. Paperwork Reduction Act*

The Paperwork Reduction Act (PRA) of 1995 (Pub. L. 104–13, 49 U.S.C. 3501, 3507) requires Federal agencies to obtain approval from the Office of Management and Budget (OMB) before undertaking a new collection of information imposed on ten or more persons, or continuing a collection previously approved by OMB that is set to expire.

This IFR modifies existing collection instruments in both parts 23 and 26. The following is a description of the sections that contain new and modified information collection requirements, along with the estimated hours and cost to fulfill them.

For purposes of estimating the cost burden on recipients, the State government wage rate was taken from the Bureau of Labor and Statistics (BLS) estimate of median wages for employees in the category of ''Eligibility Interviewer in Government Programs'' (OEWS Designation 43–4061). For the purpose of calculating loaded wage rates, these burden estimates assume wages represent 61.9 percent of total compensation, which is consistent with similar loaded wage rate estimates identified by BLS and used by DOT for related purposes. Because wages represent 61.9 percent of total compensation, the appropriate cost multiplier is 1.62 (1/0.619). Accordingly, the wage rate ($25.95) is multiplied by 1.62 to get a fully loaded hourly wage rate of $42.04 to account for the cost of employer-provided benefits.

For purposes of estimating the cost burden on applicant and certified DBE/ACDBE firms, the wage rate was taken from the BLS estimate of median wages for individuals in the category of ''Cross-industry, Private Ownership Only'' (OEWS Designation 00–0001). Using the same loaded wage rate identified above, the wage rate for DBE/ACDBE applicant firms ($69.20) is multiplied by 1.62 to get a fully loaded hourly wage rate of $112.10 to account for the cost of employer-provided benefits. The Department emphasizes that many of these hour and cost burdens are one-time burdens as a result of the change in the DBE certification eligibility requirements. After the initial transition to the new requirements, increases in annual burdens will be modest. For DOT recipients, reporting burdens are expected to decrease as a result of reduced DBE/ACDBE reporting requirements.

i. Reapplication Review for DBE/ACDBE Certification Based on Individualized Showing of Social Disadvantage

To satisfy the social and economic disadvantage (SED) requirement and ensure all determinations of disadvantage are not based in whole or in part on race or sex, an owner must provide the certifier a Personal Narrative (PN) that establishes the existence of disadvantage by a preponderance of the evidence based on individualized proof regarding specific instances of economic hardship, systemic barriers, and denied opportunities that impeded the owner's progress or success in education, employment, or business, including obtaining financing on terms available to similarly situated persons who did not face barriers in obtaining terms.

The PN must state how and to what extent the impediments caused the owner economic harm, including a full description of type and magnitude, and must establish the owner is economically disadvantaged in fact relative to similarly situated non-disadvantaged individuals.

The owner must attach to the PN a current personal net worth (PNW) statement and any other financial information the owner considers relevant. The total annual burden hours below were calculated based on the average of three stakeholder responses ranging from 240–2,000 hours. The total annual cost burden was calculated based on one stakeholder response of $80,000.

In preparing this estimate, DOT estimated a 10 percent decrease in the number of currently certified firms who will submit documentation to maintain their DBE/ACDBE decertification status. DOT also assumed a 50 percent reduction in the total burden hours compared to the pre-existing estimated burden for completing the full Uniform Certification Application (UCA), as firms will be able to use many of their other existing certification documents for resubmission.

*Respondents:* Firms seeking to maintain their DBE/ACDBE certification.
*Estimated Number of Respondents:* 41,000.
*Frequency:* One time per respondent.
*Total Annual Burden Hours:* 820,000 (one-time burden).
*Total Annual Cost Burden:* $91,922,000 (one-time burden).

ii. Unified Certification Program (UCP) Reevaluation of Applications for DBE/ACDBE Certification Based on Individualized Showing of Social Disadvantage

UCPs will need to reevaluate DBE/ACDBE applicant firms based on updated submission of application materials, including the PN and PNW statement. This estimate assumes an average burden of two hours to complete a review and make a disposition for each DBE/ACDBE certification application, including notifications to other jurisdictions.
*Respondents:* UCPs.
*Estimated Number of Respondents:* 53.
*Frequency:* One-time reevaluation of 41,000 applicant firms.
*Total Annual Burden Hours:* 82,000 (one-time burden).
*Total Annual Cost Burden:* $3,447,280 (one-time cost).

iii. Maintaining and Updating Bidders' Lists

We estimate that recipients will experience a reduced burden to implement 49 CFR 26.11 as a result of eliminating the race- and sex-based reporting requirements for bidders' lists, in addition to eliminating the requirement to report data related to applications for and determinations of individualized social and economic disadvantage.
*Respondents:* FAA, FHWA, and FTA funding recipients.
*Estimated Number of Respondents:* 1,639.
*Frequency:* 3 times per year.
*Total Annual Burden Hours:* 29,502.
*Total Annual Cost Burden:* $1,240,264.

iv. ACDBE Annual Report of Percentages of ACDBEs in Various Categories

We estimate that FAA airport recipients will experience a reduced burden to implement 49 CFR 26.11 as a result of eliminating the race- and sex-based reporting requirements for bidders' lists, in addition to eliminating the requirement to report data related to applications for and determinations of individualized social and economic disadvantage.
*Respondents:* State Departments of Transportation, District of Columbia, U.S. Virgin Islands, and Puerto Rico.
*Estimated Number of Respondents:* 53.
*Frequency:* Once per year.
*Total Annual Burden Hours:* 13,780.
*Total Annual Cost Burden:* $579,311.

v. Setting Overall Goals for DBE Participation in DOT-Assisted Contracts

The Department estimates a modest increase in burden for setting overall DBE goals as a result of the transition to the new DBE certification requirements and enhanced expectations related to disparity studies used in setting overall goals. These changes may result in increases in the amount of time for recipients to set goals based on the relative availability of certified DBEs.
*Respondents:* DOT funding recipients.
*Estimated Number of Respondents:* 1,639.
*Frequency:* Once every three years.
*Total Annual Burden Hours:* 10,927.
*Total Annual Cost Burden:* $459,371.

vi. Providing Evidence of Certification to an Additional State When a Firm Certified in Its Home State Applies to Another State for Certification (Interstate Certification)

The Department estimates a one-time increase in the burden for firms to provide evidence of certification to an additional State when a firm certified in its home State applies to another State for certification.
*Respondents:* DBE/ACDBE firms applying for interstate certification.
*Estimated Number of Respondents:* 4,100.
*Frequency:* Once.
*Total Annual Burden Hours:* 4,100.
*Total Annual Cost Burden:* $459,610 (one-time cost).

As noted in the Costs and Benefits section of this analysis, these burden hour and cost estimates have been incorporated into the Department's overall assessment of regulatory costs.

Notwithstanding any other provision of law, no person is required to respond to a collection of information unless that collection displays a valid OMB control number.

*I. Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. DOT will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States. This rule does not constitute a major rule as defined in 5 U.S.C. 804(2).

**List of Subjects in 49 CFR Parts 23 and 26**

Administrative practice and procedure, Airports, Civil rights, Government contracts, Grant programs—transportation, Mass transportation, Minority businesses, Reporting and recordkeeping requirements.

**Sean P. Duffy,**
*Secretary of Transportation.*

For the reasons stated in the preamble, the Department of Transportation amends 49 CFR parts 23 and 26 as follows:

## PART 23—PARTICIPATION OF DISADVANTAGED BUSINESS ENTERPRISE IN AIRPORT CONCESSIONS

■ 1. The authority for part 23 continues to read as follows:

**Authority:** 49 U.S.C. 47107 and 47113; 42 U.S.C. 2000d; 49 U.S.C. 322; E.O. 12138, 44 FR 29637, 3 CFR, 1979 Comp., p. 393.

■ 2. Amend § 23.1 by revising paragraph (c) to read as follows:

**§ 23.1 What are the objectives of this part?**

* * * * *

(c) To ensure that the Department's ACDBE program operates in a nondiscriminatory manner and without regard to race or sex, while maximizing efficiency of service;

* * * * *

■ 3. Amend § 23.3 as follows:
■ a. Add definitions for ACDBE-conscious and ACDBE-neutral in alphabetical order;
■ b. Remove the definitions of Race-conscious and Race-neutral; and
■ c. Revise the definition of Socially and economically disadvantaged individual.

The additions and revisions read as follows:

**§ 23.3 What do the terms used in this part mean?**

*ACDBE-conscious* measure or program is one that is focused specifically on assisting only ACDBEs.

*ACDBE-neutral* measure or program is one that is, or can be, used to assist all small business concerns.

* * * * *

*Socially and economically disadvantaged individual* means any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who a certifier finds to be socially and economically

disadvantaged on a case-by-case basis. A determination that an individual is socially and economically disadvantaged must not be based in whole or in part on race or sex. For that reason, applicants may qualify as socially and economically disadvantaged only if they can meet the relevant criteria described in § 26.67.

* * * * *

■ 4. Amend § 23.25 as follows:
■ a. Revise the introductory text of paragraphs (d) and (e); and
■ b. Add paragraph (h).

The revisions read as follows:

**§ 23.25 What measures must recipients include in their ACDBE programs to ensure nondiscriminatory participation of ACDBEs in concessions?**

* * * * *

(d) Your ACDBE program must include ACDBE-neutral measures that you will take. You must maximize the use of ACDBE-neutral measures, obtaining as much as possible of the ACDBE participation needed to meet overall goals through such measures. These are responsibilities that you directly undertake as a recipient, in addition to the efforts that concessionaires make, to obtain ACDBE participation. The following are examples of ACDBE-neutral measures you can implement:

* * * * *

(e) Your ACDBE program must also provide for the use of ACDBE-conscious measures when ACDBE-neutral measures, standing alone, are not projected to be sufficient to meet an overall goal. The following are examples of ACDBE-conscious measures you can implement:

* * * * *

(h) Effective October 3, 2025, you may not use any of the measures described in paragraph (e) of this section until the UCP that covers you has completed the reevaluation process described in § 23.81.

■ 5. Amend § 23.26 by revising paragraphs (b) introductory text, (b)(1), (d)(5), and (e) to read as follows:

**§ 23.26 Fostering small business participation.**

* * * * *

(b) This element must be submitted to the FAA for approval as a part of your ACDBE program. As part of this program element, you may include, but are not limited to including, the following strategies:

(1) Establish an ACDBE-neutral small business set-aside for certain concession opportunities. Such a strategy would include the rationale for selecting small business set-aside concession opportunities that may include consideration of size and availability of small businesses to operate the concession.

* * * * *

(d) * * *

(5) You will take aggressive steps to encourage those socially and economically disadvantaged firms eligible for ACDBE certification to become certified; and

* * * * *

(e) A State, local, or other program, in which eligibility requires satisfaction of race, sex, or other criteria in addition to business size, may not be used to comply with the requirements of this part.

* * * * *

**§ 23.27 [Amended]**

■ 6. Amend § 23.27 as follows:
■ a. Remove paragraph (c)(2)(iv);
■ b. Redesignate paragraphs (c)(2)(v), (c)(2)(vi), and (c)(2)(vii) as paragraphs (c)(2)(iv), (c)(2)(v), and (c)(2)(vi), respectively;
■ c. Remove paragraph (d)(1);
■ d. Redesignate subparagraphs (d)(2), (d)(3), and (d)(4) as paragraphs (d)(1), (d)(2), and (d)(3), respectively; and
■ e. Remove paragraphs (d)(5) and (d)(6).

■ 7. Amend § 23.41 by revising paragraph (d) to read as follows:

**§ 23.41 What is the basic overall goal requirement for recipients?**

* * * * *

(d) Effective October 3, 2025, you are not required to update your overall goals until the UCP that covers you has completed the reevaluation process described in § 23.81.

* * * * *

■ 8. Amend § 23.43 by revising paragraph (b) to read as follows:

**§ 23.43 What are the consultation requirements in the development of recipients' overall goals?**

* * * * *

(b) Stakeholders with whom you must consult include, but are not limited to, business groups, community organizations, trade associations representing concessionaires currently located at the airport, as well as existing concessionaires themselves, and other officials or organizations that could be expected to have information concerning the availability of disadvantaged businesses and the recipient's efforts to increase participation of ACDBEs.

* * * * *

■ 9. Amend § 23.45 by revising paragraphs (f), (g), and (h) to read as follows:

**§ 23.45 What are the requirements for submitting overall goal information to the FAA?**

* * * * *

(f) Your submission must include your projection of the portions of your overall goals you propose to meet through use of ACDBE-neutral and ACDBE-conscious means, respectively, and the basis for making this projection (see § 23.51(d)(5)).

(g) FAA may approve or disapprove the way you calculated your goal, including your ACDBE-neutral/ACDBE-conscious ''split,'' as part of its review of your plan or goal submission. Except as provided in paragraph (h) of this section, the FAA does not approve or disapprove the goal itself (*i.e.,* the number).

(h) If the FAA determines that your goals have not been correctly calculated or the justification is inadequate, the FAA may, after consulting with you, adjust your overall goal or ACDBE-neutral/ACDBE-conscious ''split.'' The adjusted goal represents the FAA's determination of an appropriate overall goal for ACDBE participation in the recipient's concession program, based on relevant data and analysis. The adjusted goal is binding.

* * * * *

■ 10. Amend § 23.51 as follows:
■ a. Revise the introductory text of paragraph (a);
■ b. Revise paragraph (a)(2);
■ c. Revise paragraph (c)(3); and
■ d. Revise paragraph (d)(5).

The revisions read as follows:

**§ 23.51 How are a recipient's overall goals expressed and calculated?**

(a) Your objective in setting a goal is to estimate the percentage of the base calculated under §§ 23.47 through 23.49 that would be performed by ACDBEs in the absence of social and economic disadvantage and its effects.

* * * * *

(2) In conducting this goal setting process, you are determining the extent, if any, to which the firms in your market area have been impacted by social and economic disadvantage in connection with concession opportunities or related business opportunities.

* * * * *

(c) * * *

(3) Use data from a disparity study. Use a percentage figure derived from data in a valid, applicable disparity study. Any disparity study utilized must

provide a detailed capacity analysis, including the methodology used.

* * * * *

(d) * * *

(5) Among the information you submit with your overall goal (see § 23.45(e)), you must include description of the methodology you used to establish the goal, including your base figure and the evidence with which it was calculated, as well as the adjustments you made to the base figure and the evidence relied on for the adjustments. You should also include a summary listing of the relevant available evidence in your jurisdiction and an explanation of how you used that evidence to adjust your base figure. You must also include your projection of the portions of the overall goal you expect to meet through ACDBE-neutral and ACDBE-conscious measures, respectively (see §§ 26.51(c) of this chapter).

* * * * *

■ 11. Amend § 23.53 by adding paragraph (g) to read as follows:

**§ 23.53 How do car rental companies count ACDBE participation toward their goals?**

* * * * *

(g) Effective October 3, 2025, you as a car rental company may not count any ACDBE participation toward the goal that an airport has set for you until the UCP covering that airport has completed the reevaluation process described in part 26, § 23.81

■ 12. Amend § 23.55 by adding paragraph (m) to read as follows:

**§ 23.55 How do recipients count ACDBE participation toward goals for items other than car rentals?**

* * * * *

(m) Effective October 3, 2025, you may not count any ACDBE participation toward ACDBE goals until the UCP covering you has completed the reevaluation process described in § 23.81.

■ 13. Amend § 23.57 as follows:

■ a. Revise paragraphs (b)(4) and (c); and

■ b. Add paragraph (d).

The revision and addition read as follows:

**§ 23.57 What happens if a recipient falls short of meeting its overall goals?**

* * * * *

(b) * * *

(4) The FAA may impose conditions on the recipient as part of its approval of the recipient's analysis and corrective actions including, but not limited to, modifications to your overall goal methodology, changes in your ACDBE-neutral/ACDBE-conscious split, or the introduction of additional ACDBE-neutral or ACDBE-conscious measures.

* * * * *

(c) If information coming to the attention of FAA demonstrates that current trends make it unlikely that you, as an airport, will achieve ACDBE awards and commitments that would be necessary to allow you to meet your overall goal at the end of the fiscal year, FAA may require you to make further good faith efforts, such as modifying your ACDBE-conscious/ACDBE-neutral split or introducing additional ACDBE-neutral or ACDBE-conscious measures for the remainder of the fiscal year.

(d) Effective October 3, 2025, you are not subject to this section until the UCP that covers you has completed the reevaluation process described in § 23.81.

■ 14. Add § 23.81 to subpart E to read as follows:

**§ 23.81 ACDBE reevaluation process.**

(a) Effective October 3, 2025, each UCP must:

(1) Identify each currently certified ACDBE;

(2) Provide each firm identified pursuant to paragraph (a)(1) of this section with the opportunity to submit documentation demonstrating its ACDBE eligibility under the standards set forth in this part;

(3) Determine whether each firm identified pursuant to paragraph (a)(1) of this section meets the ACDBE eligibility standards set forth in this part; and

(4) Issue a written decision to each firm reevaluated pursuant to subparagraph (a)(3), indicating that it has either been recertified or is decertified.

(b) The provisions of § 26.87 of this chapter shall not apply to any action taken pursuant to paragraph (a) of this section.

(c) Each UCP must reevaluate each firm identified pursuant to paragraph (a)(1) of this section as quickly as practicable and must promptly notify the Department when it has done so. The Department reserves the right to review a UCP's reevaluation process.

## PART 26—PARTICIPATION BY DISADVANTAGED BUSINESS ENTERPRISES IN DEPARTMENT OF TRANSPORTATION FINANCIAL ASSISTANCE PROGRAMS

■ 15. The authority for part 26 continues to read as follows:

**Authority:** 23 U.S.C. 304 and 324; 42 U.S.C. 2000d, *et seq.;* 49 U.S.C. 47113, 47123; Sec. 1101(b), Pub. L. 114–94, 129 Stat. 1312, 1324 (23 U.S.C. 101 note); Sec. 150, Pub. L. 115–254, 132 Stat. 3215 (23 U.S.C. 101 note); Pub. L. 117–58, 135 Stat. 429 (23 U.S.C. 101 note).

■ 16. Amend § 26.1 by revising paragraph (c) to read as follows:

**§ 26.1 What are the objectives of this part?**

* * * * *

(c) To ensure that the Department's DBE program operates in a nondiscriminatory manner and without regard to race or sex, while maximizing efficiency of service;

* * * * *

■ 17. Amend § 26.5 as follows:

■ a. Add definitions for DBE-conscious and DBE-neutral in alphabetical order;

■ b. Remove the definitions of Race-conscious and Race-neutral; and

■ c. Revise the definition of Socially and economically disadvantaged individual.

The addition and revision read as follows:

**§ 26.5 Definitions.**

* * * * *

*DBE-conscious* measure or program is one that is focused specifically on assisting only DBEs.

*DBE-neutral* measure or program is one that is, or can be, used to assist all small businesses.

* * * * *

*Socially and economically disadvantaged individual* means any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who a certifier finds to be socially and economically disadvantaged on a case-by-case basis. A determination that an individual is socially and economically disadvantaged must not be based in whole or in part on race or sex. For that reason, all applicants shall qualify as socially and economically disadvantaged if they can meet the relevant criteria described in § 26.67. Being born in a particular country does not, standing alone, mean that a person is necessarily socially and economically disadvantaged.

* * * * *

**§ 26.11 [Amended]**

■ 18. Amend § 26.11 as follows:

■ a. Remove paragraph (c)(2)(iv);

■ b. Redesignate paragraphs (c)(2)(v), (c)(2)(vi), and (c)(2)(vii) as subparagraphs (c)(2)(iv), (c)(2)(v), and (c)(2)(vi), respectively;

■ c. Remove paragraph (e)(1);

■ d. Redesignateparagraphs (e)(2), (e)(3), and (e)(4) as paragraphs (e)(1), (e)(2), and (e)(3), respectively; and

■ e. Remove paragraphs (e)(5) and (e)(6).

■ 19. Amend § 26.37 by revising paragraph (b) to read as follows:

**§ 26.37 What are a recipient's responsibilities for monitoring?**

* * * * *

(b) A recipient's DBE program must also include a monitoring and enforcement mechanism to ensure that work committed, or in the case of DBE-neutral participation, the work subcontracted, to all DBEs at contract award or subsequently is performed by the DBEs to which the work was committed or subcontracted to, and such work is counted according to the requirements of § 26.55. This mechanism must include a written verification that you have reviewed contracting records and monitored the work site to ensure the counting of each DBE's participation is consistent with its function on the contract. The monitoring to which this paragraph (b) refers may be conducted in conjunction with monitoring of contract performance for other purposes such as a commercially useful function review.

* * * * *

■ 20. Amend § 26.39 by revising paragraphs (b)(1) and (b)(5) to read as follows:

**§ 26.39 Fostering small business participation.**

* * * * *

(b) * * *

(1) Establishing a DBE-neutral small business set-aside for prime contracts under a stated amount (*e.g.,* $1 million).

* * * * *

(5) To meet the portion of your overall goal you project to meet through DBE-neutral measures, ensuring that a reasonable number of prime contracts are of a size that small businesses, including DBEs, can reasonably perform.

* * * * *

■ 21. Amend § 26.45 as follows:
■ a. Revise paragraph (a)(2);
■ b. Revise paragraph (b);
■ c. Revise paragraph (c)(3);
■ d. Revise paragraph (d)(1)(ii);
■ e. Revise paragraph (d)(3);
■ f. Revise paragraph (f)(3);
■ g. Revise paragraph (g)(1); and
■ h. Revise paragraph (h);

The revisions read as follows:

**§ 26.45 How do recipients set overall goals?**

(a) * * *

(2) If you are an FTA Tier II recipient who intends to operate a DBE-neutral program, or if you are an FAA recipient who reasonably anticipates awarding $250,000 or less in FAA prime contract funds in a Federal fiscal year, you are not required to develop overall goals for FTA or FAA, respectively, for that Federal fiscal year.

(b) Your overall goal must be based on demonstrable evidence of the availability of ready, willing, and able DBEs relative to all businesses ready, willing, and able to participate on your DOT-assisted contracts (hereafter, the ''relative availability of DBEs''). The goal must reflect your determination of the level of DBE participation you would expect absent the effects of social and economic disadvantage. You cannot simply rely on either the 10 percent national goal, your previous overall goal, or past DBE participation rates in your program without reference to the relative availability of DBEs in your market.

(c) * * *

(3) Use data from a disparity study. Use a percentage figure derived from data in a valid, applicable disparity study. Any disparity study utilized must provide a detailed capacity analysis, including the methodology used.

* * * * *

(d) * * *

(1) * * *

(ii) Evidence from disparity studies conducted anywhere within your jurisdiction, to the extent it is not already accounted for in your base figure. To the extent that the disparity study provides a detailed capacity analysis, include the methodology used;

* * * * *

(3) If you attempt to make an adjustment to your base figure to account for the effects of an ongoing DBE program, the adjustment must be based on demonstrable evidence that is logically and directly related to the effect for which the adjustment is sought.

* * * * *

(f) * * *

(3) You must include with your overall goal submission a description of the methodology you used to establish the goal, including your base figure and the evidence with which it was calculated, and the adjustments you made to the base figure and the evidence you relied on for the adjustments. You should also include a summary listing of the relevant available evidence in your jurisdiction and, where applicable, an explanation of why you did not use that evidence to adjust your base figure. You must also include your projection of the portions of the overall goal you expect to meet through DBE-neutral and DBE-conscious measures, respectively (*see* § 26.51(c)).

* * * * *

(g)(1) In establishing an overall goal, you must provide for consultation and publication. This includes:

(i) Consultation with general contractor groups, community organizations, and other officials or organizations that could be expected to have information concerning the availability of disadvantaged and non-disadvantaged businesses and your efforts to establish a level playing field for the participation of DBEs. The consultation must include a scheduled, direct, interactive exchange (*e.g.,* a face-to-face meeting, video conference, teleconference) with as many interested stakeholders as possible focused on obtaining information relevant to the goal setting process, and it must occur before you are required to submit your methodology to the operating administration for review pursuant to paragraph (f) of this section. You must document in your goal submission the consultation process you engaged in. Notwithstanding paragraph (f)(4) of this section, you may not implement your proposed goal until you have complied with this requirement.

(ii) A published notice announcing your proposed overall goal before submission to the operating administration on August 1st. The notice must be posted on your official internet website and may be posted in any other sources (*e.g.,* trade association publications). If the proposed goal changes following review by the operating administration, the revised goal must be posted on your official internet website.

* * * * *

(h) Effective October 3, 2025you are not required to update your overall goals until the UCP that covers you has completed the reevaluation process described in § 26.111.

■ 22. Amend § 26.47 as follows:
■ a. Revise paragraph (c)(4);
■ b. Revise paragraph (d); and
■ c. Add paragraph (e).

**§ 26.47 Can recipients be penalized for failing to meet overall goals?**

* * * * *

(c) * * *

(4) FHWA, FTA, or FAA may impose conditions on the recipient as part of its approval of the recipient's analysis and corrective actions including, but not limited to, modifications to your overall goal methodology, changes in your DBE-conscious/DBE-neutral split, or the introduction of additional DBE-neutral or DBE-conscious measures.

* * * * *

(d) If, as recipient, your Uniform Report of DBE Awards or Commitments and Payments or other information coming to the attention of FTA, FHWA, or FAA, demonstrates that current

trends make it unlikely that you will achieve DBE awards and commitments that would be necessary to allow you to meet your overall goal at the end of the fiscal year, FHWA, FTA, or FAA, as applicable, may require you to make further good faith efforts, such as by modifying your DBE-conscious/DBE-neutral or introducing additional DBE-neutral or DBE-conscious measures for the remainder of the fiscal year.

(e) Effective October 3, 2025, you are not subject to this section until the UCP that covers you has completed the reevaluation process described in § 26.111.

■ 23. Amend § 26.51 as follows:
■ a. Revise paragraph (a);
■ b. Revise the introductory text to paragraph (b);
■ c. Revise paragraph (c);
■ d. Revise paragraph (d);
■ e. Revise paragraph (e)(2);
■ f. Revise paragraph (f);
■ g. Revise paragraph (g); and
■ h. Add paragraph (h).

The revisions read as follows:

**§ 26.51 What means do recipients use to meet overall goals?**

(a) You must meet the maximum feasible portion of your overall goal by using DBE-neutral means of facilitating DBE-neutral participation. DBE-neutral participation includes any time a DBE wins a prime contract through customary competitive procurement procedures or is awarded a subcontract on a prime contract that does not carry a DBE contract goal.

(b) DBE-neutral means include, but are not limited to, the following:

* * * * *

(c) Each time you submit your overall goal for review by the concerned operating administration, you must also submit your projection of the portion of the goal that you expect to meet through DBE-neutral means and your basis for that projection. This projection is subject to approval by the concerned operating administration, in conjunction with its review of your overall goal.

(d) You must establish contract goals to meet any portion of your overall goal you do not project being able to meet using DBE-neutral means.

* * * * *

(e) * * *

(2) You are not required to set a contract goal on every DOT-assisted contract. You are not required to set each contract goal at the same percentage level as the overall goal. The goal for a specific contract may be higher or lower than that percentage level of the overall goal, depending on such factors as the type of work involved, the location of the work, and the availability of DBEs for the work of the particular contract. However, over the period covered by your overall goal, you must set contract goals so that they will cumulatively result in meeting any portion of your overall goal you do not project being able to meet through the use of DBE-neutral means.

* * * * *

(f) To ensure that your DBE program continues to be narrowly tailored to overcome the effects of social and economic disadvantage, you must adjust your use of contract goals as follows:

(1) If your approved projection under paragraph (c) of this section estimates that you can meet your entire overall goal for a given year through DBE-neutral means, you must implement your program without setting contract goals during that year, unless it becomes necessary in order meet your overall goal.

*Example 1 to paragraph (f)(1):* Your overall goal for Year I is 12 percent. You estimate that you can obtain 12 percent or more DBE participation through DBE-neutral measures, without any use of contract goals. In this case, you do not set any contract goals for the contracts that will be performed in Year I. However, if part way through Year I, your DBE awards or commitments are not at a level that would permit you to achieve your overall goal for Year I, you could begin setting DBE-conscious contract goals during the remainder of the year as part of your obligation to implement your program in good faith.

(2) If, during any year in which you are using contract goals, you determine that you will exceed your overall goal, you must reduce or eliminate the use of contract goals to the extent necessary to ensure that the use of contract goals does not result in exceeding the overall goal. If you determine that you will fall short of your overall goal, then you must make appropriate modifications in your use of DBE-neutral or DBE-conscious measures to allow you to meet the overall goal.

*Example 2 to paragraph (f)(2):* In Year II, your overall goal is 12 percent. You have estimated that you can obtain 5 percent DBE participation through use of DBE-neutral measures. You therefore plan to obtain the remaining 7 percent participation through use of DBE goals. By September, you have already obtained 11 percent DBE participation for the year. For contracts let during the remainder of the year, you use contract goals only to the extent necessary to obtain an additional one percent DBE participation. However, if you determine in September that your participation for the year is likely to be only 8 percent total, then you would increase your use of DBE-neutral or DBE-conscious means during the remainder of the year in order to achieve your overall goal.

(3) If the DBE participation you have obtained by DBE-neutral means alone meets or exceeds your overall goals for two consecutive years, you are not required to make a projection of the amount of your goal you can meet using such means in the next year. You do not set contract goals on any contracts in the next year. You continue using only DBE-neutral means to meet your overall goals unless and until you do not meet your overall goal for a year.

*Example 3 to paragraph (f)(3):* Your overall goal for Years I and Year II is 10 percent. The DBE participation you obtain through DBE-neutral measures alone is 10 percent or more in each year. (For this purpose, it does not matter whether you obtained additional DBE participation through using contract goals in these years.) In Year III and following years, you do not need to make a projection under paragraph (c) of this section of the portion of your overall goal you expect to meet using DBE-neutral means. You simply use DBE-neutral means to achieve your overall goals. However, if in Year VI your DBE participation falls short of your overall goal, then you must make a paragraph (c) of this section projection for Year VII and, if necessary, resume use of contract goals in that year.

(4) If you obtain DBE participation that exceeds your overall goal in two consecutive years using contract goals (*i.e.,* not through DBE-neutral means alone), you must reduce your use of contract goals proportionately in the following year.

*Example 4 to paragraph (f)(4):* In Years I and II, your overall goal is 12 percent, and you obtain 14 and 16 percent DBE participation, respectively. You have exceeded your goals over the two-year period by an average of 25 percent. In Year III, your overall goal is again 12 percent, and your paragraph (c) of this section projection estimates that you will obtain 4 percent DBE participation through DBE-neutral means and 8 percent through contract goals. You then reduce the contract goal projection by 25 percent (*i.e.,* from 8 to 6 percent) and set contract goals accordingly during the year. If in Year III you obtain 11 percent participation, you do not use this contract goal adjustment mechanism for Year IV, because there have not been two consecutive years of exceeding overall goals.

(g) In any year in which you project meeting part of your goal through DBE-neutral means and the remainder through contract goals, you must maintain data separately on DBE achievements in those contracts with and without contract goals, respectively. You must report this data to the concerned operating administration as provided in § 26.11.

(h) Effective October 3, 2025, you may not set any contract goals until the UCP that covers you has completed the reevaluation process described in § 26.111.

■ 24. Amend § 26.55 by adding paragraph (i) to read as follows:

**§ 26.55 How is DBE participation counted toward goals?**

* * * * *

(i) Effective October 3, 2025, you may not count any DBE participation toward DBE goals until the UCP that covers you has completed the reevaluation process described in § 26.111.

■ 25. Amend § 26.61 by revising paragraph (b) to read as follows:

**§ 26.61 Burden of proof.**

* * * * *

(b) The firm has the burden of demonstrating, by a preponderance of the evidence, *i.e.,* more likely than not, that it satisfies all of the requirements in this subpart. In determining whether the firm has met its burden, the certifier must consider all the information in the record, viewed as a whole. In a decertification proceeding the certifier bears the burden of proving, by a preponderance of the evidence, that the firm is no longer eligible for certification under the rules of this part.

■ 26. Revise § 26.67 to read as follows:

**§ 26.67 Social and economic disadvantage.**

(a) Non-presumptive Disadvantage. All applicants must demonstrate social and economic disadvantage (SED) affirmatively based on their own experiences and circumstances within American society, and without regard to race or sex.

(1) To satisfy the SED requirement and ensure all determinations of disadvantage are not based in whole or in part on race or sex, an owner must provide the certifier a Personal Narrative (PN) that establishes the existence of disadvantage by a preponderance of the evidence based on individualized proof regarding specific instances of economic hardship, systemic barriers, and denied opportunities that impeded the owner's progress or success in education, employment, or business, including obtaining financing on terms available to similarly situated, non-disadvantaged persons.

(2) The PN must state how and to what extent the impediments caused the owner economic harm, including a full description of type and magnitude, and must establish the owner is economically disadvantaged in fact relative to similarly situated non-disadvantaged individuals.

(3) The owner must attach to the PN a current PNW statement and any other financial information he considers relevant.

■ 27. Add § 26.111 to subpart F to read as follows:

**§ 26.111 DBE Reevaluation Process.**

(a) Effective October 3, 2025, each UCP must:

(1) Identify each currently certified DBE;

(2) Provide each firm identified pursuant to subparagraph (a)(1) with the opportunity to submit documentation demonstrating its DBE eligibility under the standards set forth in this part;

(3) Determine whether each firm identified pursuant to subparagraph (a)(1) meets the DBE eligibility standards set forth in this part; and

(4) Issue a written decision to each firm reevaluated pursuant to subparagraph (a)(3), indicating that it has either been recertified or is decertified.

(b) The provisions of § 26.87 of this part shall not apply to any action taken pursuant to paragraph (a).

(c) Each UCP must reevaluate each firm identified pursuant to subparagraph (a)(1) as quickly as practicable and must promptly notify the Department when it has done so. The Department reserves the right to review a UCP's reevaluation process.

[FR Doc. 2025–19460 Filed 10–2–25; 8:45 am]

**BILLING CODE 4910–9X–P**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

### 50 CFR Parts 600 and 622

**[Docket No. 250915–0853]**

**RIN 0648–BM94**

## Fisheries of the Caribbean, Gulf of America, and South Atlantic; Fishery Management Plans of Puerto Rico, St. Croix, and St. Thomas and St. John; Amendment 2

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Final rule.

**SUMMARY:** NMFS issues regulations to implement management measures described in Amendment 2 to the Fishery Management Plans (FMPs) for Puerto Rico, St. Croix, St. Thomas and St. John FMP (Amendment 2), as prepared by the Caribbean Fishery Management Council (Council). This final rule prohibits and restricts the use of certain net gear in U.S. Caribbean Federal waters and requires a descending device to be available and ready for use on vessels when fishing for federally managed reef fish species in U.S. Caribbean Federal waters. The purpose of this final rule and Amendment 2 is to protect habitats and species from the potential negative impacts associated with the use of certain net gear and to enhance the survival of released reef fish in U.S. Caribbean Federal waters.

**DATES:** This final rule is effective November 3, 2025, except for the revisions for §§ 622.437(a)(4), 622.477(a)(4), and 622.512(a)(4), which are effective April 1, 2026.

**ADDRESSES:** Electronic copies of Amendment 2, which includes a fishery impact statement, an environmental assessment, a regulatory impact review, and a Regulatory Flexibility Act (RFA) analysis, may be obtained from the Southeast Regional Office website at *https://www.fisheries.noaa.gov/action/amendment-2-puerto-rico-st-croix-and-st-thomas-and-st-john-fishery-management-plans-trawl.*

**FOR FURTHER INFORMATION CONTACT:** Maria Lopez-Mercer, NMFS Southeast Regional Office, 727–824–5305, *maria.lopez@noaa.gov.*

**SUPPLEMENTARY INFORMATION:** NMFS, with the advice of the Council, manages the Puerto Rico, St. Croix, and St. Thomas and St. John fisheries in U.S. Caribbean Federal waters under the Puerto Rico, St. Croix, and St. Thomas and St. John FMPs. The Council prepared the FMPs, which the Secretary of Commerce approved, and NMFS implements the FMPs through regulations at 50 CFR parts 600 and 622 under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

On August 27, 2024, NMFS published a notice of availability for Amendment 2 and requested public comment (89 FR 68572). On September 30, 2024, NMFS published a proposed rule for Amendment 2 and requested public comment (89 FR 79492). NMFS

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**Florida Department of Transportation**

RON DESANTIS
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JARED W. PERDUE, P.E.
SECRETARY

November 20, 2025

ATTN: Important Changes to Business Certification Programs

Dear Modal Partners:

The purpose of this letter is to inform Florida's modal partners of recent changes in both state and federal law to reduce discriminatory practices included within the U.S. Department of Transportation's (USDOT) Disadvantaged Business Enterprise (DBE) and Airport Concession Disadvantaged Business Enterprise (ACDBE) programs.

As expressed in FDOT's response to USDOT's Request for Information (RFI) titled "Advancing a Surface Transportation Proposal that Focuses on America's Most Fundamental Infrastructure Needs", published in the Federal Register on July 21, 2025, Florida firmly believes the DBE and ACDBE programs must be repealed entirely and replaced with a program whose primary purpose is advocating for improving economic competitiveness and small business development.

Last month, USDOT issued an Interim Final Rule concerning its DBE and ACDBE programs, effectively removing the presumption based on race and sex with a focus on economic disadvantage for certification. These rules are in addition to FDOT's repeal of references to these programs in Florida Law, replacing discriminatory requirements with a state-led program focused on small business development, regardless of someone's race or sex.

Accordingly, we have notified all Florida-based federally funded transportation entities of these changes. In this notification, FDOT provided a copy of the most recent USDOT guidance and Interim Final Rule. While FDOT continues to work with USDOT to transition the state entirely away from DBE and ACDBE programs, all authorities were reminded of the requirement to follow the new federal rules.

Separately, FDOT will launch a new state-led small business development program through the FDOT Business Growth and Engagement Office next year which will focus on economic competitiveness and small business development over any discriminatory methodology. Additional information will be provided in the months ahead including:

- Technical assistance on how to do business with FDOT
- Guidance on obtaining FDOT business certifications
- Business networking opportunities
- Additional resources to support business growth
- Setting performance goals to spur small business growth

In the interim, if you become aware of a federally-funded transportation entity that is not in compliance with the new federal protections against discriminatory contracting practices, you are encouraged to notify the department at bge.office@dot.state.fl.us. Upon receipt, FDOT will notify the

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entity of the requirements of Federal law and further refer such complaint to the appropriate Federal authority.

Should you have any questions about these changes, please feel free to contact us at bge.office@dot.state.fl.us or 850-414-4747.

We thank you for your continued efforts to reduce congestion and prioritize the movement of our state's supply chain.

Sincerely,

Signed by:
Dan Fitz-Patrick
EBCEDD8913E6488...

Dan Fitz-Patrick
Chief Strategy Officer, Assistant Secretary

# GENERAL PROVISIONS

# SECTION 1A
# SUPPLEMENTAL GENERAL PROVISIONS

The following Supplemental General Provisions are included to supplement the Part I General Provisions as required by the FAA AC 150/5370-10, latest edition. If there is a conflict between the FAA Standard General Provisions and other provisions, the FAA Standard will prevail, unless the other provisions are more strict and required by local ordinances.

## SECTION 10 DEFINITION OF TERMS

**10-50a RESIDENT PROJECT REPRESENTATIVE.** An authorized representative of the Engineer assigned to make all necessary observations and/or tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor in the execution of this contract. The Resident Project Representative (RPR) is the Engineer's agent, will act as directed by and under the supervision of the Engineer, and will confer with the Engineer regarding his/her actions. The RPR's dealings in matters pertaining to the on-site work shall, in general, be only with Engineer and Contractor. Written communications with Owner will be through or as directed by the Engineer.

## SECTION 20 PROPOSAL REQUIREMENTS AND CONDITIONS

**Supplement to Paragraph 20-9 IRREGULAR PROPOSALS.** Proposals shall be considered irregular for any of the reasons stated in paragraph 20-08, and if the proposal is "nonresponsive" with respect to the requirements of Executive Order 11246 and 49 CFR Part 23.

**Supplement to Paragraph 20-14 DISQUALIFICATION OF BIDDERS.**

A bidder shall be disqualified for any of the reasons stated in paragraph 20-14, as well as the following:

(d) Lack of responsibility as shown by past work judged from the standpoint of workmanship and/or performance as determined by the Owner;

(e) Lack of competency, as revealed by inability to produce valid license as required by law;

(f) Uncompleted work for which the bidder is committed by contract, which, in the judgment of the Owner, might hinder or prevent the prompt completion of work under this contract if awarded to such bidder; and

(g) Being in arrears on any of his existing contracts with the Owner or in litigation with the Owner resulting from having defaulted on a previous contract with the Owner.

## SECTION 30 AWARD AND EXECUTION OF CONTRACT

**Supplement to Paragraph 30-2 AWARD OF CONTRACT.** Award of the contract may be subject to the availability of FAA/FDOT AIP/PTGA funds, and will be made after the necessary determinations of the responsibility of the low bidders have been made. Upon approval by the Federal Aviation Administration and based on the recommendations of the Engineer, contract award notification will be made.

**Supplement to Paragraph 30-05 REQUIREMENTS OF CONTRACT BONDS.** For all contracts, separate performance and payment bonds shall each be in a sum equal to the full amount of the contract awarded. The bond shall be written through a company licensed to do business in the State of Florida and meeting the following requirements, ***in addition to local ordinances***.

(a) **Qualifications - Management and Strength**

(1) The surety must be rated no less than "A" as to ~~management~~ ***Financial Strength*** and no less than ***"IX" as to Financial Size***, ~~strength~~ by the latest edition of Best's Insurance Guide, published by Alfred M. Best Company, Inc., 75 Fulton St., New York, New York 10038;

(2) The surety company executing the bond shall be listed by the U.S. Treasury Department as being approved by and for writing bonds for federal projects on its current list in an amount not less than the amount of the bond to the owner;

(b) **Bonding Limit - Any One Risk.** The bonding limit of the sureties shall not exceed five percent (5%) of the policyholder surplus (capital and surplus) as listed by the aforementioned Best's Insurance Guide; and

(c) **Authorization.** Attorneys-in-fact who sign performance, payment and guaranty bonds must file with such bond a certified copy of their power of attorney to sign such bonds. All bonds must be countersigned by a resident Florida agent of the surety with proof of agency attached.

**Supplement to Paragraph 30-06 EXECUTION OF CONTRACT.** The successful bidder shall provide satisfactory evidence of all required insurance coverage to the Owner or the persons executing the contract. The above documents must be furnished, executed, and delivered before the contract will be executed by the Owner and a copy of such fully executed contract is delivered to the Contractor. If the contract is mailed, special handling is recommended.

## SECTION 40 SCOPE OF WORK

**40-1a PRE-CONSTRUCTION CONFERENCE.** After contract has been awarded and signed, but prior to the commencement of the work, a Pre-Construction Conference shall be held at the office of the Owner. Such conference shall be attended by authorized representatives of the Owner, Engineer, Contractor, and appropriate airport users. The purpose of this conference will be to review the Contractor's submitted progress schedule, clarify any issues that might arise with regard to responsibility and jurisdiction, and acquaint all parties with the respective authorized representatives.

The Contractor's progress schedule shall be furnished to the Engineer five (5) working days in advance of this conference. The exact time and place of this meeting shall be established by the Owner and written notice shall be given.

**Supplement to Paragraph 40-05 MAINTENANCE OF TRAFFIC.** Contractor vehicles, and construction equipment shall be limited to the areas of runway and taxiway which are closed to air traffic, except when approved by the Owner. Safety practices shall be in accordance with FAA AC 150/5370-2, latest edition, Operational Safety on Airports during Construction. Vehicle traffic patterns to and from construction areas shall be as approved by the Owner after coordination with

the Owner. Grassed areas damaged by ground traffic will be restored by the Contractor at his expense prior to completion and acceptance of the project.
The Contractor shall furnish flaggers in sufficient numbers to protect and divert vehicular, aircraft, and pedestrian traffic from working areas closed to traffic, or to protect any new work. Failure to comply with these requirements will result in the Owner shutting down the work until the Contractor can demonstrate the necessary protection.

When contractor vehicles must repeatedly cross the active runway, or be within 250 feet of an active runway centerline, the Contractor shall furnish flagmen to control such movements to assure safety to aircraft and personnel using the active runway. Vehicles shall be flagged and lighted in accordance with AC 150/5370-2, latest edition.

**Supplement to 40-08 FINAL CLEANING UP.** Areas disturbed during construction are to be restored to the conditions existing prior to construction. No separate payment will be made for this work.

## 40-09 UTILITIES AND TEMPORARY FACILITIES.

(a) **Existing Utilities and Facilities** indicated on the drawings may not be complete and location could vary from that shown. The Contractor shall verify the exact location of those existing utilities and facilities which are directly involved in the construction and/or within the limits of the work.

(b) **Protection.** All active utilities and facilities traversing the site of the work shall be preserved in operating condition. All property including, but not limited to, sewer and water mains, conduit, manholes, catch basins, valve boxes, poles, guys, electrical and telephone cables and other appurtenances shall be protected. The Contractor shall repair damage to any such utility and facility due to the work under this contract to the satisfaction of the local authority and the utility, at no cost to the Owner.

(c) **Approval** shall be obtained from the appropriate utility authority prior to making adjustments to, or in any way altering the operation of existing utilities and facilities or making connections to existing pipes and structures.

(d) **Electrical Power.** Temporary wiring and electrical power for construction shall be furnished by the Contractor. Contractor shall make all necessary arrangements with the local power company for temporary services, at Contractor's expense.

(1) Temporary wiring shall meet all safety requirements of the National Electrical Code and local code requirements.

(2) Temporary power shall be made available by the Contractor to all subcontractors to enable them to properly carry out their work. An adequate number of outlets shall be provided, each properly and clearly labeled with maximum voltage and fuse protection, and provided with ground fault protection.

(3) Temporary lighting shall consist of a weatherproof socket properly insulated and provided with a locking wire-type guard.

(4) All devices shall be properly grounded.

(e) **Water.** The Contractor shall arrange with local authorities for water and pay all costs in connection therewith.

(f) **Temporary Sanitary Facilities.**

(1) Provide temporary toilet facilities separate from the job office. Maintain these during the entire period of construction under this Contract for use of all construction personnel on the job. Provide enough chemical toilets to conveniently serve the needs of all personnel.

(2) Chemical toilets and their maintenance shall meet the requirements of State and local health regulations and ordinances. Any facilities or maintenance methods failing to meet these requirements shall be corrected immediately.

## SECTION 50 CONTROL OF WORK

**Supplement to Paragraph 50-01 AUTHORITY OF THE RESIDENT PROJECT REPRESENTATIVE (RPR).** All notices given by the Owner or the Engineer under the provisions of this contract shall be in writing and service of same may be in either of the following manners:

(a) By delivery of such notice to the Contractor or to any officer of the Contractor if said Contractor be a corporation, or to any agent or superintendent of the Contractor.

(b) By mailing such notice by certified mail to the address of the Contractor shown on the Contractor's bid.

The Engineer shall be permitted to inspect and review all payrolls, records or personnel, conditions of employment, invoices of materials, books of accounts, and other relevant data and records pertinent to the contract and subcontracts.

**Supplement to Paragraph 50-6 COOPERATION BETWEEN CONTRACTORS.** The Contractor shall not commit or permit any act which will interfere with the performance of the work by any other contractor or fail to perform such acts as required to avoid interference with the performance of work by any other contractor.

If there is a difference of opinion as to the respective rights of the Contractor and others doing the work within the limits of or adjacent to the project, the Engineer will decide as to the respective rights of the various parties involved in order to secure the completion of the Owner's work in general harmony and in a satisfactory manner. His decision shall be final and binding on the Contractor.

**Supplement to Paragraph 50-7 CONSTRUCTION LAYOUT AND STAKES.** The Contractor must establish all layout required for the construction of the work and shall perform all other surveys required during construction. Initial staking for the construction layout, grade control, and the final measurements for the proposed Work shall be performed by a competent licensed surveyor at the expense of the Contractor, who shall cooperate with the Engineer to facilitate checking of the work.

**Supplement to Paragraph 50-08, AUTHORITIES AND DUTIES OF QUALITY ASSURANCE (QA) INSPECTORS.** Resident Project Representative (RPR) will:

1. SCHEDULES: Review the progress schedule, schedule of Shop Drawing submissions and schedule of values prepared by Contractor and consult with Engineer concerning their acceptability.

2. CONFERENCES: Attend pre-construction conferences. Arrange a schedule of progress meetings and other job conferences as required in consultation with Engineer and notify those expected to attend in advance. Attend meetings, and maintain and circulate copies of minutes thereof.

3. LIAISON:

   a. Serve as Engineer's liaison with Contractor, working principally through Contractor's superintendent and assist him in understanding the intent of the Contract Documents. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-site operations.

   b. As requested by the Engineer, assist in obtaining from Owner additional details or information, when required at the job site for proper execution of the work.

4. SHOP DRAWINGS AND SAMPLES:

   a. Receive and record date of receipt of shop drawings and samples, receive samples which are furnished at the site by Contractor, and notify Engineer of their availability for examination.

   b. Advise Engineer and Contractor or its superintendent immediately of the commencement of any work requiring a shop drawing or sample submission if the submission has not been reviewed by the Engineer.

5. REVIEW OF WORK, REJECTION OF DEFECTIVE WORK, INSPECTIONS AND TESTS:

   a. Conduct on-site observations of the work in progress to assist Engineer in determining if the work is proceeding in accordance with the Contract Documents and that completed work will conform to the Contract Documents.

   b. Report to Engineer whenever he believes that any work is unsatisfactory, faulty or defective, or does not conform to the Contract Documents, or does not meet the requirements of any inspections, tests, or approval required to be made or has been damaged prior to final payment. Advise Engineer when he believes work should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

   c. Verify that test, equipment and systems startups and operating and maintenance instructions are conducted as required by the Contract Documents and in presence of the required personnel, and the Contractor maintains adequate records thereof; observe, record and report to Engineer appropriate details relative to the test procedures and startups.

   d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the outcome of these inspections and report to Engineer.

6. INTERPRETATION OF CONTRACT DOCUMENTS: Transmit Engineer's clarification and interpretations of the Contract Documents to Contractor.

7. MODIFICATIONS: Consider and evaluate Contractor's suggestions for modifications in drawings or specifications and report them with recommendations to Engineer.

8. RECORDS:

   a. Maintain at the job site orderly files for correspondence, reports of job conferences, shop drawings and sample submissions, reproductions of original Contract Documents, including all addenda, change orders, field orders, additional drawings issued subsequent to the execution of the contract, Engineer's clarifications and interpretations of the Contract Documents, progress reports and other project related documents.

   b. Keep a diary or log book, recording hours on the job site, weather conditions, data relative to questions of extras or deductions, list of visiting officials and representatives or manufacturers, fabricators, suppliers and distributors, daily activities, decisions, observations in general and specific observations in more detail as in the case of observing test procedures. Send copies to Engineer.

   c. Record names, addresses and telephone numbers of all contractors, subcontractors and major suppliers of material and equipment.

9. REPORTS:

   a. Furnish Engineer daily reports as required to show progress of the work and Contractor's compliance with the approved progress schedule of shop drawing submissions.

   b. Consult with Engineer in advance of scheduled major tests, inspections or start of important phases of the work.

   c. Report immediately to Engineer upon the occurrence of any accident.

10. PAYMENT REQUISITIONS: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward them with recommendations to Engineer, noting particularly their relation to the schedule of values, work completed and materials and equipment delivered at the site, but not incorporated in the work.

11. CERTIFICATES, MAINTENANCE AND OPERATION MANUALS: During the course of the work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by Contractor are applicable to the items actually installed; and deliver this material to Engineer for his review and forwarding to Owner prior to final acceptance of the work.

12. COMPLETION:

   a. Before Engineer issues a Certificate of Substantial Completion, submit to Contractor a list of observed items requiring completion or correction.

b. Conduct final inspection in the company of Engineer, Owner and Contractor and prepare a final list of items to be completed or corrected.

c. Verify that all items on final list have been completed or corrected and make recommendations to Engineer concerning acceptance.

13. PAYMENT OF COMPENSATION, ETC.: The payment of any compensation, whatever may be its character or form, or the giving of any gratuity, or the granting of any valuable favor by the Contractor to any inspector, directly or indirectly, is strictly prohibited and any such act on the part of the Contractor will constitute a violation of this contract.

LIMITATIONS OF AUTHORITY

Except upon written instructions of the Engineer, Resident Project Representative shall not:

1. Authorize any deviation from the Contract Documents or approve any substitute materials or equipment;

2. Exceed limitations of Engineer's authority as set forth in the Contract Documents;

3. Undertake any of the responsibilities of Contractor, subcontractor or Contractor's superintendent, or expedite the work;

4. Advise on, or issue, directions relative to any aspect of the means, methods, techniques, sequences, or procedures of construction unless such is specifically called for in the Contract Documents.

5. Advise on, or issue, directions as to safety precautions and programs in connection with the work;

6. Authorize Owner to occupy the project in whole or in part; and,

7. Participate in specialized field or laboratory tests.

**Supplement to Paragraph 50-10 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK.** No work shall be done without lines and grades having been given to and approved by the Engineer.

## SECTION 60 CONTROL OF MATERIALS

**Supplement to Paragraph 60-2 SAMPLES, TESTS, AND CITED SPECIFICATIONS.** All costs in connection with any failed tests necessary to confirm compliance with specifications, shall be borne by the Contractor.

**Supplement to Paragraph 60-3 CERTIFICATION OF COMPLIANCE/ANALYSIS (COC/COA).** Time expended by the Engineer in excess of one hour to establish or determine the "or equal" status of a material or product substitution shall be at Contractor's expense.

**60-09 RECORD DRAWINGS.** At the completion of the project construction and prior to the final inspection, the Contractor shall provide complete record drawings. The record drawings shall consist of one set of the latest edition of the contract drawings on which shall be clearly and neatly marked all variations from the contract drawings in the work actually installed. At every design elevation and dimension called out in the contract drawings, and areas as designated by the Engineer, the Contractor shall insure that a record elevation or dimension shall be provided for the record plans. The Contractor shall provide a competent, licensed surveyor to validate the record drawings. If any of the Contractor surveyor's data are found to be inaccurate, all (100%) of the record data shall be verified by a second independent registered land surveyor at the Contractor's expense.

## SECTION 70 LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

**Supplement to Paragraph 70-6 SANITARY, HEALTH, AND SAFETY PROVISIONS.** The Contractor, his personnel, and subcontractors will not be permitted to use the sanitary facilities in the existing buildings on the airport, and all personnel at the site shall be so advised. Enclosed temporary toilets shall be provided in sufficient numbers and located where directed and approved by the Owner. Drinking water shall be provided from a safe and sanitary source. All such facilities shall be furnished in strict accordance with existing governing health regulations.

**Supplement to Paragraph 70-7 PUBLIC CONVENIENCE AND SAFETY.** Particular attention is directed to safety on the project during the construction set forth under this contract, in order that the Contractor's personnel as well as the general public will be adequately protected. Construction equipment will not be operated or parked in the vicinity of the active airport runway, taxiways and apron during construction. Trenches, channels, holes and the like, dug for installation of underground items, will be left open a minimum length of time.

Equipment not in use will be parked in areas designated on the drawings and at least ***500 feet*** from the active runway and at least ***39.5 feet*** from active taxiways and aprons. Working equipment closer than this to active paved areas will be permitted only with specific permission from and coordination with the Owner through the resident project representative.

No excavation will be made closer than 50 feet to active paved areas except with express permission and coordinated with the Owner through the resident project representative. All such excavation left open over night will be adequately lighted with flashing lights.

When construction requires cutting of active taxiways or runways, same shall have adequate warning barricades and flashing lights placed at key locations to insure safety of operations. The Owner will publish NOTAM stating times of construction on a runway and advise aviators that the runway is closed.

Precaution shall be exercised at all times for the protection of persons and property. The safety provisions of the Manual of Accident Prevention in Construction, published by the Association of General Contractors of America shall be followed to the extent that such provisions are not contrary to applicable law.

**Supplement to Paragraphs 70-11 RESPONSIBILITY FOR DAMAGE CLAIMS and 70-21 INSURANCE REQUIREMENTS.**

The Contractor shall not commence work under this contract until he has obtained the following required insurance and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all the insurance required of the subcontractor has been obtained and approved, ***subject to local ordinance.*** Prior to the commencement of work hereunder, the Contractor shall furnish to the Owner and Engineer certification that the above insurance requirements have been met by providing a Certificate of Insurance that names as an additional insured the Owner, and all of its Officers, Agents, Employees, and City Commissioners, excluding worker's compensation and professional liability, and that provides such insurance is primary to any other insurance available to the additional insureds with respect to claims covered under the policy, and that such insurance coverage applies separately to each insured against whom claims are made or suit is brought; but the inclusion of one or more insureds shall not operate to increase the insurer's limit of liability. The policies evidencing required insurance shall contain an endorsement to the effect that cancellation or any material change in the policies adversely affecting the interests of the Owner in such insurance shall not be effective until ten (10) days after written notice thereof to the owner and the Engineer. The Contractor shall indemnify and save harmless the Engineer and the Owner and their officers, and employees from all suits actions, or claims of any character brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of his/her contract as may be considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, his/her surety may be held until such suit(s), action(s), or claim(s) for injuries or damages as aforesaid shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he is adequately protected by public liability and property damage insurance. All policies required under this paragraph must be an "Occurrence" form. The policies shall contain a waiver of subrogation in favor of the City of Wauchula. All insurance coverage shall be written with an insurer having an A.M. Best Rating of a least the "A" category and size category of VIII. The Contractor's self-insured retention or deductible per line of coverage shall not exceed $25,000.00 without the permission of the Owner. ***Minimum requirements and coverage amounts are as follows, not in conflict with other Sections, and whichever is requirement is greater:***

(a) **Compensation Insurance.** The Contractor shall take out and maintain during the life of this contract, Workmen's Compensation Insurance for all his employees at the site of the project and, in case any work is sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor. In case any class of employees engaged in hazardous work under this contract at the site of the project is not protected under the Workmen's Compensation Statute, the Contractor shall provide and cause each subcontractor to provide adequate insurance for the protection of his employees not otherwise protected.

(b) **Contractor's Public Liability and Property Damage Liability Insurance.** The Contractor shall take out and maintain regular Contractor's Public Liability and Property Damage Liability Insurance that will protect him from claims for damage for personal injury, including accidental death, as well as from claims for property damage that may arise from operations under this contract, whether such operations are by himself or by any subcontractor or by anyone directly or indirectly employed by either of them. The minimum amounts of such insurance shall be the greater of that as required by Local Ordinance and as follows:

(1) **Contractors' public liability insurance including automobile liability** in an amount not less than $1,000,000 for injuries, including wrongful death to any one person and subject to the same limit for each person in an amount not less than $1,000,000 for injuries including wrongful death to more than one person in any one occurrence.

(2) **Contractors' property damage liability insurance** in an amount not less than $50,000 for damages on account of any one occurrence and in an amount not less than $100,000 for damages on account of all occurrences.

(3) **Contractors' automobile property damage liability insurance** in an amount not less than $1,000,000.

(c) **Contingent Liability.** The above policies for comprehensive liability and property damage insurance must be so written as to include contingent liability and contingent property damage insurance to protect the Contractor against claims arising from the operation of subcontractors.

(d) **Contractual Liability.** To recognize and hold harmless the requirements of this contract.

(e) **Builder's Risk.** The Contractor shall secure and maintain during the term of this contract, builder's risk insurance to include but not limited to fire, lightning, extended coverage, vandalism and malicious mischief, flood, all hazards in the amount of the project value or greater.

(f) **Umbrella (Excess) Liability Insurance**. Umbrella Liability with limits of not less than $1,000,000.00, exclusive of defense costs, to be in excess of all other coverages. Such coverage shall be at least as broad as the primary coverages above, with any excess umbrella layers written on a strict following form basis over the primary coverage. All such policies shall be endorsed to provide defense coverage obligations.

***See GP Sections 70-11 and 70-21 for additional information and requirements.***

**70-22 PROJECT INSPECTION BY OTHERS.** The Contractor is advised that the project may be inspected by the Design Engineers, City of Wauchula, Hardee County Inspectors, Insurance/Re-Insurance company appointed inspectors, and any other Agencies having jurisdiction over this project.

## SECTION 80 EXECUTION AND PROGRESS

**Supplement to Paragraph 80-04 LIMITATION OF OPERATIONS.** The construction work shall be accomplished in such a manner that the runway is subject to closure only during the times required for construction, and that such closures for construction receive timely publication of NOTAM as to timing and frequency of occurrences.

## SECTION 90 MEASUREMENT AND PAYMENT

**Supplement to Paragraph 90-09 ACCEPTANCE AND FINAL PAYMENT.** Before the final payment is made, the Contractor shall show to the Owner satisfactory evidence that all just liens, claims, and demands of his employees and of other parties from whom materials used in the construction of the work have been purchased or procured, are fully satisfied. The Contractor shall execute and furnish a release of lien of the form included with the contract documents.

Before acceptance and final payment is made, the Contractor shall furnish to the Owner a guarantee to remain in full force and effect for a period of one (1) year from the date of the acceptance of the project by the Owner. This guarantee shall provide that the Contractor shall repair or replace for said period of one year, all work performed and materials and equipment furnished that were not performed or furnished according to the terms of the contract, and made good all defects thereof that have become apparent before the expiration of one year. Such guarantees shall be covered by the surety bond. If any part of the project, in the opinion of the Owner for the reasons stated above, needs to be replaced, repaired or made good during that time, he shall so notify the Contractor in writing. If the Contractor refuses or neglects to do such work within five (5) days from the date of service of such notice, the Owner shall have the work done by others and the cost thereof shall be paid by the Contractor or his surety. Before the surety bond is released, the Owner shall certify in writing that the foregoing obligations have been fully discharged.

When the contract work has been accepted in accordance with the requirements of the subsection titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of his/her objections to the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the Engineer shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the Engineer's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the Engineer's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the owner as a claim in accordance with the subsection titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 50.

After the Contractor has approved, or approved under protest, the Engineer's final estimate, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of paragraph 50-16, CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 50, or under the provisions of this subsection, such claims will be considered by the owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

**END OF SECTION 1A**

## SECTION 10 DEFINITION OF TERMS

When the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be defined as follows:

| Paragraph Number | Term | Definition |
|---|---|---|
| **10-01** | **AASHTO** | The American Association of State Highway and Transportation Officials. |
| **10-02** | **Access Road** | The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway. |
| **10-03** | **Advertisement** | A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished. |
| **10-04** | **Airport** | Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; airport buildings and facilities located in any of these areas, and a heliport. |
| **10-05** | **Airport Improvement Program (AIP)** | A grant-in-aid program, administered by the Federal Aviation Administration (FAA). |
| **10-06** | **Air Operations Area (AOA)** | The term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron. |
| **10-07** | **Apron** | Area where aircraft are parked, unloaded or loaded, fueled and/or serviced. |
| **10-08** | **ASTM International (ASTM)** | Formerly known as the American Society for Testing and Materials (ASTM). |
| **10-09** | **Award** | The Owner's notice to the successful bidder of the acceptance of the submitted bid. |
| **10-10** | **Bidder** | Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated. |
| **10-11** | **Building Area** | An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon. |
| **10-12** | **Calendar Day** | Every day shown on the calendar. |
| **10-13** | **Certificate of Analysis (COA)** | The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications. |

| Paragraph Number | Term | Definition |
|---|---|---|
| **10-14** | **Certificate of Compliance (COC)** | The manufacturer's certification stating that materials or assemblies furnished fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer's authorized representative. |
| **10-15** | **Change Order** | A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for work within the scope of the contract and necessary to complete the project. |
| **10-16** | **Contract** | A written agreement between the Owner and the Contractor that establishes the obligations of the parties including but not limited to performance of work, furnishing of labor, equipment and materials and the basis of payment.<br>The awarded contract includes but may not be limited to: Advertisement, Contract form, Proposal, Performance bond, payment bond, General provisions, certifications and representations, Technical Specifications, Plans, Supplemental Provisions, standards incorporated by reference and issued addenda. |
| **10-17** | **Contract Documents** | The complete documentation setting forth the contractual obligations set forth for the construction of the project, including but not limited to, the entire project manual (front ends, general and special provisions, technical specifications, and any referenced standards therein), as well as the construction plans and drawings. Contract Documents also refers to the contract agreement pages and other supporting advertisement, bidding requirements, and bidding procedures documents, also known as the "Front Ends". |
| **10-18** | **Contract Item (Pay Item)** | A specific unit of work for which a price is provided in the contract. |
| **10-19** | **Contract Time** | The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date. |
| **10-20** | **Contractor** | The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work. |

| Paragraph Number | Term | Definition |
|---|---|---|
| **10-21** | **Contractors Quality Control (QC) Facilities** | The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP). |
| **10-22** | **Contractor Quality Control Program (CQCP)** | Details the methods and procedures that will be taken to assure that all materials and completed construction required by the contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. |
| **10-23** | **Control Strip** | A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification. |
| **10-24** | **Construction Safety and Phasing Plan (CSPP)** | The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications. |
| **10-25** | **Drainage System** | The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area. |
| **10-26** | **Engineer** | The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering, inspection, and/or observation of the contract work and acting directly or through an authorized representative. |
| **10-27** | **Equipment** | All machinery, together with the necessary supplies for upkeep and maintenance; and all tools and apparatus necessary for the proper construction and acceptable completion of the work. |
| **10-28** | **Extra Work** | An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Owner's Engineer or Resident Project Representative (RPR) to be necessary to complete the work within the intended scope of the contract as previously modified. |
| **10-29** | **FAA** | The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative. |
| **10-30** | **Federal Specifications** | The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration. |

| Paragraph Number | Term | Definition |
|---|---|---|
| **10-31** | **Force Account** | **a.** Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis.<br>**b.** Owner Force Account - Work performed for the project by the Owner's employees. |
| **10-32** | **Intention of Terms** | Whenever, in these specifications or on the plans, the words “directed,” “required,” “permitted,” “ordered,” “designated,” “prescribed,” or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer and/or Resident Project Representative (RPR) is intended; and similarly, the words “approved,” “acceptable,” “satisfactory,” or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer and/or RPR, subject in each case to the final determination of the Owner.<br>Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference. |
| **10-33** | **Lighting** | A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface. |
| **10-34** | **Major and Minor Contract Items** | A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items. |
| **10-35** | **Materials** | Any substance specified for use in the construction of the contract work. |
| **10-36** | **Modification of Standards (MOS)** | Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1. |
| **10-37** | **Notice to Proceed (NTP)** | A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins. |

| Paragraph Number | Term | Definition |
|---|---|---|
| **10-38** | **Owner** | The term “Owner” shall mean the party of the first part or the contracting agency signatory to the contract. Where the term “Owner” is capitalized in this document, it shall mean airport Sponsor only. The Owner for this project is ***The City of Wauchula Municipal Airport***. |
| **10-39** | **Passenger Facility Charge (PFC)** | Per 14 Code of Federal Regulations (CFR) Part 158 and 49 United States Code (USC) § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls. |
| **10-40** | **Pavement Structure** | The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit. |
| **10-41** | **Payment bond** | The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work. |
| **10-42** | **Performance bond** | The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract. |
| **10-43** | **Plans** | The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications. Plans may also be referred to as 'contract drawings.’ |
| **10-44** | **Project** | The agreed scope of work for accomplishing specific airport development with respect to a particular airport. |
| **10-45** | **Proposal** | The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications. |
| **10-46** | **Proposal guaranty** | The security furnished with a proposal to guarantee that the bidder will enter into a contract if their own proposal is accepted by the Owner. |
| **10-47** | **Quality Assurance (QA)** | Owner’s responsibility to assure that construction work completed complies with specifications for payment. |
| **10-48** | **Quality Control (QC)** | Contractor’s responsibility to control material(s) and construction processes to complete construction in accordance with project specifications. |
| **10-49** | **Quality Assurance (QA) Inspector** | An authorized representative of the Engineer and/or Resident Project Representative (RPR) assigned to make all necessary inspections, observations, tests, and/or observation of tests of the work performed or |

| Paragraph Number | Term | Definition |
|---|---|---|
| | | being performed, or of the materials furnished or being furnished by the Contractor. |
| **10-50** | **Quality Assurance (QA) Laboratory** | The official quality assurance testing laboratories of the Owner or such other laboratories as may be designated by the Engineer or RPR. May also be referred to as Engineer's, Owner's, or QA Laboratory. |
| **10-51** | **Resident Project Representative (RPR)** | The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative. |
| **10-52** | **Runway** | The area on the airport prepared for the landing and takeoff of aircraft. |
| **10-53** | **Runway Safety Area (RSA)** | A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the construction safety and phasing plan (CSPP) for limits of the RSA. |
| **10-54** | **Safety Plan Compliance Document (SPCD)** | Details how the Contractor will comply with the CSPP. |
| **10-55** | **Specifications** | A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically. |
| **10-56** | **Sponsor** | A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport. |
| **10-57** | **Structures** | Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein. |
| **10-58** | **Subgrade** | The soil that forms the pavement foundation. |
| **10-59** | **Superintendent** | The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the RPR, and who shall supervise and direct the construction. |

| Paragraph Number | Term | Definition |
|---|---|---|
| **10-60** | **Supplemental Agreement** | A written agreement between the Contractor and the Owner that establishes the basis of payment and contract time adjustment, if any, for the work affected by the supplemental agreement. A supplemental agreement is required if: (1) in scope work would increase or decrease the total amount of the awarded contract by more than 25%: (2) in scope work would increase or decrease the total of any major contract item by more than 25%; (3) work that is not within the scope of the originally awarded contract; or (4) adding or deleting of a major contract item. |
| **10-61** | **Surety** | The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor. |
| **10-62** | **Taxilane** | A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas. |
| **10-63** | **Taxiway** | The portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas. |
| **10-64** | **Taxiway/Taxilane Safety Area (TSA)** | A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See the construction safety and phasing plan (CSPP) for limits of the TSA. |
| **10-65** | **Work** | The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications. |
| **10-66** | **Working day** | A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days. |
| 10-67 | Owner Defined terms | *None* |

**END OF SECTION 10**

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## SECTION 20 PROPOSAL REQUIREMENTS AND CONDITIONS

### 20-01 ADVERTISEMENT (NOTICE TO BIDDERS).

The Owner, or his/her authorized agent, shall publish the advertisement at such places and at such times as are required by local law or ordinances. The published advertisement shall state the time and place for submitting sealed proposals; a description of the proposed work; instructions to bidders as to obtaining proposal forms, plans, and specifications; proposal guaranty required; and the Owner's right to reject any and all bids. ***See the Invitation to Bid.***

**20-02 QUALIFICATION OF BIDDERS**. Each bidder shall submit evidence of competency and evidence of financial responsibility to perform the work to the Owner at the time of bid opening.

Evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, and a list of equipment and a list of key personnel that would be available for the work.

Each bidder shall furnish the Owner satisfactory evidence of their financial responsibility. Evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether their financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Owner.

~~Unless otherwise specified, a bidder may submit evidence that they are prequalified with the State Highway Division and are on the current "bidder's list" of the state in which the proposed work is located. Evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.~~

***Each bidder shall submit "evidence of competency" and "evidence of financial responsibility" to the Owner at the time of bid opening. Each bidder shall submit the information in Section SBQ of the Bid Proposal Forms. Each bidder may submit FDOT certification to supplement the information required in Section SBQ.***

**20-03 CONTENTS OF PROPOSAL FORMS**. The Owner's proposal forms state the location and description of the proposed construction; the place, date, and time of opening of the proposals; and the estimated quantities of the various items of work to be performed and materials to be furnished for which unit bid prices are asked. The proposal form states the time in which the work must be completed, and the amount of the proposal guaranty that must accompany the proposal. The Owner will accept only those Proposals properly executed on physical forms or electronic forms provided by the Owner. Bidder actions that may cause the Owner to deem a proposal irregular are given in paragraph 20-09 *Irregular proposals*.

***Mobilization is limited to 10 percent of the total project cost, less general provisions items.***

**20-04 ISSUANCE OF PROPOSAL FORMS**. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder if the bidder is in default for any of the following reasons:

**a.** Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.

**b.** Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.

**c.** Documented record of Contractor default under previous contracts with the Owner.

**d.** Documented record of unsatisfactory work on previous contracts with the Owner.

**20-05 INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES**. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as provided in the Section 40, paragraph 40-02, Alteration of Work and Quantities, without in any way invalidating the unit bid prices.

**20-06 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE**. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. Bidders shall satisfy themselves to the character, quality, and quantities of work to be performed, materials to be furnished, and to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied to the conditions to be encountered in performing the work and the requirements of the proposed contract, plans, and specifications.

**20-07 PREPARATION OF PROPOSAL**. The bidder shall submit their proposal on the forms furnished by the Owner. All blank spaces in the proposal forms, unless explicitly stated otherwise, must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals which they propose for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

***Prices should be written in whole dollars and cents. The extended total amount of each item should not be rounded.***

The bidder shall correctly sign the proposal in ink. If the proposal is made by an individual, their name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state where the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of their authority to do so and that the signature is binding upon the firm or corporation.

**20-08 RESPONSIVE AND RESPONSIBLE BIDDER.** A responsive bid conforms to all significant terms and conditions contained in the Owner's invitation for bid. It is the Owner's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 2 CFR § 200.318(h). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

**20-09 IRREGULAR PROPOSALS**. Proposals shall be considered irregular for the following reasons:

**a.** If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.

**b.** If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.

**c.** If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.

**d.** If the proposal contains unit prices that are obviously unbalanced.

**e.** If the proposal is not accompanied by the proposal guaranty specified by the Owner.

~~**f.** If the applicable Disadvantaged Business Enterprise information is incomplete.~~

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

**20-10 BID GUARANTEE**. Each separate proposal shall be accompanied by a bid bond, certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such bond, check, or collateral, shall be made payable to the Owner.

**20-11 DELIVERY OF PROPOSAL.** Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

**20-12 WITHDRAWAL OR REVISION OF PROPOSALS**. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing ***by letter, fax or by email*** before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

**20-13 PUBLIC OPENING OF PROPOSALS**. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

**20-14 DISQUALIFICATION OF BIDDERS**. A bidder shall be considered disqualified for any of the following reasons:

**a.** Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

**b.** Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.

**c.** If the bidder is considered to be in "default" for any reason specified in paragraph 20-04, *Issuance of Proposal Forms,* of this section.

**20-15 Discrepancies and Omissions.** A Bidder who discovers discrepancies or omissions with the project bid documents shall immediately notify the Owner's Engineer of the matter. A bidder that has doubt as to the true meaning of a project requirement may submit to the Owner's Engineer a written request for interpretation no later than ***seven 7 calendar*** days prior to bid opening.

Any interpretation of the project bid documents by the Owner's Engineer will be by written addendum issued by the Owner. The Owner will not consider any instructions, clarifications or interpretations of the bidding documents in any manner other than written addendum.

**END OF SECTION 20**

## SECTION 30 AWARD AND EXECUTION OF CONTRACT

**30-01 CONSIDERATION OF PROPOSALS**. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit bid price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

**a.** If the proposal is irregular as specified in Section 20, paragraph 20-09, *Irregular Proposals*.

**b.** If the bidder is disqualified for any of the reasons specified Section 20, paragraph 20-14, *Disqualification of Bidders*.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interests.

**30-02 AWARD OF CONTRACT**. The award of a contract, if it is to be awarded, shall be made within **180** calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

If the Owner elects to proceed with an award of contract, the Owner will make award to the responsible bidder whose bid, conforming with all the material terms and conditions of the bid documents, is the lowest in price.

**30-03 CANCELLATION OF AWARD**. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with paragraph 30-07 *Approval of Contract*.

**30-04 RETURN OF PROPOSAL GUARANTY**. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the paragraph 30-01, *Consideration of Proposals.* Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in paragraph 30-05, *Requirements of Contract Bonds.*

**30-05 REQUIREMENTS OF CONTRACT BONDS**. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

***Separate performance and payment bonds are required for the contract.***

**30-06 EXECUTION OF CONTRACT**. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in paragraph 30-05, *Requirements of Contract Bonds,* of this section, within ***15*** calendar days from the date mailed or otherwise delivered to the successful bidder.

**30-07 APPROVAL OF CONTRACT**. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

**30-08 FAILURE TO EXECUTE CONTRACT**. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the period specified in paragraph 30-06, *Execution of Contract,* of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidated damages to the Owner.

**END OF SECTION 30**

## SECTION 40 SCOPE OF WORK

**40-01 INTENT OF CONTRACT**. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

**40-02 ALTERATION OF WORK AND QUANTITIES**. The Owner reserves the right to make such changes in quantities and work as may be necessary or desirable to complete, in a satisfactory manner, the original intended work. Unless otherwise specified in the Contract, the Owner's Engineer or RPR shall be and is hereby authorized to make, in writing, such in-scope alterations in the work and variation of quantities as may be necessary to complete the work, provided such action does not represent a significant change in the character of the work.

For purpose of this section, a significant change in character of work means: any change that is outside the current contract scope of work; any change (increase or decrease) in the total contract cost by more than 25%; or any change in the total cost of a major contract item by more than 25%.

Work alterations and quantity variances that do not meet the definition of significant change in character of work shall not invalidate the contract nor release the surety. Contractor agrees to accept payment for such work alterations and quantity variances in accordance with Section 90, paragraph 90-03, *Compensation for Altered Quantities*.

Should the value of altered work or quantity variance meet the criteria for significant change in character of work, such altered work and quantity variance shall be covered by a supplemental agreement. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

**40-03 OMITTED ITEMS**. The Owner, the Owner's Engineer or the RPR may provide written notice to the Contractor to omit from the work any contract item that does not meet the definition of major contract item. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with Section 90, paragraph 90-04, *Payment for Omitted Items*.

**40-04 EXTRA WORK**. Should acceptable completion of the contract require the Contractor to perform an item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, Owner may issue a Change Order to cover the necessary extra work. Change orders for extra work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the RPR's opinion, is necessary for completion of the extra work.

When determined by the RPR to be in the Owner's best interest, the RPR may order the Contractor to proceed with extra work as provided in Section 90, paragraph 90-05, *Payment for Extra Work*. Extra work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a supplemental agreement as defined in Section 10, paragraph 10-59, *Supplemental Agreement*.

If extra work is essential to maintaining the project critical path, RPR may order the Contractor to commence the extra work under a Time and Material contract method. Once sufficient detail is available to establish the level of effort necessary for the extra work, the Owner shall initiate a change order or supplemental agreement to cover the extra work.

Any claim for payment of extra work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

**40-05 MAINTENANCE OF TRAFFIC**. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration. The Contractor shall maintain traffic in the manner detailed in the Construction Safety and Phasing Plan (CSPP).

**a.** It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to their own operations and the operations of all subcontractors as specified in Section 80, paragraph 80-04, *Limitation of Operations*. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in Section 70, paragraph 70-15, *Contractor's Responsibility for Utility Service and Facilities of Others*.

**b.** With respect to their own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport in accordance with the construction safety and phasing plan (CSPP) and the safety plan compliance document (SPCD).

**c.** When the contract requires the maintenance of an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep the road, street, or highway open to all traffic and shall provide maintenance as may be required to accommodate traffic. The Contractor, at their expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (http://mutcd.fhwa.dot.gov/), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways.

**40-06 REMOVAL OF EXISTING STRUCTURES**. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Resident Project Representative (RPR) shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the RPR in accordance with the provisions of the contract.

Except as provided in Section 40, paragraph 40-07, *Rights in and Use of Materials Found in the Work*, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.

**40-07 RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK**. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be embankment, the Contractor may at their own option either:

**a.** Use such material in another contract item, providing such use is approved by the RPR and is in conformance with the contract specifications applicable to such use; or,

**b.** Remove such material from the site, upon written approval of the RPR; or

**c.** Use such material for the Contractor’s own temporary construction on site; or,

**d.** Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the RPR’s approval in advance of such use.

Should the RPR approve the Contractor’s request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at their expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the RPR approve the Contractor’s exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of their own exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

**40-08 FINAL CLEANUP**. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of the property Owner.

**END OF SECTION 40**

## SECTION 50 CONTROL OF WORK

**50-01 AUTHORITY OF THE RESIDENT PROJECT REPRESENTATIVE (RPR)**. The RPR has final authority regarding the interpretation of project specification requirements. The RPR shall determine acceptability of the quality of materials furnished, method of performance of work performed, and the manner and rate of performance of the work. The RPR does not have the authority to accept work that does not conform to specification requirements.

**50-02 CONFORMITY WITH PLANS AND SPECIFICATIONS**. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans, or specifications.

If the RPR finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications, but that the portion of the work affected will, in their opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the RPR will advise the Owner of their determination that the affected work be accepted and remain in place. The RPR will document the determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. Changes in the contract price must be covered by contract change order or supplemental agreement as applicable.

If the RPR finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the RPR's written orders.

The term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the RPR's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's execution of the work, when, in the RPR's opinion, such compliance is essential to provide an acceptable finished portion of the work.

The term "reasonably close conformity" is also intended to provide the RPR with the authority, after consultation with the Sponsor, to use sound engineering judgment in their determinations to accept work that is not in strict conformity, but will provide a finished product equal to or better than that required by the requirements of the contract, plans and specifications.

The RPR will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

**50-03 COORDINATION OF CONTRACT, PLANS, AND SPECIFICATIONS**. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. If electronic files are provided and used on the project and there is a conflict between the electronic files and hard copy plans, the hard copy plans shall govern. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract

general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the RPR for an interpretation and decision, and such decision shall be final.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, Contractor shall immediately notify the Owner or the designated representative in writing requesting their written interpretation and decision.

**50-04 LIST OF SPECIAL PROVISIONS.**

**Special Provisions are listed in General Provision Sections 130 and greater, and furthermore in the Technical Specifications as "SP-" specifications.**

**50-05 COOPERATION OF CONTRACTOR**. The Contractor shall be supplied with ***one*** hard copies or an electronic PDF of the plans and specifications. The Contractor shall have available on the construction site at all times one hardcopy each of the plans and specifications. Additional hard copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the RPR and their inspectors and with other Contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as their agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the RPR or their authorized representative.

**50-06 COOPERATION BETWEEN CONTRACTORS**. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with their own contract and shall protect and hold harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange their work and shall place and dispose of the materials being used to not interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join their work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

**50-07 CONSTRUCTION LAYOUT AND STAKES**. The Engineer/RPR shall establish necessary horizontal and vertical control. The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor. Contractor is responsible for preserving integrity of horizontal and vertical controls established by Engineer/RPR. In case of negligence on the part of the Contractor or their employees, resulting in the destruction of any horizontal and vertical control, the resulting costs will be deducted as a liquidated damage against the Contractor.

Prior to the start of construction, the Contractor will check all control points for horizontal and vertical accuracy and certify in writing to the RPR that the Contractor concurs with survey control established for the project. All lines, grades and measurements from control points necessary for the proper execution and control of the work on this project will be provided to the RPR. The Contractor is responsible to establish all layout required for the construction of the project.

Copies of survey notes will be provided to the RPR for each area of construction and for each placement of material as specified to allow the RPR to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. Surveys will be provided to the RPR prior to commencing work items that cover or disturb the survey staking. Survey(s) and notes shall be provided in the following format(s): **ASCII text or csv format compatible with AutoCAD Civil 3D Version 2026 or earlier.**

Laser, GPS, String line, or other automatic control shall be checked with temporary control as necessary. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses. The cost shall be included in the price of the bid for the various items of the Contract.

**50-08 AUTHORITY AND DUTIES OF QUALITY ASSURANCE (QA) INSPECTORS**. QA inspectors shall be authorized to inspect all work done and all material furnished. Such QA inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. QA inspectors are not authorized to revoke, alter, or waive any provision of the contract. QA inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

QA Inspectors are authorized to notify the Contractor or their representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the RPR for a decision.

**50-09 INSPECTION OF THE WORK**. All materials and each part or detail of the work shall be subject to inspection. The RPR shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the RPR requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Provide advance written notice to the RPR of work the Contractor plans to perform each week and each day. Any work done or materials used without written notice and allowing opportunity for inspection by the RPR may be ordered removed and replaced at the Contractor's expense.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

**50-10 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK**. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the RPR as provided in paragraph 50-02, *Conformity with Plans and Specifications*.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of Section 70, paragraph 70-14, *Contractor's Responsibility for Work*.

No removal work made under provision of this paragraph shall be done without lines and grades having been established by the RPR. Work done contrary to the instructions of the RPR, work done beyond the lines shown on the plans or as established by the RPR, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the RPR made under the provisions of this subsection, the RPR will have authority to cause unacceptable work to be remedied or removed and replaced; and unauthorized work to be removed and recover the resulting costs as a liquidated damage against the Contractor.

**50-11 LOAD RESTRICTIONS**. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor, at their own expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel.

**50-12 MAINTENANCE DURING CONSTRUCTION**. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

**50-13 FAILURE TO MAINTAIN THE WORK**. Should the Contractor at any time fail to maintain the work as provided in paragraph 50-12, *Maintenance during Construction*, the RPR shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the RPR's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be recovered as a liquidated damage against the Contractor.

**50-14 PARTIAL ACCEPTANCE**. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the RPR to make final inspection of that unit. If the RPR finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the RPR may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

**50-15 FINAL ACCEPTANCE.** Upon due notice from the Contractor of presumptive completion of the entire project, the RPR and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The RPR shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the RPR will notify the Contractor and the Contractor shall correct the unsatisfactory work. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the RPR will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

**50-16 CLAIMS FOR ADJUSTMENT AND DISPUTES.** If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the RPR in writing of their intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the RPR is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation.

Such notice by the Contractor and the fact that the RPR has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the RPR who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

The provisions of this paragraph will apply only to contracts awarded to the lowest bidder pursuant to competitive bidding.

On projects with original contract amounts in excess of $100,000, the Contractor may submit to the RPR, in writing, proposals for modifying the plans, specifications or other requirements of the contract for the sole purpose of reducing the cost of construction. The value engineering cost proposal shall not impair, in any manner, the essential functions or characteristics of the project, including but not limited to service life, economy of operation, ease of maintenance, desired appearance, design and safety standards. This provision shall not apply unless the proposal submitted is specifically identified by the Contractor as being presented for consideration as a value engineering proposal.

Not eligible for value engineering cost proposals are changes in the basic design of a pavement type, runway and taxiway lighting, visual aids, hydraulic capacity of drainage facilities, or changes in grade or alignment that reduce the geometric standards of the project.

As a minimum, the following information shall be submitted by the Contractor with each proposal:

a. A description of both existing contract requirements for performing the work and the proposed changes, with a discussion of the comparative advantages and disadvantages of each.

b. An itemization of the contract requirements that must be changed if the proposal is adopted.

c. A detailed estimate of the cost of performing the work under the existing contract and under the proposed changes.

d. A statement of the time by which a change order adopting the proposal must be issued.

e. A statement of the effect adoption of the proposal will have on the time for completion of the contract.

f. The contract items of work affected by the proposed changes, including any quantity variation attributable to them.

The Contractor may withdraw, in whole or in part, any value engineering cost proposal not accepted by the RPR, within the period specified in the proposal. The provisions of this subsection shall not be construed to require the RPR to consider any value engineering cost proposal that may be submitted.

The Contractor shall continue to perform the work in accordance with the requirements of the contract until a change order incorporating the value engineering cost proposal has been issued. If a change order has not been issued by the date upon which the Contractor's value engineering cost proposal specifies that a decision should be made, or such other date as the Contractor may subsequently have requested in writing, such value engineering cost proposal shall be deemed rejected.

The RPR shall be the sole judge of the acceptability of a value engineering cost proposal and of the estimated net savings from the adoption of all or any part of such proposal. In determining the estimated net savings, the RPR may disregard the contract bid prices if, in the RPR's judgment such prices do not represent a fair measure of the value of the work to be performed or deleted.

The Owner may require the Contractor to share in the Owner's costs of investigating a value engineering cost proposal submitted by the Contractor as a condition of considering such proposal. Where such a condition is imposed, the Contractor shall acknowledge acceptance of it in writing. Such acceptance shall constitute full authority for the Owner to deduct the cost of investigating a value engineering cost proposal from amounts payable to the Contractor under the contract.

If the Contractor's value engineering cost proposal is accepted in whole or in part, such acceptance will be by a contract change order that shall specifically state that it is executed pursuant to this paragraph. Such change order shall incorporate the changes in the plans and specifications which are necessary to permit the value engineering cost proposal or such part of it as has been accepted and shall include any conditions upon which the RPR's approval is based. The change order shall also set forth the estimated net savings attributable to the value engineering cost proposal. The net savings shall be determined as the difference in costs between the original contract costs for the involved work items and the costs occurring as a result of the proposed change. The change order shall also establish the net savings agreed upon and shall provide for adjustment in the contract price that will divide the net savings equally between the Contractor and the Owner.

The Contractor's 50% share of the net savings shall constitute full compensation to the Contractor for the value engineering cost proposal and the performance of the work.

Acceptance of the value engineering cost proposal and performance of the work shall not extend the time of completion of the contract unless specifically provided for in the contract change order.

**END OF SECTION 50**

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## SECTION 60 CONTROL OF MATERIALS

**60-01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS**. The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish documentation to the RPR as to the origin, composition, and manufacture of all materials to be used in the work. Documentation shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the RPR's option, materials may be approved at the source of supply before delivery. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that meets the requirements of the specifications; and is listed in AC 150/5345-53, *Airport Lighting Equipment Certification Program* and *Addendum*, that is in effect on the date of advertisement.

**60-02 SAMPLES, TESTS, AND CITED SPECIFICATIONS**. All materials used in the work shall be inspected, tested, and approved by the RPR before incorporation in the work unless otherwise designated. Any work in which untested materials are used without approval or written permission of the RPR shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the RPR, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests will be made by and at the expense of the Owner in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), federal specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the RPR. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the RPR.

A copy of all Contractor QC test data shall be provided to the RPR daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the RPR showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

The Contractor shall employ a Quality Control (QC) testing organization to perform all Contractor required QC tests in accordance with Item C-100 Contractor Quality Control Program (CQCP).

**60-03 CERTIFICATION OF COMPLIANCE/ANALYSIS (COC/COA)**. The RPR may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's COC stating that such materials or assemblies fully comply with the requirements

of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified. The COA is the manufacturer's COC and includes all applicable test results.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the RPR.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "or equal," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

**a.** Conformance to the specified performance, testing, quality or dimensional requirements; and,

**b.** Suitability of the material or assembly for the use intended in the contract work.

The RPR shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The RPR reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

**60-04 PLANT INSPECTION**. The RPR or their authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the RPR conduct plant inspections, the following conditions shall exist:

**a.** The RPR shall have the cooperation and assistance of the Contractor and the producer with whom the Contractor has contracted for materials.

**b.** The RPR shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.

**c.** If required by the RPR, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Place office or working space in a convenient location with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The RPR shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

**60-05 ENGINEER/ RESIDENT PROJECT REPRESENTATIVE (RPR) FIELD OFFICE**. **Engineer's field office is not required for this project.**

**60-06 STORAGE OF MATERIALS**. Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the RPR. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans and/or CSPP, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the RPR. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the RPR a copy of the property Owner's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at their expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

**60-07 UNACCEPTABLE MATERIALS**. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the RPR.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the RPR has approved its use in the work.

**60-08 OWNER FURNISHED MATERIALS**. The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

**END OF SECTION 60**

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## SECTION 70 LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

**70-01 LAWS TO BE OBSERVED**. The Contractor shall keep fully informed of all federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all their officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

**70-02 PERMITS, LICENSES, AND TAXES**. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

**70-03 PATENTED DEVICES, MATERIALS, AND PROCESSES**. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

**70-04 RESTORATION OF SURFACES DISTURBED BY OTHERS**. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work ~~(by others)~~ must be shown on the plans and is indicated as follows:

***Services required by Contractor:***
***City of Wauchula Power service connection, extension, and coordination.***
***Local datacomm/technology, cell, cable, and/or telephone service connections and coordination for electronic pay dispenser/fuel management integrated systems.***

***Utilities on the airfield that may be in the vicinity of the work, but not required by Contractor:***
***Airfield lighting systems including but not limited to runway, taxiway,***

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the RPR.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as

extra work by the RPR, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

**70-05 FEDERAL PARTICIPATION**. The United States Government may agree/may have agreed to reimburse the Owner for some portion of the contract costs. The contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator. No requirement of this contract shall be construed as making the United States a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

**70-06 SANITARY, HEALTH, AND SAFETY PROVISIONS**. The Contractor's worksite and facilities shall comply with applicable federal, state, and local requirements for health, safety and sanitary provisions.

**70-07 PUBLIC CONVENIENCE AND SAFETY**. The Contractor shall control their operations and those of their subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to their own operations and those of their own subcontractors and all suppliers in accordance with Section 40, paragraph 40-05, *Maintenance of Traffic,* and shall limit such operations for the convenience and safety of the traveling public as specified in Section 80, paragraph 80-04, *Limitation of Operations*.

The Contractor shall remove or control debris and rubbish resulting from its work operations at frequent intervals, and upon the order of the RPR. If the RPR determines the existence of Contractor debris in the work site represents a hazard to airport operations and the Contractor is unable to respond in a prompt and reasonable manner, the RPR reserves the right to assign the task of debris removal to a third party and recover the resulting costs as a liquidated damage against the Contractor.

**70-08 CONSTRUCTION SAFETY AND PHASING PLAN (CSPP).** The Contractor shall complete the work in accordance with the approved Construction Safety and Phasing Plan (CSPP) developed in accordance with AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP is located in the **general drawings (GXXX)** of the project plans.

**70-09 USE OF EXPLOSIVES**. The use of explosives is not permitted on this project.

**70-10 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE**. The Contractor shall be responsible for the preservation of all public and private property and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer/RPR has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at their expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

**70-11 RESPONSIBILITY FOR DAMAGE CLAIMS**. The Contractor shall indemnify and hold harmless the Engineer/RPR and the Owner and their officers, agents, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the “Workmen’s Compensation Act,” or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of their own contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, their own surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

**70-12 THIRD PARTY BENEFICIARY CLAUSE**. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third-party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

**70-13 OPENING SECTIONS OF THE WORK TO TRAFFIC**. If it is necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such “phasing” of the work must be specified below and indicated on the approved Construction Safety and Phasing Plan (CSPP) and the project plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified.

**Refer to the Construction Safety and Phasing Plans and Documentation (CSPP)**

Upon completion of any portion of work listed above, such portion shall be accepted by the Owner in accordance with Section 50, paragraph 50-14, *Partial Acceptance*.

No portion of the work may be opened by the Contractor until directed by the Owner in writing. Should it become necessary to open a portion of the work to traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the RPR, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at their expense.

The Contractor shall make their own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

The Contractor must conform to safety standards contained AC 150/5370-2 and the approved CSPP.

Contractor shall refer to the plans, specifications, and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

**70-14 CONTRACTOR'S RESPONSIBILITY FOR WORK**. Until the RPR's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with Section 50, paragraph 50-14, *Partial Acceptance*, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at their own expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

**70-15 CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS**. As provided in paragraph 70-04, *Restoration of Surfaces Disturbed by Others*, the Contractor shall cooperate with the owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and/or in the contract documents.

**Facilities on the Airport but not necessarily in the project area:**
**TECO Natural Gas Main – along Vandolah Road**
**Fiber Optic Cables – along Vandolah Road and possibly into the Airport**

**Facilities known to be in the project area:**
**Runway and taxiway lighting cables, including Primary Wind Cone**

**Automatic Security Gate Controllers, and Overhead Light Poles**
**Underground single and 3-phase Power lines and service**
**Overhead Apron lighting / poles**
**Underground and overhead telephone and cable television lines – Owners Unknown**
**Lift Station, Septic tanks and lines, sanitary gravity lines**
**Storm Drainage culverts and structures**
**Potable water services, hose bibbs, standpipes, and stub-ups and sanitary mains (as applicable) – City of Wauchula Department of Public Works and Engineering**
**Telephone lines and service**
**High voltage 3-phase power underground lines east of the project along fence line**
**Runway and Taxiway Lighting and Navigational Aids – City of Wauchula Municipal Airport**
**Power Lines Duke Energy**

**See also the Design Survey and the Construction Plans for known utilities. It is the Contractor's responsibility to coordinate utilities, and call for locates prior to construction. By State of Florida Law, the Contractor is required to contact SUNSHINE STATE ONE CALL 811 prior to any construction activity.**

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of their plan of operations. Such notification shall be in writing addressed to "The Person to Contact" as provided in this paragraph and paragraph 70-04, *Restoration of Surfaces Disturbed By Others*. A copy of each notification shall be given to the RPR.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's "Person to Contact" no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the RPR.

The Contractor's failure to give the two days' notice shall be cause for the Owner to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the RPR and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the RPR continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or their own surety.

**70-15.1 FAA FACILITIES AND CABLE RUNS**. The Contractor is hereby advised that the construction limits of the project ***may*** include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the execution of the project work, shall comply with the following:

a. The Contractor shall permit FAA maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA owned facilities.

b. The Contractor shall provide notice to the FAA Air Traffic Organization (ATO)/Technical Operations/System Support Center (SSC) Point-of-Contact through the airport *manager* a minimum of seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.

c. If execution of the project work requires a facility outage, the Contractor shall contact the FAA Point-of-Contact a minimum of 72 hours prior to the time of the required outage.

d. Any damage to FAA cables, access roads, or FAA facilities during construction caused by the Contractor’s equipment or personnel whether by negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA facilities to FAA requirements. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA.

e. If the project work requires the cutting or splicing of FAA owned cables, the FAA Point-of-Contact shall be contacted a minimum of 72 hours prior to the time the cable work commences. The FAA reserves the right to have a FAA representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA specifications and require approval by the FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA, the Contractor shall furnish and install a sufficient length of new cable that eliminates the need for any splice.

**70-16 FURNISHING RIGHTS-OF-WAY**. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor’s operations.

**70-17 PERSONAL LIABILITY OF PUBLIC OFFICIALS**. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, RPR, their authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

**70-18 NO WAIVER OF LEGAL RIGHTS**. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or their surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill their obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guaranty.

**70-19 ENVIRONMENTAL PROTECTION**. The Contractor shall comply with all federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, asphalts, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

**70-20 ARCHAEOLOGICAL AND HISTORICAL FINDINGS**. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during their operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the RPR. The RPR will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in Section 40, paragraph 40-04, *Extra Work,* and Section 90, paragraph 90-05, *Payment for Extra Work*. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with Section 80, paragraph 80-07, *Determination and Extension of Contract Time*.

**70-21 INSURANCE REQUIREMENTS.**

a. Before any work commences, Contractor shall, without in any way altering their liability, obtain, pay for, and maintain insurance for the coverages and amounts of coverage not less than those set forth in the subsections below, and shall provide the CITY with a Certificate of Insurance and an opportunity to inspect a certified copy of each policy applicable to this Agreement. The

Certificate of Insurance must name as an additional insured the City of Wauchula and all of its Officers, Agents, Employees, and City Commissioners, excluding worker's compensation and professional liability; must provide that such insurance is primary to any other insurance available to the additional insureds with respect to claims covered under the policy; and must provide that such insurance coverage applies separately to each insured against whom claims are made or suit is brought; but the inclusion of more than one insured shall not operate to increase the insurer's limit of liability. Contractor shall thereafter provide the CITY an annual Certificate of Insurance satisfactory to the CITY to evidence such coverage. Such Certificates of Insurance will provide that there shall be no termination, non-renewal, modification or expiration of such coverage without thirty (30) days prior written notice to the CITY. Contractor shall maintain, at all times, the minimum levels of insurance set forth below.

b. The CITY shall be named as an additional insured on all Contractor policies related to the project, excluding professional liability and worker's compensation. All policies required under this section must be an "Occurrence" form. The policies shall contain a waiver of subrogation in favor of the City of Wauchula. All insurance coverage shall be written with an insurer having an A.M. Best Rating of a least the "A" category and size category of VIII.

c. The Contractor's self-insured retention or deductible per line of coverage shall not exceed $25,000.00 without the permission of the CITY.

d. If there is any failure by the Contractor to comply with the provisions of this section, the CITY may, at its option, and on notice to the Contractor, suspend the Contractor's work for cause until there is full compliance.

e. CITY may, at its sole discretion, purchase such insurance at Contractor's expense provided that the CITY shall have no obligation to do so and if the CITY shall do so, it shall not relieve Contractor of its obligation to obtain insurance.

f. The Contractor shall not be relieved of or excused from the obligation to obtain and maintain such insurance amount and coverages.

g. To the extent applicable, Contractor will ensure that all subcontractors comply with the requirements of this Section relating to insurance, and maintain coverage throughout the term of the Service Agreement. All Contractor's sub-contractors shall be required to include CITY and Contractor as additional insured on their General Liability Insurance policies.

h. In the event that subconsultants used by the Contractor do not have insurance, or do not meet the insurance limits, Contractor shall indemnify and hold harmless the CITY for any claim in excess of the subconsultants' insurance coverage.

i. The Contractor shall not commence work under this Agreement until all insurance required as stated herein has been obtained and such insurance has been approved by the CITY.

1. Comprehensive Automobile Liability Insurance. $1,000,000.00 combined single limit of liability for bodily injuries, death and property damage resulting from any one occurrence, including all owned, hired, and non-owned vehicles.

2. Commercial General Liability. $1,000,000.00 combined single limit of liability for bodily injuries, death and property damage, and personal injury resulting from any one occurrence, including the following coverages:

3. Premises and Operations: Broad Form Commercial General Liability Endorsement to include Blanket Contractual liability (specifically covering, but not limited to, the contractual obligations assumed by the Firm); Personal Injury (with employment and contractual exclusions deleted); and Broad Form Property Damage coverage.

4. Independent Contractors: Delete Exclusion relative to collapse, explosion and underground; Property Damage Hazards; Cross Liability Endorsement; and Contractual liability (specifically covering, but not limited to, the contractual obligations assumed by the Firm)

5. Umbrella (Excess) Liability Insurance. Umbrella Liability with limits of not less than $1,000,000.00, exclusive of defense costs, to be in excess of all other coverages. Such coverage shall be at least as broad as the primary coverages above, with any excess umbrella layers written on a strict following form basis over the primary coverage. All such policies shall be endorsed to provide defense coverage obligations.

6. Professional Liability Insurance. $1,000,000.00 for design errors and omissions, exclusive of defense costs. Contractor shall be required to provide continuing Professional Liability Insurance to cover each project for a period of two (2) years after the project is completed. Insurance requirements may vary depending on projects as determined by the City Manager. The CITY may require the Contractor to provide a higher level of coverage for a specific project and time frame.

7. Performance, Payment and Other Bonds. Contractor shall furnish Performance and Payment Bonds specific to each project if required and agreed to under the Consultant Service Agreement for the project.

8. Worker's Compensation. The Contractor shall provide, pay for, and maintain worker's compensation insurance on all employees, its agents or subcontractors as required by Florida Statutes.

9. Contingent Liability. The above policies for comprehensive liability and property damage insurance must be so written as to include contingent liability and contingent property damage insurance to protect the Contractor against claims arising from the operation of subcontractors.

10. Contractual Liability. To recognize and hold harmless the requirements of this contract.

11. Builder's Risk. The Contractor shall secure and maintain during the term of this contract, builder's risk insurance to include but not limited to fire, lightning, extended coverage, vandalism and malicious mischief, flood, all other hazards, **in the amount of the project**

**value or greater.**

*12.* ***Refer also to Section 70-11 of the Supplemental General Provisions and other sections of the Contract Documents for additional Insurance Requirements.***

## 70-22: UNITED STATES IRON AND STEEL PRODUCTS

a. The Contractor acknowledges to and for the benefit of the Owner that it understands that the products to be installed as a part of this contract must be in compliance with 255.0993, Florida Statutes, Public works projects; United States-produced iron and steel products.

1. DEFINITIONS.— As used in this section, the term:

   a) “Governmental entity” means the state, or any office, board, bureau, commission, department, branch, division, or institution thereof, or a separate agency or unit of local government created or established by law or ordinance and the officers thereof. The term includes, but is not limited to, a county; a city, a town, or other municipality; or a department, a commission, an authority, a school district, a taxing district, a water management district, a board, a public corporation, an institution of higher education, or other public agency or body thereof authorized to expend public funds for the construction, maintenance, repair, renovation, remodeling, or improvement of public works.

   b) Iron or steel product” means any product made primarily of iron or steel, including, but not limited to, lined or unlined pipes and fittings; bars and rods; wire, wire ropes, and link chains; forgings; grating and drainage products; access covers, hatches, manhole covers, and other castings; hydrants; electric transmission and distribution poles; tanks; flanges; pipe clamps and restraints; valves; structural steel and other steel mill products; materials made primarily of iron and steel within precast concrete; and other construction materials made primarily of iron or steel.

   c) “Manufacturing process” means the application of a process to alter the form or function of materials or elements of a product in a manner that adds value and transforms the materials or elements into a new finished product functionally different from a finished product produced merely from assembling materials or elements into a product without applying such a process.

   d) “Produced in the United States” means that, with respect to iron and steel, all manufacturing processes, from initial melting through application of coatings, occur in the United States, other than metallurgical processes to refine steel additives.

   e) “Public works project” means an activity paid for with any state-appropriated funds or state funds administered by a governmental entity which consists of the construction, maintenance, repair, renovation, remodeling, or improvement of a building, road, street, sewer, storm drain, water system, site development, irrigation system, reclamation project, gas or electrical distribution system, gas or electrical substation, or other facility, project, or portion thereof owned in whole or in part by any governmental entity.

2. UNITED STATES-PRODUCED IRON AND STEEL REQUIREMENT.

   a) Notwithstanding any other law, a governmental entity entering into a contract for a public works project or for the purchase of materials for a public works project must include in the contract a requirement that any iron or steel product permanently incorporated in the project be produced in the United States.

   b) Paragraph (a) does not apply if the governmental entity administering the funds for a public works project or the purchase of materials for a public works project solely determines that any of the following applies:

      1) Iron or steel products produced in the United States are not produced in sufficient quantities, reasonably available, or of satisfactory quality.

      2) The use of iron or steel products produced in the United States will increase the total cost of the project by more than 20 percent.

      3) Complying with paragraph (a) is inconsistent with the public interest.

   c) When steel and iron materials are used in a public works project, paragraph (a) does not prevent a minimal use of foreign steel and iron materials if:

      1. Such materials are incidental or ancillary to the primary product and are not separately identified in the project specifications; and

      2. The cost of such materials does not exceed one-tenth of 1 percent of the total contract cost or $2,500, whichever is greater. For purposes of this subparagraph, the cost of such materials is that shown to be the value of the iron or steel products as they are delivered to the project.

   (d) Electrical components, equipment, systems, and appurtenances, including supports, covers, shielding, and other appurtenances related to an electrical system, necessary for operation or concealment, except transmission and distribution poles, are not considered iron or steel products and are exempt from the requirements of paragraph (a).

3. INTERNATIONAL AGREEMENTS.—This section shall be applied in a manner consistent with, and may not be construed to impair, the state's obligations under any international agreement.

4. RULEMAKING.—The Department of Management Services shall develop guidelines and procedures by rule to implement this section.

5. APPLICABILITY.—This section does not apply to contracts procured by the Department of Transportation subject to the Buy America requirements of 23 C.F.R. s. 635.410.

## 70-23 E-VERIFY REQUIREMENTS

Effective January 1, 2021, public and private employers, contractors, and subcontractors must require registration with, and use of the E-Verify system in order to verify the work authorization status of all newly hired employees. Contractor acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of:

a. All persons employed by Contractor to perform employment duties within the State of Florida during the term of the Contract; and

b. All persons (including subcontractors/subvendors/subconsultants) assigned by Contractor to perform work pursuant to this Contract with the City. Contractor acknowledges and agrees that the use of the U.S. Department of Homeland Security's E-Verify System during the term of this Contract is a condition of the Contract with the City.

By entering this Contract with the City, Contractor becomes obligated to comply with the provisions of Section 448.095, Florida Statutes, "Employment Eligibility." This includes, but is not limited to, use of the E-Verify System to verify the work authorization status of all newly hired employees, and requiring all subcontractors to provide an affidavit to Contractor attesting that the subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. Contractor agrees to maintain a copy of such affidavit for the duration of this Contract. Failure to comply with this section will result in the termination of this Contract as provided in Section 448.095, Florida Statutes, and Contractor may not be awarded a public contract for at least one (1) year after the date on which the Contract was terminated. Contractor will also be liable for any additional costs to the City incurred as a result of the termination of this Contract in accordance with this section.

## 70-24 PUBLIC RECORD LAWS

The parties acknowledge and agree that the City is a public agency subject to Chapter 119, Florida Statutes. All documents, including but not limited to, letters, memos, e-mails, computer files, photographs, drawings, tracings, plans, specifications, maps, evaluations, reports and other records and data of any type relating to the Project received, prepared, or developed by Contractor under this Contract are public records subject to Florida Statutes Chapter 119 and shall not be destroyed. Accordingly, pursuant to Section 119.0701, Florida Statutes, the Contractor must comply with all public records laws in accordance with Chapter 119, Florida Statutes. In accordance with Chapter 119, Florida Statutes, the Contractor agrees to:

a. Keep and maintain all records that ordinarily and necessarily would be required by the Owner to perform the services under this Contract.

b. Upon request from the City, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the costs provided in Chapter 119, Florida Statutes, or as otherwise provided by law.

c. Ensure that public records that are exempt, or confidential and exempt, from public records disclosures are not disclosed as except as authorized by law for the duration of the Contract term and following completion of the Contract if the Contractor does not transfer the records to the City.

d. Upon completion of the services under this Contract, at no cost to the City, either transfer to the City all public records in the Contractor's possession that were not previously provided or keep and maintain public records required by the City to perform the services. If the Contractor transfers all public records to the City upon completion of the services, the Contractor must destroy any duplicate public records that are exempt, or confidential and exempt, from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the services under this Contract, its obligations shall survive the termination or expiration of the Contract, and the Contractor must meet all applicable requirements for retaining public records, including abiding by all State of Florida records retention schedules. All records stored electronically must be provided to the City, upon request from the City, in a format that is compatible with the information technology systems of the City.

**e. IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO ITS DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE OWNER'S CUSTODIAN OF PUBLIC RECORDS AT: STEPHANIE CAMACHO, CITY CLERK, VIA EMAIL: SCAMACHO@CITYOFWAUCHULA.COM**

If the Contractor does not comply with the provisions of this section, the CITY will enforce the Contract provisions in accordance herewith and may unilaterally cancel this Contract in accordance with Florida law.

**70-25 TRADE SECRETS AND PROPRIETARY CONFIDENTIAL BUSINESS INFORMATION:**

a. Documents submitted by Contractor which it contends constitute trade secrets as defined in Sections 812.081 and 688.002, Florida Statutes, or confidential and propriety business information when held by the City as a utility owner, consistent with Section 119.0713(5), Florida Statutes, or information related to cybersecurity that is exempt and confidential under Section 119.0725, Florida Statutes, and which are clearly marked or stamped as confidential by the Contractor at the time of submission to the City, will not be subject to public access. Except as may be required under applicable law, court order, or regulation, or to the extent required to perform and enforce this Contract, both parties shall (and shall cause their employees and contractors to) keep all Confidential Information strictly confidential and shall not disclose it to any third party. The Confidential Information may be transmitted orally, in writing, electronically or otherwise observed by either party. However, should a requestor of public records challenge Contractor's claim of trade secret or confidential and proprietary business information, within five (5) calendar days of such challenge, Contractor must provide a separate written affidavit and a separate indemnification and release guarantee, as approved by the City's Attorney or designee, to the City to support its claim that the alleged trade secrets or proprietary and confidential business information actually constitutes same as defined by law. Contractor must demonstrate the need for confidentiality of the documentation by showing a business advantage or opportunity to obtain an advantage would be gained if the documentation were released. Otherwise, Contractor is required to timely seek a protective order in the Circuit Court of Hardee County to prevent the City's release of the requested records.

b. "Confidential Information" means all non-public information of either party, including the terms of this agreement, all technical information about either party's products or services, pricing information, marketing and marketing plans, other business and financial information of either party and all trade secrets of either party. Notwithstanding the foregoing, "Confidential Information" shall not include (i) any information that is in the public domain other than due to

Recipient's breach of this Contract; (ii) any information in the possession of the Recipient without restriction prior to disclosure by the Discloser; or (iii) any information independently developed by the Recipient without reliance on the information disclosed hereunder by the Discloser. "Discloser" means either party that discloses Confidential Information, and "Recipient" means either party that receives it.

c. To the extent Contractor regards certain terms and provisions of this Contract to contain data or information that is covered by one or more of the following: (1) information related to critical infrastructure, and (2) network schematics, hardware and software configurations, or encryption information or information that identifies detection, investigation, or response practices for suspected or confirmed cybersecurity incidents, Contractor must clearly mark such provisions as confidential and exempt. To the extent such terms and provisions are clearly marked as confidential and exempt from public record law requirements, the parties agree to treat the terms and conditions in accordance with the provisions of Paragraph a) above.

## 70-26 SOLICITATION OF CONTRACT

Contractor warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for Contractor, to solicit or secure this Contract and that it has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for Contractor, any fee, commission, percentage, gift, or other compensation contingent upon or resulting from the award or making of this Contract.

## 70-27 PUBLIC ENTITY CRIME

As provided by Florida Statute 287.133(2)(a), a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or a public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Florida Statute 287.017 for Category Two for a period of 36 months from the date of being placed on the convicted vendor list. Any person must notify the City within 30 days after a conviction of a public entity crime applicable to that person or to an affiliate of that person. By its execution hereof, Contractor certifies that neither it nor an affiliate is on the convicted vendor list.

## 70-28 SCRUTINIZED COMPANIES LIST/COUNTRIES OF CONCERN/INTERESTS OF FOREIGN COUNTRIES

Contractor hereby certifies that it: (a) has not been placed on the Scrutinized Companies that Boycott Israel List, nor is engaged in a boycott of Israel; (b) has not been placed on the Scrutinized Companies with Activities in Sudan List nor the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List; and (c) has not been engaged in business operations in Cuba or Syria. This Contract may be terminated at the option of the City if the Contractor is found to have submitted a false certification as provided under Florida Statute 287.135(5), been placed on the Scrutinized Companies that Boycott Israel List, or is engaged in a boycott of Israel, been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or been engaged in business operations in Cuba or Syria.

## 70-29 ANTI-TRUST VENDOR VIOLATOR

The Contractor has a continuous duty, throughout the entire Contract Term identified in Section 4, and any renewal, to disclose to the City if the Contractor or any of its affiliates, as defined by section 287.137(1), Fla. Stat., are placed on the Antitrust Violator Vendor List. Pursuant to section 287.137, Fla. Stat., "A person or an affiliate who has been placed on the antitrust violator vendor list following a conviction or being held civilly liable for an antitrust violation may not submit a bid, proposal, or reply for any new contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply for a new contract with a public entity for the construction or repair of a public building or public work; may not submit a bid, proposal, or reply on new leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a new contract with a public entity; and may not transact new business with a public entity."

## 70-30 JESSICA LUNSFORD ACT (SECTION 1012.32, FLORIDA STATUTES)

Background screening requirements for certain non-instructional school district employees and contractors. (1) Except as provided in s. 1012.467 or s. 1012.468, non-instructional school district employees or contractual personnel who are permitted access on school grounds when students are present, who have direct contact with students or who have access to or control of school funds must meet level 2 screening requirements as described in s. 1012.32. Contractual personnel shall include any contractor, individual, or entity under contract with a school or the school board. (2) Every 5 years following employment or entry into a contract in a capacity described in subsection (1), each person who is so employed or under contract with the school district must meet level 2 screening requirements as described in s. 1012.32, at which time the school district shall request the Department of Law Enforcement to forward the fingerprints to the Federal Bureau of Investigation for the level 2 screening. If, for any reason following employment or entry into a contract in a capacity described in subsection (1), the fingerprints of a person who is so employed or under contract with the school district are not retained by the Department of Law Enforcement under s. 1012.32(3)(a) and (b), the person must file a complete set of fingerprints with the district school superintendent of the employing or contracting school district. Upon submission of fingerprints for this purpose, the school district shall request the Department of Law Enforcement to forward the fingerprints to the Federal Bureau of Investigation for the level 2 screening, and the fingerprints shall be retained by the Department of Law Enforcement under s. 1012.32(3)(a) and (b). The cost of the state and federal criminal history check required by level 2 screening may be borne by the district school board, the contractor, or the person fingerprinted. Under penalty of perjury, each person who is employed or under contract in a capacity described in subsection (1) must agree to inform his or her employer or the party with whom he or she is under contract within 48 hours if convicted of any disqualifying offense while he or she is employed or under contract in that capacity.(3) If it is found that a person who is employed or under contract in a capacity described in subsection (1) does not meet the level 2 requirements, the person shall be immediately suspended from working in that capacity and shall remain suspended until final resolution of any appeals.

## 70-31 CONFLICT OF INTEREST

This Contract is subject to Chapter 112, Florida Statutes, and Contractor shall disclose the name of any officer, director, employee, or other agent who is also an employee of the City of Wauchula. The Contractor shall also disclose the name of any City of Wauchula employee who owns, directly or indirectly, more than a 5% interest in Contractor's, or its affiliates, business entity.

## 70-32 CHOICE OF LAW, VENUE, AND WAIVER OF JURY TRIAL

a. This Contract, and the rights and duties of the parties arising from or relating to this Contract or its subject matter, shall be construed in accordance with the laws of the State of Florida and the ordinances of the City of Wauchula without regard to its conflicts of law provisions. Each of the parties irrevocably submits to the exclusive jurisdiction of the courts of Hardee County, Florida, and further agree that the venue for any legal action brought by or filed against the City for any matter arising out of or relating to this Contract shall be exclusively in that state or federal court for Hardee County, Florida that has jurisdiction over such legal actions.

b. WAIVER OF JURY TRIAL. BY ENTERING INTO THIS AGREEMENT, THE CONTRACTOR AND THE CITY HEREBY EXPRESSLY AND IRREVOCABLY WAIVE ANY RIGHTS THEY MAY HAVE TO A TRIAL BY JURY IN ANY LITIGATION ARISING OUT OF OR RELATED TO THIS AGREEMENT.

## 70-33 DRUG FREE WORKPLACE

Contractor shall comply with the applicable provisions of the Drug-Free Work Place Act of 1988 (Public Law 100-690, Title V, Subtitle D; 41 USC § 701 et seq.) and maintain a drug-free work environment; and the final rule, government-wide requirements for drug-free work place issued by the Office of Management and Budget to implement the provisions of the Drug-Free Work Place Act of 1988 is incorporated by reference and the Contractor shall comply with the relevant provisions thereof, including any amendments, which are made part of this Agreement.

## 70-34 DISCRIMINATORY VENDOR LIST

Contractor hereby acknowledges its continuous duty to disclose to the City if Contractor or any of its affiliates, as defined by Section 287.134(1)(a), Florida Statutes, has been placed on the Discriminatory Vendor List. Pursuant to Section 287.134(2)(a), Florida Statutes: “An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity.”

## 70-35 ACCESS AND AUDITS

1. Contractor agrees to comply with Section 20.055(5), Florida Statutes, and to incorporate in all agreements with subconsultants, subvendors, and subcontractors, the obligation to comply with the provisions of Section 20.055(5), Florida Statutes.

2. Contractor shall maintain adequate records to justify all charges and costs incurred in performing the work for at least five (5) years from the date of final payment under this Agreement. The CITY shall have access to such books, records, and documents as required in this section for the purpose of inspection or audit during normal business hours at the Contractor's place of business.

3. Misrepresentations of billable time or reimbursable expenses as determined by the Auditor to the City of Wauchula shall result in the recovery of any resulting overpayments. The CITY's cost of recovery shall be the sole expense of the Contractor, including accounting and legal fees, court costs, and administrative expenses.

4. Intentional misrepresentations of billable hours and reimbursable expenses will be criminally prosecuted to the fullest extent of the law.

5. All invoices submitted are subject to audit and demand for refund of overpayment up to five (5) years following final payment under this Agreement.

**70-36 ANNUAL APPROPRIATIONS**

Contractor acknowledges that the CITY, during any fiscal year, shall not expend money, incur any liability, or enter into any agreement which, by its terms, involves the expenditure of money in excess of the amounts budgeted as available for expenditure during such fiscal year. Any agreement, verbal or written, made in violation of this subsection is null and void, and no money may be paid on such agreement. Nothing herein contained shall prevent the making of agreements for a period exceeding one year, but any agreement so made shall be executory only for the value of the services to be rendered or agreed to be paid for in succeeding fiscal years. This Agreement will remain in full force and effect only as long as the expenditures provided for in the Agreement have been appropriated by the City Commission of the City of Wauchula in the annual budget for each fiscal year of the Service Agreement, and is subject to termination without any penalty due to lack of funding. Accordingly, the CITY's performance and obligation to pay under this agreement is contingent upon annual appropriation.

**70-37 LIMITATION OF LIABILITY**

In no event, shall the CITY be liable to the Contractor for indirect, incidental, consequential, special, exemplary, or punitive damages of any kind or nature, including loss of profit, whether foreseeable or not, arising out of or resulting from the nonperformance or breach of this contract by the CITY whether based in contract, common law, warranty, tort, strict liability, contribution, indemnity or otherwise.

**70-38 CONTRACT RETAINAGE PAYMENT CONDITIONS**

Contract retainage for this project is subject to Florida Law. Effective October 1, 2020, all public works projects exceeding $200,000 are subject to the following additional retainage conditions, not in conflict with other requirements regarding satisfactory completion, record drawings, and close-out documentation :

1. Retainage limit is now 5% for the lifetime of the project.

2. Reduction in retainage percentage no longer required at 50% completion.

3. Provision allowing the contractor to request early release of retainage was removed.

**END OF SECTION 70**

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## SECTION 80 EXECUTION AND PROGRESS

**80-01 SUBLETTING OF CONTRACT**. The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Resident Project Representative (RPR).

The Contractor shall perform, with his organization, an amount of work equal to at least **25%** percent of the total contract cost.

Should the Contractor elect to assign their contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

**The Contractor shall provide copies of all subcontracts to the RPR 14 calendar days prior to being utilized on the project. As a minimum, the information shall include the following:**

- Subcontractor's legal company name.
- Subcontractor's legal company address, including County name.
- Principal contact person's name, telephone and fax number.
- Complete narrative description, and dollar value of the work to be performed by the subcontractor.
- Copies of required insurance certificates in accordance with the specifications.
- Minority/ non-minority status.

**80-02 NOTICE TO PROCEED (NTP)**. The notice to proceed shall state the date on which it is expected the Contractor will begin the construction and from which date contract time will be charged. The Contractor shall begin the work to be performed under the contract within 10 days of the date set by the Engineer in the written notice to proceed, but in any event, the Contractor shall notify the Engineer at least 24 hours in advance of the time actual construction operations will begin. The Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the Owner.

**80-03 EXECUTION AND PROGRESS**. Unless otherwise specified, the Contractor shall submit their coordinated construction schedule showing all work activities for the RPR’s review and acceptance at least 10 days prior to the start of work. The Contractor’s progress schedule, once accepted by the RPR, will represent the Contractor's baseline plan to accomplish the project in accordance with the terms and conditions of the Contract. The RPR will compare actual Contractor progress against the baseline schedule to determine that status of the Contractor's performance. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the RPR's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the RPR at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the NTP is issued by the Owner.

The project schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified. It shall include information on the sequence of work activities, milestone dates, and activity duration. The schedule shall show all work items identified in the project proposal for each work area and shall include the project start date and end date.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a twice monthly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

**80-04 LIMITATION OF OPERATIONS**. The Contractor shall control their operations and the operations of their subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct their operations within an AOA of the airport, the work shall be coordinated with airport operations (through the RPR) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the RPR and until the necessary temporary marking, signage and associated lighting is in place as provided in Section 70, paragraph 70-08, *Construction Safety and Phasing Plan (CSPP)*.

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; and immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until satisfactory conditions are provided. The areas of the AOA identified in the Construction Safety Phasing Plan (CSPP) and as listed below, cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows:

***Taxiways shall be closed anytime there is activity within the Safety Area. Refer to the Construction Safety and Phasing Plan for detailed phasing requirements.***

The Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction and the approved CSPP.

**80-04.1 OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION.** All Contractors' operations shall be conducted in accordance with the approved project Construction Safety and Phasing Plan (CSPP) and the Safety Plan Compliance Document (SPCD) and the provisions set forth within the current version of AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a SPCD that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and SPCD and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP and SPCD unless approved in writing by the Owner. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require a significant amount of time.

**80-05 CHARACTER OF WORKERS, METHODS, AND EQUIPMENT**. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the RPR, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the RPR, be removed immediately by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the RPR.

Should the Contractor fail to remove such person or persons, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the RPR may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall not cause injury to previously completed work, adjacent property, or existing airport facilities due to its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless otherwise authorized by the RPR. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the RPR to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the RPR determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the RPR may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this paragraph.

**80-06 TEMPORARY SUSPENSION OF THE WORK**. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods the Owner may deem necessary, due to unsuitable weather, or other conditions considered unfavorable for the execution of the work, or for such time necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the written order to suspend work to the effective date of the written order to resume the work. Claims for such compensation shall be filed with the RPR within the time period stated in the RPR's order to resume work. The Contractor shall submit with their own claim information substantiating the amount shown on the claim. The RPR will forward the Contractor's claim to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather or for any other delay provided for in the contract, plans, or specifications.

If it becomes necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

**80-07 DETERMINATION AND EXTENSION OF CONTRACT TIME**. The ***number of calendar days*** shall be stated in the proposal and contract and shall be known as the Contract Time.

If the contract time requires extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

**80-07.1 CONTRACT TIME BASED ON CALENDAR DAYS.** Contract Time based on calendar days shall consist of the number of calendar days stated in the contract counting from the effective date of the Notice to Proceed and including all Saturdays, Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of the Owner's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

**80-08 FAILURE TO COMPLETE ON TIME**. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in paragraph 80-07, *Determination and Extension of Contract Time*) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

| Schedule | Liquidated Damages Cost | Allowed Construction Time |
|---|---|---|
| All Schedules | $500 per Calendar Day | 180 Calendar Days |

The maximum construction time allowed for all Schedules will be the sum of the time allowed for individual schedules but not more than **180 Calendar Days**. Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a wavier on the part of the Owner of any of its rights under the contract.

**80-09 DEFAULT AND TERMINATION OF CONTRACT**. The Contractor shall be considered in default of their contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons, if the Contractor:

**a.** Fails to begin the work under the contract within the time specified in the Notice to Proceed, or

**b.** Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or

**c.** Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or

**d.** Discontinues the execution of the work, or

**e.** Fails to resume work which has been discontinued within a reasonable time after notice to do so, or

**f.** Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or

**g.** Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or

**h.** Makes an assignment for the benefit of creditors, or

**i.** For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Owner consider the Contractor in default of the contract for any reason above, the Owner shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the RPR of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the RPR will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

**80-10 TERMINATION FOR NATIONAL EMERGENCIES**. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the RPR.

Termination of the contract or a portion thereof shall neither relieve the Contractor of their responsibilities for the completed work nor shall it relieve their surety of its obligation for and concerning any just claim arising out of the work performed.

**80-11 WORK AREA, STORAGE AREA AND SEQUENCE OF OPERATIONS**. The Contractor shall obtain approval from the RPR prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate work in accordance with the approved CSPP and SPCD.

**END OF SECTION 80**

## SECTION 90 MEASUREMENT AND PAYMENT

**90-01 MEASUREMENT OF QUANTITIES**. All work completed under the contract will be measured by the RPR, or their authorized representatives, using United States Customary Units of Measurement.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meters) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the RPR.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

The term “lump sum” when used as an item of payment will mean complete payment for the work described in the contract. When a complete structure or structural unit (in effect, “lump sum” work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When requested by the Contractor and approved by the RPR in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the RPR and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

**Measurement and Payment Terms**

| Term | Description |
|---|---|
| **Excavation and Embankment Volume** | In computing volumes of excavation, the average end area method will be used unless otherwise specified. |
| **Measurement and Proportion by Weight** | The term “ton” will mean the short ton consisting of 2,000 pounds (907 km) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, independently certified scales by competent, qualified personnel at locations designated by the RPR. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the RPR directs, and each truck shall bear a plainly legible identification mark. |

| Term | Description |
|---|---|
| **Measurement by Volume** | Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery. |
| **Asphalt Material** | Asphalt materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts. Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, will be used for computing quantities. |
| **Cement** | Cement will be measured by the ton (kg) or hundredweight (km). |
| **Structure** | Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions. |
| **Timber** | Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece. |
| **Plates and Sheets** | The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch. |
| **Miscellaneous Items** | When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted. |
| **Scales** | Scales must be tested for accuracy and serviced before use. Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.<br><br>Scales shall be accurate within 0.5% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the RPR before beginning work and at such other times as |

| Term | Description |
|---|---|
| | requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed 0.1% of the nominal rated capacity of the scale, but not less than one pound (454 grams). The use of spring balances will not be permitted.<br><br>In the event inspection reveals the scales have been “overweighing” (indicating more than correct weight) they will be immediately adjusted. All materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of 0.5%.<br><br>In the event inspection reveals the scales have been under-weighing (indicating less than correct weight), they shall be immediately adjusted. No additional payment to the Contractor will be allowed for materials previously weighed and recorded.<br><br>Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the RPR can safely and conveniently view them.<br><br>Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.<br><br>All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project. |
| **Rental Equipment** | Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered in connection with extra work will be measured as agreed in the change order or supplemental agreement authorizing such work as provided in paragraph 90-05 *Payment for Extra Work*. |
| **Pay Quantities** | When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the RPR. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions. |

**90-02 SCOPE OF PAYMENT**. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of Section 70, paragraph 70-18, *No Waiver of Legal Rights*.

When the "basis of payment" subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

**90-03 COMPENSATION FOR ALTERED QUANTITIES**. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in Section 40, paragraph 40-02, *Alteration of Work and Quantities,* will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from their own unbalanced allocation of overhead and profit among the contract items, or from any other cause.

**90-04 PAYMENT FOR OMITTED ITEMS**. As specified in Section 40, paragraph 40-03, *Omitted Items,* the RPR shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the RPR omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the RPR's order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the RPR's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the RPR's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

**90-05 PAYMENT FOR EXTRA WORK**. Extra work, performed in accordance with Section 40, paragraph 40-04, *Extra Work*, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work, ***and subject to the following:***

***The Contractor shall not order any materials without the written consent of the Engineer. The Contractor will be reimbursed for stored materials on-site only as accepted by the Engineer upon inspection by the RPR. The Owner will not pay any re-stocking fees, delivery fees, or any other fees for any materials that were not included in the unit prices bid. All materials must be protected and in new, unused, undamaged condition, per Section 90-07. Additionally, the Owner will not pay for any unused or excess materials, equipment rentals, or anything else not used on the project.***

**90-06 PARTIAL PAYMENTS**. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the RPR, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with paragraph 90-07, *Payment for Materials on Hand*. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

From the total of the amount determined to be payable on a partial payment, ***5*** percent of such total amount will be deducted and retained by the Owner for protection of the Owner's interests. Unless otherwise instructed by the Owner, the amount retained by the Owner will be in effect until the final payment is made except as follows:

~~(1) Contractor may request release of retainage on work that has been partially accepted by the Owner in accordance with Section 50-14. Contractor must provide a certified invoice to the RPR that supports the value of retainage held by the Owner for partially accepted work.~~

(2) In lieu of retainage, the Contractor may exercise at its option the establishment of an escrow account per paragraph 90-08.

b. The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 30 days after the Contractor has received a partial payment. Contractor must provide the Owner evidence of prompt and full payment of retainage held by the prime Contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Owner. When the Owner has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

c. When at least 95% of the work has been completed to the satisfaction of the RPR, the RPR shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done. The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the RPR to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in paragraph 90-09, *Acceptance and Final Payment*. ***Retainage shall be subject to Florida Law (Refer to GP Section 70).***

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or

collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

***Lien releases shall be subject to Florida Law.***

**90-07 PAYMENT FOR MATERIALS ON HAND.** Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

**a.** The material has been stored or stockpiled in a manner acceptable to the RPR at or on an approved site.

**b.** The Contractor has furnished the RPR with acceptable evidence of the quantity and quality of such stored or stockpiled materials.

**c.** The Contractor has furnished the RPR with satisfactory evidence that the material and transportation costs have been paid.

**d.** The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material stored or stockpiled.

**e.** The Contractor has furnished the Owner evidence that the material stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of their responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this paragraph.

**90-08 PAYMENT OF WITHHELD FUNDS**. At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in paragraph 90-06 *Partial Payments*, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:

**a.** The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.

**b.** The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.

**c.** The Contractor shall enter into an escrow agreement satisfactory to the Owner.

**d.** The Contractor shall obtain the written consent of the surety to such agreement.

**90-09 ACCEPTANCE AND FINAL PAYMENT**. When the contract work has been accepted in accordance with the requirements of Section 50, paragraph 50-15, *Final Acceptance*, the RPR will prepare the final estimate of the items of work actually performed. The Contractor shall approve the RPR's final estimate or advise the RPR of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the RPR shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the RPR's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the RPR's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with Section 50, paragraph 50-16, *Claims for Adjustment and Disputes*.

After the Contractor has approved, or approved under protest, the RPR's final estimate, and after the RPR's receipt of the project closeout documentation required in paragraph 90-11, *Contractor Final Project Documentation*, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of Section 50, paragraph 50-16, *Claims for Adjustments and Disputes,* or under the provisions of this paragraph, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

**90-10 CONSTRUCTION WARRANTY.**

**a.** In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.

**b.** This warranty shall continue for a period of one year from the date of final acceptance of the work, except as noted. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes possession. However, this will not relieve the Contractor from corrective items required by the final acceptance of the project work. Light Emitting Diode emitting diode (LED) light fixtures with the exception of obstruction lighting, must be warranted by the manufacturer for a minimum of four (4) years after date of installation inclusive of all electronics.

**c.** The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to

Owner real or personal property, when that damage is the result of the Contractor's failure to conform to contract requirements; or any defect of equipment, material, workmanship, or design furnished by the Contractor.

**d.** The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

**e.** The Owner will notify the Contractor, in writing, within ***14 calendar*** days after the discovery of any failure, defect, or damage.

**f.** If the Contractor fails to remedy any failure, defect, or damage within ***14 calendar*** days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

**g.** With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) Enforce all warranties for the benefit of the Owner.

**h.** This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

***Note that Engineering Brief (EB) #67, Light Sources Other than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures, requires that all light-emitting diode (LED) light fixtures with the exception of obstruction lighting, (advisory circular (AC) 150/5345-43) must be warranted by the manufacturer for a minimum of four (4) years after date of installation inclusive of all electronics.***

**90-11 CONTRACTOR FINAL PROJECT DOCUMENTATION.** Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the RPR approves the Contractor's final submittal. The Contractor shall:

**a.** Provide two (2) copies of all manufacturers' warranties specified for materials, equipment, and installations. Coordinate and submit electronic or physical warranty cards on behalf of the Owner.

**b.** Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.

**c.** Complete final cleanup in accordance with Section 40, paragraph 40-08, *Final Cleanup*.

**d.** Complete all punch list items identified during the Final Inspection.

**e.** Provide complete release of all claims for labor and material arising out of the Contract.

~~**f.** Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.~~

**g.** When applicable per state requirements, return copies of sales tax completion forms.

**h.** Manufacturer's certifications for all items incorporated in the work.

**i.** All required record drawings, as-built drawings or as-constructed drawings.

**j.** Project Operation and Maintenance (O&M) Manual(s).

k. Security for Construction Warranty.

**l.** Equipment commissioning documentation submitted, if required.

**END OF SECTION 90**

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**FAA Airports**

# Contract Provision Guidelines for Obligated Sponsors and Airport Improvement Program Projects (Issued on March 17, 2026)

***Go to www.faa.gov for additional information, incorporated by reference.***

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## A1 ACCESS TO RECORDS AND REPORTS

**ACCESS TO RECORDS AND REPORTS**

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Owner, the Federal Aviation Administration and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

## A2 BREACH OF CONTRACT TERMS

**BREACH OF CONTRACT TERMS**

Any violation or breach of terms of this contract on the part of the [*Contractor | Consultant*] or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

Owner will provide [*Contractor | Consultant*] written notice that describes the nature of the breach and corrective actions the [*Contractor | Consultant*] must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the Owner elects to terminate the contract. The Owner's notice will identify a specific date by which the [*Contractor | Consultant*] must correct the breach. Owner may proceed with termination of the contract if the [*Contractor | Consultant*] fails to correct the breach by the deadline indicated in the Owner's notice.

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

## A3 BUY AMERICAN PREFERENCE

### A3.1.1 Certification of Compliance with FAA Buy American Preference Statement

**FAA BUY AMERICAN PREFERENCE**

The Contractor certifies that its bid/offer is in compliance with 49 U.S.C. § 50101, BABA and other related Made in America Laws,[1] U.S. statutes, guidance, and FAA policies, which provide that Federal funds may not be obligated unless all iron, steel and manufactured goods used in AIP funded projects are produced in the United States, unless the Federal Aviation Administration has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

The bidder or offeror must complete and submit the certification of compliance with FAA's Buy American Preference, BABA and Made in America laws included herein with their bid or offer. The Airport Sponsor/Owner will reject as nonresponsive any bid or offer that does not include a completed certification of compliance with FAA's Buy American Preference and BABA.

The bidder or offeror certifies that all constructions materials, defined to mean an article, material, or supply other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of: non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber; or drywall used in the project are manufactured in the U.S.

The bidder or offeror certifies procurement of certain rolling stock using FAA grant funds will prohibit airports from using Federal financial assistance to procure buses or rail car vehicle rolling stock from covered entities.

[1] Per Executive Order 14005 "Made in America Laws" means all statutes, regulations, rules, and Executive Orders relating to federal financial assistance awards or federal procurement, including those that refer to "Buy America" or "Buy American," that require, or provide a preference for, the purchase or acquisition of goods, products, or materials produced in the United States, including iron, steel, and manufactured products offered in the United States.

### A3.1.2 Certification of Compliance with FAA Buy American Preference – Construction Projects

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with its proposal. The bidder or offeror must indicate how it intends to comply with 49 U.S.C. § 50101, BABA and other related Made in America Laws, U.S. statutes, guidance, and FAA policies, by selecting one of the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (i.e., not both) by inserting a checkmark (ü) or the letter "X".

☐ Bidder or offeror hereby certifies that it will comply with 49 U.S.C. § 50101, BABA and other related U.S. statutes, guidance, and policies of the FAA by:

a) Only installing iron, steel and manufactured products produced in the United States;

b) Only installing construction materials defined as: an article, material, or supply – other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber or drywall that have been manufactured in the United States.

c) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or

d) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

a) To provide to the Airport Sponsor or the FAA evidence that documents the source and origin of the iron, steel, and/or manufactured product.
b) To faithfully comply with providing U.S. domestic products.
c) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.
d) Certify that all construction materials used in the project are manufactured in the U.S.

☐ The bidder or offeror hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 U.S.C. § 50101(a) but may qualify for a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

a) To the submit to the Airport Sponsor or FAA within 15 calendar days of being selected as the responsive bidder, a formal waiver request and required documentation that supports the type of waiver being requested.

b) That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination that may result in rejection of the proposal.
c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
d) To furnish U.S. domestic product for any waiver request that the FAA rejects.
e) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

**Required Documentation**

**Type 2 Waiver (Nonavailability) -** The iron, steel, manufactured goods or construction materials or manufactured goods are not available in sufficient quantity or quality in the United States. The required documentation for the Nonavailability waiver is

a) Completed Content Percentage Worksheet and Final Assembly Questionnaire
b) Record of thorough market research, consideration where appropriate of qualifying alternate items, products, or materials including;
c) A description of the market research activities and methods used to identify domestically manufactured items capable of satisfying the requirement, including the timing of the research and conclusions reached on the availability of sources.

**Type 3 Waiver** – The cost of components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the "facility/project." The required documentation for a Type 3 waiver is:

a) Completed Content Percentage Worksheet and Final Assembly Questionnaire including;
b) Listing of all manufactured products that are not comprised of 100 percent U.S. domestic content (excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
c) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly and installation at project location.
d) Percentage of non-domestic component and subcomponent cost as compared to total "facility" component and subcomponent costs, excluding labor costs associated with final assembly and installation at project location.

**Type 4 Waiver** (Unreasonable Costs) - Applying this provision for iron, steel, manufactured goods or construction materials would increase the cost of the overall project by more than 25 percent. The required documentation for this waiver is:

a) A completed Content Percentage Worksheet and Final Assembly Questionnaire from
b) At minimum two comparable equal bids and/or offers;
c) Receipt or record that demonstrates that supplier scouting called for in Executive Order 14005, indicates that no domestic source exists for the project and/or component;
d) Completed waiver applications for each comparable bid and/or offer.

**False Statements**: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

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| Date | Signature |
| Company Name | Title |

### A3.1.3 Certification of Compliance with FAA Buy American Preference – Equipment/Building Projects

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 U.S.C. § 50101, and other Made in America Laws, U.S. statutes, guidance, and FAA policies by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (ü) or the letter "X".

☐ Bidder or offeror hereby certifies that it will comply with 49 U.S.C. § 50101, BABA and other related U.S. statutes, guidance, and policies of the FAA by:

a) Only installing steel and manufactured products produced in the United States;
b) Only installing construction materials defined as: an article, material, or supply – other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber or drywall that have been manufactured in the United States.
c) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
d) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

a) To provide to the Airport Sponsor or FAA evidence that documents the source and origin of the steel and manufactured product.
b) To faithfully comply with providing U.S. domestic product.
c) To furnish U.S. domestic product for any waiver request that the FAA rejects.
d) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☐ The bidder or offeror hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 U.S.C. § 50101(a) but may qualify for a Type 3 waiver under 49 U.S.C. § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

a) To submit to the Airport Sponsor or FAA within 15 calendar days of being selected as the responsive bidder, a formal waiver request and required documentation that supports the type of waiver being requested.
b) That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination that may result in rejection of the proposal.

c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
d) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

**Required Documentation**

**Type 2 Waiver** (**Nonavailability)** - The iron, steel, manufactured goods or construction materials are not available in sufficient quantity or quality in the United States. The required documentation for the Nonavailability waiver is:

a) Completed Content Percentage Worksheet and Final Assembly Questionnaire
b) Record of thorough market research, consideration where appropriate of qualifying alternate items, products, or materials including;
c) A description of the market research activities and methods used to identify domestically manufactured items capable of satisfying the requirement, including the timing of the research and conclusions reached on the availability of sources.

**Type 3 Waiver** – The cost of the item components and subcomponents produced in the United States is more that 60 percent of the cost of all components and subcomponents of the "item". The required documentation for a Type 3 waiver is:

a) Completed Content Percentage Worksheet and Final Assembly Questionnaire including;
b) Listing of all product components and subcomponents that are not comprised of 100 percent U.S. domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108 (products of unknown origin must be considered as non-domestic products in their entirety).
c) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
d) Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

**Type 4 Waiver (Unreasonable Costs)** - Applying this provision for iron, steel, manufactured goods or construction materials, would increase the cost of the overall project by more than 25 percent. The required documentation for this waiver is:

a) Completed Content Percentage Worksheet and Final Assembly Questionnaire from
b) At minimum two comparable equal bidders and/or offerors;
c) Receipt or record that demonstrates that supplier scouting called for in Executive Order 14005, indicates that no domestic source exists for the project and/or component;
d) Completed waiver applications for each comparable bid and/or offer.

**False Statements**: Per 49 U.S.C. § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

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| Date | Signature |
| Company Name | Title |

## A4 CIVIL RIGHTS - GENERAL

### A4.1.1 General Clause that is used for Contracts, Lease Agreements, and Transfer Agreements

**GENERAL CIVIL RIGHTS PROVISIONS**

In all its activities within the scope of its airport program, the Contractor agrees to comply with pertinent statutes, Executive Orders, and such rules as identified in Title VI List of Pertinent Nondiscrimination Acts and Authorities to ensure that no person shall, on the grounds of race, color, national origin, creed, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

### A4.1.2 Specific Clause that is used for General Contract Agreements

The above provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract.

### A4.1.3 Specific Clause that is used for Lease Agreements or Transfer Agreements

If the Contractor transfers its obligation to another, the transferee is obligated in the same manner as the Contractor.

The above provision obligates the Contractor for the period during which the property is owned, used or possessed by the Contractor and the airport remains obligated to the Federal Aviation Administration.

## A5 CIVIL RIGHTS – TITLE VI ASSURANCE

### A5.1.1 Title VI Solicitation Notice

**Title VI Solicitation Notice:**

The (***Title of Recipient***), in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4), 28 CFR § 50.3, and 49 CFR Part 21, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, all contractors will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of the owner's race, color, national origin, sex, creed, age, or disability in consideration for an award.

### A5.1.2 Title VI List of Pertinent Nondiscrimination Acts and Authorities

Insert this list in every contract or agreement, unless the Sponsor has determined and the FAA concurs, that the contract or agreement is not subject to the Nondiscrimination Acts and Authorities. This list can be omitted if the FAA has determined that the contractor or company is already subject to nondiscrimination requirements, which is a rare occurrence.

**Title VI List of Pertinent Nondiscrimination Acts and Authorities**

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq*., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR Part 21 (Non-discrimination in Federally-Assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964) including amendments thereto;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 794 *et seq*.), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27 (Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance);
- The Age Discrimination Act of 1975, as amended (42 .U.S.C. § 6101 *et seq*.) (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (49 U.S.C. § 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987 (P.L. 100-259) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);

- Titles II and III of the Americans with Disabilities Act of 1990 (42 U.S.C. § 12101, et seq) (prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities) as implemented by U.S. Department of Transportation regulations at 49 CFR Parts 37 and 38;
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. § 1681, et seq).

### A5.1.3 Nondiscrimination Requirements/Title VI Clauses for Compliance

The Sponsor must include this contract clause in:

1) Every contract or agreement (unless the Sponsor has determined, and the FAA concurs, that the contract or agreement is not subject to the Nondiscrimination Acts and Authorities); and

2) Service contracts with utility companies that are not already subject to substantively identical nondiscrimination requirements.

3) Other types of contracts with utility companies involving property covered by A5.4.2, A5.4.3, or A5.4.4.

**Compliance with Nondiscrimination Requirements:**

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor"), agrees as follows:

1. **Compliance with Regulations:** The Contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin), creed, sex, age, or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21 including amendments thereto.
3. **Solicitations for Subcontracts, including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the contractor's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.
4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Sponsor or the Federal Aviation Administration to be pertinent to ascertain

compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance: In** the event of a Contractor's noncompliance with the non-discrimination provisions of this contract, the Sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

    a. Withholding payments to the Contractor under the contract until the Contractor complies; and/or

    b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Sponsor to enter into any litigation to protect the interests of the Sponsor. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

**(HABENDUM CLAUSE)**

**TO HAVE AND TO HOLD** said lands and interests therein unto (***Title of Sponsor***) and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the (***Title of Sponsor***), its successors and assigns.

The (***Title of Sponsor***), in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]* (2) that the (***Title of Sponsor***) will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended[, and (3) that in the event of breach of any of the above-mentioned nondiscrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the Federal Aviation Administration and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

### A5.1.4 Title VI Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program

This applies to agreements such as leases of concession space in a terminal and any future deeds, leases, licenses, permits, or similar instruments entered into by the Sponsor with other parties for the construction or use of, or access to, space on, over, or under real property acquired or improved under the Airport Improvement Program.

**CLAUSES FOR CONSTRUCTION/USE/ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY OR PROGRAM**

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by (***Title of Sponsor***) pursuant to the provisions of the Airport Improvement Program grant assurances.

A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Title VI List of Pertinent Nondiscrimination Acts and Authorities.

B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non-discrimination covenants, (***Title of Sponsor***) will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued.*

C. With respect to deeds, in the event of breach of any of the above Non-discrimination covenants, (***Title of Sponsor***) will there upon revert to and vest in and become the absolute property of (***Title of Sponsor***) and its assigns.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

## A6 CLEAN AIR AND WATER POLLUTION CONTROL

**CLEAN AIR AND WATER POLLUTION CONTROL**

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 U.S.C. §§ 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. §§ 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

Contractor must include this requirement in all subcontracts that exceed $150,000.

## A7 CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS

**CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS**

1. Overtime Requirements.

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages; Liquidated Damages.

In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of $33 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. Withholding for Unpaid Wages and Liquidated Damages.

The Federal Aviation Administration (FAA) or the Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this clause.

4. Subcontractors.

The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

## A8 COPELAND "ANTI-KICKBACK" ACT

**COPELAND "ANTI-KICKBACK" ACT**

Contractor must comply with the requirements of the Copeland "Anti-Kickback" Act (18 USC 874 and 40 USC 3145), as supplemented by Department of Labor regulation 29 CFR part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the Owner, a weekly statement on the wages paid to each employee performing on covered work during the prior week. Owner must report any violations of the Act to the Federal Aviation Administration.

## A9 DAVIS-BACON REQUIREMENTS

**DAVIS-BACON REQUIREMENTS**

1. Minimum Wages.

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under regulations implementing the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination;

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers, or mechanics to be employed in the classification, or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding. The Federal Aviation Administration or the Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the Contractor, Sponsor, Applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and Basic Records.

(i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records that show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant, Sponsor, or Owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR § 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead, the payrolls shall only need to include an individually identifying number for each employee (*e.g.,* the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at *https://www.dol.gov/agencies/whd/government-contracts/construction/payroll-certification* or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit them to the applicant, Sponsor, or Owner, as the case may be, for transmission to the Federal Aviation Administration, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, Sponsor, or Owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i), and that such information is correct and complete;

(2) That each laborer and mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the “Statement of Compliance” required by paragraph (3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The Contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the Sponsor, the Federal Aviation Administration, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the Contractor, Sponsor, applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR § 5.12.

4. Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any

craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR § 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at no less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination that provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

5. Compliance with Copeland Act Requirements.

The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. Subcontracts.

The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR §§ 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR § 5.5.

7. Contract Termination: Debarment.

A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR § 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes Concerning Labor Standards.

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility.

(i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR § 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR § 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 USC § 1001.

## A10 DEBARMENT AND SUSPENSION

### A10.1.1 Bidder or Offeror Certification

**CERTIFICATION OF OFFEROR/BIDDER REGARDING DEBARMENT**

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

### A10.1.2 Lower Tier Contract Certification

**CERTIFICATION OF LOWER TIER CONTRACTORS REGARDING DEBARMENT**

The successful bidder, by administering each lower tier subcontract that exceeds $25,000 as a "covered transaction", must confirm each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally-assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: http://www.sam.gov.
2. Collecting a certification statement similar to the Certification of Offeror /Bidder Regarding Debarment, above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract.

If the Federal Aviation Administration later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

## ~~A11 DISADVANTAGED BUSINESS ENTERPRISE~~

### ~~A11.1.1 Solicitation Language (Solicitations with a DBE Contract Goal)~~

~~For traditional design-bid-build projects, the decision on whether DBE information is a matter of responsiveness or responsibility is laid out in the Sponsor's approved DBE program and the Sponsor should incorporate the applicable solicitation language accordingly. Special procedures apply in the case of negotiated procurements and for projects that follow the Design-Build method of procurement. In all cases, Sponsors should include only the applicable solicitation language from the examples below.~~

~~Bid Information Submitted as a matter of **responsiveness**:~~

~~The Owner's award of this contract is conditioned upon Bidder or Offeror satisfying the good faith effort requirements of 49 CFR § 26.53.~~

~~As a condition of responsiveness, the Bidder or Offeror must submit the following information with its proposal on the forms provided herein:~~

1) ~~The names and addresses of Disadvantaged Business Enterprise (DBE) firms that will participate in the contract;~~
2) ~~A description of the work that each DBE firm will perform;~~
3) ~~The dollar amount of the participation of each DBE firm listed under (1);~~
4) ~~Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal~~
5) ~~Written confirmation from each listed DBE firm that it is participating in the contract in the kind and amount of work provided in the prime contractor's commitment; and~~
6) ~~If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in appendix A to 49 CFR part 26 including any amendments thereto. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.~~

~~Bid Information submitted as a matter of **responsibility**:~~

~~The Owner's award of this contract is conditioned upon Bidder or Offeror satisfying the good faith effort requirements of 49 CFR § 26.53.~~

~~As a condition of responsibility, every Bidder or Offeror must submit the following information on the forms provided herein within five days after bid opening.~~

1) ~~The names and addresses of Disadvantaged Business Enterprise (DBE) firms that will participate in the contract;~~
2) ~~A description of the work that each DBE firm will perform;~~
3) ~~The dollar amount of the participation of each DBE firm listed under (1);~~

4) Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal;
5) Written confirmation from each listed DBE firm that it is participating in the contract in the kind and amount of work provided in the prime contractor's commitment; and
6) If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in appendix A to 49 CFR Part 26 including any amendments thereto. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.

Bid Information requirements for **negotiated procurements**:
In a negotiated procurement, such as a procurement for professional services, the Sponsor may allow the bidder/offeror to make a contractually binding commitment to meet the goal at the time of bid submission or the presentation of initial proposals but provide the information required under the above *responsiveness* or *responsibility* procedures before the final selection for the contract is made by the recipient.

Bid Information submitted for **Design-Build projects**:
In a design-build contracting situation, in which the Sponsor solicits proposals to design and build a project with minimal project details at time of letting, the Sponsor may set a DBE goal that proposers must meet by submitting a DBE Open-Ended DBE Performance Plan (OEPP) with the proposal. The OEPP replaces the requirement to provide the information required in paragraph (b) of 49 CFR § 26.53 that applies to design-bid-build contracts. To be considered responsive, the OEPP must include a commitment to meet the goal and provide details of the types of subcontracting work or services (with projected dollar amount) that the proposer will solicit DBEs to perform. The OEPP must include an estimated time frame in which actual DBE subcontracts would be executed. Once the design-build contract is awarded, the recipient must provide ongoing monitoring and oversight to evaluate whether the design-builder is using good faith efforts to comply with the OEPP and schedule. The recipient and the design-builder may agree to make written revisions of the OEPP throughout the life of the project, *e.g.*, replacing the type of work items the design-builder will solicit DBEs to perform and/or adjusting the proposed schedule, as long as the design-builder continues to use good faith efforts to meet the goal.

### A11.1.2 Solicitation Language (Solicitations with No DBE Contract Goal)

The requirements of 49 CFR Part 26 including any amendments thereto apply to this contract. It is the policy of the [Insert Name of Owner] to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. The Owner encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

### ~~A11.1.3 Prime Contracts (Contracts Covered by a DBE Program)~~

~~**Contract Assurance (49 CFR § 26.13; mandatory text provided) –**~~

~~The Contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26, including any amendments thereto, in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:~~

~~1) Withholding monthly progress payments;~~

~~2) Assessing sanctions;~~

~~3) Liquidated damages; and/or~~

~~4) Disqualifying the Contractor from future bidding as non-responsible.~~

~~**Prompt Payment (49 CFR § 26.29; acceptable/sample text provided**) –~~

~~The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than [specify number of days, not to exceed 30] days from the receipt of each payment the prime contractor receives from [Name of recipient]. The prime contractor agrees further to return retainage payments to each subcontractor within [specify number of days, not to exceed 30] days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the [Name of Recipient]. This clause applies to both DBE and non-DBE subcontractors.~~

~~**Termination of DBE Subcontracts (49 CFR § 26.53(f); acceptable/sample text provided) –**~~

~~The prime contractor must not terminate a DBE subcontractor listed in response to [include Solicitation paragraph number where paragraph A11.3.1, Solicitation Language appears] (or an approved substitute DBE firm) without prior written consent of [Name of Recipient]. This includes, but is not limited to, instances in which the prime contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.~~

~~The prime contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains written consent [Name of Recipient]. Unless [Name of Recipient] consent is provided, the prime contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.~~

~~[Name of Recipient] may provide such written consent only if [Name of Recipient] agrees, for reasons stated in the concurrence document, that the prime contractor has good cause to terminate the DBE firm. For purposes of this paragraph, good cause includes the circumstances listed in 49 CFR § 26.53.~~

~~Before transmitting to [Name of Recipient] its request to terminate and/or substitute a DBE subcontractor, the prime contractor must give notice in writing to the DBE subcontractor, with a copy to [Name of Recipient], of its intent to request to terminate and/or substitute, and the reason for the request.~~

~~The prime contractor must give the DBE five days to respond to the prime contractor's notice and advise [Name of Recipient] and the contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why [Name of Recipient] should not approve the prime contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), [Name of Recipient] may provide a response period shorter than five days.~~

~~In addition to post-award terminations, the provisions of this section apply to pre-award deletions of or substitutions for DBE firms put forward by offerors in negotiated procurements.~~

## A12 DISTRACTED DRIVING

**TEXTING WHEN DRIVING**

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving", (10/1/2009) and DOT Order 3902.10, "Text Messaging While Driving", (12/30/2009), the Federal Aviation Administration encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant.

In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding $15,000 that involve driving a motor vehicle in performance of work activities associated with the project.

## A13 PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

**PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT**

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to use and procurement of certain telecommunications and video surveillance services or equipment in compliance with the National Defense Authorization Act P.L. 115-232, § 889(f)(1)).

## A14 DRUG FREE WORKPLACE REQUIREMENTS

### A14.1 CONTRACT CLAUSE

None.

## A15 FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE)

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR Part 201, et seq, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part-time workers.

The [*Contractor | Consultant*] has full responsibility to monitor compliance to the referenced statute or regulation. The [*Contractor | Consultant*] must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

## A16 LOBBYING AND INFLUENCING FEDERAL EMPLOYEES

### CERTIFICATION REGARDING LOBBYING

The Bidder or Offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

## A17 OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. The employer must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The employer retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (29 CFR Part 1910). The employer must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

## A18 PROCUREMENT OF RECOVERED MATERIALS

**PROCUREMENT OF RECOVERED MATERIALS**

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

1) The contract requires procurement of $10,000 or more of a designated item during the fiscal year; or
2) The contractor has procured $10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at www.epa.gov/smm/comprehensive-procurement-guidelines-construction-products.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:

a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
b) Fails to meet reasonable contract performance requirements; or
c) Is only available at an unreasonable price.

## A19 RIGHT TO INVENTIONS

**RIGHTS TO INVENTIONS**

Contracts or agreements that include the performance of experimental, developmental, or research work must provide for the rights of the Federal Government and the Owner in any resulting invention as established by 37 CFR part 401, Rights to Inventions Made by Non-profit Organizations and Small Business Firms under Government Grants, Contracts, and Cooperative Agreements. This contract incorporates by reference the patent and inventions rights as specified within 37 CFR § 401.14. Contractor must include this requirement in all sub-tier contracts involving experimental, developmental, or research work.

## A20 SEISMIC SAFETY

### A20.1.1 Professional Service Agreements for Design

**SEISMIC SAFETY**

In the performance of design services, the Consultant agrees to furnish a building design and associated construction specification that conform to a building code standard that provides a level of seismic safety substantially equivalent to standards as established by the National Earthquake Hazards Reduction Program (NEHRP). Local building codes that model their building code after the current version of the International Building Code (IBC) meet the NEHRP equivalency level for seismic safety. At the conclusion of the design services, the Consultant agrees to furnish the Owner a "certification of compliance" that attests conformance of the building design and the construction specifications with the seismic standards of NEHRP or an equivalent building code.

### A20.1.2 Construction Contracts

**SEISMIC SAFETY**

The Contractor agrees to ensure that all work performed under this contract, including work performed by subcontractors, conforms to a building code standard that provides a level of seismic safety substantially equivalent to standards established by the National Earthquake Hazards Reduction Program (NEHRP). Local building codes that model their code after the current version of the International Building Code (IBC) meet the NEHRP equivalency level for seismic safety.

## A21 TAX DELINQUENCY AND FELONY CONVICTIONS

### CERTIFICATION OF OFFEROR/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (ü) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

**Certifications**

1) The applicant represents that it is ( ) is not ( ) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

2) The applicant represents that it is ( ) is not ( ) a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

**Note**

If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the Sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The applicant therefore must provide information to the owner about its tax liability or conviction to the Owner, who will then notify the FAA Airports District Office, which will then notify the agency's SDO to facilitate completion of the required considerations before award decisions are made.

**Term Definitions**

**Felony conviction:** Felony conviction means a conviction within the preceding twenty four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. Code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 USC § 3559.

**Tax Delinquency**: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

## A22 TERMINATION OF CONTRACT

### A22.1.1 Termination for Convenience

**TERMINATION FOR CONVENIENCE (CONSTRUCTION & EQUIPMENT CONTRACTS)**

The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

1. Contractor must immediately discontinue work as specified in the written notice.
2. Terminate all subcontracts to the extent they relate to the work terminated under the notice.
3. Discontinue orders for materials and services except as directed by the written notice.
4. Deliver to the Owner all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work, and as directed in the written notice.
5. Complete performance of the work not terminated by the notice.
6. Take action as directed by the Owner to protect and preserve property and work related to this contract that Owner will take possession.

Owner agrees to pay Contractor for:

1. Completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;
2. Documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;
3. Reasonable and substantiated claims, costs, and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and
4. Reasonable and substantiated expenses to the Contractor directly attributable to Owner's termination action.

Owner will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the Owner's termination action.

The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

**TERMINATION FOR CONVENIENCE (PROFESSIONAL SERVICES)**

The Owner may, by written notice to the Consultant, terminate this Agreement for its convenience and without cause or default on the part of Consultant. Upon receipt of the notice of termination, except as explicitly directed by the Owner, the Contractor must immediately discontinue all services affected.

Upon termination of the Agreement, the Consultant must deliver to the Owner all data, surveys, models, drawings, specifications, reports, maps, photographs, estimates, summaries, and other documents and materials prepared by the Engineer under this contract, whether complete or partially complete.

Owner agrees to make just and equitable compensation to the Consultant for satisfactory work completed up through the date the Consultant receives the termination notice. Compensation will not include anticipated profit on non-performed services.

Owner further agrees to hold Consultant harmless for errors or omissions in documents that are incomplete as a result of the termination action under this clause.

### A22.1.2 Termination for Default

**TERMINATION FOR CAUSE (CONSTRUCTION)**

Section 80-09 of FAA Advisory Circular 150/5370-10 establishes standard language for conditions, rights, and remedies associated with Owner termination of this contract for cause due to default of the Contractor.

**TERMINATION FOR CAUSE (EQUIPMENT)**

The Owner may, by written notice of default to the Contractor, terminate all or part of this Contract for cause if the Contractor:

1. Fails to begin the Work under the Contract within the time specified in the Notice- to-Proceed;
2. Fails to make adequate progress as to endanger performance of this Contract in accordance with its terms;
3. Fails to make delivery of the equipment within the time specified in the Contract, including any Owner approved extensions;
4. Fails to comply with material provisions of the Contract;
5. Submits certifications made under the Contract and as part of their proposal that include false or fraudulent statements; or
6. Becomes insolvent or declares bankruptcy.

If one or more of the stated events occur, the Owner will give notice in writing to the Contractor and Surety of its intent to terminate the contract for cause. At the Owner's discretion, the notice may allow the Contractor and Surety an opportunity to cure the breach or default.

If within [10] days of the receipt of notice, the Contractor or Surety fails to remedy the breach or default to the satisfaction of the Owner, the Owner has authority to acquire equipment by other procurement action. The Contractor will be liable to the Owner for any excess costs the Owner incurs for acquiring such similar equipment.

Payment for completed equipment delivered to and accepted by the Owner shall be at the Contract price. The Owner may withhold from amounts otherwise due the Contractor for such completed equipment, such sum as the Owner determines to be necessary to protect the Owner against loss because of Contractor default.

Owner will not terminate the Contractor's right to proceed with the work under this clause if the delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such acceptable causes include: acts of God, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, and severe weather events that substantially exceed normal conditions for the location.

If, after termination of the Contractor's right to proceed, the Owner determines that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the Owner issued the termination for the convenience the Owner.

The rights and remedies of the Owner in this clause are in addition to any other rights and remedies provided by law or under this contract.

**TERMINATION FOR CAUSE (PROFESSIONAL SERVICES)**

Either party may terminate this Agreement for cause if the other party fails to fulfill its obligations that are essential to the completion of the work per the terms and conditions of the Agreement. The party initiating the termination action must allow the breaching party an opportunity to dispute or cure the breach.

The terminating party must provide the breaching party [7] days advance written notice of its intent to terminate the Agreement. The notice must specify the nature and extent of the breach, the conditions necessary to cure the breach, and the effective date of the termination action. The rights and remedies in this clause are in addition to any other rights and remedies provided by law or under this agreement.

a) **Termination by Owner**: The Owner may terminate this Agreement for cause in whole or in part, for the failure of the Consultant to:
   1. Perform the services within the time specified in this contract or by Owner approved extension;
   2. Make adequate progress so as to endanger satisfactory performance of the Project; or
   3. Fulfill the obligations of the Agreement that are essential to the completion of the Project.

   Upon receipt of the notice of termination, the Consultant must immediately discontinue all services affected unless the notice directs otherwise. Upon termination of the Agreement, the Consultant must deliver to the Owner all data, surveys, models, drawings, specifications, reports, maps, photographs, estimates, summaries, and other documents and materials prepared by the Engineer under this contract, whether complete or partially complete.

   Owner agrees to make just and equitable compensation to the Consultant for satisfactory work completed up through the date the Consultant receives the termination notice. Compensation will not include anticipated profit on non-performed services.

   Owner further agrees to hold Consultant harmless for errors or omissions in documents that are incomplete as a result of the termination action under this clause.

If, after finalization of the termination action, the Owner determines the Consultant was not in default of the Agreement, the rights and obligations of the parties shall be the same as if the Owner issued the termination for the convenience of the Owner.

b) **Termination by Consultant**: The Consultant may terminate this Agreement for cause in whole or in part, if the Owner:

1. Defaults on its obligations under this Agreement;
2. Fails to make payment to the Consultant in accordance with the terms of this Agreement;
3. Suspends the project for more than [180] days due to reasons beyond the control of the Consultant.

Upon receipt of a notice of termination from the Consultant, Owner agrees to cooperate with Consultant for the purpose of terminating the agreement or portion thereof, by mutual consent. If Owner and Consultant cannot reach mutual agreement on the termination settlement, the Consultant may, without prejudice to any rights and remedies it may have, proceed with terminating all or parts of this Agreement based upon the Owner's breach of the contract.

In the event of termination due to Owner breach, the Consultant is entitled to invoice Owner and to receive full payment for all services performed or furnished in accordance with this Agreement and all justified reimbursable expenses incurred by the Consultant through the effective date of termination action. Owner agrees to hold Consultant harmless for errors or omissions in documents that are incomplete as a result of the termination action under this clause.

## A23 TRADE RESTRICTION CERTIFICATION

**TRADE RESTRICTION CERTIFICATION**

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);

2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and

3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC § 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR § 30.17, no contract shall be awarded to an Offeror or subcontractor:

1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR; or
2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list; or
3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

## A24 VETERAN'S PREFERENCE

**VETERAN'S PREFERENCE**

In the employment of labor (excluding executive, administrative, and supervisory positions), the Contractor and all sub-tier contractors must give preference to covered veterans as defined within 49 U.S.C. § 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 U.S.C. § 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

## A25 DOMESTIC PREFERENCES FOR PROCUREMENTS

### CERTIFICATION REGARDING DOMESTIC PREFERENCES FOR PROCUREMENTS

The Bidder or Offeror certifies by signing and submitting this bid or proposal that, to the greatest extent practicable, the Bidder or Offeror has provided a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including, but not limited to, iron, aluminum, steel, cement, and other manufactured products) in compliance with 2 CFR § 200.322.

## A26 PROHIBITION OF COVERED UNMANNED AIRCRAFT SYSTEMS (UAS)

The Bidder or Offeror certifies that they are aware of and comply with relevant Federal statutes and regulations, including those from the Federal Aviation Administration (FAA), for operating unmanned aircraft systems (UAS) in accordance, and in compliance with all related requirements in the FAA Reauthorization Act of 2024 (Public Law 118-63), section 936 (49 U.S.C. § 44801 note).

Contractor warrants that all UAS operations will be conducted in full compliance with all applicable Federal Aviation Administration (FAA) regulations, including but not limited to 14 CFR Part 107, and any other applicable local, state, or Federal laws and regulations.

Sponsors and subgrant recipients cannot use AIP grant funds to enter into, extend, or renew a contract related to covered unmanned aircraft systems (UAS). This includes both procurement and operational contracts, as well as contracts with entities that operate such systems.

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# SECTION 130
# SPECIAL PROVISIONS

**1.0 CONTRACT DOCUMENTS.** This section of these specifications is a part of the Contract Documents as defined in the General Provisions. All applicable parts of the balance of the Contract Documents are equally as binding for this as for all other sections.

**2.0 GENERAL.** The special requirements set forth in this section of these specifications shall govern any aspect of the contract work which such requirements are deemed applicable by the Owner or the Engineer. The purpose of these requirements is to ensure that the contract work does not damage private property or create any hazard to aircraft operations, and point out special coordination or schedule conditions that the Contractor should be aware of. It shall be the Contractor's responsibility to conduct all work in strict accordance with the special requirements set forth herein and to fully cooperate with the Owner and the Engineer in every way necessary to fulfill the purposes of these requirements.

All civil construction and earthwork to be accomplished in accordance with FAA Advisory Circulars 150/5370-10 Standards for Specifying Construction of Airports, 150/5370-7, Airport Construction Controls to prevent Air and Water Pollution, and FAA Advisory Circular 150/5320-5, Airport Drainage, latest versions, as applicable to the project.

**3.0 STRUCTURAL STANDARDS.** Refer to Structural General Notes sheet and Specification Section 13120 Pre-Engineered Metal Building for the applicable standards.

**4.0 DESCRIPTION OF WORK.** The project consists of, but is not limited to, the following primary sub-elements:

a. Finalize, sign\seal, and submit design plans for T-Hangar building structures, foundations, and site work.
b. Obtain building and fire permits from City of Wauchula and Hardee County.
c. Procure PEMB, components, cladding, and all other materials.
d. Construct 10-Unit T-Hangar building structures and foundations.
e. Construct civil and electrical site work.

Attention shall be directed to the balance of these Contract Documents for more specific information on the work to be performed. All construction and materials will be specified in more detail on the drawings and hereinafter.

**5.0 SITE EXAMINATION.** The Contractor's attention is called to Section 20-6 of the General Provisions which requires all Bidders to examine the project site prior to submission of a proposal.

**6.0 CONSTRUCTION SEQUENCE AND CONTRACT TIME.** Upon execution of the Contract(s), the Owner shall issue a written "Notice To Proceed" which will specify an effective date for the Contractor(s) to commence work. Between the execution of the Contract and the date specified for the commencement of work, the Contractor shall prepare and submit the materials, equipment and work schedules as specified in the various sections of these specifications. Upon approval of the materials and equipment schedules by the Owner's Representative, the Contractor shall proceed with the ordering of the materials and equipment. The Contractor shall notify the Owner's Representative of the receipt of any materials and equipment and of any changes in the delivery schedules. During this period, the Contractor shall

install the Owner's Representative's field office and may bring equipment and materials into the Contractor's staging area. All work under this Contract must be completed within the number of calendar days stated herein below of the date specified in the written "Notice To Proceed":

The number of calendar days for the completion of the Bid Schedules is presented as follows:

| **Segment** | **Contract Time**** |
|---|---|
| ***All Bid Schedules*** | ***0 Calendar Days – Procurement**** |
| | ***150 Calendar Days – Substantial Completion*** |
| | ***30 Calendar Days – Final Completion*** |
| | ***180 Calendar Days Total*** |

***** Procurement will be conducted in advance of construction for a period of not less than 90 calendar days, which will not be counted against the construction contract time..***

**7.0 LIQUIDATED DAMAGES.** If the work remains incomplete after the time specified in paragraph 1-5.0 for the completion of all work, the Contractor shall pay the Owner as liquidated damages the sum of ***Five Hundred Dollars ($500.00)*** per calendar day for each and every calendar day that the work remains incomplete beyond the above specified time as provided in the General Provisions.

Following are the general objectives that must be attained in order to minimize time and economic loss to the aviation community, airline passengers, and construction contractors:

- Keep the airport operational for all user aircraft
- Minimize flight operation delays
- Maintain safety of aircraft operations
- Minimize delays to contractor activities
- Minimize aircraft operations and construction activity conflicts

**8.0 SCHEDULING OF WORK.** Prior to commencement of any work, the Contractor must confer with the Airport operator to assure that the scheduling of construction activities in conjunction with aircraft operations is fully understood.

**9.0 WORKING NEAR RUNWAYS AND/OR TAXIWAYS.** Normal airport operations will be conducted on the airfield during construction and the work shall be carried on in such a manner as not to interfere with the necessary operation of the airport. The Contractor shall take all precautions necessary to ensure the safety of operating aircraft as well as his own equipment and personnel.

No construction operations shall be carried on within 39.5 feet (12 m) from the centerline of any taxiway or within 75 feet (76 m) of the centerline of any active runway or within the limits of active runway approach zones unless prior approval has been obtained. When permission has been granted to work inside these limits, no equipment shall be left within the lines when not actually working. During lunch hour or other breaks in the daily work schedule, nights, weekends, and the days when work is not permitted or is not progressing, the equipment shall be located outside of these restriction lines. All booms shall be lowered when the equipment is not in operation. No construction operations, including an open flame such as welding or burning, shall be carried on near any aircraft.

**10.0 LIMITATION ON CONSTRUCTION.**

(a) Open-flame welding or torch cutting operations is prohibited unless adequate fire and safety precautions are provided by the Contractor and have been approved by the airport operator.

(b) Open trenches, excavations and stockpiled material at the construction site will be prominently marked by red flags and lighted by light units (acceptable to the Airport Operator and the FAA) during the hours of restricted visibility and/or darkness.

(c) Stockpiled material will be constrained in a manner to prevent movement resulting from aircraft blast or wind conditions in excess of 10 knots.

(d) The fire department will be notified when construction could alter or block access routes.

(e) Local regulations regarding noise abatement will be adhered to.

(f) Where construction involves areas requiring maintenance of traffic with lighting and/or signage, the manual on Uniform Traffic Control Devices for Streets and Highways shall be followed.

**11.0 OBSTRUCTIONS TO NAVIGATION.** Penetration of approach/departure clearance surfaces and the transitional surfaces shall not be allowed without advance notification of the Project Engineer and approval by the Airport Operator and FAA. This includes any penetrations whatsoever by the Contractor including but not limited to motor vehicles, cranes, other construction equipment, structures, stockpiled materials, rock, aggregates, excavated earth, etc.

When such penetration is unavoidable they shall be brought to the attention of the FAA, the Airport Operator and the Engineer as far in advance as is practical to allow Notices to Airmen (NIGHTTIME) to be prepared and distributed to appropriate FAA divisions for publication and distribution.

**12.0 TAXIWAY CLEARANCES.** Large aircraft wings extend beyond the edges of paved taxiways when they are taxiing. It is therefore critical that no construction vehicles, equipment, or materials enter or be placed within taxiway obstacle free areas without prior approval from the Airport Owner, FAA and the Engineer. It is required during construction activities, taxiway obstacle free areas be flagged and lighted in critical areas of construction activity by the Contractor. The flagging alignments will be designated by the Airport Owner and the Engineer. When safety and obstacle free areas must be infringed upon by construction activities for extended periods of time, plans of infringements will be agreed by the Contractor with the Engineer, Airport Owner and FAA adequately in advance so that NOTAMS may be issues and airlines informed.

When required and approved, taxiways may be closed and aircraft detoured. Figure 1 depicts typical taxiway clearance and flagging requirements.

**13.0 NAVIGATIONAL AIDS.** Any unplanned, unapproved or accidental shutdown of any navigational aid requires immediate notification of the Airport Owner, and the FAA by the Engineer and the Contractor.

**14.0 DEBRIS, DIRT, ETC. ON APRON, RUNWAY OR TAXIWAYS.** Aprons, runways and taxiways shall be kept free of all debris, dirt, etc. at all times. Any accidental spillage of excavation or other materials shall be cleaned up immediately by the contractor after prompt notification by the Airport Owner or the Engineer. A program of regular apron and taxiway inspection will be planned by the Airport Owner, the Engineer and the Contractor. Inspections shall be made before the time for commencement of normal aircraft operations and more frequently if construction activities are of a nature that debris may accumulate on runway, taxiways or aprons.

**15.0 STORAGE OF EQUIPMENT, MATERIAL OR EXCAVATION.** The Contractor shall not store materials or park equipment in aircraft operational areas when the equipment or material is not in use or about to be installed. Material or equipment in use, in operation areas must be stored or parked in a manner that they may be quickly removed to accommodate aircraft operations.

No vehicles, equipment or material shall be operated or stored within 500' of the centerline of existing runway pavement or 65.5' of the centerline of existing taxiway pavement. A line 65.5' from the centerline of the existing taxiway or apron pavements will be flagged and lighted as required in AC 150/5370-2, latest edition, by the contractor.

Space will be made available at the site for the temporary field offices of the Contractor (and his subcontractor) and for storage of construction equipment and materials. The Contractor (and his subcontractor) shall provide all necessary temporary fencing and gates to protect materials from theft. The Contractor shall make arrangements with the Engineer for space for his own needs and the needs of his subcontractors.

**16.0 GROUND VEHICLE TRAFFIC CONTROL.**

(a) When any vehicle other than those routinely used in the aircraft movement area and runway approach area is required to travel over any portion of that area, it should be escorted by a vehicle properly identified to operate in the area or provided with a flag on a staff so attached to the vehicle so that the flag will be readily visible. The flag should be not less than 3 feet square consisting of a checkered pattern on international orange and white squares of not

less than 1 foot on each side and displayed in full view above the vehicle. A flag or escort vehicle is not required for vehicles which have been painted, marked and lighted for routine use on aircraft movement areas. Any vehicle operating on the movement area during the hours of darkness should be equipped with a flashing dome-type light, the color to be in accordance with local and/or state codes.

(b) Vehicular traffic crossing active movement areas must be controlled either by two-way radio with the Airport Traffic Control Tower's Ground Frequency (see safety notes plan), by escort, flagman, signal light or the means appropriate for the particular airport. The clearance should be confirmed by the driver's personal observation that no aircraft is approaching his position.

(c) All Contractor's vehicles shall have the company identification plainly visible on both sides of the vehicle in order to identify the vehicle. It may be desirable to clearly identify the vehicles for control purpose by either assigned initials or numbers prominently displayed on each side. The identifying symbols should be 8-inch minimum, black-type characters of a color easily read. They may be applied by use of tape or water soluble paint to facilitate removal.

(d) Security measures at the airport will require that Contractor employees park their personal cars in the area of the Contractor's storage area. Parking of personal cars at the site of the work will not be permitted. The Contractor, as a subsidiary obligation, shall provide adequate and safe transportation for his employees from the area where the cars are parked to and from the work area. Employees and drivers of work vehicles will be instructed as to proper access roads and will be cautioned that unauthorized use of aircraft pavements or other areas outside the designated work area may lead to their arrest and subsequent payment of fines.

(e) Trucks delivering material to an actual work area shall be provided with an escort.

**17.0 APPLICABLE STANDARDS.** Advisory Circular AC No. 150/5370-2 will be used as a guideline to assist in maintaining operational safety during construction activities. This document also refers to other applicable Advisory Circulars.

Federal Aviation Regulations - Part 77, not included herein, will also be used to define "Objects Affecting Navigable Airspace".

**18.0 OSHA and OTHER SAFETY PRECAUTIONS.** In addition to the safety requirements outlined thus far, all pertinent Occupational Safety and Health Administration rules shall be complied with. Specifically,

(a) Prior to each days work, the Contractor's supervisor should call the tower shift supervisor and inform him of that day's activities and where he will be working. The supervisor and one of his representatives shall have a two-way radio available at all times. It will be turned on any time work is underway adjacent to the terminal apron or any taxiway.

(b) The Contractor's supervisor shall be responsible for insuring all workmen comply with the Airport Security Program. He will control ingress and egress of his and subcontractor's personnel and ensure construction work gates remain locked or manned by a flagman at all times.

**19.0 CONFINED SPACE ENTRY PROCEDURES.** Contractor shall be aware of and follow proper confined space entry procedures as outlined by the National Institute for Occupational Safety and Health (NIOSH). Confined spaces are generally defined as spaces which:

1. Are NOT designed for continuous worker presence.
2. Have limited openings for entry or exit.
3. Have less than ideal natural ventilation.

The Contractor shall, as a minimum, have the following equipment on hand for use by his employees, subcontractors, inspectors, etc.:

| | |
|---|---|
| 3 | Harnesses |
| 3 | 40' Lengths of 5/8" Nylon Rope |
| 3 | Sets of Leather Gloves |
| 3 | Sets of Safety Glasses |
| 1 | Ventilation Blower |
| 1 | Tripod w/ Winch |
| 1 | Tri Gas Detectors of the latest approved models |

Contractor shall make at least one person available as an assistant for all inspections in confined areas.

**20.0 VIOLATIONS.** The responsibilities of meeting the requirements of this Safety Plan rests with the Contractor. The Engineer, the appropriate FAA representative, and the Airport Operator each have the right to stop work at the Contractor's expense if violation of this plan is encountered.

**21.0 EXISTING FAA CABLE PROTECTION.** The local FAA Airway Facilities personnel will mark the cable alignment once prior to construction, thereafter, the cable alignment markings shall be maintained by the Contractor. The uncovering of the cables shall be performed in the presence of FAA local Airway Facilities personnel. A notice of 48 hours shall be given the FAA before commencing the excavation. Any cable that lays within the work areas shall be covered by planing or metal sheets to protect the cables from direct bearing pressure by heavy equipment. If the Contractor causes a disruption in FAA service due to cutting of the cable, he shall be liable for all costs of replacement plus a penalty fine of $500.00 (Five Hundred Dollars) per day of disruption.

**22.0 PHASED CONSTRUCTION.** The Contractor will submit a proposed construction schedule within 15 days of Notice to Proceed. He will include calendar dates and will phase schedule his work to minimize any conflict with normal airport operation. The Contractor's attention is directed to the General Site and Safety Plan of the Contract Drawings for more specific detail on phasing construction.

**23.0 NIGHT WORK.** All necessary equipment including lights, generators, etc., required for night work shall be supplied by the Contractor and no separate measurement or payment will be made for lighting equipment, but rather it shall be considered incidental to the various contract work items. The Contractor may elect to work night hours in order to complete the project within the given time.

Before commencing with night work, the Contractor shall demonstrate the capabilities of his lighting system to the Engineer. If the Engineer is not completely satisfied that adequate light is being provided the Contractor shall provide additional lighting apparatus to the Engineer's satisfaction before the Contractor is allowed to commence work.

**24.0 PROJECT SCHEDULE.** Upon execution of a contract for the designated Bid Schedule, the Contractor may proceed with preparation and submittal of shop drawings for approval and with subsequent ordering and fabricating of materials. When the Contractor is ready to commence work on the site, he shall inform the Owner who will issue a written "Notice to Proceed" which will specify an effective date for the Contractor to commence work at the site. All work under this contract must be completed within the time schedule, as shown on page 3 of this section, of the date specified in the written "Notice to Proceed". The Owner reserves the right to issue the "Notice to Proceed" at any time in order to preclude the Contractor from taking an extraordinary amount of time to prepare for work at the site.

The Contractor shall be required to submit a tentative schedule of how the work will be accomplished over the contract period. This tentative schedule shall provide for a minimal disruption of general aviation and no disruption to the existing aircraft parking areas.

Also, in accordance with paragraph 80-02 of Section 80, the Contractor shall notify the Engineer at least 48 hours is the time required by the Owner to issue a proper Notice to Airmen (NOTAM) of the pending construction activities. The Contractor shall coordinate his overall schedule with the other contractors through the Owner. The Contractor's daily schedule must be coordinated with the Owner and the Engineer.

**25.0 WEEKLY SCHEDULE UPDATE REQUIRED.** To facilitate the specific requirements and intent of this section, the Contractor shall prepare and submit weekly, a schedule of operations for the following work week. The schedule shall be given to the Engineer by the end of the work week preceding the week covered by the schedule. The weekly schedules shall be subject to the approval of the Engineer, and shall include as a minimum, the following:

1. Major work items to be accomplished.
2. Number of men to be on site.
3. Type and quantity of equipment to be on site.
4. Areas of the site where construction is scheduled.
5. Any anticipated closing of facilities which will be required.
6. Other information requested by the Owner or Engineer.

The Engineer may disallow work in areas not included in the current work schedule.

**26.0 HAUL ROUTES AND AIRPORT ACCESS FOR CONSTRUCTION.** When public roads and highways must be used for haul routes, it will become the contractor's responsibility to obtain the proper permits needed for this function and to obey all rules and regulations pertinent to the public roads and highways. The Contractor shall be responsible for keeping the haul routes, including state, Owner, and county roads, swept clean of any debris introduced by his construction equipment.

Haul routes on the airport shall be as shown on the Contract Drawings or as directed by the Engineer. Access to the construction areas shall be in accordance with the General Site and Safety Plan of the Contract Drawings. Trucks loaded in the construction areas shall have loads trimmed as necessary to ensure that no particles, stones, or debris will fall off.

All paved haul routes or access roads shall be kept clean at all times to prevent the accumulation of dirt and mud and the generation of dust by sweeping, washing or other methods directed by the Engineer. Unpaved haul roads, if any, shall be maintained by blading and filling when directed by the Engineer, and dust shall be controlled at all times.

All haul roads disturbed shall be restored to their original or better condition before the Project will be considered complete. No separate payment will be made for the construction, repair and maintenance, including dust control of haul and access roads, and all costs thereof shall be included in the contract price for the various work.

**27.0 STORAGE AREA AND EQUIPMENT AREA.** The areas for the location of all of the Contractor(s)'s Field Offices and for storing materials and servicing, repairing and parking construction equipment are located where shown on the drawings. All material to be used in the work shall be stored in these areas. The Owner will not be responsible for any vandalized equipment or material stored in the Airport property. Any area occupied by the Contractor shall be maintained in a clean and orderly condition satisfactory to the Engineer. Particular attention shall be given to the elimination of combustible rubbish or debris in the areas, and none shall be left exposed overnight or at other periods of time the work is shut down. At the completion of the contract, all Contractor's and subcontractor's facilities will be removed promptly in a workmanlike manner, and the area left clean and free of all debris or surplus material.

**28.0 APPROVAL OF SUBCONTRACTORS.** The names of the subcontractors shall be submitted for approval. The Contractor shall submit a list of recent work of similar scope and nature that the proposed subcontractor has successfully completed. Failure of the Contractor to prove to the satisfaction of the Engineer that the subcontractor he proposes has expertise in the services to be performed will be cause for rejection.

~~**29.0 ENGINEER'S FIELD OFFICE AND SANITARY FACILITIES**. Contractor shall furnish prior to beginning construction and maintain during construction of the improvements embraced in the contract a suitable field office for the Engineer at the site of the work. The location of the field office shall be approved by the Engineer. The Contractor shall maintain the office during construction and remove it upon completion of the work.~~

~~The office shall be equipped with electric lights, heating and air conditioning facilities and telephone service. The field office shall contain not less than 150 square feet of floor area and shall be provided with glazed and screened windows. Each door shall be equipped with locks. The office shall be equipped with the following furniture:~~

~~1 - standard size flat top desk~~
~~1 - table at least 2 feet 6 inches wide and 5 feet long~~
~~1 - desk chair, 1 straight chair, and 1 drafting stool~~
~~1 - drafting table~~
~~1 - shelving, closets and plan racks as may be required~~
~~1 – telephone and 1- fax machine or combination device~~
~~1 - telephone message recorder~~
~~1 - copier (may be shared in Contractor's office)~~
~~1 - at least one reverse cycle air conditioner capable of~~

~~maintaining the office at 72 degrees F.~~

~~The above Contractor shall be assessed $800 per day for each day that the field office is not installed, while construction has started.~~

~~The Contractor awarded the contract shall pay all copying, telephone, heating, and electric bills~~ applicable to the Contract incurred by the Engineer in the field office, except for ~~***personal***~~ long distance toll calls. Any long distance toll calls for project business purposes shall be borne by the ~~Contractor.~~ ***An Engineer's Field Trailer will NOT be required on this project.***

**30.0 DISPOSAL SITE FOR SURPLUS AND UNSUITABLE MATERIALS.** ~~A disposal site for excavated surplus and unsuitable material will be available as shown on the plans or as otherwise specified or may be designated by the Owner prior to construction. The material if disposed of on airport property shall be maintained at a uniform height and shall be sloped and graded to drain. The area shown on the plans shall be graded level and compacted with a vibratory roller. Concrete debris and pavement excavation to be disposed of shall not exceed 4 feet in the maximum dimension and shall be buried and covered with the excavated materials.~~ ***No disposal site is authorized for this project. All unsuitable, unused, or unnecessary waste materials shall be hauled off of Airport property and legally disposed by the Contractor. The Engineer shall determine with the RPR what materials are unsuitable by testing provided by the Contractor. The Airport reserves the first right of refusal to accept any unused, non-hazardous excess materials at***

**31.0 COORDINATION WITH OTHERS.** It is essential that work under this contract be coordinated with other Contractors, the Owner, county, and/or utilities companies which may be performing other work on or adjacent to the airport.

**32.0 AIRCRAFT BARRICADES.** The Contractor shall furnish and place as required, lighted barricades to clearly define work areas to aircraft operators. The barricades shall be placed as shown on the plans or as directed by the Engineer. The barricades shall be low profile type, a maximum of 24 inches high (including flag heights), shall be bright reflective red and white, with red and white striped or checkered flags, and shall be lighted with red reflective lights. No open flame lighting shall be used. All temporary lights and barricades shall be weighted against jet blast (100 mph). Barricades shall be placed no more than 8 feet apart.

Barricades shall be maintained throughout each calendar day for the duration of the project. Should moving the position of barricades to accomplish a day's work be necessary, the original position of the barricades shall be restored at each day's end.

**33.0 MEASUREMENT AND PAYMENT.** No separate measurement or payment will be made for the provisions of physical facilities or the compliance with requirements under this section of these specifications except for stated allowances. The provision of facilities and compliance with requirements covered by this section of these specifications shall be included in the unit price bid for mobilization.

**34.0 MATERIALS, WORKMANSHIP, AND EQUIPMENT SPECIFICATIONS.** Unless otherwise specifically provided for in the Technical Specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for the purpose. Where equipment, materials, articles, or workmanship are referred to in the Technical Specifications, as “equal to” or of a particular standard, the Owner’s authorized representative shall decide the question of equality.

All materials, equipment, parts, and assemblies thereof, entering into the work shall be new and tested as specified. Unless waived in writing by the Owner, all field and operating tests shall be made in the presence of the Owner’s authorized representative. When such a waiver is issued, a sworn statement in duplicate of the test made and the results thereof shall be furnished to the Owner by the Contractor or manufacturer. Costs of all test and trials specified hereto, other than laboratory tests, and with the exception of the Owner’s expenses shall be borne by the Contractor and shall be included in the Contract price.

All workmanship and materials shall be of the highest quality. The equipment shall be the product of a manufacturer who is experienced and skilled in the field with an established record of research and development. No equipment will be considered unless the manufacturer has designed and manufactured equipment of comparable type and size for at least five (5) years.

The Contractor shall furnish to the Owner for approval the manufacturer’s detailed specifications for all machinery, mechanical and other special equipment which he contemplates installing together with full information as to type, performance characteristics, and all other pertinent information as required, and shall likewise submit for approval as required full information concerning all other materials or articles which he proposes to incorporate in the work.

Machinery, mechanical, and other equipment, materials, or articles installed or used without such prior approval shall be at the risk of subsequent rejection.

Materials specified by reference to the number or symbol of a specific standard, such as ASTM standard, AASHTO standard, an FDOT specification, a Federal specification, the requirements in the Structural General Notes and Specification Section 13120 Pre-Engineered Metal Building. Underwriter’s Laboratories number, Construction Specifications Institute specification, or other similar standard, shall conform and comply with requirements in the latest revision thereof, and any amendment or supplements thereto in effect on the date of the Instruction to Bidders, except as limited to type, class or grade, or modified in such reference. The standards referred to, except as modified in the Technical Specifications shall have full force and effect as though printed therein.

The Owner may require the Contractor to dismiss from the work such employee or employees as the Owner may deem incompetent, careless, or insubordinate.

**35.0 CARE AND PROTECTION OF THE WORK.** The Contractor shall be responsible for all damages to persons or property that occur as the result of its fault or negligence in connection with the prosecution of the work. The Contractor shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the Owner.

The Contractor shall shore up, brace, underpin, secure, and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way effected by the excavations or other operations connected with the construction of the improvements embraced by this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property owners or other party before commencement of any work. The Contractor shall indemnify and hold harmless the Owner from any damages on account of settlement or the loss of lateral support of adjoining or adjacent properties, and from all loss or expense and all damages for which the Owner may become liable in consequence of such injury or damages to adjoining and adjacent structures and/or their premises.

**36.0 DEWATERING AND STORM-WATER ABATEMENT.** The contractor shall maintain and protect the project from storm-water runoff and ground water at all times. The contractor shall provide all the necessary men, materials, and equipment necessary for construction of the project in dry conditions for the entire duration of the project. If no specific pay item is provided for dewatering, the contractor shall include money in other bid items for the cost of dewatering the site. The Owner will not be responsible for delays or other problems caused by groundwater welling or storm-water runoff, due to the negligence of the contractor in providing the proper dewatering efforts necessary to build the project. The contractor is responsible for making all inquiries, examinations of the site, and requests for geotechnical information available regarding groundwater and storm-water runoff.

The contractor shall provide a temporary dewatering plan to the Engineer for review a minimum of 14 calendar days prior to the start of construction. The plan should incorporate any ditches, dikes, dams, swales, well points, sock pipes, ditch blocks, pumps, alum drips, hay bales, silt fences, concrete ditch paving, or any other features necessary for construction of the project in dry conditions with regard to ground-water; and necessary for the mitigation of storm-water run-off during a storm event. This would include any features necessary over and above those designed by the Engineer for the project.

The Engineer is not responsible for the sequencing, phasing, or means and methods of construction. The means and methods of providing groundwater dewatering and storm-water runoff abatement is the responsibility of the contractor. However, storm-water structures and dewatering features shall be constructed in the earliest point of the project possible so as to prevent detrimental effects from groundwater and storm-water run-off. The exact timing of such preventative constructions are the responsibility of the contractor.

It is the contractor’s responsibility to prevent all upstream and downstream flooding of all properties and structures during the entire duration of the project. The contractor shall maintain and protect all existing, proposed, and temporary storm-water structures for the entire duration of the project in good working order so as to prevent such flooding.

The contractor shall provide the dewatering and storm-water run-off abatement men, materials, and equipment at no additional cost to the Owner above that specified in the executed contract.

**37.0 CONSTRUCTION SAFETY AND PHASING PLAN (CSPP).** The contractor shall fully comply with all safety requirements as indicated in the Construction Safety and Phasing Plan (CSPP) drawings included in the construction plans, as well as the approved CSPP document. The approved CSPP document submitted and approved by the FAA forms a part of these contract documents, whether physically attached or not, and will be made available to the contractor upon request. The report documentation describes in detail the additional requirements to preserve safety during the project, and is considered a supplement to the plans.

In addition to the CSPP documentation, the contractor is required to read and comply with Advisory Circular 150\5370-2, *Operational Safety on Airports During Construction*, latest edition. Refer also to the remainder of these General Provisions.

As part of the submittals process prior to construction, the contractor shall submit the Safety Plan Compliance Document (SPCD), to the Engineer for review and approval.

**END OF SECTION 130**

# TECHNICAL SPECIFICATIONS

## SECTION C-100 CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)

1.1 GENERAL. Quality is more than test results. Quality is the combination of proper materials, testing, workmanship, equipment, inspection, and documentation of the project. Establishing and maintaining a culture of quality is key to achieving a quality project. The Contractor shall establish, provide, and maintain an effective Contractor Quality Control Program (CQCP) that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The Contractor shall establish a CQCP that will:

a. Provide qualified personnel to develop and implement the CQCP.

b. Provide for the production of acceptable quality materials.

c. Provide sufficient information to assure that the specification requirements can be met.

d. Document the CQCP process.

The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the CQCP has been reviewed and approved by the Resident Project Representative (RPR). No partial payment will be made for materials subject to specific quality control (QC) requirements until the CQCP has been reviewed and approved.

The QC requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the quality assurance (QA) testing requirements. QA testing requirements are the responsibility of the RPR or Contractor as specified in the specifications.

A Quality Control (QC)/Quality Assurance (QA) workshop with the Engineer, Resident Project Representative (RPR), Contractor, subcontractors, testing laboratories, and Owner's representative must be held prior to start of construction. The QC/QA workshop will be facilitated by the Contractor. The Contractor shall coordinate with the Airport and the RPR on time and location of the QC/QA workshop. Items to be addressed, at a minimum, will include:

a. Review of the CQCP including submittals, QC Testing, Action & Suspension Limits for Production, Corrective Action Plans, Distribution of QC reports, and Control Charts.

b. Discussion of the QA program.

c. Discussion of the QC and QA Organization and authority including coordination and information exchange between QC and QA.

d. Establish regular meetings to discuss control of materials, methods and testing.

e. Establishment of the overall QC culture.

1.2 DESCRIPTION OF PROGRAM.

a. General description. The Contractor shall establish a CQCP to perform QC inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. The CQCP shall ensure conformance to applicable specifications and plans with respect to materials, off-site fabrication, workmanship, construction, finish, and functional performance. The CQCP shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of QC.

b. Contractor Quality Control Program (CQCP). The Contractor shall describe the CQCP in a written document that shall be reviewed and approved by the RPR prior to the start of any production, construction, or off-site fabrication. The written CQCP shall be submitted to the RPR for review and approval at least 10 calendar days before the CQCP Workshop. The Contractor's CQCP and QC testing laboratory must be approved in writing by the RPR prior to the Notice to Proceed (NTP).

The CQCP shall be organized to address, as a minimum, the following:

1. QC organization and resumes of key staff
2. Project progress schedule
3. Submittals schedule
4. Inspection requirements
5. QC testing plan
6. Documentation of QC activities and distribution of QC reports
7. Requirements for corrective action when QC and/or QA acceptance criteria are not met
8. Material quality and construction means and methods. Address all elements applicable to the project that affect the quality of the pavement structure including subgrade, subbase, base, and surface course. Some elements that must be addressed include, but is not limited to mix design, aggregate grading, stockpile management, mixing and transporting, placing and finishing, quality control testing and inspection, smoothness, laydown plan, equipment, and temperature management plan.

The Contractor must add any additional elements to the CQCP that is necessary to adequately control all production and/or construction processes required by this contract.

1.3 CQCP ORGANIZATION. The CQCP shall be implemented by the establishment of a QC organization. An organizational chart shall be developed to show all QC personnel, their authority, and how these personnel integrate with other management/production and construction functions and personnel.

The organizational chart shall identify all QC staff by name and function, and shall indicate the total staff required to implement all elements of the CQCP, including inspection and testing for each item of work. If necessary, different technicians can be used for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the CQCP, the personnel assigned shall be subject to the qualification requirements of paragraphs 100-03a and 100-03b. The organizational chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

The QC organization shall, as a minimum, consist of the following personnel:

a. Program Administrator. The Contractor Quality Control Program Administrator (CQCPA) must be a full-time employee of the Contractor, or a consultant engaged by the Contractor. The CQCPA must have a minimum of five (5) years of experience in QC pavement construction with prior QC experience on a project of comparable size and scope as the contract.

Included in the five (5) years of paving/QC experience, the CQCPA must meet at least one of the following requirements:

(1) Professional Engineer with one (1) year of airport paving experience.

(2) Engineer-in-training with two (2) years of airport paving experience.

(3) National Institute for Certification in Engineering Technologies (NICET) Civil Engineering Technology Level IV with three (3) years of airport paving experience.

(4) An individual with four (4) years of airport paving experience, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.

The CQCPA must have full authority to institute any and all actions necessary for the successful implementation of the CQCP to ensure compliance with the contract plans and technical specifications. The CQCPA authority must include the ability to immediately stop production until materials and/or processes are in compliance with contract specifications. The CQCPA must report directly to a principal officer of the construction firm. The CQCPA may supervise the Quality Control Program on more than one project provided that person can be at the job site within two (2) hours after being notified of a problem.

b. QC technicians. A sufficient number of QC technicians necessary to adequately implement the CQCP must be provided. These personnel must be either Engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II in Civil Engineering Technology or higher, and shall have a minimum of two (2) years of experience in their area of expertise.

The QC technicians must report directly to the CQCPA and shall perform the following functions:

(1) Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by paragraph 100-6.

(2) Performance of all QC tests as required by the technical specifications and paragraph100-8.

(3) Performance of tests for the RPR when required by the technical specifications.

Certification at an equivalent level of qualification and experience by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

c. Staffing levels. The Contractor shall provide sufficient qualified QC personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The CQCP shall state where different technicians will be required for different work elements.

1.4 PROJECT PROGRESS SCHEDULE. Critical QC activities must be shown on the project schedule as required by Section 80, paragraph 80-03, *Execution and Progress*.

1.5 SUBMITTALS SCHEDULE. The Contractor shall submit a detailed listing of all submittals (for example, mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include as a minimum:

a. Specification item number

b. Item description

c. Description of submittal

d. Specification paragraph requiring submittal

e. Scheduled date of submittal

1.6 INSPECTION REQUIREMENTS. QC inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by paragraph 100-9.

Inspections shall be performed as needed to ensure continuing compliance with contract requirements until completion of the particular feature of work. Inspections shall include the following minimum requirements:

a. During plant operation for material production, QC test results and periodic inspections shall be used to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment used in proportioning and mixing shall be inspected to ensure its proper operating condition. The CQCP shall detail how these and other QC functions will be accomplished and used.

b. During field operations, QC test results and periodic inspections shall be used to ensure the quality of all materials and workmanship. All equipment used in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and tolerances specified. The CQCP shall document how these and other QC functions will be accomplished and used.

1.7 CONTRACTOR QC TESTING FACILITY.

a. For projects that include Item P-401, Item P-403, and Item P-404, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM D3666, *Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials*:

- 8.1.3 Equipment Calibration and Checks;
- 8.1.9 Equipment Calibration, Standardization, and Check Records;
- 8.1.12 Test Methods and Procedures

**b.** For projects that include P-501, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM C1077, Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation:

- 7 Test Methods and Procedures
- 8 Facilities, Equipment, and Supplemental Procedures

1.8 QC TESTING PLAN. As a part of the overall CQCP, the Contractor shall implement a QC testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification Item, as well as any additional QC tests that the Contractor deems necessary to adequately control production and/or construction processes.

The QC testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

a. Specification item number (e.g., P-401)

b. Item description (e.g., Hot Mix Asphalt Pavements)

c. Test type (e.g., gradation, grade, asphalt content)

d. Test standard (e.g., ASTM or American Association of State Highway and Transportation Officials (AASHTO) test number, as applicable)

e. Test frequency (e.g., as required by technical specifications or minimum frequency when requirements are not stated)

f. Responsibility (e.g., plant technician)

g. Control requirements (e.g., target, permissible deviations)

The QC testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D3665. The RPR shall be provided the opportunity to witness QC sampling and testing.

All QC test results shall be documented by the Contractor as required by paragraph 100-9.

1.9 DOCUMENTATION. The Contractor shall maintain current QC records of all inspections and tests performed. These records shall include factual evidence that the required QC inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the RPR daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the CQCPA.

Contractor QC records required for the contract shall include, but are not necessarily limited to, the following records:

a. Daily inspection reports. Each Contractor QC technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations. These technician’s daily reports shall provide factual evidence that continuous QC inspections have been performed and shall, as a minimum, include the following:

(1) Technical specification item number and description

(2) Compliance with approved submittals

(3) Proper storage of materials and equipment

(4) Proper operation of all equipment

(5) Adherence to plans and technical specifications

(6) Summary of any necessary corrective actions

(7) Safety inspection.

(8) Photographs and/or video

The daily inspection reports shall identify all QC inspections and QC tests conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible QC technician and the CQCPA. The RPR shall be provided at least one copy of each daily inspection report on the work day following the day of record. When QC inspection and test results are recorded and transmitted electronically, the results must be archived.

b. Daily test reports. The Contractor shall be responsible for establishing a system that will record all QC test results. Daily test reports shall document the following information:

(1) Technical specification item number and description
(2) Test designation
(3) Location
(4) Date of test
(5) Control requirements
(6) Test results
(7) Causes for rejection
(8) Recommended remedial actions
(9) Retests

Test results from each day's work period shall be submitted to the RPR prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical QC charts. When QC daily test results are recorded and transmitted electronically, the results must be archived.

1.10 CORRECTIVE ACTION REQUIREMENTS. The CQCP shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the CQCP as a whole, and for individual items of work contained in the technical specifications.

The CQCP shall detail how the results of QC inspections and tests will be used for determining the need for corrective action and shall contain clear rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and use statistical QC charts for individual QC tests. The requirements for corrective action shall be linked to the control charts.

1.11 INSPECTION AND/OR OBSERVATIONS BY THE RPR. All items of material and equipment are subject to inspection and/or observation by the RPR at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate QC system in conformance with the requirements detailed here and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to inspection and/or observation by the RPR at the site for the same purpose.

Inspection and/or observations by the RPR does not relieve the Contractor of performing QC inspections of either on-site or off-site Contractor's or subcontractor's work.

1.12 NONCOMPLIANCE.

a. The Resident Project Representative (RPR) will provide written notice to the Contractor of any noncompliance with their CQCP. After receipt of such notice, the Contractor must take corrective action.

b. When QC activities do not comply with either the CQCP or the contract provisions or when the Contractor fails to properly operate and maintain an effective CQCP, and no effective corrective actions have been taken after notification of non-compliance, the RPR will recommend the Owner take the following actions:

(1) Order the Contractor to replace ineffective or unqualified QC personnel or subcontractors and/or

(2) Order the Contractor to stop operations until appropriate corrective actions are taken.

METHOD OF MEASUREMENT

2.1 BASIS OF MEASUREMENT AND PAYMENT. [Not Used] [Contractor Quality Control Program (CQCP) is for the personnel, tests, facilities and documentation required to implement the CQCP. The CQCP will be paid as a lump sum with the following schedule of partial payments:

a. With first pay request, 25% with approval of CQCP and completion of the Quality Control (QC)/Quality Assurance (QA) workshop.

b. When 25% or more of the original contract is earned, an additional 25%.

c. When 50% or more of the original contract is earned, an additional 20%.

d. When 75% or more of the original contract is earned, an additional 20%

e. After final inspection and acceptance of project, the final 10%.

**BASIS OF PAYMENT**

**3.1 PAYMENT WILL BE MADE UNDER:**

| | | |
|---|---|---|
| **Item C-100-1** | **Contractor Quality Control Program (CQCP) and Testing** | **- Lump Sum (LS)** |

**REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

National Institute for Certification in Engineering Technologies (NICET)

ASTM International (ASTM)

| | |
|---|---|
| ASTM C1077 | Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation |
| ASTM D3665 | Standard Practice for Random Sampling of Construction Materials |
| ASTM D3666 | Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials |

**END OF SECTION C-100**

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**SECTION C-105 MOBILIZATION**

**1.1 DESCRIPTION.** This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

***Additionally, this item shall consist of the establishment of temporary offices, buildings, utilities, safety equipment and first aid supplies, sanitary and other facilities, maintenance of traffic, as required by these specifications and State and local laws and regulations. The costs of bonds and any required insurances, and any other preconstruction expenses necessary for the start of the work may also be included in this Section.***

**1.2 MOBILIZATION LIMIT.** Mobilization shall be limited to ***10*** percent of the subtotal of project construction costs.

**1.3 POSTED NOTICES.** Prior to commencement of construction activities, the Contractor must post the following documents in a prominent, weather proof, and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor when entering the work site: ~~Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended~~; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination and OSHA Workplace Safety posters. These notices must remain posted until final acceptance of the work by the Owner.

**Links to the posters available at: https://www.faa.gov/airports/engineering/**

1**.4 ENGINEER/RPR FIELD OFFICE.** ***An Engineer/RPR field office is not required for this project.***

**1.5 DEMOBILIZATION.** ***Upon or before issuance of substantial completion, the Contractor shall promptly begin to demobilize men, equipment and facilities from the project site. At the time of final completion all materials, equipment, offices and temporary facilities shall be removed from the site. The site shall be fully restored to its previous condition or as otherwise approved by the Engineer, including establishment of stabilized areas or turfing disturbed areas. Final payment for the Mobilization pay item as well as all retainage may be withheld until the site restoration and demobilization are complete. Demobilization is considered a part of Mobilization, and is paid for by the Mobilization pay item.***

**1.*6 DEWATERING. See General Provision 130 (Special Provisions, Section 35).***

***1.7 CONSTRUCTION SURVEYS/AS-BUILTS. See Technical Specification P-100.***

***1.8 CONSTRUCTION SAFETY AND PHASING/MOT. See General Provision 130 (Special Provisions, Section 36).***

**105-1.9. CONSTRUCTION PERMITS, LICENSES, FEES, AHJ COORDINATION. This item consists of the various construction side permits (site, NPDES, tree, etcetera), contractor's business or other required licenses, any fees required to enter the site or to be paid to the City or other Authority Having Jurisdiction (AHJ), as well as the Contractor's efforts to coordinate inspections, requirements, paperwork, etcetera, anything as necessary by the City, Power Company, County or various other agencies, in order to complete the required work for the duration of the project.**

**105.1.10 UTILITY SERVICE DEVELOPMENT CHARGES, CITY\COUNTY INSPECTIONS. This item consists of the actual charges for electrical power service utilities charged to the Owner for placing the utilities into service. This item includes the costs for any maintenance and other bonds, as well as the cost for City\County inspections of the project or systems at various points in the construction's progress.**

**105.1.1 GENERAL, SUPPLEMENTAL, AND SPECIAL PROVISIONS. This item consists of the costs of general and special requirements per the contract documents not covered by items C-105-1 through 6, which shall use the stepped table from paragraph 2.1 below, and made reference therein (see those sections).**

## METHOD OF MEASUREMENT

**2.1 BASIS OF MEASUREMENT AND PAYMENT**. Based upon the contract lump sum price for "Mobilization", ***"Dewatering", "Construction Surveys", "Construction Safety and Phasing", "Construction Permits, Licenses, Fees, Coordination", "Utility Service Charges/City Inspections".*** partial payments will be made as follows:

a. With first pay request, 25%.

b. When 25% or more of the original contract is earned, an additional 25%.

c. When 50% or more of the original contract is earned, an additional 40%.

d. After Final Inspection, Staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, *Contractor Final Project Documentation,* the final 10%.

## BASIS OF PAYMENT

**3.1 PAYMENT WILL BE MADE UNDER:**

| | | |
|---|---|---|
| C-105-1 | Mobilization (Limited to 10%) | -- Lump Sum (LS) |
| C-105-2 | Dewatering | -- Lump Sum (LS) |
| C-105-3 | Construction Surveys/As-Builts | -- Lump Sum (LS) |
| C-105-4 | Construction Safety and Phasing/MOT | -- Lump Sum (LS) |

| | | |
|---|---|---|
| C-105-5 | Construction Permits, Licenses, Fees, AHJ Coordination | -- Lump Sum (LS) |
| C-105-6 | Utility Service Development Charges, City\County Inspections | -- Lump Sum (LS) |

**REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

**END OF SECTION C-105**

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# ITEM P-605 JOINT SEALANTS FOR PAVEMENTS

## DESCRIPTION

**605-1.1** This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

## MATERIALS

**605-2.1 JOINT SEALANTS.** Joint sealant materials for concrete joints and cracks shall meet the requirements of ASTM D5893 and crack sealant materials for asphalt cracks shall meet the requirements of ASTM D6690.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

**605-2.2 BACKER ROD.** The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be 25% ± 5 % larger in diameter than the nominal width of the joint.

**605-2.3 BOND BREAKING TAPES.** Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

## CONSTRUCTION METHODS

**605-3.1 TIME OF APPLICATION.** Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

**605-3.2 EQUIPMENT.** Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, 10 days prior to use on the project.

**a. Tractor-mounted routing tool**. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

**b. Concrete saw.** Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

**c. Sandblasting equipment.** The Contractor must demonstrate sandblasting equipment including the air compressor, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the Resident Project Representative (RPR), that the method cleans the joint and does not damage the joint.

**d. Waterblasting equipment**. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

**e. Hand tools**. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

**f. Hot-poured sealing equipment**. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

**g. Cold-applied, single-component sealing equipment**. The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier’s instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

**605-3.3 PREPARATION OF JOINTS.** Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter.

The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

**a. Sawing**. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

**b. Sealing**. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by sandblasting**,** tractor-mounted routing equipment**,** concrete saw**,** and waterblaster as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

**c. Backer Rod.** When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

**d. Bond-breaking tape.** Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

**605-3.4 INSTALLATION OF SEALANTS.** Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to 1/4 inch (6 mm) ±1/16 inch (2 mm) below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer’s instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

**605-3.5 INSPECTION.** The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

**605-3.6 CLEAN-UP.** Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

## METHOD OF MEASUREMENT

**605-4.1** Joint sealing material shall be measured by the linear foot (meter) of sealant in place, completed, and accepted. Joint and crack repair as required per Specification P-101, including routing and cleaning prior to sealing, shall be considered incidental to the P-605 pay items.

## BASIS OF PAYMENT

**605-5.1** ~~Payment for joint sealing material shall be made at the contract unit price per linear foot (meter).~~ The price shall be full compensation for furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item. ***No separate payment will be made for joint and crack sealing per the typical sections and details. This item will be paid for by paving pay items.***

Payment will be made under:

~~Item P-605-1 Rout, Clean, and Seal Asphalt Crack - per Linear Foot (LF)~~

***P-401-1 Asphalt Mix Pavement - Surface Course, 12.5 mm NMAS - per Ton (TN)***

***P-401-2 Asphalt Mix Pavement - Leveling, 9.5 mm NMAS - per Ton (TN)***

## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

| | |
|---|---|
| ASTM D789 | Standard Test Method for Determination of Relative Viscosity of Polyamide (PA) |
| ASTM D5249 | Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints |

| | |
|---|---|
| ASTM D5893 | Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements |
| ASTM D6690 | Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt |

Advisory Circulars (AC)

| | |
|---|---|
| AC 150/5340-30 | Design and Installation Details for Airport Visual Aids |

**END OF ITEM P-605**

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# ITEM P-606 ADHESIVE COMPOUNDS, TWO-COMPONENT FOR SEALING WIRE AND LIGHTS IN PAVEMENT

## DESCRIPTION

**606-1.1** This specification covers two types of material; a liquid suitable for sealing electrical wire in saw cuts in pavement and for sealing light fixtures or bases in pavement, and a paste suitable for embedding light fixtures in the pavement. Both types of material are two-component filled formulas with the characteristics specified in paragraph 606-2.4. Materials supplied for use with asphalt and/or concrete pavements must be formulated so they are compatible with the asphalt and/or concrete.

## MATERIALS

**606-2.1 CURING**. When pre-warmed to 77°F (25°C), mixed, and placed in accordance with manufacturer's directions, the materials shall cure at temperatures of 45°F (7°C) or above without the application of external heat.

**606-2.2 STORAGE**. The adhesive components shall not be stored at temperatures over 86°F (30°C), unless otherwise specified by the manufacturer.

**606-2.3 CAUTION**. Installation and use shall be in accordance with the manufacturer's recommended procedures. Avoid prolonged or repeated contact with skin. In case of contact, wash with soap and flush with water. If taken internally, call doctor. Keep away from heat or flame. Avoid vapor. Use in well-ventilated areas. Keep in cool place. Keep away from children.

**606-2.4 CHARACTERISTICS**. When mixed and cured in accordance with the manufacturer's directions, the materials shall have the following properties shown in Table 1.

**Table 1. Property Requirements**

| Physical or Electrical Property | Minimum | Maximum | ASTM Method |
|---|---|---|---|
| Tensile | | | |
| Portland cement concrete | 1,000 psi (70 kg/sq cm) | | D 638 |
| Asphalt concrete | 500 psi (35 kg/sq cm) | | |
| Elongation | | | |
| Portland cement concrete | | See note [1] | D 638 |
| Asphalt concrete | 50% | | D 638 |
| Coef. of cub. exp. cu. cm/cu. cm/°C | 0.00090 | 0.00120 | D 1168 |
| Coef. of lin. exp. cm/cm/°C | 0.000030 | 0.000040 | D 1168 |

| Physical or Electrical Property | Minimum | Maximum | ASTM Method |
|---|---|---|---|
| Dielectric strength, short time test | 350 volts/mil. | | D 149 |
| Arc resistance | 125 sec | | |
| Pull-off | | | |
| Adhesion to steel | 1,000 psi (70 kg/sq cm) | | |
| Adhesion to Portland cement concrete | 200 psi (14 kg/sq cm) | | |
| Adhesion to asphalt concrete | No test available. | | |
| Adhesion to aluminum | 250 psi | | |

[1] 20% or more (without filler) for formulations to be supplied for areas subject to freezing.

**SAMPLING, INSPECTION, AND TEST PROCEDURES**

**606-3.1 TENSILE PROPERTIES.** Tests for tensile strength and elongation shall be conducted in accordance with ASTM D638.

**606-3.2 EXPANSION.** Tests for coefficients of linear and cubical expansion shall be conducted in accordance with, Method B, except that mercury shall be used instead of glycerine. The test specimen shall be mixed in the proportions specified by the manufacturer, and cured in a glass tub approximately 2 inch (50 mm) long by 3/8 inch (9 mm) in diameter. The interior of the tube shall be precoated with a silicone mold release agent. The hardened sample shall be removed from the tube and aged at room temperature for one (1) week before conducting the test. The test temperature range shall be from 35°F (2°C) to 140°F (60°C).

**606-3.3 TEST FOR DIELECTRIC STRENGTH.** Test for dielectric strength shall be conducted in accordance with ASTM D149 for sealing compounds to be furnished for sealing electrical wires in pavement.

**606-3.4 TEST FOR ARC RESISTANCE.** Test for arc resistance shall be conducted for sealing compounds to be furnished for sealing electrical wires in pavement.

**606-3.5 TEST FOR ADHESION TO STEEL.** The ends of two smooth, clean, steel specimens of convenient size (1 inch by 1 inch by 6 inch) (25 mm by 25 mm by 150 mm) would be satisfactory when bonded together with adhesive mixture and allowed to cure at room temperature for a period of time to meet formulation requirements and then tested to failure on a Riehle (or similar) tensile tester. The thickness of adhesive to be tested shall be 1/4 inch (6 mm).

**606-3.6 ADHESION TO PORTLAND CEMENT CONCRETE.**

**a. Concrete test block preparation.** The aggregate grading shall be as shown in Table 2.

The coarse aggregate shall consist of crushed rock having a minimum of 75% of the particles with at least one fractured face and having a water absorption of not more than 1.5%. The fine aggregate shall consist of crushed sand manufactured from the same parent rock as the coarse aggregate. The concrete shall have a water-cement ratio of 5.5 gallons (21 liters) of water per bag of cement, a cement factor of 6, ±0.5, bags of cement per cubic yard (0.76 cubic meter) of concrete, and a slump of 2-1/2 inch (60 mm), ±1/2 inch (60 mm ±12 mm). The ratio of fine aggregate to total aggregate shall be approximately 40% by solid volume. The air content shall be 5.0%, ±0.5%, and it shall be obtained by the addition to the batch of an air-entraining admixture such as Vinsol® resin. The mold shall be of metal and shall be provided with a metal base plate.

Means shall be provided for securing the base plate to the mold. The assembled mold and base plate shall be watertight and shall be oiled with mineral oil before use. The inside measurement of the mold shall be such that several one inch (25 mm) by 2-inch (75 mm) by 3-inch (25 mm by 50 mm by 75 mm) test blocks can be cut from the specimen with a concrete saw having a diamond blade. The concrete shall be prepared and cured in accordance with ASTM C192.

**Table 2. Aggregate for Bond Test Blocks**

| Type | Sieve Size | Percent Passing |
|---|---|---|
| **Coarse Aggregate** | 3/4 inch (19.0 mm) | 97 to 100 |
| | 1/2 inch (12.5 mm) | 63 to 69 |
| | 3/8 inch (9.5 mm) | 30 to 36 |
| | No. 4 (4.75 mm) | 0 to 3 |
| **Fine Aggregate** | No. 4 (4.75 mm) | 100 |
| | No. 8 (2.36 mm) | 82 to 88 |
| | No. 16 (1.18 mm) | 60 to 70 |
| | No. 30 (600 µm) | 40 to 50 |
| | No. 50 (300 µm) | 16 to 26 |
| | No. 100 (150 µm) | 5 to 9 |

**b. Bond test.** Prior to use, oven-dry the test blocks to constant weight at a temperature of 220°F to 230°F (104°C to 110°C), cool to room temperature, 73.4°F ±3°F (23°C ±1.6°C), in a desiccator, and clean the surface of the blocks of film or powder by vigorous brushing with a stiff-bristled fiber brush. Two test blocks shall be bonded together on the one inch by 3 inch (25 mm by 75 mm) sawed face with the adhesive mixture and allowed to cure at room temperature for a period of time to meet formulation requirements and then tested to failure in a Riehle (or similar) tensile tester. The thickness of the adhesive to be tested shall be 1/4 inch (6 mm).

**606-3.7 COMPATIBILITY WITH ASPHALT MIX.** Test for compatibility with asphalt in accordance with ASTM D5329.

**606-3.8 ADHESIVE COMPOUNDS - CONTRACTOR'S RESPONSIBILITY.** The Contractor shall furnish the vendor's certified test reports for each batch of material delivered to the project. The report shall certify that the material meets specification requirements and is suitable for use with concrete and asphalt concrete pavements. The report shall be provided to and accepted by the Resident Project Representative (RPR) before use of the material. In addition, the Contractor shall obtain a statement from the supplier or manufacturer that guarantees the material for one year. The supplier or manufacturer shall furnish evidence that the material has performed satisfactorily on other projects.

**606-3.9 APPLICATION.** Adhesive shall be applied on a dry, clean surface, free of grease, dust, and other loose particles. The method of mixing and application shall be in strict accordance with the manufacturer's recommendations. When used with Item P-605, such as light can installation, Item P-605 shall not be applied until the Item P-606 has fully cured.

## METHOD OF MEASUREMENT

**606-4.1** The adhesive compound shall ***not be measured separately, but included as an incidental work item for which it is a component part of other items*** ~~be measured by the gallon (l) of adhesive as specified, in place, complete and accepted~~. When required in the installation of an in-runway lighting system or portion thereof, no measurement will be made for direct payment of adhesive, as the cost of furnishing and installing shall be considered as a subsidiary obligation in the completion of the installation.

## BASIS OF PAYMENT

**606-5.1** Payment shall be made separately***, but included as an incidental work item for which it is a component part of other items***, ~~where applicable, at the contract unit price per gallon (l) for the adhesive.~~ This price shall be full compensation for furnishing all materials, and for all preparation, delivering, and application of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

## REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

| | |
|---|---|
| ASTM C192 | Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory |
| ASTM D149 | Standard Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies |
| ASTM D638 | Standard Test Method for Tensile Properties of Plastics |

ASTM D5329 Standard Test Methods for Sealants and Fillers, Hot-applied, for Joints and Cracks in Asphaltic and Portland Cement Concrete Pavements

**END OF ITEM P-606**

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## ITEM P-610 CONCRETE FOR MISCELLANEOUS STRUCTURES

### DESCRIPTION

**610-1.1** This item shall consist of concrete and reinforcement, as shown on the plans, prepared and constructed in accordance with these specifications. This specification shall be used for all concrete other than airfield pavement which are cast-in-place.

### MATERIALS

**610-2.1 GENERAL.** Only approved materials, conforming to the requirements of these specifications, shall be used in the work. Materials may be subject to inspection and tests at any time during their preparation or use. The source of all materials shall be approved by the Resident Project Representative (RPR) before delivery or use in the work. Representative preliminary samples of the materials shall be submitted by the Contractor, when required, for examination and test. Materials shall be stored and handled to ensure preservation of their quality and fitness for use and shall be located to facilitate prompt inspection. All equipment for handling and transporting materials and concrete must be clean before any material or concrete is placed in them.

The use of pit-run aggregates shall not be permitted unless the pit-run aggregate has been screened and washed, and all fine and coarse aggregates stored separately and kept clean. The mixing of different aggregates from different sources in one storage stockpile or alternating batches of different aggregates shall not be permitted.

**a. Reactivity.** Fine aggregate and coarse aggregates to be used in all concrete shall have been tested separately within six months of the project in accordance with ASTM C1260. Test results shall be submitted to the RPR. The aggregate shall be considered innocuous if the expansion of test specimens, tested in accordance with ASTM C1260, does not exceed 0.08% at 14 days (16 days from casting). If the expansion either or both test specimen is greater than 0.08% at 14 days, but less than 0.20%, a minimum of 25% of Type F fly ash, or between 40% and 55% of slag cement shall be used in the concrete mix.

If the expansion is greater than 0.20% the aggregates shall not be used, and test results for other aggregates must be submitted for evaluation; or aggregates that meet P-501 reactivity test requirements may be utilized.

**610-2.2 COARSE AGGREGATE.** The coarse aggregate for concrete shall meet the requirements of ASTM C33 and the requirements of Table 4, Class Designation 5S; and the grading requirements shown below, as required for the project.

**Coarse Aggregate Grading Requirements**

| Maximum Aggregate Size | ASTM C33, Table 3 Grading Requirements (Size No.) |
|---|---|
| 1 1/2 inch (37.5 mm) | 467 or<br>4 and 67 |
| 1 inch (25 mm) | 57 |
| ¾ inch (19 mm) | 67 |
| ½ inch (12.5 mm) | 7 |

**610-2.2.1 Coarse Aggregate susceptibility to durability (D) cracking.** Not used.

**610-2.3 FINE AGGREGATE.** The fine aggregate for concrete shall meet all fine aggregate requirements of ASTM C33.

**610-2.4 CEMENT.** Cement shall conform to the requirements of ***ASTM C150 Type I/II***.

**610-2.5 CEMENTITIOUS MATERIALS.**

**a. Fly ash.** Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than 15% and a total available alkali content less than 3% per ASTM C311. Fly ash produced in furnace operations using liming materials or soda ash (sodium carbonate) as an additive shall not be acceptable. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the RPR.

**b. Slag cement (ground granulated blast furnace (GGBF)).** Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

**610-2.6 WATER.** Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

**610-2.7 ADMIXTURES.** The Contractor shall submit certificates indicating that the material to be furnished meets all of the requirements indicated below. In addition, the RPR may require the Contractor to submit complete test data from an approved laboratory showing that the material to be furnished meets all of the requirements of the cited specifications. Subsequent tests may be made of samples taken by the RPR from the supply of the material being furnished or proposed for use on the work to determine whether the admixture is uniform in quality with that approved.

**a. Air-entraining admixtures**. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entrainment agent and any water reducer admixture shall be compatible.

**b. Water-reducing admixtures**. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D. ASTM C494, Type F and G high range water reducing admixtures and ASTM C1017 flowable admixtures shall not be used.

**c. Other chemical admixtures**. The use of set retarding and set-accelerating admixtures shall be approved by the RPR. Retarding shall meet the requirements of ASTM C494, Type A, B, or D and set-accelerating shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

**610-2.8 PREMOLDED JOINT MATERIAL.** Premolded joint material for expansion joints shall meet the requirements of ASTM D1751**.**

**610-2.9 JOINT FILLER.** The filler for joints shall meet the requirements of Item P-605, unless otherwise specified.

**610-2.10 STEEL REINFORCEMENT.** Reinforcing shall consist of reinforcing steel conforming to the requirements of ASTM A615, ASTM A706, ASTM A775, or ASTM A934 or welded steel wire or deformed steel fabric conforming to ASTM A1064 or ASTM A884**.**

**610-2.11 MATERIALS FOR CURING CONCRETE.** Curing materials shall conform to ASTM C309 and consist of White-pigmented Liquid Membrane-Forming Compound, Type 2, Class B.

## CONSTRUCTION METHODS

**610-3.1 GENERAL.** The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified here. All machinery and equipment used by the Contractor on the work, shall be of sufficient size to meet the requirements of the work. All work shall be subject to the inspection and approval of the RPR.

**610-3.2 CONCRETE MIXTURE.** The concrete shall develop a compressive strength of 4000 psi in 28 days as determined by test cylinders made in accordance with ASTM C31 and tested in accordance with ASTM C39. The concrete shall contain not less than 470 pounds of cementitious material per cubic yard (280 kg per cubic meter). The water cementitious ratio shall not exceed 0.45 by weight. The air content of the concrete shall be 5% +/- 1.2% as determined by ASTM C231 and shall have a slump of not more than 4 inches (100 mm) as determined by ASTM C143.

**610-3.3 MIXING.** Concrete may be mixed at the construction site, at a central point, or wholly or in part in truck mixers. The concrete shall be mixed and delivered in accordance with the requirements of ASTM C94 or ASTM C685.

The concrete shall be mixed only in quantities required for immediate use. Concrete shall not be mixed while the air temperature is below 40°F (4°C) without the RPR's approval. If approval is granted for mixing under such conditions, aggregates or water, or both, shall be heated and the concrete shall be placed at a temperature not less than 50°F (10°C) nor more than 100°F (38°C). The Contractor shall be held responsible for any defective work, resulting from freezing or injury in any manner during placing and curing, and shall replace such work at his expense.

Retempering of concrete by adding water or any other material is not permitted.

The rate of delivery of concrete to the job shall be sufficient to allow uninterrupted placement of the concrete.

**610-3.4 FORMS**. Concrete shall not be placed until all the forms and reinforcements have been inspected and approved by the RPR. Forms shall be of suitable material and shall be of the type, size, shape, quality, and strength to build the structure as shown on the plans. The forms shall be true to line and grade and shall be mortar-tight and sufficiently rigid to prevent displacement and sagging between supports. The surfaces of forms shall be smooth and free from irregularities, dents, sags, and holes. The Contractor shall be responsible for their adequacy.

The internal form ties shall be arranged so no metal will show in the concrete surface or discolor the surface when exposed to weathering when the forms are removed. All forms shall be wetted with water or with a non-staining mineral oil, which shall be applied immediately before the concrete is placed. Forms shall be constructed so they can be removed without injuring the concrete or concrete surface.

**610-3.5 PLACING REINFORCEMENT.** All reinforcement shall be accurately placed, as shown on the plans, and shall be firmly held in position during concrete placement. Bars shall be fastened together at intersections. The reinforcement shall be supported by approved metal chairs. Shop drawings, lists, and bending details shall be supplied by the Contractor when required.

**610-3.6 EMBEDDED ITEMS.** Before placing concrete, all embedded items shall be firmly and securely fastened in place as indicated. All embedded items shall be clean and free from coating, rust, scale, oil, or any foreign matter. The concrete shall be spaded and consolidated around and against embedded items. The embedding of wood shall not be allowed.

**610-3.7 CONCRETE CONSISTENCY**. The Contractor shall monitor the consistency of the concrete delivered to the project site; collect each batch ticket; check temperature; and perform slump tests on each truck at the project site in accordance with ASTM C143.

**610-3.8 PLACING CONCRETE.** All concrete shall be placed during daylight hours, unless otherwise approved. The concrete shall not be placed until the depth and condition of foundations, the adequacy of forms and falsework, and the placing of the steel reinforcing have been approved by the RPR. Concrete shall be placed as soon as practical after mixing, but in no case later than one (1) hour after water has been added to the mix. The method and manner of placing shall avoid segregation and displacement of the reinforcement. Troughs, pipes, and chutes shall be used as an aid in placing concrete when necessary. The concrete shall not be dropped from a height of more than 5 feet (1.5 m). Concrete shall be deposited as nearly as practical in its final position to avoid segregation due to rehandling or flowing. Do not subject concrete to procedures which cause segregation. Concrete shall be placed on clean, damp surfaces, free from running water, or on a properly consolidated soil foundation.

**610-3.9 VIBRATION.** Vibration shall follow the guidelines in American Concrete Institute (ACI) Committee 309R, Guide for Consolidation of Concrete.

**610-3.10 JOINTS.** Joints shall be constructed as indicated on the plans.

**610-3.11 FINISHING.** All exposed concrete surfaces shall be true, smooth, and free from open or rough areas, depressions, or projections. All concrete horizontal plane surfaces shall be brought flush to the proper elevation with the finished top surface struck-off with a straightedge and floated.

**610-3.12 CURING AND PROTECTION.** All concrete shall be properly cured in accordance with the recommendations in American Concrete Institute (ACI) 308R, Guide to External Curing of Concrete. The concrete shall be protected from damage until project acceptance.

**610-3.13 COLD WEATHER PLACING.** When concrete is placed at temperatures below 40°F (4°C), follow the cold weather concreting recommendations found in ACI 306R, Cold Weather Concreting.

**610-3.14 HOT WEATHER PLACING.** When concrete is placed in hot weather greater than 85ºF (30 ºC), follow the hot weather concreting recommendations found in ACI 305R, Hot Weather Concreting.

**QUALITY ASSURANCE (QA)**

**610-4.1 QUALITY ASSURANCE SAMPLING AND TESTING**. Concrete for each day's placement will be accepted on the basis of the compressive strength specified in paragraph 610-3.2. The RPR will sample the concrete in accordance with ASTM C172; test the slump in accordance with ASTM C143; test air content in accordance with ASTM C231; make and cure compressive strength specimens in accordance with ASTM C31; and test in accordance with ASTM C39. The QA testing agency will meet the requirements of ASTM C1077.

The Contractor shall provide adequate facilities for the initial curing of cylinders.

**610-4.2 DEFECTIVE WORK.** Any defective work that cannot be satisfactorily repaired as determined by the RPR, shall be removed and replaced at the Contractor's expense. Defective work includes, but is not limited to, uneven dimensions, honeycombing and other voids on the surface or edges of the concrete.

**METHOD OF MEASUREMENT**

**610-5.1** ~~Concrete shall be measured by the square yard (square meter) of concrete complete in place and accepted.~~

**BASIS OF PAYMENT**

**610-6.1** ~~Payment shall be made at the contract unit price per square yard (square meter).~~ This price shall be full compensation for furnishing all materials including reinforcement and embedded items and for all preparation, delivery, installation, and curing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

***Payment shall be made under the FF-101 pay items as applicable.***

**REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

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| ASTM A184 | Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement |
| ASTM A615 | Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement |
| ASTM A704 | Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement |
| ASTM A706 | Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement |
| ASTM A775 | Standard Specification for Epoxy-Coated Steel Reinforcing Bars |
| ASTM A884 | Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement |
| ASTM A934 | Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars |
| ASTM A1064 | Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete |
| ASTM C31 | Standard Practice for Making and Curing Concrete Test Specimens in the Field |
| ASTM C33 | Standard Specification for Concrete Aggregates |
| ASTM C39 | Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens |
| ASTM C94 | Standard Specification for Ready-Mixed Concrete |
| ASTM C136 | Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates |
| ASTM C114 | Standard Test Methods for Chemical Analysis of Hydraulic Cement |
| ASTM C136 | Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates |
| ASTM C143 | Standard Test Method for Slump of Hydraulic-Cement Concrete |
| ASTM C150 | Standard Specification for Portland Cement |
| ASTM C171 | Standard Specification for Sheet Materials for Curing Concrete |
| ASTM C172 | Standard Practice for Sampling Freshly Mixed Concrete |

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| ASTM C231 | Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method |
| ASTM C260 | Standard Specification for Air-Entraining Admixtures for Concrete |
| ASTM C309 | Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete |
| ASTM C311 | Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete |
| ASTM C494 | Standard Specification for Chemical Admixtures for Concrete |
| ASTM C618 | Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete |
| ASTM C666 | Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing |
| ASTM C685 | Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing |
| ASTM C989 | Standard Specification for Slag Cement for Use in Concrete and Mortars |
| ASTM C1017 | Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete |
| ASTM C1077 | Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation |
| ASTM C1157 | Standard Performance Specification for Hydraulic Cement |
| ASTM C1260 | Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method) |
| ASTM C1365 | Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis |
| ASTM C1602 | Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete |
| ASTM D1751 | Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types) |

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|---|---|
| ASTM D1752 | Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction |

American Concrete Institute (ACI)

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|---|---|
| ACI 305R | Hot Weather Concreting |
| ACI 306R | Cold Weather Concreting |
| ACI 308R | Guide to External Curing of Concrete |
| ACI 309R | Guide for Consolidation of Concrete |

**END OF ITEM P-610**

# ITEM SP-100 GENERAL PROVISIONS AND REQUIREMENTS FOR ELECTRICAL WORK

## GENERAL

### 100-1.1 SPECIAL REQUIREMENTS FOR ELECTRICAL WORK.

**a.** This item shall apply to all electrical work contained within the Contract Documents. Where the contract general conditions, special provisions or other parts of the Contract Documents also apply, the stricter of the documents shall govern.

### 100-1.2 AUXILIARIES AND ACCESSORIES.

**a.** Include all auxiliaries and accessories for a complete, fully functional and properly operating system in accordance with the Contract Documents.

**b.** Provide and install all electrical systems and any necessary appurtenances as per Federal Aviation Administration (FAA) Advisory Circulars and FAA Orders, NFPA 70 - National Electrical Code (NEC), federal, state and local codes whether specified or shown in the Contract Documents or not. The content of the Contract Documents in general only refers to work required above and beyond the requirements of the FAA, NEC and applicable federal, state and local codes.

### 100-1.3 PROJECT PAY ITEMS.

**a.** The project pay items are provided to be inclusive of all work to be performed as shown in the Contract Documents. All work not identified with a specific pay item shall be considered required work to complete the project and shall be considered subsidiary to the cost of the project pay items provided.

### 100-1.4 CONTRACTOR EXPERIENCE.

**a.** All Contractors used to perform work of this contract shall be licensed to perform electrical work in the state in which the project is located at the time bids are submitted. At least one member (qualifier) of the electrical contracting firm shall hold a state certified (unlimited, unrestricted) electrical contractor’s license.

### 100-1.5 EXPERIENCE AND SUPERVISION OF CONTRACTOR PERSONNEL.

**a.** Provide a resident on-site electrical supervisor to manage work at the job site whenever electrical work is being performed or affected. Electrical work is defined as any work described, included, depicted or contained within the L-XXX specification series, SP-XXX specification series, E- series drawings, and all other work within the Contract Documents dealing with the distribution of electrical power/light, electrical/electronic/light monitoring, communication and control.

**b.** When work is being performed within the Aircraft Operations Area, the on-site supervisor shall also be within the Aircraft Operations Area, except for incidental absences. Incidental absences shall not exceed 45 minutes in length. The Contractor is encouraged to keep the same on-site supervisor(s) from commencement to completion of work.

**c.** Each on-site supervisor shall have a minimum of 5 years (2,000 hours per year) of successful supervisory experience either constructing or maintaining airfield lighting systems. At least 3 of these years of experience shall have occurred in the last 5 years on projects of comparable size and complexity. On-site supervisor shall be certified as a "Qualified Person". The definition of a Qualified Person is defined in OSHA 1910.399 and NFPA 70E (Article 100 & 110.2(1)). The certification shall be signed by the Contractor's Electrical License qualifier. Equivalent experience and training may be considered by the Engineer. On-Site supervisor may substitute one year of education in qualified electrical curriculum for one-half year electrical experience for a maximum of 2,000 hours of the required 10,000 hours of experience. Records of on-site supervisor's experience demonstrating compliance with these requirements shall be submitted to the Engineer for verification and review prior to starting work. Experience records shall include contact information for references (name, title and phone number) from airports where the proposed on-site supervisor has completed the required electrical experience. Only on-site supervisors whose experience records have been confirmed by the Engineer shall supervise work. Work shall not start prior to approval of the on-site supervisor, unless under the direct supervision of the Contractor's Electrical License qualifier. Multiple certified on-site supervisors may be required to support multiple shifts or around the clock activities.

**d.** If at any time the Resident Project Representative (RPR) believes that work is being performed without the presence of an on-site supervisor, the RPR will request that the workman in question demonstrate that the on-site supervisor is present. If the on-site supervisor's presence cannot be verified within 45 minutes the RPR may direct the Contractor to suspend work until proper supervision is made available. The Contractor shall not be remunerated for costs associated with suspension of work under these conditions.

**e.** It is agreed and understood that, if requested in writing by the RPR, the Contractor shall replace any on-site supervisor with another meeting the required qualifications within seven (7) days of receipt of request.

**f.** Electricians are tasked with installing raceways and fittings; electrical distribution and supply equipment, pulling, splicing and terminating wire/cable; grounding, lightning protection, installing light bases, light fixtures; connecting signs; performing electrical testing or other work contained in the Contract Documents or as described in 1.5(A) above. Electricians performing work shall have a minimum of 4 years (2,000 hours per year) of successful experience either constructing or maintaining airfield lighting systems and shall be certified a "Qualified Person". A copy of each Electrician's experience shall be submitted to the RPR. Each electrician's experience submittal shall comply with the above requirements. An apprentice/helper/laborer may assist the electrician with the above tasks as directed by the on-site supervisor. An electrician may supervise a maximum of four apprentices/helpers/laborers.

**g.** Electrical apprentices, helpers, laborers, shall be qualified persons for the work they are performing and shall be under the supervision of the on-site supervisor or electrician.

**h.** Other helpers, laborers, equipment operators, concrete workers and other crafts persons (skilled or unskilled) shall be qualified persons for the work they are performing and shall be under the supervision of the on-site supervisor and are not subject to the four person limitation in 1.5.f.

**i.** Any person who does not have the required experience or who demonstrates a lack of knowledge appropriate for the task they are performing shall be dismissed from the project for remainder of the contract.

## SUMMARY OF WORK

### 100-2.1 GENERAL.

**a.** In support of this project this contract includes installation of airfield lighting, counterpoise, signage, power distribution, standby generator, lightning protection and other electrical work as shown in the Contract Documents. The above is not intended to be all inclusive but is provided as an aid to the Contractor. It is the intent of the Contract Documents that the Contractor is to furnish and install all materials and provide the necessary supervision, transportation, preparation, assembly, survey and installation of these materials, and for all labor, equipment, tools, incidentals, and appurtenances necessary to provide a fully functional and operational system as described by these Contract Documents. All items are new and unused unless specifically noted otherwise.

### 100-2.2 RECORD DOCUMENTS.

**a.** The Contractor shall maintain the Contract Documents, Shop Drawings and samples at the site, in good order and annotated daily to show all changes made during the construction process per Item SP-106. These shall be available to the RPR for examination.

### 100-2.3 ENGINEERING OBSERVATIONS.

**a.** Items noted by Engineer during construction and before final acceptance, which does not comply with the Contract, will be listed in accordance with the general conditions. These items will be sent to the Contractor for action. The Contractor shall have these items corrected.

**b.** The Contractor shall check items noted after acceptance during the warranty/guarantee period in the same manner as above.

### 100-2.4 EXISTING CONDITIONS.

**a.** Investigate site thoroughly and reroute all conduit/duct and wiring in area of new construction in order to maintain continuity of existing circuitry. Existing conduit/duct shown in the Contract Documents show approximate locations only. Contractor must verify and coordinate existing site conduit/ducts, wiring and piping. The bids shall include hand digging and all required rerouting in areas of existing conduit/ducts and/or pipes.

**b.** Check site and existing conditions thoroughly before bidding. Advise Engineer of discrepancies or questions noted. If any difference is discovered between the existing conditions and the Contract Documents, the Engineer shall be notified in writing immediately.

**c.** The Electrical Contractor shall investigate all existing systems within the construction limits and complete the performance verification prior to the beginning of any work, which could affect these existing systems.

**d.** Advise Engineer in writing of all deficiencies in existing system(s) prior to work. All systems will be assumed to be fully operational if written notification is not received by Engineer prior to work on system.

**e.** The work involved is in connection with existing systems/facilities, which must remain in operation while work is being performed. Work must be done in accordance with the schedule specified in the Contract Documents. Schedule all work to minimize the period when systems are inoperable. Request written permission and receive written approval from Engineer a minimum of 2 weeks in advance of any shutdown of existing systems. (FAA requires 45 days minimum notice.) Perform work required at other than standard working hours where outages cannot be accepted during regular working hours. Protect existing buildings and equipment during construction as required.

**f.** There may be piping, fixtures or other items, which must be removed or relocated in order to perform the alteration work. All conduit/duct, wiring, boxes, etc. that do not comply with the Contract Documents shall be removed or corrected to comply with the Contract Documents. All unused conduit/duct not removed shall be identified and a pull line shall be installed. Bid shall include all removal and relocation required for completion of the alterations and the new construction.

**g.** Special attention is directed to relocation of the existing power conduits and duct bank and communication systems. Cable counts, location, and function must be field verified before starting work.

**h.** The Contractor shall verify the areas, conditions, and features necessary to tie into existing construction. This verification shall be done prior to submittal of shop drawings, fabrication or erection, construction or installation. The Contractor shall be responsible for the accurate tie-in of the new work to existing facilities. This requirement assumes that existing items comply with current codes and standards.

**100-2.5 SYSTEMS WARRANTY.**

**a.** The work required under this division shall include a one (1) year warranty from the date of final acceptance unless required otherwise by the Contract Documents. This warranty shall be by the Contractor/Manufacturer to the Owner for any defective workmanship or material, which has been furnished under this contract. The Contractor/Manufacturer at no cost to the Owner shall perform replacement of defective workmanship or material for a period of one (1) year (or greater if noted in the Contract Documents) from the date of final acceptance of the system. This warranty shall not include light bulbs in service after one (1) month from date of substantial completion of the system. Explain the provisions of the warranty to the Owner during project close out.

**b.** In accordance with EB-67D, Light Sources Other Than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures; all LED light fixtures with the exception of obstruction lighting (AC 150/5345-43) shall be warranted by the manufacturer for a minimum of four (4) years after date of installation inclusive of all electronics. This warranty shall be by the Contractor/Manufacturer to the Owner for any defective workmanship or material, which has been furnished under this contract. The Contractor/Manufacturer at no cost to the Owner shall perform replacement of defective LED fixture workmanship or material for a period of four (4) years after date of installation.

**100-2.6 SUBSTANTIAL COMPLETION.**

**a.** All specified work shall be complete prior to final observation of work, and all forms and other information requested, including Operation and Maintenance Manuals, shall be submitted to the Engineer for approval one (1) week before the request for substantial completion of the work.

**100-2.7 CONTRACTORS RESPONSIBILITIES.**

**a.** Provide necessary layout, labor, material, equipment, tools, transportation, full time supervision and services required for the satisfactory and timely completion of the work in accordance with the Contract Documents.

**b.** Unload, store, protect and re-handle the materials required for this Contract until such time that material is in place. Provide protection of materials required of this contract after installation.

**c.** Provide all required transportation, erection, maintenance, dismantling and removal of temporary facilities and equipment required by this contract.

**d.** Provide all transportation, unloading, distribution, hoisting, rigging, material handling and scaffolding required installing the work of this contract.

**e.** Provide all engineering and layout required to perform the work from established base lines and benchmarks.

**f.** The Electrical Contractor shall coordinate the work of all the Electrical Contractors vendors and subcontractors to provide a fully functional and operating system.

**g.** Provide temporary electrical power and temporary water and sanitary sewer for this Contractor's field office, if required. Pay all utility company charges. Provide temporary power required for this Contractor's work.

**h.** Prior to start of work this Contractor is to inspect work performed by others on which this work is to be placed on or adjacent to, and report in writing to the Engineer, any condition found to be unacceptable. Failure to make said report shall constitute acceptance of the conditions found and any claims made thereafter due the unacceptable conditions will not be considered by the Engineer.

**i.** Provide all required coordination and supervision where work connects to or is affected by work of others and comply with all requirements affecting this work. Work required under other items of the Contract Documents to be performed by this Contractor shall be coordinated with the respective Contractor, and such work performed at no additional cost to the Owner including but not limited to electrical work in support of other trades as shown in the Contract Documents.

**j.** It is the responsibility of the Contractor to coordinate the exact required location of any electrical or electronic equipment, system, or cabinets to be installed or relocated. No existing equipment may be relocated without prior coordination and with approval of the Engineer.

**k.** Provide and pay for all permits, licenses, fees and inspections required for the performance of the work. The Contractor shall pay all sales, consumer, use and other taxes required in accordance with the law of the place of the project.

**l.** Provide all tests as required, per the Contract Documents and submit all test reports to the Engineer.

**m.** Provide all excavation, backfill, compaction, shoring and dewatering required for performance of the work.

**n.** Provide sleeves for all conduit/duct required as specified.

**o.** Protect all work of this Contract from damage and intrusion of dirt and foreign objects. Close off open ends of conduit/duct and sleeves on work, which is to be completed at a later date. Remove closure material prior to continuance of work.

**p.** Prior to Final Inspection, submit to the Engineer, all Record Drawings and Operation and Maintenance Manuals as specified. Instruct Owner's maintenance personnel in the operation and maintenance of the systems as required by the Contract Documents.

**q.** The above is not all inclusive of the work described by the Contract Documents, which form the basis for this Contract, but is presented for the Contractor's convenience.

**100-2.8 EXISTING UTILITIES.**

**a.** The Contractor is solely responsible for the location of all existing utilities within the project limits. Please refer to SP-104 for additional requirements.

**b.** The Contractor is solely responsible for the protection of all existing utilities within the project limits. All manholes, hand holes, light bases, conduits and ducts shall be kept tightly closed and sealed during all phases of construction. The items may be opened in support of the work but shall be resealed or closed or covered immediately upon completion of the specific task that required them to be opened.

**BASIC MATERIAL & METHODS**

**100-3.1 REQUIREMENTS OF BASIC MATERIALS AND METHODS.**

**a.** The work shall include the furnishing of the systems, equipment and material specified in this Division and as called for in the Contract Documents, to include supervision, operations, methods and labor for the fabrication, installation, start-up and tests for the complete electrical installation. Provide the necessary inter-trade/Contractor coordination for the installation to be in a neat and work person like manner.

**b.** Drawings for the work are diagrammatic, intended to convey the Scope of the Work and to indicate the general arrangement and locations of the work. The drawings shall not be scaled for exact sizes or locations. Because of the scale of the drawings, certain basic items such as: conduit/duct fittings, access panels, sleeves, pull and junction boxes may not be shown. Where such items are required by Code or by other items or where they are required for proper installation of the work, such items shall be included. Coordinate final equipment locations with governing architectural, civil and structural drawings as applicable. Layout equipment before installation so that all trades may install equipment in the space available.

**c.** Equipment Specifications may not deal with minute items such as components, parts, controls and devices, which may be required to produce the equipment performance specified, or as required to meet the equipment warranties. Where such items are required, the Contractor/Supplier of the equipment shall include them, whether specifically called for or not.

**d.** Conduit/duct routed through the building/structure that interferes with other equipment and construction shall not constitute a reason for an extra charge. Equipment, conduit/duct, and fixtures shall fit into available spaces in the building/structure; do not introduce these into the building/structure at such times or in such manner as to cause damage to the structure. Equipment that requires servicing shall be readily accessible.

**e.** Locate all openings required for work performed under this item. Provide sleeves, guards or other acceptable methods to allow passage of items installed under this item.

**f.** Keep cutting and patching to a minimum. Insofar as possible, determine in advance the proper chase size and openings necessary for the work.

**g.** Where cutting and patching are required due to an error of the Contractor, or where the Contractor has not given enough advance notice of the need for holes, recesses, and chases, patching shall be performed by those trades skilled in the use of the materials involved and shall be done at the Contractor's expense.

**h.** Any cutting of work in place shall be patched and decorated by such mechanics and in such a manner that the quality of workmanship and finish shall be compatible with that of adjacent construction.

**i.** The location of electrical work is indicated on the drawings. The Engineer may adjust exact locations of new work as work progresses. Before any item is installed, the indicated location may be changed by twenty-five (25) feet in any direction without additional cost.

**j.** All penetrations through roof, wall or floor shall maintain structure fire rating and environmental barriers. Any roof penetrations shall be made by a state licensed roofing Contractor and shall maintain any in place roofing warranty.

**k.** Surface mounted fixtures, outlets, cabinets, conduit/duct, panels, etc., shall have finish or shall be painted as directed by Engineer. Paint shall be in accordance with other applicable items of the Contract Documents.

**l.** All materials utilized shall be suitable for the environment encountered. No combination of materials shall be used that forms an electrolytic coupling of such nature that in the presence of moisture corrosion is accelerated.

**m.** In general, all relays, contactors, panelboards, dry type transformers, disconnect switches, and circuit breakers are to be supplied and manufactured by the same manufacturer and shall be submitted and accepted equivalent to that specified.

**n.** Where the requirements of another division, item, or part of these Contract Documents exceed the requirements of this division, those requirements shall govern.

**o.** Make electrical connections to regulators, transformers, instruments, mechanical equipment, controls and at other locations as required with approximately 3 feet (12" minimum) of liquid tight flexible metal conduit. Grounding type liquid tight flexible metallic conduit connectors shall be used. Determine the requirements from the Contract Documents and the accepted manufacturer drawings.

**p.** Provide inserts, hangers, supports, braces, and anchor bolts as necessary for all work called for under the Contract Documents.

**q.** Provide equipment grounding conductor in all conduit/ducts, for all circuits, except series airfield lighting.

**r.** All galvanized materials shall be hot-dip galvanized after fabrication, conforming to ASTM A-386 and/or A-153, unless noted otherwise (UNO).

**s.** Unless noted otherwise, all panelboards, junction boxes, wire ways, etc., shall be spaced off the concrete structure by using a Unistrut P-1060 series square washer or accepted equivalent between the mounting surface and the equipment at each mounting point. Equipment as listed above, mounted on Unistrut or accepted equivalent shall have Unistrut P-1060 series square washer, Unistrut P-28XX flat plate fitting or accepted equivalent installed between the Unistrut channel or accepted equivalent and the equipment at each mounting point.

**t.** All bolted connections and equipment mountings shall utilize two flat washers, lock washer and hex head bolting hardware, unless noted otherwise.

**u.** Unless noted otherwise, all wire sizes are based on a 90 Deg. C., THWN-2, 600-volt insulation, copper conductors, not more than three single insulated conductors, in raceway, in free air. The conduit/duct sizes are based on the use of THWN-2, 600-volt insulated conductors. The Contractor shall make the necessary increase in conduit/duct sizes for other types of wire insulation. In no case shall the conduit/duct size be reduced. The minimum power circuit wire size shall be #12 AWG.

**v.** Conductor sizes may have been adjusted due to voltage drop or other engineering considerations. Equipment provided by the Contractor shall be capable of accepting the quantity and sizes of conductors shown in the Contract Documents. All conductor pigtails, cable step-down adapters, cable step-up adapters, terminal blocks and splicing materials necessary to complete the cable termination/splice shall be considered incidental to the respective pay items provided.

**w.** All equipment enclosures, junction boxes, wire ways, pull boxes, etc. utilized in damp, wet or exterior locations shall be NEMA 4X stainless steel. All mounting channel, hardware, nuts, bolts, lock washers, etc. utilized in damp, wet or exterior locations shall be stainless steel.

**x.** All electrical conductors, windings, bus bars, etc. shall be high conductivity (98% conductivity) copper.

**y.** This Contractor shall furnish and install all required overcurrent protection required by the NEC and the Contract Documents. The overcurrent protection shall be sized according to the equipment nameplate data.

**z.** Powder-actuated fasteners will not be allowed without express written approval of the Engineer. No fasteners shall pierce the structure until accepted by the Engineer.

**aa.** Use Ideal NOALOX antioxidant compound or accepted equivalent on all aluminum to aluminum mechanical or electrical connections. Use Thomas and Betts KOPR-SHIELD or accepted equivalent on all rigid galvanized steel conduit connections and all copper grounding connections using mechanical lugs. Use an approved anti-seize compound on all bolted connections.

### 100-3.2 ELECTRICAL REFERENCE SYMBOLS.

**a.** Symbols used in the Contract Documents are defined in the Electrical Legend. Not necessarily will all symbols defined be applicable to the project.

### 100-3.3 ACTIVE SERVICES.

**a.** Existing active services, water, gas, sewer, electric, communication, jet fuel, etc. when encountered, shall be protected against damage. Do not prevent or disturb operation of active services, which are to remain. If active services are encountered which require relocation, make request to Authorities Having Jurisdiction (AHJ) for determination of procedures. Where existing services are to be abandoned, they shall be terminated in conformance with requirements of the AHJ, Utility or Municipality having jurisdiction.

**100-3.4 CODES AND STANDARDS.**

**a.** Install in accordance with latest edition of the National Electrical Code and the regulations of governing Federal, State, County, local and other applicable codes, including the Utility Companies. Where a conflict in code requirements occurs the most stringent requirement shall govern. The Contractor shall be responsible to obtain and pay for all required licenses, fees and inspections including meter installation fee. The cost for such shall be included in the bid price.

**b.** The work shall meet the requirements and recommendations of applicable portions of the latest editions of these laws, codes and standards:

**1.** OSHA 1910 & 1926

**2.** NFPA 70, National Electrical Code

**3.** NFPA 70E, Standard for Electrical Safety in the Workplace

**4.** NFPA 101, Life Safety Code

**5.** NFPA 409, Standard on Aircraft Hangars

**6.** NFPA 780, Standard for the Installation of Lightning Protection Systems (UL 96, UL 96A)

**7.** FAA Advisory Circulars, Engineering Briefs and Orders

**8.** Applicable local building code

**9.** Florida Building Code Project State Specific

**10.** ANSI C2, National Electrical Safety Code

**11.** NEMA Standards (NEMA)

**12.** Underwriter's Laboratories (UL)

**13.** Institute of Electrical and Electronics Engineers (IEEE)

**14.** FDOT - Standard Specifications for Road and Bridge Construction Project State Specific

**15.** FDOT – Design Standards Index Project State Specific

**16.** AWS D1.1, Structural Welding Code – Steel

**17.** Merriam-Webster Dictionary

The above is not all inclusive of applicable codes and standards but is presented for the Contractors convenience.

The advisory circulars are available online at:

https://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.list?display=current&q=

**100-3.5 LISTED AND LABELED.**

**a.** All materials shall be new and free of defects and shall be U.L. listed, bear the U.L. label or be labeled or listed with an accepted, nationally recognized Electrical Testing Agency. Where no labeling or listing service is available for certain types of equipment, test data shall be submitted to prove to the Engineer that equipment meets or exceeds available standards. All U.L. listed material shall be used only for the intended purpose.

**100-3.6 UTILITY COMPANY FEES, CHARGES, AND COSTS.**

**a.** It is the Contractor's responsibility to contact the applicable Utility Company(s) to determine if any fees, charges or costs will be due the Utility Company(s) as required by the Utility Company(s) for temporary power, installations, hook-ups, etc. This fee, charge or cost shall be included in this Contractor's price.

**100-3.7 TESTING – QUALITY CONTROL.**

**a.** Systems shall be tested by the Contractor, in the presence of the RPR, and placed in proper working order prior to demonstrating systems to the Owner. Refer to the requirements in each item for other applicable standards.

**b.** Provide all tests as required, per the Contract Documents and submit all test reports to the RPR. Costs of all testing shall be borne by the Contractor and shall be considered incidental to the respective pay item of the tested item. The Contractor shall perform all Quality Control in accordance with the Contract Documents and the Contractor’s Quality Control Plan General Conditions. The Owner will perform Quality Assurance/Acceptance.

**c.** After work is completed a load balance test shall be made to demonstrate that with full lighting and mechanical load the balance between phases is within 5%. Unbalance beyond this limit shall be corrected.

**d.** Perform such tests as required by AHJ over the site.

**e.** Testing methods shall be acceptable to the Engineer and shall be submitted to the RPR for review, a minimum of thirty (30) days prior to the scheduled test.

**100-3.8 LAMINATED PHENOLIC PLASTIC NAMEPLATES.**

**a.** Contractor shall provide nameplates for wiring systems and equipment as called for herein. All nameplates shall have beveled edges and one-half inch (1/2") lettering. If equipment is smaller than ten inches by six inches (10"x 6"), one-quarter inch (1/4") lettering may be used. Smaller lettering may be used with permission of the RPR.

**b.** Nameplates shall be laminated phenolic plastic, black front and back with white core, with lettering etched through the outer covering. White engraved letters on black background.

Emergency systems shall use red front and back with white core for nameplates. Attach nameplates with stainless steel pop rivets, sealed with clear silicon caulk. Adhesive may be used only on panelboard interiors. Where conditions do not warrant piercing the enclosure "LOCTITE" brand adhesive or accepted equivalent may be used with permission of the RPR.

**c.** Coordinate nameplates with Contract Documents and submit 1 to 1 scale detail of all nameplates to RPR for review.

**d.** All electrical equipment, enclosures, pull boxes and all similar items in the sole opinion of the RPR shall be equipped with nameplates. Examples are all constant current regulators, motors, pushbutton stations, hand holes, pull boxes, junction boxes, manholes, control panels, system cabinets, terminal cabinets, time switches, disconnect switches, panelboards, circuit breakers, contactors, relays, high voltage boxes and cabinets. Special electrical systems shall be identified at junction and pull boxes, terminal cabinets and equipment racks.

**e.** Nameplates shall adequately describe the function of the particular equipment involved. Where nameplates are detailed in the Contract Documents, inscription and size of letters shall be as shown. Nameplates for panelboards and switchboards shall include the panel designation, panel name, source(s) of power and voltage and phase of the supply. For example, "Equip YY, Panel A, fed from Panel XYZ, 480/277V, 3-phase, 4-wire." The unique name of a particular piece of equipment shall be used consistently on all nameplates referencing that particular piece of equipment. Equipment name/numbers utilized shall be consistent throughout the entire system. When equipment has multiple sources of power, all sources of power shall appear on the nameplate. Power source descriptions shall contain as a minimum the information listed above. Nameplates shall include as a minimum the following.

**1.** Equipment Number

**2.** Equipment Name

**3.** Power Source(s)

**4.** Voltage Level and number of phases (for each power source)

**f.** Panelboard and distribution panels shall have each breaker position identified with phenolic labels.

**g.** All major pull and junction boxes in service areas, tunnels, above accessible ceilings and in accessible chases shall have nameplates identifying the feeder or system. This shall include the access cover on lighting pole bases.

**h.** Systems with conductors exceeding 100 volts to ground shall have voltage identification nameplates with one-half inch (1/2") high letters on all panels, switches, pull boxes and junction boxes.

**100-3.9 CONCRETE WORK.**

**a.** Concrete bases and pads for all equipment furnished by Contractor shall be the responsibility of Contractor unless noted otherwise.

**b.** Furnish and install reinforced concrete pads for transformers, switchgear, and motor control centers, etc. of size as shown in the Contract Documents. Chamfer the top edges 1". Trowel all surfaces smooth, provide broom finish where noted. Reinforce the pads as shown in the Contract Documents.

**c.** Concrete equipment pads shall be installed by tradespersons skilled in concrete work. Equipment pads shall be level within one-eighth inch (1/8”) in 10 feet (10’). Equipment pads not meeting the previous requirements shall be removed and replaced at the Contractor’s expense.

**d.** The Contractor shall furnish all equipment anchor bolts and shall be responsible for their proper installation and accurate location.

**100-3.10 EXCAVATING, TRENCHING AND BACKFILLING.**

**a.** This Contractor shall do excavating necessary for light bases, underground wiring, conduit, duct banks and other underground work and shall backfill trenches and excavations after work has been inspected. Care shall be taken in excavating that walls and footings and adjacent load bearing soils are not disturbed in any way, except where lines must cross under a footing, pad or other structural item. Where a line must pass under a footing, pad or other structural item the crossing shall be made by the smallest possible trench to accommodate the conduit/duct. Excavations shall be kept free from water. No greater length of trench shall be left open in advance of conduit/duct installation than that, which is authorized or directed by the RPR.

**b.** Roots shall be removed to a level of eighteen (18") below finished grades and deeper as required for conduit/duct runs, manholes and light pole bases. No roots shall be allowed to remain under the work.

**c.** Backfill about the work shall be placed, where practical, as the work of construction progresses. Backfilling on or against concrete work shall be done only when directed. Backfilling of conduit/duct lines shall progress as rapidly as the testing and acceptance of the finished items of the work will permit and shall be carried to a crown approximately six inches (6") above the existing grades. In backfilling around conduit/duct lines, selected material shall be compacted firmly around the conduit/duct. Fill and backfill shall be clean and free from vegetable matter and refuse.

**d.** All loose materials shall be removed from all excavations for electrical items. The bottom of the excavation shall be compacted to the following criteria:

| SOIL TYPE | DESIGN AIRCRAFT GROSS WEIGHT | TEST STANDARD | UNDER PAVEMENT | IN TURF |
|---|---|---|---|---|
| <30% RETAINED ON ¾" SIEVE | >60,000 LBS | ASTM D1557 | 100% | 95% |
| <30% RETAINED ON ¾" SIEVE | ≤60,000 LBS | ASTM D698 | 100% | 98% |
| >30% RETAINED ON ¾" SIEVE | >60,000 LBS | AASHTO T-180 | 100% | 95% |
| >30% RETAINED ON ¾" SIEVE | ≤60,000 LBS | AASHTO T-99 | 100% | 95% |

Backfill shall comply with the same compaction requirements.

**e.** All trenches and other excavation left open by necessity shall be barricaded and guarded as required by OSHA or applicable codes and regulations.

**100-3.12 WELDING.**

**a.** All welding and weld procedures shall be in accordance with AWS D1.1, Latest Edition. Qualifications of welders and welding operators shall be in accordance with AWS D1.1, Latest Edition. The welder qualification test shall be performed on a 1" A-36 Test Coupon in the 3G and 4G positions. The welder qualification shall be current within 12 months of the work being performed. Weld inspections shall be per the criteria set forth in AWS D1.1 for visual weld inspection.

**100-3.13 ELECTRONIC DRAWING FILES.**

**a.** Electronic versions of the Contract Documents may be available for the Contractors use. Please be advised that Engineer cannot be held responsible for third party use of this information, and furthermore, that this information is supplied as a professional courtesy. This applies to all electronic data files transmitted on behalf of Engineer to third parties.

**b.** The files are without warranty as to performance, accuracy, or freedom from error, or as to any results generated through their use at any time. Written dimensions in file, details, specifications take precedence.

**c.** The files being transmitted are the intellectual property of Engineer and as such are protected by the copyright laws of the United States. The files are being transmitted for the single use on this project only.

**d.** The electronic files provided are non-sealed and unofficial versions of the Contract Documents that have been created by the Engineer. The electronic files are provided only for the convenience of explicitly authorized users.

**e.** The hard copy Conformed Documents that have been provided are the only official documents that may be relied upon for accurate presentation. The electronic files provided will be at the authorized user's risk and does not pose any risk or liability to the Owner or Engineer.

**f.** Engineer does not guarantee or warrant the authenticity of electronic files. The authorized users agree and recognize that the electronic files may unintentionally become corrupted or modified without the authorization of the Engineer.

**g.** Written dimensions will govern over scaled values.

**h.** AutoCAD files were developed using base files provided by others.

**i.** Variations in printer drivers may cause the electronic file presentation to vary considerably.

## DESIGNATION OF MATERIALS

### 100-4.1 DESIGNATION OF MATERIALS.

**a.** Where equipment or materials are specified using the name and catalog number of one manufacturer, that equipment or material specified shall set the quality and functionality of the item. Equivalents accepted by the Engineer will be acceptable.

**b.** Where equipment or materials are specified using the name and catalog number of more than one manufacturer, that equipment or material shall be one of those specified. No alternative will be acceptable.

**c.** Where no brand name is specified, the source and quality shall be subject to the Engineer's review and acceptance.

**d.** When a product is specified to be in accordance with a trade association or government standard, at the request of Engineer, Contractor shall furnish a certificate that the product complies with the referenced standard. Upon request of the Engineer, the Contractor shall submit supporting test data to substantiate compliance.

**e.** The Engineer shall be the sole judge of whether the proposed "equivalent" is suitable for use in the work.

**f.** The Engineer reserves the right to reject any and all equipment, materials or procedures, which, in the Engineer's opinion, does not meet the system design and the standards and codes, shown in the Contract Documents.

**g.** Each Bidder represents their bid is based upon the materials and equipment described in the Contract Documents.

**PROTECTION OF MATERIALS, EQUIPMENT AND WORK**

**100-5.1 PROTECTION OF MATERIALS, EQUIPMENT AND WORK.**

**a.** Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials, even though accepted before storage, shall be subject to reinspection prior to their use in the work. The Contractor shall coordinate the storage of all materials with the RPR.

**b.** The Contractor shall protect electrical raceway, cable, lighting fixtures, associated support systems, and all other electrical items against damage from movement of equipment and material, welding, flame cutting, and other construction damage. Raceways and supporting structures for raceway and lighting fixtures shall not be used as access scaffolding at any time. Whenever welding or flame cutting operations occur above or near raceways, cables lighting fixtures, etc not shielded from such operations by concrete floor or other protective covers, the Contractor shall protect the items from damage by means of fireproof boards or blankets. Damaged materials shall be repaired or replaced, by and at the Contractor's expense, subject to the RPR's direction and acceptance.

**c.** Surfaces of most equipment, such as panels, switchgear, transformers, constant current regulators (CCR) and circuit breakers, are finished at the factory. Great care shall be exercised to prevent damage to this original finish during installation of the equipment and during construction work.

**d.** If the factory finish is damaged during construction, the entire surface of the damaged component shall be refinished by and at the expense of the Contractor.

**e.** The refinished surface shall be equivalent in every respect to the original surface, including color, texture and smoothness. Refinishing paint, if furnished with the equipment, may be used; otherwise, the paint shall be obtained from the equipment manufacturer.

**f.** All cut edges of galvanized materials and marred or scratched galvanized surfaces shall be repaired using LPS-1G cold galvanizing compound or accepted equivalent.

**GENERAL CONSTRUCTION REQUIREMENTS**

**100-6.1 GENERAL CONSTRUCTION REQUIREMENTS.**

**a.** Provide the bracing, shoring, rails, guards, and covers necessary to prevent damage or injury. Do not leave energized electrical items exposed or unprotected. Protect personnel from exposure to contact with electricity. Deliver equipment and materials to the job site in their original, unopened, labeled containers. Store ferrous materials to prevent rusting. Store finished materials and equipment to prevent staining and discoloring.

**b.** Maintain separation between stainless steel items and carbon steel items to prevent contamination of stainless-steel item and subsequent rust stains on stainless steel item.

**c.** All sheeting, shoring, dewatering and cleaning necessary to keep trenches and their grades in proper condition for the work to be continued, including the removal of water by mechanical means, shall be the Contractor's responsibility.

## METHOD OF MEASUREMENT

### 100-7.1 METHOD OF MEASUREMENT.

**a.** The items described in Item SP-100 are incidental to other pay items and shall not be measured for payment.

## BASIS OF PAYMENT

### 100-8.1 BASIS OF PAYMENT

**a.** No direct payment shall be made for the work described in Item SP-100. The work described in Item SP-100 is incidental to other items and shall be paid for in the respective bid item of which it is a component part.

## END OF ITEM SP-100

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## ITEM SP-105 ALTERATIONS, REMOVAL AND DEMOLITION

### GENERAL

### 105-1.1 GENERAL.

**a.** This item shall apply to all electrical work contained within the Contract Documents. Where the contract general conditions, special provisions or other parts of the Contract Documents also apply, the stricter of the documents shall govern.

**b.** Alterations shall mean any change or rearrangement in the component parts, including structural, mechanical, and electrical systems, or internal or external arrangements of an existing item, component, system or structure.

**c.** Removal shall mean the dismantling and disposal of existing materials, components, equipment, and utilities. Removed items shall be handled, prepared for storage, transported to storage areas, or disposed of as specified.

**d.** Demolition shall mean abandonment, removal and disposal, or salvage and delivery to the Owner as required by the Contract Documents.

**e.** The installation and/or removal of power and lighting equipment may be critical to airport operations; therefore, the Contractor shall follow work schedule established in the Contract Documents or as directed by the Engineer.

**f.** Temporary power and lighting shall be accomplished in accordance with the Contract Documents.

### 105-1.2 CONDITION OF EXISTING FACILITIES.

**a.** The Contractor shall verify the areas, conditions, and features necessary to tie into existing construction. This verification shall be done prior to submittal of shop drawings, fabrication or erection, construction or installation. The Contractor shall be responsible for the accurate tie-in of the new work to existing facilities.

**b.** The Contractor shall protect all existing utilities from damage resulting from alteration, removal and demolition activities.

**c. Any hazardous waste issue shall be immediately reported to the Engineer.**

**d.** Whenever the scope of work requires, connection to an existing circuit, or should the scope of work involve working adjacent or near to an existing circuit and the work could have an adverse impact on the existing circuit, the circuit's insulation resistance shall be tested, in the presence of the Engineer. The test shall be performed in accordance with Item SP-111 and prior to any activity affecting or impacting the respective circuit. The Contractor shall record the results on forms included in Item SP-111. When the work affecting the circuit is complete (or at end of shift prior to energization), the circuit's insulation resistance shall be checked again, in

the presence of the Engineer. The Contractor shall record the results on forms included in Item SP-111. The second reading shall be equal to or greater than the first reading or the Contractor shall make the necessary repairs to the circuit to bring the second reading above the first reading. All repair costs including a complete replacement of the L-823 connectors, L-830 transformers and L-824 cable, if necessary, shall be borne by the Contractor. The Contractor shall measure and record the insulation resistance of **ALL** airfield lighting circuits prior to starting any work. All test results shall be submitted in the Operation and Maintenance (O&M) Manual.

**e.** Should the Contractor fail to perform the insulation resistance tests prior to starting work, the Contractor shall be responsible to bring the impacted circuits to a minimum 50 megohm earth resistance value or higher value in conformance with any previous airport test records.

**105-1.3 OCCUPANCY AND USE OF EXISTING FACILITIES.**

**a.** The Owner will occupy and use the facilities within the areas of work during the entire construction period. The Contractor shall be required to plan and coordinate the Contractor's activities in order to provide all necessary controls for the abatement of dust, noise, and inconvenience to Owner personnel during all phases of the work.

**105-1.4 VACATING OCCUPIED AREAS.**

**a.** No areas will be vacated by the Owner.

**105-1.5 SAFETY REQUIREMENTS.**

**a.** The Contractor shall conduct all operations in a manner that will ensure the safety of persons and property in accordance with the OSHA requirements of CFR 29 Part 1926/1910.

**b.** The Contractor shall comply with the Airport Maintenance Department's LOCK OUT/TAG OUT (LOTO) procedure and NFPA 70E.

**105-1.6 CLASSIFICATION OF REMOVED ITEMS.**

**a.** Existing materials and equipment indicated to be removed will be classified as "salvageable" and shall remain the property of the Owner or will be classified as "demolition or debris" and shall be legally disposed.

**b. Salvageable Items:**

**1.** Salvaged materials and equipment shall be reused in the work only in construction of temporary electrical facilities, unless noted otherwise.

**2.** Properly box, protect and ready for transport salvageable items. Retained salvaged items shall be stored on Owner property.

**3.** Salvaged materials and equipment to be retained by the Owner but not reused in the work shall be turned over to the Owner at a site at the facility to be determined by the Owner.

**4.** All electrical materials designated to be removed and reinstalled by the Contractor shall be stored indoors in a conditioned space. The indoor conditioned space shall be provided by the Contractor and considered incidental to the pay items provided. As each item designated for removal and reinstallation is removed the Contractor and Engineer shall immediately inspect the item for appropriateness for reinstallation. Any damage not reported in writing to the Engineer within two hours of removal shall become the Contractor's responsibility for replacement/repair of the material as directed by the Engineer.

**c. Demolition or Debris:**

**1.** Items classified as demolition or debris shall be legally disposed of off the Owner's property. The cost of such disposal shall be included in the bid price.

**105-1.7 TEMPORARY PROTECTION.**

**a.** Contractor shall protect persons and property throughout the progress of the work in accordance with the Contract Documents.

**105-1.8 DEMOLITION TASK PLAN AND SCHEDULE.**

**a.** The Contractor shall submit to the Engineer a Demolition Task Plan and Schedule for all existing utility relocation(s) and demolition work. The task plan shall be submitted within 30 days of notice to proceed but no later than 30 days prior to the start of the relocation/demolition work.

**b.** The task plan and schedule shall detail the phasing of the utility relocation(s) and demolition activities with the balance of the project phasing plan. The task plan and schedule shall detail the Contractor's plan for protection of the existing utilities.

**c.** The task plan and schedule shall demonstrate preliminary coordination has taken place with the FAA, Airport, communications and applicable utilities and demonstrates compliance with the Contract Documents.

**d.** No work shall be initiated until the task plan and schedule has been submitted to the Engineer and accepted by the utilities. No demolition, alteration or relocation work shall be started until the permanent work replacing the demolition, alteration or relocation is complete, in place, accepted and ready for operation; or until other temporary means have been approved and accepted by the Engineer.

**EXECUTION**

**105-2.1 DISCONNECTING UTILITIES.**

**a.** Prior to the start of work, the Contractor shall coordinate with the Owner and effected utility companies to have each utility placed in a safe work condition.

**b.** Each utility effected shall be locked out and tagged by the Contractor. Proper safety grounds or equivalent shall be placed for personnel protection.

**105-2.2 TEMPORARY UTILITY SERVICES.**

**a.** Contractor shall install temporary utility services in satisfactory operating condition before disconnecting existing utilities. Such temporary services shall be maintained during the period of construction and removed only after new permanent services have been tested and are in operation. Please refer to Item SP-104.

**105-2.3 REMOVAL WORK.**

**a.** The Contractor shall not disturb the existing construction beyond that indicated or necessary for installation of new work. Temporary shoring and bracing for support of building components to prevent settlement or other movement shall be as required to protect the work and existing facilities.

**b.** The Contractor shall provide protective measures to control accumulation and migration of dust and dirt in all areas of work, particularly those adjacent to occupied areas. The Contractor shall remove dust, dirt, and debris from the areas of work daily.

**105-2.4 SALVAGEABLE MATERIALS AND EQUIPMENT.**

**a.** The Contractor shall remove all salvageable materials and equipment in a manner that will cause the least possible damage thereto. Salvageable items, which are to be retained by the Owner, shall be carefully handled, stored, and protected.

**b.** The Contractor shall provide identification tags on all salvageable items boxed or placed in containers, indicating the type, size, and quantity of materials.

**105-2.5 BUILDINGS AND STRUCTURES.**

**a.** The Contractor shall perform removal operations in existing areas/buildings/structures as indicated and as otherwise required to complete the work.

**b.** Existing concrete shall be demolished, removed, and disposed. Square, straight edges shall be provided where existing concrete adjoins new work and at other locations where indicated. Existing steel reinforcement shall be protected where indicated; otherwise, it shall be cut off flush with face of concrete.

**c.** The Contractor shall dismantle structural steel components at field connections and in a manner that will prevent bending or damage.

**d.** The use of flame-cutting torches will be permitted only when other methods of dismantling are not practical, and when approved in writing by the Engineer.

**105-2.6 ELECTRICAL EQUIPMENT AND FIXTURES.**

**a.** All removed or demolished items not identified for reuse in the work or to be turned over to the Owner, unless noted otherwise, shall be properly and legally disposed of off the airport site.

### 105-2.7 DEMOLITION OPERATIONS.

**a.** Demolition operations shall be conducted to ensure the safe passage of persons to and from facilities occupied and used by the Owner.

**b.** The sequence of operations shall be such that maximum protection from inclement weather will be provided for materials and equipment in partially dismantled state.

### 105-2.8 MAINTAINING TRAFFIC.

**a.** Demolition operations and removal of debris to disposal areas shall be conducted to ensure minimum interference with roads, streets, walks, and other facilities occupied and used by the Owner.

**b.** Streets, walks, runways, taxiways and other facilities occupied and used by the Owner shall not be closed or obstructed without written permission.

### 105-2.9 UTILITY ADJUSTMENTS.

**a.** The Contractor shall adjust utility elevations and or locations as described in the Contract Documents.

## DISPOSAL OF REMOVED/DEMOLISHED MATERIALS

### 105-3.1 GENERAL.

**a.** The Contractor shall dispose of debris, rubbish, scrap, and other non-salvageable materials resulting from demolition/removal operations. Removed/demolished materials shall not be stored or disposed of on the project site.

**b.** Removed/demolished materials shall be properly and legally disposed of off airport property.

**c.** Removed/demolished debris shall be transported from Owner property and legally disposed at no additional cost to the Owner. The Contractor shall pay permits and fees for disposal.

### 105-3.2 RACEWAY DEMOLITION.

**a.** Pull wire out of existing raceways. Underground conduit/duct may be abandoned in place when not in an area of excavation. When abandoned in place install waterproof caps/plugs and concrete end of duct markers.

**b.** Raceways that interfere with new work shall be completely removed.

**c.** Install 200-pound test pull rope in all conduits/ducts to remain in place. Conduit/duct banks may be abandoned in place if they are not within 24” of any new subgrade material.

**d.** Dispose of raceway as debris.

### 105-3.3 MANHOLE/HAND HOLE DEMOLITION.

**a.** Manholes, hand holes, pull boxes, etc. shall be removed and disposed of as demolition debris.

**b.** Demolished manholes, hand holes, pull boxes, etc. below the new full strength pavement shall be completely removed.

**c.** Demolished manholes, hand holes, pull boxes, etc. below shoulder pavement or in turfed areas shall be cut down to a depth of 48” min. below finished grade, filled and compacted in accordance with the Contract Documents.

### 105-3.5 GENERAL – CUTTING AND PATCHING.

**a.** Cutting, patching, repairing, and other alteration work shall be done by mechanics skilled in the particular trade or work required.

**b.** Salvaged items for reuse shall be as accepted by the Engineer.

**c.** Where required to patch or extend existing construction, or both, such alteration work shall match existing exposed surface materials in finish, color, texture, and pattern.

## METHOD OF MEASUREMENT

### 105-4.1 METHOD OF MEASUREMENT.

**a.** All Electrical Demolition covered by this item will be paid for at the contract lump sum price, as set forth below, for demolition, alteration and removal complete and in accordance with the Contract Documents.

## BASIS OF PAYMENT

### 105-5.1 BASIS OF PAYMENT.

**a.** Payment will be made at the contract lump sum price for the required demolition, alteration and removal. This price shall be full compensation for furnishing all material, equipment and for all preparation, removal of the demolished materials and equipment and for all materials, labor, equipment, tools, services and incidentals necessary or required for the electrical demolition as shown in the Contract Documents. It is the intent of the demolition pay item that all equipment, devices, raceway, pull boxes, manholes, fixtures, wiring, materials, systems, appurtenances, etc., which are no longer required as a result of the project be removed. All waste materials shall be removed from the airport property and legally disposed of by the Contractor. This item includes all backfill, P-610, sod and other materials and

appurtenances not specifically identified, but necessary to complete these items in accordance with the Contract Documents.

Payment will be made under:

**Item SP-105-1 Electrical Demolition - Lump Sum (LS)**

**END OF ITEM SP-105**

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# ITEM SP-106 SUBMITTALS, RECORD DOCUMENTS AND MAINTENANCE MANUALS

## PART 1 – DESCRIPTION

### 106-1.1 GENERAL:

**a.** The items described in this item are applicable to all electrical work. Electrical work is defined as any work described, included, depicted or contained within the Construction Specifications Institute (CSI) Division 16, 26, 27, 28, 33 or 34 specifications, L-XXX specification series, E- series drawings and all other work within the Contract Documents dealing with the distribution of electrical power/light, electrical/electronic/light monitoring, communication and control.

**b.** Only Third Party Certified manufacturers, listed in AC 150/5345-53, Appendix 3 Addendum (as required) and meeting the BUY AMERICAN preference requirements can provide equipment and materials specified in the Contract Documents. Documentation certifying compliance with the BUY AMERICAN preference rules for AIP (in accordance with Title 49, United State Code [USC], 1990; later designated as 49 USC §50101) shall be included with each equipment and material submittal.

**c.** The requirements for submittals, record drawings and Operation and Maintenance (O&M) Manuals supplement the requirements and are in addition to the requirements of the general conditions, special provisions or other parts of the Contract Documents. Where the contract general conditions, special provisions or other parts of the Contract Documents also apply, the stricter of the documents shall govern.

### 106-1.2 SCOPE:

**a.** This item includes the requirements for submittals, record documents and operation and maintenance (O&M) manuals. All submittals and O & M Manuals shall be submitted in book form as described by this item.

## PART 2 – REQUIREMENTS FOR SUBMITTALS

### 106-2.1 DATA, SHOP DRAWINGS AND SAMPLES:

**a.** Shop drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are prepared by the Contractor or any subcontractor, manufacturer, supplier or distributor, and which illustrate some portion of the work.

**b.** Submittal data for electrical materials and equipment shall consist of shop drawings and/or catalog cuts showing technical data as necessary to evaluate the material or equipment, to include dimensions, wiring diagrams, performance curves, ratings, control sequence and other descriptive data necessary to describe fully the item proposed and its operating characteristics.

**c.** Prior to the installation of any material or equipment and **within 30 days of notice to proceed**, the Contractor shall provide to the Engineer all submittals as required by the Contract

Documents. The submittals shall be complete and made in **ONE** submission in the format required by this item. Partial submission will only be considered under special circumstances.

**d.** The Contractor shall perform no portion of the work, nor purchase any materials, requiring submission until the Engineer has accepted the relevant submittal/shop drawing/sample. Should the Contractor commence any work or install any materials prior to the receipt of an accepted submittal/shop drawing/sample the Contractor is deemed to be proceeding at the Contractor's own risk.

**e.** Samples are physical examples furnished by the Contractor to illustrate materials, equipment or workmanship, and to establish standards by which the work will be judged. Each sample shall be accompanied by the manufacturer's instructions regarding installation, operation and maintenance and shall be identified by item number, and specification.

**f.** By approving and submitting Shop Drawings and Samples, the Contractor thereby represents that the Contractor has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data and that the Contractor, has checked and coordinated each Shop Drawing and Sample with the requirements of the work of the Contract Documents.

**g.** Unless otherwise stated in the Contract Documents the Engineer will review Data, Shop Drawings and Samples within thirty (30) days after receipt, but only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. The Engineer's review of a separate item shall not indicate approval of an assembly in which the item functions.

**h.** The Engineer reserves the right to reject any and all equipment, materials and procedures, which, in the Engineer's opinion, does not comply with the system design and the standards and codes specified herein.

**i.** The Engineer shall be the sole judge of whether the proposed "acceptable equivalent" is suitable for use in the work.

**j.** The Contractor shall make any corrections required by the Engineer and shall resubmit the required number of corrected shop drawings or new samples until accepted. The Contractor shall direct specific attention in writing on resubmitted shop drawings to revisions other than the corrections requested by the Engineer on previous submissions.

**k.** If the Contractor desires to substitute materials or deviate from the requirements of the Contract Documents, the Contractor shall separately submit all substitute materials and deviations to the Contract Documents. Such submittals shall be clearly and boldly marked "**SUBSTITUTION"** or **"DEVIATION TO CONTRACT DOCUMENTS"**. If the substitution or deviation is accepted, the Contractor will not be excused from producing work in conformity with the Contract Documents. If a trial use establishes the work does not comply with the Contract Documents, the Contractor shall take such action as the Engineer determines necessary.

**l.** The Engineer's approval of shop drawings or samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents unless the Contractor has informed the Engineer in writing of such deviation at the time of submission and the Engineer has provided written acceptance to the specific deviation. The Engineer's approval

shall not relieve the Contractor from responsibility for errors or omissions in the shop drawings or samples.

**m.** The submittals will be checked only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Any action noted by the Engineer on the submittal is subject to the requirements of the Contract Documents.

**n.** The Contractor is responsible for dimensions, quantities, fabrication processes and methods of construction, coordination of the Contractors work with that of all trades. The Contractor shall be responsible for satisfactory performance of the Contractor's work and supplying a complete and fully functional system. The Contractor shall confirm and correlate dimensions at the jobsite.

**o.** Samples shall be submitted upon request or as required by the Contract Documents.

**p.** The Contractor shall maintain an accurate updated "SUBMITTAL REGISTER" containing the status of all submittals. The log shall be updated on a weekly basis. The Contractor shall bring the submittal register to each progress meeting. The submittal register shall contain the following information:

**1.** Submittal description and number assigned.
**2.** Contract Document required submittal date.
**3.** Submittal electrical system type; airfield lighting or airfield lighting control or airfield lighting vault power system.
**4.** Reference Item # (L-108, 26 05 33.13, etc).
**5.** Date sent to Engineer.
**6.** Date returned to Contractor from Engineer.
**7.** Submittal status.
**8.** Date of resubmittal and return – as applicable.
**9.** Date material released for fabrication.
**10.** Projected date of fabrication.
**11.** Projected date of delivery to site.

**106-2.2 ELECTRONIC SUBMITTAL:**

**a.** Electronic submittal shall consist of a single PDF document separated and book marked per each electrical system, per specification section as described in section 106-2.2.d. containing all materials for each item to be installed in the project.

**b.** Electronic submittals larger than 10 megabyte shall be separated into smaller PDF files for transmission to make up a single PDF document. Each separate PDF shall be book marked per specification section containing all materials for each item to be installed in the project.

**c.** Each PDF for electronic transmission shall be clearly labeled as transmittal X of Y per submittal section.

**d.** Provide separate submittal PDF's for each of the following electrical system types:

1. One PDF submittal set for the Airfield Lighting System. All components to be included in the contract for lighting, conduit, grounding and miscellaneous systems shall be included.
2. One PDF submittal set for the Airfield Lighting Control System.
3. One PDF submittal set for the Airfield Lighting Vault Modifications,

**106-2.3 SUBMITTAL CONTENTS:**

**a.** First sheet(s) in shall be a cover sheet containing the project information and location. See appendix A at the end of SP-106 specification.

**b.** The second sheet shall be a table of contents identifying the specification section(s) being submitted.

**c.** Third sheet shall be prepared and filled out by Contractor and shall list project address of airport, Engineer, Contractor & subcontractor(s).

**d.** Fourth sheet shall also be filled out by Contractor and list project schedule information.

**e.** Submittals consisting of marked catalog sheets or shop drawings shall be inserted in the PDF in specification number/section order. Submittal data shall be presented in a clear and thorough manner. **Original PDF catalog sheets are preferred. Scans of catalog sheets are acceptable provided they are equivalent in quality to the original document.**

**f.** Clearly and boldly mark each page to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. **Markings shall be boldly and clearly made with arrows or circles (highlighting is not acceptable).**

**g.** All sheets within the submittal shall be oriented in a portrait setting. Mixing of portrait and landscape oriented standard 8.5 X 11 sheets shall not be permitted.

**h.** All sheets contained within the PDF shall be straight. Sheets scanned on a drastic angle making the submittal page difficult to read shall not be permitted and shall result in the submittal being rejected.

**i.** Some catalog sheets have colored backgrounds or colored text. When scanned these items appear black and obscure the printed text and markings by the contractor. For this reason all scans of sheets with colored backgrounds or text shall be made in color. Sheets that are not readable due to obscured information shall be rejected.

**j.** Submittals for components of electrical equipment and systems shall identify the equipment for which they are a component part on each submittal sheet.

**k.** Shop Drawings: Drawings to include identification of project and names of Engineer(s), General Contractor, subcontractor and supplier, data, number sequentially and indicate the following:

1. Fabrication and erection dimensions.
2. Arrangements and sectional views.

**3.** Necessary details, including complete information for making connections with other work.
**4.** Kinds of materials and finishes.
**5.** Descriptive names of equipment.
**6.** Modifications and options to standard equipment required by the work.
**7.** Leave blank area, size approximately 5 x 5 inches, near title block for the Engineer's stamp imprint.
**8.** Point-to-point wiring diagrams.
**9.** Conduit/duct/raceway rough-in drawings.
**10.** See specific items of the Contract Documents for further requirements.

**l.** Submittal Product Data - Technical data is required for all items as called for in the Contract Documents regardless if item furnished is as specified.

**1.** Submit technical data verifying that the item submitted complies with the requirements of the Contract Documents. Technical data shall include manufacturer's name and model number, dimensions, weights, electrical characteristics, and clearances required. Indicate all optional equipment and changes from the standard item as called for in the Contract Documents. Furnish drawings, or diagrams, dimensioned and in correct scale, covering equipment, showing arrangement of components and overall coordination.
**2.** In order to facilitate review of product data, insofar as practicable, they shall be noted, indicating by cross reference the Contract Documents, note, drawing number and/or specification number and item paragraph numbers where item(s) occur in the Contract Documents.
**3.** See specific items in Contract Documents for further requirements.

**106-2.4 PROCESSING SUBMITTALS:**

**a.** Submit the PDF submittal and shop drawings per Specification section

**b.** The Contractor shall review, stamp with the Contractor's approval and submit to the Engineer, eight (8) prints of shop drawings, eight (8) copies of submittal books and three (3) sets of samples where required, as described in this item,

**c.** The General Contractor shall review the submittal books before submitting to the Engineer. No request for payment will be considered until the submittal book has been reviewed and submitted for review by the Engineer.

**d.** Product Data: For standard manufactured materials, products and items, submit one (1) copy or sets of data (per book).

**e.** Shop Drawings for custom fabricated items and systems:

**1.** Initially submit a transparency (suitable for reproduction) together with four (4) prints made the transparency.
**2.** When submittal is acceptable, furnish one (1) print per book made from the accepted transparency.

**f.** Acceptance: When returned to Contractor, the front of each submittal will be marked with the Engineer's stamp. If box marked "Submit Specified Item", or "Rejected" or "Revise and

Resubmit" is checked, submittal is not accepted and Contractor is to correct and resubmit as noted. If submittal is marked "Make Correction Noted" Contractor may begin construction utilizing the submitted item with corrections made. **However, the corrected submittal must be resubmitted for record keeping purposes.** Contractor is to comply with notation making necessary corrections on submittal and resubmit for final record.

**g.** If the submittal is marked "No Exception Taken" the Engineer took no exceptions to the submitted items.

**h.** Corrections or comments made on the shop drawings during this review do not relieve Contractor from compliance with requirements of the Contract Documents. This check is only for review of the general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. The Contractor is responsible for; confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating the Contractor's work with that of all other trades and performing all work in a safe and satisfactory manner.

**i.** Note that the acceptance of shop drawings or other information submitted in accordance with the requirements contained in this item, does not assure that the Engineer or any other Owner's Representative attests:

1. To the dimensional accuracy or dimensional suitability of the material or equipment involved.
2. The ability of the material or equipment involved to perform as designed.
3. The mechanical or electrical performance of equipment.

**j.** Approval of shop drawings does not invalidate the Contract Documents if in conflict; unless a letter requesting such a change is submitted and accepted on the Engineer's letterhead.

### 106-2.5 DELAYS:

**a.** Contractor is responsible for delays in job progress accruing directly or indirectly from late submissions or resubmissions of shop drawings, or product data.

### 106-2.6 RE-SUBMITTALS:

**a.** The Engineer shall be reimbursed for engineering costs to review resubmittals subsequent to the second submittal.

## PART 3 – RECORD DOCUMENTS

### 106-3.1 PROGRESS AND RECORD DRAWINGS:

**a.** Keep two sets of blue line prints on the job and neatly mark up design drawings each day as components are installed. **Red pencil shall be used for additions and green pencil for deletions. Use of "white out" or similar products is not permitted.**

**b.** All items on record drawings shall be shown in actual location installed. Drawings shall be inspected weekly, by the Engineer, for compliance and accuracy. Project payments shall be withheld if the marked-up drawings are not current.

**c.** Change the equipment schedules to agree with items actually furnished.

**d.** All hand holes, pull boxes, junction can plazas, manholes, underground ducts, conduits, force mains, drains, ground grids, etc. (all underground utilities) installed by this Contractor or located by this Contractor during the construction of this project shall be surveyed and recorded on the record documents. Record utility locations in state plane grid coordinates. Provide north-south, east-west coordinate and elevation.

**e.** At the end of the project, all changes shall be reviewed by the Electrical Contractor. The drawings shall be marked "As Built" and dated and signed by the Electrical Contractor's Superintendent.

**f.** Prior to request for final payment, furnish a set of "As Built" prints to the Engineer for review. The final prints shall be professionally drafted to indicate "As Built" conditions to the Engineer. The prints shall be stamped "As Built" signed and dated by the Contractor. The Contractor's signature shall certify to the Engineer that the "As Built" drawings are accurate and complete.

**g.** The Contractor's failure to produce representative "As Built" drawings in accordance with requirements of this item, shall be cause for the Engineer to produce such "As-built" drawings and the Contractor shall reimburse Engineer for all costs to produce a representative set of "As Built" drawings.

## PART 4 – OPERATION AND MAINTENANCE MANUALS

### 106-4.1 REQUIREMENTS FOR OPERATION AND MAINTENANCE MANUALS:

**a.** Two (2) CD's shall be provided with all O & M Manual information included in PDF format. The Operation and Maintenance Manual shall be submitted as a PDF document. As a minimum, the Operation and Maintenance Manual shall contain the following:

1. Safety precautions used while maintaining the equipment.
2. Theory of circuit and system operation.
3. Complete schematic and interconnecting wiring diagrams.
4. Complete parts list with each circuit component keyed to designations assigned on schematics and wiring diagrams. Complete information shall be given for each part to permit ordering for replacement purposes. This information shall include the components rating, name of manufacturer and the manufacturer's part number.
5. Recommended preventative maintenance, including care, cleaning lubrication, service intervals, etc.
6. Troubleshooting procedures.
7. Physical characteristics (weight, size, mounting dimensions, etc.).
8. Installation instructions.
9. Operating instruction.
10. Recommended spare parts and usage for a one (1) year period.
11. Submit for checking purposes a specific set of written operating instructions on each item, which requires instructions to operate. After acceptance, provide one copy for insertion in each Operation and Maintenance Manual.

**12.** Submit for acceptance maintenance information consisting of manufacturer's printed instructions and parts list for each major item of equipment. After acceptance, insert information in each Operations and Maintenance Manual. Detailed schematic diagrams shall be furnished for all electrical/electronic equipment.
**13.** Bill of materials.
**14.** Physical layout plans.
**15.** Equipment supplier list.
**16.** Panel schedules shall be submitted with the respective panel data.
**17.** Special instructions
**18.** Service maintenance contracts including the name, address and 24 hour phone number and contact of manufacturer’s authorized Repair Company.

There shall be no "Black Boxes" for which there are no schematic/wiring diagrams.

**106-4.2 OPERATION AND MAINTENANCE MANUALS:**

**a.** O & M Manuals shall consist of a PDF document. The manual shall be bookmarked into sections by Table of Contents, Project Contacts, and each technical specification section. Shop drawings, product data and/or catalog sheets shall be inserted into the O & M PDF by technical specification.

**b.** Provide correct designation of project on first page of each technical specification submittal section. Description sheet shall be white with black letters, minimum of 11” high and full width of page. Description shall describe project and match project Contract Document description. Description to include submittal type.

**c.** All documents inserted into the O & M Manual PDF, including but not limited to catalog cut sheets, theory of operation, and all other related product data, shall be the original documentation from the manufacturer.

**d.** Any scanned documentation shall be legible, and have the correct orientation in the pdf so the document can be read horizontally, from left to right, in line with all other pages in the O & M Manual. Failure to meet these requirements will result in the O & M Manual’s rejection. Upon rejection any errata shall be fixed and resubmitted to the engineer for approval.

**e.** Provide one O & M Manual for the following electrical system required by the contract documents:

**106-4.3 OPERATION AND MAINTENANCE MANUAL CONTENTS:**

**a.** Operation & Maintenance Manuals shall include:

**1.** First sheet in PDF shall be the cover sheet.
**2.** The second sheet shall be a table of contents.
**3.** The third sheet shall be filled out by Contractor and shall list project address of airport, Engineer, Contractor & subcontractor(s).
**4.** The fourth sheet shall also be filled out by Contractor and list project schedule information showing project “as completed”.

5. Shop Drawings: Shop drawings shall be a copy of the final and accepted shop drawings submitted as required in Item SP-106-2. These shall be inserted into the PDF in specification number/section order. Each catalog sheet shall clearly identify where the product is used and the Contract Document identification for equipment.
6. Product data and/or catalog sheets shall be a copy of the final and accepted submittal submitted as required in Item SP-106-2. These shall be inserted into the PDF in specification number/section order. Each catalog sheet shall clearly identify where the product is used and the Contract Document identification for equipment.
7. Warranty/Guarantee: Provide copy of warranty/guarantee and letters of certification, in respective location in O & M Manual PDF. Original warranty/guarantee shall be incorporated into separate project warranty PDF with warranty/guarantees provided for other items and submitted for Engineer review.

**106-4.4 PROCESSING OPERATION AND MAINTENANCE MANUALS:**

**a.** The General Contractor shall review the manuals before submitting to the Engineer. Submit one CD containing the PDF set of O& M Manuals to the owner and one CD containing the PDF set to the Engineer.

**106-4.5 DELAYS:**

**a.** Contractor is responsible for delays in job progress accruing directly or indirectly from late submissions or resubmissions of the Operation and Maintenance Manuals.

**106-4.6 RE-SUBMITTALS:**

**a.** The Engineer shall be reimbursed the cost to review Operation and Maintenance Manual re-submittals subsequent to the second submittal.

## PART 5 – METHOD OF MEASUREMENT

**106-5.1 METHOD OF MEASUREMENT**

**a.** The items described in Item SP-106 are incidental to other pay items and shall not be measured for payment.

## PART 6 – BASIS OF PAYMENT

**106-6.1 BASIS OF PAYMENT**

**a.** No direct payment shall be made for the work described in Item SP-106. The work described in Item SP-106 is incidental to other items and shall be paid for in the respective bid item of which it is a component part.

## PART 7 – SUBMITTAL LIST

**106-7.1 SUBMITTAL LIST**

**a.** The following is a list of materials expected by the Engineer to be incorporated within the project. This list is not all inclusive as the Contractor's chosen means and methods will have a direct impact on the materials used.

**b.** It is the intent of this item that all materials used or incorporated into this project is submitted to the Engineer for review.

**c.** The Contractor shall maintain a submittal register in accordance with Part 2 of this item. The Submittal register shall include all items used or incorporated into the project.

LIST TO FOLLOW:

**APPENDIX 1**

**"EXAMPLE OF COVER SHEET"**

**AIRPORT NAME**

**AIRPORT OWNER**

# PROJECT NAME

## AIRPORT PROJECT NUMBER

**AIP#**

**DOT#**

## AIRFIELD LIGHTING SYSTEM

## OPERATION AND MAINTENANCE MANUAL

OWNER MANUAL #1

Note:

Submittal books and spline information similar.

**END OF ITEM SP-106**

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## ITEM L-109 AIRPORT TRANSFORMER VAULT AND VAULT EQUIPMENT

### DESCRIPTION

**109-1.1** This item shall consist of ~~constructing~~ modifying an airport transformer vault or a prefabricated metal housing per these specifications and per the design and dimensions shown in the plans. ~~This work shall also include the installation of conduits in the floor and foundation, painting and lighting of the vault or metal housing, and the furnishing of all incidentals that are necessary to produce a completed unit.~~ Included as a separate part under this item or as a separate item where an existing vault is to be used shall be the furnishing of all vault equipment, wiring, electrical buses, cable, conduit, potheads, and grounding systems. This work shall also include the painting of equipment and conduit; the marking and labeling of equipment and the labeling or tagging of wires; the testing of the installation; and the furnishing of all incidentals necessary to place it in operating condition as a completed unit to the satisfaction of the RPR.

### EQUIPMENT AND MATERIALS

#### 109-2.1 GENERAL.

**a.** Airport lighting equipment and materials covered by advisory circulars (AC) shall be certified in AC 150/5345-53, Airport Lighting Equipment Certification Program (ALECP) and listed in the ALECP Addendum.

**b.** All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when requested by the RPR.

**c.** Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor's cost.

**d.** All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

**e.** The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be provided in electronic pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes, specified in this document.

**f.** All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

**CONSTRUCTION OF VAULT AND PREFABRICATED METAL HOUSING**

**109-3.1 ELECTRICAL VAULT BUILDING.** Not Required.

**109-3.2 CONCRETE.** Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures.

**109-3.3 PRECAST CONCRETE STRUCTURES.** Not Required.

**109-3.4 REINFORCING STEEL.** Not Required.

**109-3.5 BRICK.** Not Required.

**109-3.6 RIGID STEEL CONDUIT.** Rigid steel conduit and fittings shall be per Underwriters Laboratories Standards 6 and 514B.

**109-3.7 PLASTIC CONDUIT AND FITTINGS**. Plastic Conduit and fittings shall conform to the requirements of UL-651 and UL-654 schedule 40 polyvinyl chloride (PVC) suitable for use above or below ground.

**109-3.8 LIGHTING.** Not Required.

**109-3.9 OUTLETS.** Not Required.

**109-3.10 SWITCHES.** Not Required.

**109-3.11 PAINT.**

**a.** Priming paint for non-galvanized metal surfaces shall be a high solids alkyd primer compatible with the manufacturer's recommendations for the intermediate or topcoat.

**b.** White paint for body and finish coats on metal and wood surfaces shall be ready-mixed paint conforming to the Master Painter's Institute (MPI), Reference #9, Exterior Alkyd, Gloss.

**c.** Priming paint for wood surfaces shall be mixed on the job by thinning the specified white paint by adding 1/2 pint (0.24 liter) of raw linseed oil to each gallon (liter).

**d.** Paint for the floor, ceiling, and inside walls shall be per Porter Paint Company 69, 71, and 79 or equivalent. Walls and ceiling shall be light gray and the floor shall be medium gray.

**e.** The roof coating shall be hot asphalt material per ASTM D2823. Asbestos-free roof coating per ASTM D4479 may be substituted if required by local codes.

**109-3.12 GROUND BUS.** Ground bus shall be 1/8 × 3/4 inch (3 × 19 mm) minimum copper bus bar.

**109-3.13 SQUARE DUCT.** Duct shall be square similar to that manufactured by the Square D Company (or equivalent), or the Trumbull Electric Manufacturing Company (or equivalent). The entire front of the duct on each section shall consist of hinged or removable cover for ready access to the interior. The cross-section of the duct shall be not less than 4 × 4 inch (100 × 100 mm) except where otherwise shown in the plans.

**109-3.14 GROUND RODS.** Ground rods shall be in accordance with Item L-108.

**109-3.15 VAULT PREFABRICATED METAL HOUSING.** Not Required.

**109-3.16 FAA-APPROVED EQUIPMENT.** Certain items of airport lighting equipment installed in vaults are covered by individual ACs listed below:

| | |
|---|---|
| AC 150/5345-3 | Specification for L-821, Panels for Remote Control of Airport Lighting |
| AC 150/5345-5 | Circuit Selector Switch |
| AC 150/5345-7 | Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits |
| AC 150/5345-10 | Specification for Constant Current Regulators and Regulator Monitors |
| AC 150/5345-13 | Specification for L-841 Auxiliary Relay Cabinet Assembly for Pilot Control of Airport Lighting Circuits. |
| AC 150/5345-49 | Specification for L-854, Radio Control Equipment |
| AC 150/5345-56 | Specification for L-890 Airport Lighting Control and Monitoring System (ALCMS) |

**109-3.17 OTHER ELECTRICAL EQUIPMENT.** Distribution transformers, oil switches, cutouts, relays, terminal blocks, transfer relays, circuit breakers, and all other regularly used commercial items of electrical equipment not covered by FAA equipment specifications and ACs shall conform to the applicable rulings and standards of the Institute of Electrical and Electronic Engineers (IEEE) or the National Electrical Manufacturers Association (NEMA). When specified, test reports from a testing laboratory indicating that the equipment meets the specifications shall be supplied. In all cases, equipment shall be new and a first-grade product. This equipment shall be supplied in the quantities required for the specific project and shall incorporate the electrical and mechanical characteristics specified in the proposal and plans. Equipment selected and installed by the Contractor shall maintain the interrupting current rating of the existing systems or specified rating whichever is greater.

**109-3.18 WIRE.** Wire (in conduit) rated up to 5,000 volts shall be per AC 150/5345-7, Specification for L-824 Underground Electrical Cables for Airport Lighting Circuits. For ratings up to 600 volts, moisture and heat resistant thermoplastic wire conforming to Commercial Item Description A-A-59544A Type THWN-2 shall be used. The wires shall be of the type, size, number of conductors, and voltage shown in the plans or in the proposal.

**a. Control circuits.** Unless otherwise indicated on the plans, wire shall be not less than No. 12 American wire gauge (AWG) and shall be insulated for 600 volts. If telephone control cable is specified, No. 19 AWG telephone cable per ANSI/Insulated Cable Engineers Association (ICEA) S-85-625 specifications shall be used.

**b. Power circuits.**

**(1)** 600 volts maximum – Wire shall be No. 6 AWG or larger and insulated for at least 600 volts.

**(2)** 3,000 volts maximum – Wire shall be No. 6 AWG or larger and insulated for at least 3,000 volts.

**(3)** Over 3,000 volts-Wire shall be No. 6 AWG or larger and insulated for at least the circuit voltage.

**109-3.19 SHORT CIRCUIT / COORDINATION / DEVICE EVALUATION / ARC FLASH ANALYSIS.** The Contractor shall, based upon the equipment provided, include as a part of the submittal process the electrical system “Short Circuit / Coordination / Device evaluation / Arc Flash Analysis”. The analysis shall be performed by the equipment manufacturer and submitted in a written report. The analysis shall be signed and sealed by a registered professional Engineer from the state in which the project is located. The analysis shall comply with NFPA-70E and IEEE 1584.

The analysis will include: one line diagrams, short circuit analysis, coordination analysis, equipment evaluation, arc flash analysis and arc flash labels containing at a minimum, equipment name, voltage/current rating, available incident energy and flash protection boundary.

The selected firms field service Engineer shall perform data gathering for analysis completion and device settings, perform device setting as recommended by the analysis and will furnish and install the arc flash labels. The components worst case incident energy will be considered the available arc flash energy at that specific point in the system. Submit three written copies and one electronic copy of the report.

## CONSTRUCTION METHODS

## CONSTRUCTION OF VAULT AND PREFABRICATED METAL HOUSING

**109-4.1 GENERAL.** Not Required.

**109-4.2 FOUNDATION AND WALLS.** Not Required.

**109-4.3 ROOF.** Not Required.

**109-4.4 FLOOR.** Not Required.

**109-4.5 FLOOR DRAIN.** Not Required.

**109-4.6 CONDUITS IN FLOOR AND FOUNDATION.** Not Required.

**109-4.7 DOORS.** Not Required.

**109-4.8 PAINTING.** Not Required.

**109-4.9 LIGHTS AND SWITCHES.** Not Required.

## INSTALLATION OF EQUIPMENT IN VAULT OR PREFABRICATED METAL HOUSING

**109-5.1 GENERAL.** The Contractor shall furnish, install, and connect all equipment, equipment accessories, conduit, cables, wires, buses, grounds, and support necessary to ensure a complete and operable electrical distribution center for the airport lighting system as specified herein and shown in the plans. When specified, an emergency power supply and transfer switch shall be provided and installed.

The equipment installation and mounting shall comply with the requirements of the National Electrical Code and local code agency having jurisdiction. All electrical work shall comply with the NEC and local code agency having jurisdiction including the separation of under 600V work from 5,000V work."

**109-5.2 POWER SUPPLY EQUIPMENT.** Transformers, regulators, booster transformers, and other power supply equipment items shall be furnished and installed at the location shown in the plans or as directed by the RPR. The power supply equipment shall be set on steel "H" sections, "I" beams, channels, or concrete blocks to provide a minimum space of 1-1/2 inch (38 mm) between the equipment and the floor. The equipment shall be placed so as not to obstruct the oil-sampling plugs of the oil-filled units; and name-plates shall, so far as possible, not be obscured.

If specified in the plans and specifications, equipment for an alternate power source or an emergency power generator shall be furnished and installed. The alternate power supply installation shall include all equipment, accessories, an automatic changeover switch, and all necessary wiring and connections. The emergency power generator set shall be the size and type specified.

**109-5.3 SWITCHGEAR AND PANELS.** Oil switches, fused cutouts, relays, transfer switches, panels, panel boards, and other similar items shall be furnished and installed at the location shown in the plans or as directed by the RPR. Wall or ceiling mounted items shall be attached to the wall or ceiling with galvanized bolts of not less than 3/8-inch (9 mm) diameter engaging metal expansion shields or anchors in masonry or concrete vaults.

**109-5.4 DUCT AND CONDUIT.** The Contractor shall furnish and install square-type exposed metallic ducts with hinged covers for the control circuits in the vault. These shall be mounted along the walls behind all floor-mounted equipment and immediately below all wall-mounted equipment. The hinged covers shall be placed to open from the front side with the hinges at the front bottom.

Wall brackets for square ducts shall be installed at all joints 2 feet (60 cm) or more apart with intermediate brackets as specified. Conduit shall be used between square ducts and equipment or between different items of equipment when the equipment is designed for conduit connection.

When the equipment is not designed for conduit connection, conductors shall enter the square-type control duct through insulating bushings in the duct or on the conduit risers.

**109-5.5 WIRING AND CONNECTIONS.** The Contractor shall make all necessary electrical connections in the vault per the wiring diagrams furnished and as directed by the RPR. In wiring to the terminal blocks, the Contractor shall leave sufficient extra length on each control lead to make future changes in connections at the terminal block. This shall be accomplished by running each control lead the longest way around the box to the proper terminal. Leads shall be neatly laced in place.

**109-5.6 MARKING AND LABELING.** All equipment, control wires, terminal blocks, etc., shall be tagged, marked, or labeled as specified below:

**a. Wire identification.** The Contractor shall furnish and install self-sticking wire labels or identifying tags on all control wires at the point where they connect to the control equipment or to the terminal blocks. Wire labels, if used, shall be of the self-sticking preprinted type and of the manufacturer's recommended size for the wire involved. Identification -markings designated in the plans shall be followed. Tags, if used, shall be of fiber not less than 3/4 inch (19 mm) in diameter and not less than 1/32 inch (1 mm) thick. Identification markings designated in the plans shall be stamped on tags by means of small tool dies. Each tag shall be securely tied to the proper wire by a nonmetallic cord.

**b. Labels.** The Contractor shall stencil identifying labels on the cases of regulators, breakers, and distribution and control relay cases with white oil paint as designated by the RPR. The letters and numerals shall be not less than one inch (25 mm) in height and shall be of proportionate width. The Contractor shall also mark the correct circuit designations per the wiring diagram on the terminal marking strips, which are a part of each terminal block.

**METHOD OF MEASUREMENT**

**109-6.1** The quantity of vaults to be paid for under this item shall consist of the number of vaults constructed in place and accepted as a complete unit.

**109-6.2** The quantity of prefabricated metal housings to be paid for under this item shall consist of the number of housings constructed in place and accepted as a complete unit.

**109-6.3** The quantity of equipment to be paid for under this item shall consist of all equipment installed, connected and accepted as a complete unit ready for operation within an existing vault or prefabricated metal housing.

**BASIS OF PAYMENT**

**109-7.1** ~~Payment will be made at the contract unit price for each completed and accepted vault or prefabricated metal housing equipment installation.~~ This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

~~Item L-109-7.1 Construction of Airport Transformer Vault in Place - per unit~~

~~Item L-109-7.2 Installation of Airport Transformer Vault Equipment in Place - per unit~~

~~Item L-109-7.3 Construction of [ Prefabricated Metal Housing ] [ Prefabricated Concrete Building ] and Foundation in Place - per unit~~

~~Item L-109-7.4 Installation of Equipment with in existing vault or prefabricated metal housing in Place - per unit~~

**Item L-109-1** **Airfield Electrical Vault Modifications** **-- Lump Sum (LS)**

Payment shall be made at the contract unit price to include all transportation, coordination, materials, labor, supervision, and all incidentals required to furnish and install all equipment, raceway, conductors, lightning protection, alternator, utility services, feeders, branch circuits, grounding, bonding, coordination study, overcurrent protection, terminations, etc. required for the new Airfield Lighting Vault electrical service and alternator as shown in the Contract Documents, install all controls and monitoring and all appurtenances necessary for a complete and functional electrical system in accordance with the Contract Documents.

**Item L-109-2** **Short Circuit/Coordination/Device Evaluation/ Arc Flash Analysis** **-- Lump Sum (LS)**

Payment shall be made at the contract unit price for Short Circuit/Coordination/Device Evaluation/Arc Flash Analysis. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and supervision, engineering, and for all labor, equipment, tools, and incidentals necessary, including but not limited to, site visits and investigation, where required, to complete this item in conformance with the Contract Documents.

Item L-109-3 **Airfield Lighting Vault Emergency Power Generator** -- Lump Sum (LS)

Payment shall be made at the contract unit price for the Airfield Lighting Vault normal and emergency power system modification/installation. This work includes the short-circuit, component burden, protective device coordination and arc-flash studies. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and supervision, engineering, and for all labor, equipment, tools, and incidentals necessary, including but not limited to, site visits and investigation,

where required, to complete this item in conformance with the Contract Documents.

**REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

| | |
|---|---|
| AC 150/5340-30 | Design and Installation Details for Airport Visual Aids |
| AC 150/5345-3 | Specification for L-821, Panels for Remote Control of Airport Lighting |
| AC 150/5345-5 | Circuit Selector Switch |
| AC 150/5345-7 | Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits |
| AC 150/5345-10 | Specification for Constant Current Regulators and Regulator Monitors |
| AC 150/5345-13 | Specification for L-841 Auxiliary Relay Cabinet Assembly for Pilot Control of Airport Lighting Circuits |
| AC 150/5345-49 | Specification L-854, Radio Control Equipment; |
| AC 150/5345-53 | Airport Lighting Equipment Certification Program |

American National Standards Institute / Insulated Cable Engineers Association (ANSI/ICEA)

| | |
|---|---|
| ANSI/ICEA S-85-625 | Standard for Telecommunications Cable Aircore, Polyolefin Insulated, Copper Conductor Technical Requirements |

ASTM International (ASTM)

| | |
|---|---|
| ASTM A615 | Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement |
| ASTM C62 | Standard Specification for Building Brick (Solid Masonry Units Made from Clay or Shale) |
| ASTM C90 | Standard Specification for Loadbearing Concrete Masonry Units |
| ASTM D2823 | Standard Specification for Asphalt Roof Coatings, Asbestos Containing |
| ASTM D4479 | Standard Specification for Asphalt Roof Coatings – Asbestos-Free |

Commercial Item Description (CID)

| | |
|---|---|
| A-A 59544 | Cable and Wire, Electrical (Power, Fixed Installation) Institute of Electrical and Electronic Engineers (IEEE) |
| IEEE 1584 | Guide for Performing Arc-Flash Hazard Calculations |

Master Painter's Institute (MPI)

| | |
|---|---|
| MPI Reference #9 | Alkyd, Exterior, Gloss (MPI Gloss Level 6) |

Underwriters Laboratories (UL)

| | |
|---|---|
| UL Standard 6 | Electrical Rigid Metal Conduit – Steel |
| UL Standard 514B | Conduit, Tubing, and Cable Fittings |
| UL Standard 514C | Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers |
| UL Standard 651 | Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings |
| UL Standard 651A | Type EB and A Rigid PVC Conduit and HDPE Conduit |

National Fire Protection Association (NFPA)

| | |
|---|---|
| NFPA-70 | National Electrical Code (NEC) |
| NFPA-70E | Standard for Electrical Safety in the Workplace |
| NFPA-780 | Standard for the Installation of Lightning Protection Systems |

**END OF ITEM L-109**

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# ITEM SP-109S-26 05 29 HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

## GENERAL

### 1.1 RELATED DOCUMENTS

**a.** Drawings and general provisions of the Contract, including Contractual Conditions and Division 01 Specification sections apply to this section.

### 1.2 SUMMARY

**a.** This section includes the requirements for provision and installation of supporting devices.

### 1.3 DESCRIPTION

**a.** Furnish and install all supports, anchors, fasteners, hangers and inserts required to mount fixtures, conduit, cables, pullboxes and other equipment furnished under this Division.

### 1.4 REFERENCES AND REGULATORY REQUIREMENTS

**a.** Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

**b.** Conform to the requirements of the following:

**1.** NECA - National Electrical Contractors Association.

**2.** ANSI/NFPA 70 - National Electrical Code (NEC).

### 1.5 SUBMITTALS

**a.** Submit catalog cut sheet showing brand of conduit supporting hardware to be used and (where applicable) showing that conduit supporting hardware is UL listed and labeled, and manufactured in the United States.

**b.** Submit catalog cut sheet on all types of conduit support fittings, hardware, straps, and hangers.

**c.** Product data shall be submitted for approval on:

**1.** Mounting hardware and inserts.

**2.** Conduit straps, hangers and fittings.

**3.** Supporting channel.

**d.** Product data shall prove compliance with Contract Documents, National Electric Code, National Board of Fire Underwriters, manufacturer's specifications, and written installation data.

**e.** Submit shop drawing showing routing and location of all conduit racking systems. Provide coordination drawings.

## PRODUCTS

### 2.1 PRODUCT REQUIREMENTS

**a.** Materials and Finishes: Provide corrosion resistance.

**b.** Provide materials, sizes, and types of anchors, fasteners and supports to carry the loads of equipment and conduit. Consider weight of wire in conduit when selecting products.

**c.** All components used in dry locations shall be galvanized.

**d. All material used in damp, wet or exterior locations shall be stainless steel.**

## EXECUTION

### 3.1 INSTALLATION

**a.** Install products in accordance with manufacturer's instructions.

**b.** Provide anchors, fasteners, and supports in accordance with NECA "Standard of Installation."

**c.** Do not fasten supports to pipes, ducts, mechanical equipment, and conduit.

**d.** Do not use spring steel clips and clamps and metal banding straps.

**e.** Do not fasten supports to sides or bottom of pre-cast structural beams.

**f.** Obtain permission from RPR before drilling, or cutting structural members.

**g.** Fabricate supports from structural steel or steel channel. Rigidly weld members or use hexagon head bolts to present neat appearance with adequate strength and rigidity. Use spring lock washers under all nuts.

**h.** Install surface-mounted cabinets and panelboards with minimum of four anchors.

**i.** In wet and damp locations use stainless steel channel supports to stand cabinets and panelboards one inch (25) mm) off wall.

**j.** Install square washers between equipment and mounting channel to prevent deforming the equipment when tightened to the channel.

**k.** Use sheet metal channel to bridge studs above and below cabinets and panelboards recessed in hollow partitions.

**l.** All items shall be supported from the structural portion of the building, except standard ceiling-mounted lighting fixtures. Small devices may be supported from ceiling system where permitted by ceiling system manufacturer, however, no sagging of the ceiling will be permitted. Wire shall not be used as a support. Boxes and conduit shall not be supported or fastened to ceiling suspension wires or to ceiling channels.

**m.** Lay out and install work in advance of the laying of floors or walls and provide all sleeves that may be required for openings through floors, walls, or other assemblies. Where plans call for conduit to be run exposed, provide all inserts and clamps for the supporting of conduit.

**n.** All conduits shall be securely fastened in place on maximum of 8 foot intervals (in accordance with NEC). Hangers, supports or fastenings shall be provided at each elbow and at the end of each straight run terminating at a box or cabinet. The use of perforated iron for supporting conduits will not be permitted. The required strength of the supporting equipment and size and type of anchors shall be based on the combined weight of conduit, hanger and cables with a safety factor of 4. Horizontal and vertical conduit runs may be supported by one-hole malleable straps, clamp-backs, or other approved devices with suitable bolts, expansion shields (where needed) or beam-clamps for mounting to building structure or special brackets.

**o.** Where two or more conduits are run parallel or in a similar direction, they shall be grouped together and supported by means of P-1000 Unistrut (or accepted equivalent), conduit channel trapeze hanger system (racking) consisting of concrete inserts, threaded rods, washers, double nuts for each rod, locknut washers and galvanized "L" angle iron, or Unistrut cross members. Where galvanized "L" angle iron is used, conduits shall be individually fastened to the cross members with malleable iron hangers listed and approved for use on "L" angle iron, bolted with proper size cadmium machine bolts, washers and nuts. Conduits supported to Unistrut channel shall be individually fastened with two piece unistrut straps with bolts and nuts listed and approved for such use. Mineralak hangers or one hole type straps fastened to Unistrut racking is not acceptable. Beam clamps shall be malleable iron. All single panelboard, switchboard and motor control center feeder raceway runs shall be supported by means of a trapeze channel hanger support system with provisions for future as specified.

**p.** All hangers and mounting hardware clamps shall be made of durable material suitable for the application involved. Where excessive corrosive conditions or exterior and damp conditions are encountered, hanger assemblies shall be malleable iron or protected after fabrication by hot dipped galvanizing and where written approval is authorized by the RPR, special paint or other suitable preservative methods may be used.

**q.** All iron, steel, galvanized steel, and similar metallic items (not intended to be a grounding electrode) installed underground or within 12 inches of the earth shall be protected by a 12-mil thick layer of asphaltum coating. Apply coating in strict accordance with the manufacturer's instructions. Apply to clean dry surfaces. Asphaltum coating shall be applied in two applications/coats minimum. Observe the manufacturer's minimum cure time between applications/coats. Each application of the coating shall be given ample time to dry and harden before the next application is applied. Touch up areas damaged during installation, wrench marks, tooling, bonding clamps, exothermic welds, etc. Apply the proper consistency of asphaltum coating uniformly. The finished coating shall be free from sags, holidays, and smears. Asphaltum coating shall be Carboline Bitumastic 50 or Sumter Coatings Coal Black Asphaltum 100N8507 or accepted equivalent.

**r.** On concrete or brick construction, an electric or hand drill shall be used for drilling holes for all inserts in brick, concrete or similar construction. In brick, inserts shall be near center of brick, not near edge or in joint. Where steel members occur, same shall be drilled and tapped, and round head machine screws shall be used. All screws, bolts and washers used for supporting conduit or outlets shall be fabricated from rust-resisting metal. Self-tapping power driven fasteners are acceptable on block or brick construction only. Plastic anchors are not acceptable.

**s.** Spring type conduit clip devices are not acceptable for conduit support.

**t.** Threaded rod hangers shall be galvanized continuous thread type, minimum 3/8" diameter. Increase size as required to support assembly. Bending of rod hangers is not permitted.

**u.** Concrete anchors, thread rods, or similar fasteners installed on side or bottom of pre-stressed beams are not acceptable.

**v.** Group related conduits; support using conduit rack. Construct rack using Unistrut (minimum of 24", increase, distance as required for quantity of conduits and spare capacity) provide 25 percent additional space for future conduits. Group conduits on channel racking adjacent to each other at one side, allowing all remaining unused space as spare capacity. Spacing between conduits shall not exceed 1" unless written permission is granted by RPR.

**w.** Conduit straps shall not be closer than 1 " to the free edge of a Unistrut channel.

**x.** Each rack shall be provided with minimum of two (2) threaded rod hangers located at the ends of the channel. Increase number of hangers as required to support the assembly.

**y.** Rack Mounted Equipment: Use channel support system for all rack mounted equipment including all free standing rack mounted equipment. See details on drawings where available. Exterior units shall be thoroughly inspected after installation.

## METHOD OF MEASUREMENT

### 4.1 METHOD OF MEASUREMENT

**a.** The items described in Item 26 05 29 are incidental to other pay items and shall not be measured for payment.

## BASIS OF PAYMENT

### 5.1 BASIS OF PAYMENT

**a.** No direct payment shall be made for the work described in Item 26 05 29. The work described in Item 26 05 29 is incidental to L-109 pay item and shall be paid for in the respective bid item of which it is a component part.

**END OF ITEM SP-109S-26 05 29**

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**ITEM SP-109S-26 08 00.03 POWER SYSTEMS STUDY WITH ARC FLASH ANALYSIS**

## GENERAL

### 1.1 SCOPE

**a.** The Contractor shall furnish short-circuit, component burden, protective device coordination and arc-flash studies as prepared by the electrical equipment manufacturer or an approved engineering firm for each electrical service provided as a part of this contract.

**b.** The Contractor shall furnish an Arc Flash Hazard Analysis Study per the requirements set forth in NFPA 70E - Standard for Electrical Safety in the Workplace. The arc flash hazard analysis shall be performed according to the IEEE Std. 1584-2018 equations that are presented in NFPA 70E-2021.

**c.** The scope of the studies shall include all electrical equipment supplied or installed as a part of this contract. One new electrical service and two existing electrical services will be installed/modified as a part of this project and will require a short circuit/coordination/burden/arc-flash study.

1. Existing Terminal Building Electrical Service

    a) New generator,
    b) New manual transfer switch, temp gen conn and load bank conn,
    c) Existing automatic transfer switch,
    d) Other electrical distribution system changes as shown in the Contract Documents,
    e) See proposed terminal building one-line and Contract Documents for detailed requirements.

2. Existing Airfield Lighting Vault Electrical Service

    a) New generator,
    b) New manual transfer switch, temp gen conn and load bank conn,
    c) New automatic transfer switch
    d) Other electrical distribution system changes as shown in the Contract Documents,
    e) See proposed vault building one-line and Contract Documents for detailed requirements.

3. New Beacon Electrical Service

    a) New Utility Electrical Service
    b) New generator,
    c) New manual transfer switch, temp gen conn and load bank conn,
    d) New automatic transfer switch,
    e) Other electrical distribution system changes as shown in the Contract Documents,

f) See proposed beacon one-line and Contract Documents for detailed requirements

**b.** The Contractor shall provide each short-circuit, component burden, protective device coordination and arc-flash study in two stages.

1. Stage 1 – The study shall be completed based upon the design drawings to ensure that equipment is not overburdened, coordination goals can be met and incident energy can be mitigated/reduced to 8 cal/cm$^2$ or less at all points in the system. The Stage 1 Study shall be submitted with the electrical equipment submittal. The incident energy goal of 8 cal/cm$^2$ or less may not be achievable on the line side of the main service equipment.

2. Stage 2 – The study shall be completed based upon asbuilt electrical system conditions. The study shall demonstrate all the requirements of the Contract Documents have been achieved. This study shall be used to generate the data necessary for the arc-flash warning labels. The Stage 2 study shall be submitted two weeks prior to Substantial Completion. The arc-flash warning labels shall be installed within one week of permanent energization or at substantial completion. The Stage 2 study is subject to review by the Engineer. The Stage 2 overburdened, coordination and incident energy results are expected to be equivalent to or better in the Stage 1 study. Any newly installed overburdened equipment shall be replaced with properly rated equipment at the Contractor's expense.

**c.** Coordinate this work task with Item SP-111.

**d.** Study shall extend throughout the system including all areas of incident energy of 0.1 cal/cm$^2$. The incident energy of 0.1 cal/cm$^2$ shall be supported by the program calculations. All equipment that could/may be opened to adjust or troubleshoot the system shall be included in the calculations/study. This equipment shall include the bus duct cable tap boxes, transformer enclosures and other similar enclosures/equipment. These items shall be included in the study and labeled since the incident energy at these enclosures is typically less than the incident energy available at the main panel. Personnel could make system measurements at these locations while exposed to a lower incident energy.

**e.** Drawings and general provisions of the Contract Documents, including General Conditions, Special Conditions, and other sections apply to this section.

## 1.2 DESCRIPTION

**a.** Provide all labor, materials, and equipment necessary to properly and completely perform a Power Systems Study for the electrical distribution and control equipment and submit results in a report.

**b.** Electrical distribution and control equipment is to include all equipment installed under this contract and all existing equipment that this project is connecting to, complete from new equipment to existing power company transformer(s) via all applicable existing power distribution and control equipment.

**c.** Provide an up to date electrical system single-line diagram as required by NFPA 70E, "Standard for Electrical Safety in the Workplace," as referenced in OSHA 29 CFR 1910 Subpart S. This information shall include nameplate data for electrical components (e.g. transformers, medium voltage switchgear, panelboards, switchboards, motor control centers, etc.) for all portions of the electrical system from the utility interface through the lowest rated panel to each piece of utilization equipment.

**d.** Cable sizes, types and lengths between electrical equipment components and up to date utility source data shall be provided for an accurate single-line representation of the electrical system. Unique characteristics of the equipment installation shall be provided which may impact the magnitude of the potential hazard (e.g. open space versus enclosure). Overcurrent device settings shall be verified.

**e.** Data collection may require removal of barriers, opening of front panels, etc. while equipment is energized. The Contractor must provide proof (written documentation) that its employees working on the premises have been properly trained in the use and application of personal protective equipment (PPE) and the hazards of working on or near energized equipment. The Contractor shall provide its own PPE protection, as a minimum, conforming with the existing incident energy warning labels or the tables in NFPA 70E, whichever is greater.

**f.** The Contractor shall be responsible for obtaining all required data of all equipment. **The Contractor shall verify all existing data provided in the Contract Documents.**

**g.** The study shall verify adequacy of all equipment implemented under these specifications and to verify the correct application of circuit protective devices and other system components specified completely coordinated with the existing system.

**h.** A comprehensive analysis of the electrical systems noted above shall be performed for all equipment. This analysis shall include the following:

.Short Circuit Study – A short circuit analysis shall be performed in accordance with ANSI standard C37 and IEEE standard 141-1993 (Red Book) for each electrical component as defined in "Section A". Compare short circuit current to equipment ratings to determine if overburdening of equipment exists. For all new work, replace all overburdened equipment with equipment meeting the short circuit requirements. For existing panels being refed note overburdened equipment in report.

1. Coordination Study – A coordination study shall be performed in accordance with IEEE 242-2001 "Buff" to determine the proper overcurrent device settings that will balance system reliability through selective coordination while minimizing the magnitude of an electrical arc flash hazard incident.

2. Incident Energy Study – An incident energy study shall be done in accordance with the IEEE 1584-2018, "IEEE Guide for Performing Arc Flash Hazard Calculations" as referenced in NFPA 70E, "Standard for Electrical Safety in the Workplace", latest revision, in order to quantify the hazard for selection of personal protective equipment (PPE). Tables that assume fault current levels and clearing time for proper PPE selection are not acceptable.

**i.** Reconcile arc flash protective device setting recommendations with the protective device time-current coordination study.

**j.** Adjust the System Design to optimize the results of the study as it relates to safety and reliable electrical system operation (e.g. overcurrent device settings, working distances, current limiting devices). This includes mitigation, where possible, of incident energy levels that exceed 40 calories/$cm^2$. A qualified Engineer with power systems design experience shall provide this assistance

**k.** The intent /goal of the protective system included herein is to establish arc flash levels that result in an incident energy of 8 cal/$cm^2$ or less. The incident energy goal of 8 cal/$cm^2$ or less may not be achievable on the line side of the main service equipment.

**l.** Identify locations where 8 cal/$cm^2$ or less cannot be achieved.

**m.** The study shall address the case when the system is being powered from the normal source as well as from the on-site generating source.

**n.** Minimum as well as maximum possible fault conditions shall be covered in the study.

**o.** Fault conditions of all motors shall be considered.

## 1.3 REFERENCES

**a.** Institute of Electrical and Electronics Engineers, Inc. (IEEE):

1. IEEE 141 – Recommended Practice for Electric Power Distribution and Coordination of Industrial and Commercial Power Systems
2. IEEE 242 – Recommended Practice for Protection and Coordination of Industrial and Commercial Power Systems
3. IEEE 399 – Recommended Practice for Industrial and Commercial Power System Analysis
4. IEEE 241 – Recommended Practice for Electric Power Systems in Commercial Buildings
5. IEEE 1015 – Recommended Practice for Applying Low-Voltage Circuit Breakers Used in Industrial and Commercial Power Systems.
6. IEEE 1584 - Guide for Performing Arc-Flash Hazard Calculations

**b.** American National Standards Institute (ANSI):

1. ANSI C57.12.00 – Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers
2. ANSI C37.13 – Standard for Low Voltage AC Power Circuit Breakers Used in Enclosures
3. ANSI C37.010 – Standard Application Guide for AC High Voltage Circuit Breakers Rated on a Symmetrical Current Basis
4. ANSI C 37.41 – Standard Design Tests for High Voltage Fuses, Distribution Enclosed Single-Pole Air Switches, Fuse Disconnecting Switches and Accessories.

**c.** The National Fire Protection Association (NFPA):

1. NFPA 70 - National Electrical Code, latest edition
2. NFPA 70E – Standard for Electrical Safety in the Workplace

## 1.4 SUBMITTALS FOR REVIEW/APPROVAL

**a.** The short-circuit, component burden, protective device coordination and arc-flash study results shall be submitted prior to receiving final approval of the distribution equipment shop drawings and prior to release of equipment drawings for manufacturing. This preliminary submittal of study data shall be sufficient to ensure that the selection of device and characteristics will be satisfactory.

## 1.5 SUBMITTALS FOR CONSTRUCTION

**a.** The results of each short-circuit, component burden, protective device coordination and arc-flash study shall be summarized in a final report. The final accepted study shall be provided on CD in PDF format.

**b.** The report shall include the following sections:

1. Executive Summary.
2. Descriptions, purpose, basis and scope of the study
3. Tabulations of circuit breaker, fuse and other protective device ratings versus calculated short circuit duties
4. Protective device time versus current coordination curves, tabulations of relay and circuit breaker trip unit settings, fuse selection
5. Fault current calculations including a definition of terms and guide for interpretation of the computer printout
6. Details of the incident energy and flash protection boundary calculations
7. Recommendations for system improvements, where needed
8. One-line diagram

**c.** Arc flash labels shall be provided in hard copy for review by the Engineer. Once accepted the labels shall be printed and installed by the Contractor. Label placement shall be consistent. Labels shall be placed square, plumb and level.

**d.** Report shall include:

1. Available fault current at each equipment location with comparison to equipment rating
2. Overcurrent device settings (e.g. pick-up, time delay, curve), “as found” and “as recommended”
3. Incident energy level (calories/$cm^2$) for each equipment location and recommended PPE
4. Overcurrent device coordination curves including related section of the single-line diagram
5. List of prohibited energized work locations based on arc flash results.

### 1.6 QUALIFICATIONS

**a.** The short-circuit, protective device coordination and arc flash hazard analysis studies shall be conducted under the supervision and approval of a Registered Professional Electrical Engineer skilled in performing and interpreting the power system studies. The Registered Professional Electrical Engineer shall be licensed in the state where the project is located.

**b.** The Registered Professional Electrical Engineer shall be a full-time employee of the equipment manufacturer or an approved engineering firm.

**c.** The Registered Professional Electrical Engineer shall have a minimum of five (5) years of experience in performing power system studies.

**d.** The equipment manufacturer or approved engineering firm shall demonstrate experience with Arc Flash Hazard Analysis by submitting names of at least ten actual arc flash hazard analysis it has performed.

### 1.7 COMPUTER ANALYSIS SOFTWARE

**a.** The studies shall be performed using the latest revision of the SKM Systems Analysis Power*Tools for Windows (PTW) software program or prior approved equivalent.

## PRODUCTS

### 2.1 STUDIES

**a.** Contractor to furnish short-circuit and protective device coordination studies as prepared by equipment manufacturer or an approved engineering firm.

**b.** The Contractor shall furnish an Arc Flash Hazard Analysis Study per NFPA 70E, 2021 - Standard for Electrical Safety in the Workplace.

### 2.2 DATA COLLECTION

**a.** Contractor shall furnish all data as required by the power system studies. The Engineer performing the short-circuit, protective device coordination and arc flash hazard analysis studies shall furnish the Contractor with a listing of required data after award of the contract. The Contractor shall expedite collection of the data to assure completion of the studies as required for final approval of the distribution equipment shop drawings and/or prior to the release of the equipment for manufacturing.

**b.** Source combination shall include present and future motors and generators.

**c.** Load data utilized may include existing and proposed loads obtained from Contract Documents provided by Architect, or Contractor when available.

**d.** Include fault contribution of existing motors in the study. The Contractor shall obtain required existing equipment data, if necessary, to satisfy the study requirements.

## 2.3 SHORT-CIRCUIT AND PROTECTIVE DEVICE EVALUATION STUDY

**a.** Use actual conductor impedances if known. If unknown, use typical conductor impedances based on IEEE Standard 141-1993.

**b.** Minimum transformer design impedances shall be used when test impedances are not available.

**c.** Provide the following:

1. Calculation methods and assumptions
2. Selected base per unit quantities
3. One-line diagram of the system being evaluated
4. Source impedance data, including electric utility system and motor fault contribution characteristics
5. Tabulations of calculated quantities
6. Results, conclusions, and recommendations.

**d.** Calculate short-circuit momentary and interrupting duties for a three-phase bolted fault at each:

1. Electric utility's supply termination point
2. Incoming switchgear
3. Unit substation primary and secondary terminals
4. Low voltage switchgear
5. Motor control centers
6. Standby generators and automatic transfer switches
7. Branch circuit panelboards
8. Other significant locations throughout the system.

**e.** For grounded systems, provide a bolted line-to-ground fault current study for areas as defined for the three-phase bolted fault short-circuit study.

**f.** Protective Device Evaluation:

1. Evaluate equipment and protective devices and compare to short circuit ratings
2. Adequacy of switchgear, motor control centers, and panelboard bus bars to
3. Notify Architect in writing, of existing, circuit protective devices improperly rated for the calculated available fault current.

## 2.4 PROTECTIVE DEVICE COORDINATION STUDY

**a.** Proposed protective device coordination time-current curves (TCC) shall be displayed on log-log scale graphs.

**b.** Include on each TCC graph, a complete title and one-line diagram with legend identifying the specific portion of the system covered.

**c.** Terminate device characteristic curves at a point reflecting maximum symmetrical or asymmetrical fault current to which the device is exposed.

**d.** Identify the device associated with each curve by manufacturer type, function, and, if applicable, tap, time delay, and instantaneous settings recommended.

**e.** Plot the following characteristics on the TCC graphs, where applicable:

1. Electric utility's overcurrent protective device
2. Medium voltage equipment overcurrent relays
3. Medium and low voltage fuses including manufacturer's minimum melt, total clearing, tolerance, and damage bands
4. Low voltage equipment circuit breaker trip devices, including manufacturer's tolerance bands
5. Transformer full-load current, magnetizing inrush current, and ANSI through-fault protection curves
6. Conductor damage curves
7. Ground fault protective devices, as applicable
8. Pertinent motor starting characteristics and motor damage points, where applicable
9. Pertinent generator short-circuit decrement curve and generator damage point
10. The largest feeder circuit breaker in each motor control center and applicable panelboard.

**f.** Provide adequate time margins between device characteristics such that selective operation is provided, while providing proper protection.

## 2.5 ARC FLASH HAZARD ANALYSIS

**a.** The arc flash hazard analysis shall be performed according to the IEEE Std. 1584-2018 equations that are presented in NFPA 70E-2021.

**b.** The flash protection boundary and the incident energy shall be calculated at all significant locations in the electrical distribution system (switchboards, switchgear, motor-control centers, panelboards, busway and splitters) where work could be performed on energized parts.

**c.** The Arc-Flash Hazard Analysis shall include all utilization equipment.

**d.** Safe working distances shall be based upon the calculated arc flash boundary considering an incident energy of 1.2 cal/cm$^2$.

**e.** When appropriate, the short circuit calculations and the clearing times of the phase overcurrent devices will be retrieved from the short-circuit and coordination study model. Ground overcurrent relays should not be taken into consideration when determining the clearing time when performing incident energy calculations

**f.** The short-circuit calculations and the corresponding incident energy calculations for multiple system scenarios must be compared and the greatest incident energy must be uniquely reported for each equipment location. Calculations must be performed to represent the maximum and minimum contributions of fault current magnitude for all normal and emergency operating conditions. The minimum calculation will assume that the utility contribution is at a minimum and will assume a minimum motor contribution (all motors off). Conversely, the maximum calculation will assume a maximum contribution from the utility and will assume the

maximum amount of motors to be operating. Calculations shall take into consideration the parallel operation of synchronous generators with the electric utility, where applicable.

**g.** The incident energy calculations must consider the accumulation of energy over time when performing arc flash calculations on buses with multiple sources. Iterative calculations must take into account the changing current contributions, as the sources are interrupted or decremented with time. Fault contribution from motors and generators should be decremented as follows:

1. Fault contribution from induction motors should not be considered beyond 3-5 cycles.
2. Fault contribution from synchronous motors and generators should be decayed to match the actual decrement of each as closely as possible (e.g. contributions from permanent magnet generators will typically decay from 10 per unit to 3 per unit after 10 cycles).

**h.** For each equipment location with a separately enclosed main device calculations for incident energy and flash protection boundary shall include both the line and load side of the main breaker.

**i.** When performing incident energy calculations on the line side of a main breaker the line side and load side contributions must be included in the fault calculation.

**j.** Any out of sequence coordination should be checked amongst all devices within the branch containing the immediate protective device upstream of the calculation location and the calculation should utilize the fastest device to compute the incident energy for the corresponding location.

**k.** Arc Flash calculations shall be based on actual overcurrent protective device clearing time. Maximum clearing time will be capped at 2 seconds based on IEEE Std. 1584-2018. Where it is not physically possible to move outside of the flash protection boundary in less than 2 seconds during an arc flash event, a maximum clearing time based on the specific location shall be utilized.

## 2.6 REPORT SECTIONS

**a.** Input data shall include, but not be limited to the following:

1. Feeder input data including feeder type (cable or bus), size, length, number per phase, conduit type (magnetic or non-magnetic) and conductor material (copper or aluminum).
2. Transformer input data, including winding connections, secondary neutral-ground connection, primary and secondary voltage ratings, kVA rating, impedance, % taps and phase shift.
3. Reactor data, including voltage rating, and impedance.
4. Generation contribution data, (synchronous generators and Utility), including short-circuit reactance (X'd), rated MVA, rated voltage, three-phase and single line-ground contribution (for Utility sources) and X/R ratio.
5. Motor contribution data (induction motors and synchronous motors), including short-circuit reactance, rated horsepower or kVA, rated voltage, and X/R ratio.

**b.** Short-Circuit Output Data shall include, but not be limited to the following reports:

1. Low Voltage Fault Report shall include a section for three-phase and unbalanced fault calculations and shall show the following information for each applicable location:

    a) Voltage
    b) Calculated fault current magnitude and angle
    c) Fault point X/R ratio
    d) Equivalent impedance

2. Momentary Duty Report shall include a section for three-phase and unbalanced fault calculations and shall show the following information for each applicable location:

    a) Voltage
    b) Calculated symmetrical fault current magnitude and angle
    c) Fault point X/R ratio
    d) Calculated asymmetrical fault currents

        1) Based on fault point X/R ratio
        2) Based on calculated symmetrical value multiplied by 1.6
        3) Based on calculated symmetrical value multiplied by 2.7

    e) Equivalent impedance

3. Interrupting Duty Report shall include a section for three-phase and unbalanced fault calculations and shall show the following information for each applicable location:

    a) Voltage
    b) Calculated symmetrical fault current magnitude and angle
    c) Fault point X/R ratio
    d) No AC Decrement (NACD) Ratio
    e) Equivalent impedance
    f) Multiplying factors for 2, 3, 5 and 8 cycle circuit breakers rated on a symmetrical basis
    g) Multiplying factors for 2, 3, 5 and 8 cycle circuit breakers rated on a total basis

**c.** Recommended Protective Device Settings:

1. Phase and Ground Relays:

    a) Current transformer ratio
    b) Current setting
    c) Time setting
    d) Instantaneous setting
    e) Recommendations on improved relaying systems, if applicable.

2. Circuit Breakers:

   a) Adjustable pickups and time delays (long time, short time, ground)
   b) Adjustable time-current characteristic
   c) Adjustable instantaneous pickup
   d) Recommendations on improved trip systems, if applicable.

**d.** Incident energy and flash protection boundary calculations:

1. Arcing fault magnitude
2. Protective device clearing time
3. Duration of arc
4. Arc flash boundary
5. Working distance
6. Incident energy
7. Hazard risk category
8. Recommendations for arc flash energy reduction

## EXECUTION

### 3.1 FIELD ADJUSTMENT

**a.** Adjust relay and protective device settings according to the recommended settings table provided by the coordination study. Field adjustments to be completed by the Contractor and/or electrical equipment manufacturer's field service personnel.

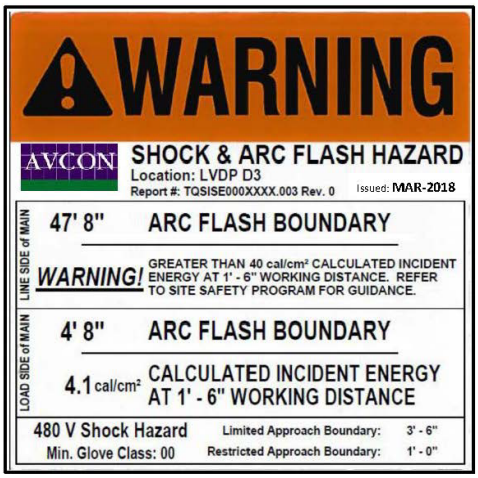
**b.** Make minor modifications to equipment as required to accomplish conformance with short circuit and protective device coordination studies.

**c.** Notify Architect in writing of any required major equipment modifications.

### 3.2 ARC FLASH WARNING LABELS

**a.** The Contractor of the Arc Flash Hazard Analysis shall provide a 3.5 in. x 5 in. thermal transfer type label of high adhesion polyester for each work location analyzed.

**b.** All labels will be based on recommended overcurrent device settings and will be provided after the results of the analysis have been presented to the Architect and after any system changes, upgrades or modifications have been incorporated in the system.



**c.** Labels shall be machine printed, with no field markings.

**d.** Arc flash labels shall be provided in the following manner and all labels shall be based on recommended overcurrent device settings.

1. For each 600, 480 and applicable 240 volt, 208-volt panelboard, safety switch, etc. at least one arc flash label shall be provided.
2. For each motor control center, one arc flash label shall be provided.
3. For each switchboard, one arc flash label shall be provided.
4. For each main switchboard with Utility Service, one flash label shall be provided for each section.
5. For each piece of utilization equipment, one label shall be provided for each section.
6. Every piece of equipment that could/may be required to be opened or adjusted during troubleshooting or repair shall be equipped with an arc-flash label.

**e.** Labels shall be field installed by the Contractor.

**f.** Available Fault Current NEC 110.24, Field Marking. Service equipment shall be legibly marked in the field with the maximum available fault current.

### 3.3 ARC FLASH TRAINING

**a.** The Engineer of the Arc Flash Hazard Analysis shall train the Owner's qualified electrical personnel of the potential arc flash hazards associated with working on energized equipment (minimum of 4 hours). The training shall be certified for continuing education units (CEUs) by the International Association for Continuing Education Training (IACET) or equivalent.

## METHOD OF MEASUREMENT

### 4.1 METHOD OF MEASUREMENT

**a.** The items described in Item 26 08 00.03 are incidental to other pay items and shall not be measured for payment.

## BASIS OF PAYMENT

### 5.1 BASIS OF PAYMENT

**a.** No direct payment shall be made for the work described in Item 26 08 00.03. The work described in Item 26 08 00.03 is incidental to L-109 pay item and shall be paid for in the respective bid item of which it is a component part.

**END OF ITEM SP-109S-26 08 00.03**

# ITEM SP-109S-26 08 20 DEMONSTRATION OF COMPLETED ELECTRICAL SYSTEMS

## GENERAL

### 1.1 RELATED DOCUMENTS

**a.** Drawings and general provisions of the Contract, including Contractual Conditions and Division 01 Specification sections apply to this section.

### 1.2 SUMMARY

**a.** This section includes the requirements for demonstration of completed electrical system.

### 1.3 DESCRIPTION

**a.** Demonstrate to Owner/Engineer/RPR the essential features of the following electrical systems:

**1.** Systems specified in Division 26.

**2.** Electrical Entrance Equipment

**a)** Circuit breakers

**b)** Transfer switches – manual & automatic

**c)** Fuses and fuse holders

**d)** Meters (where applicable)

**3.** Miscellaneous Electrical Equipment

**a)** Electrical systems controls and equipment

**b)** Electrical power equipment

**c)** Motor control devices

**d)** Relays

**e)** Special transformers

**f)** Starting devices

**g)** Quick connects

**h)** Surge suppression equipment

**4.** Lightning Protection System

**5.** Distribution Equipment

**a)** Lighting and appliance panelboards

**b)** Distribution panels

**c)** Switchboard

**6.** Standby Electrical Equipment

**a)** Batteries

**b)** Battery chargers

**c)** Controls and alarms

**d)** Emergency generators, transfer switches,

**7.** Wiring Devices

**a)** Low-voltage controls

**b)** Switches: regular, time

**b.** After the completion of testing, each system shall be demonstrated to operate successfully as intended.

## 1.4 TIME

**a.** The demonstration shall be held upon completion of all systems at a date to be agreed upon in writing by the RPR.

## 1.5 ATTENDING PARTIES

**a.** Provide the demonstration in the presence of the Owner, Engineer, RPR and the manufacturer's representative.

## 1.6 DEMONSTRATION

**a.** Demonstrate the function and location (in the structure) of each system and indicate its relationship to the riser diagrams and drawings.

**b.** Demonstrate by "start-stop operation" how to work the controls, how to reset protective devices, how to replace fuses, and what to do in case of emergency.

**c.** Certificate of Completed Demonstration

## PRODUCTS (Not Applicable)

## EXECUTION

### 3.1 EXECUTION

**a.** After the completion of testing, each system shall be demonstrated to operate successfully as intended.

**b.** The demonstration shall be held upon completion of all systems at a date to be agreed upon in writing by the RPR.

**c.** Provide the demonstration in the presence of the Owner, RPR and the manufacturer's representative.

**d.** Demonstrate the function and location (in the structure) of each system and indicate its relationship to the riser diagrams and drawings.

## METHOD OF MEASUREMENT

### 4.1 METHOD OF MEASUREMENT

**a.** The items described in Item 26 08 20 are incidental to other pay items and shall not be measured for payment.

## BASIS OF PAYMENT

### 5.1 BASIS OF PAYMENT

**a.** No direct payment shall be made for the work described in Item 26 08 20. The work described in Item 26 08 20 is incidental to L-109 pay item and shall be paid for in the respective bid item of which it is a component part.

**END OF ITEM SP-109S-26 08 20**

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# SECTION SP-109-26 23 00 – AUTOMATIC TRANSFER SWITCH

## PART 1 - GENERAL

### 1.1 SCOPE

**a.** Furnish and install automatic transfer switches (ATS) with number of poles, amperage, voltage, withstand and close-on ratings as shown In the Contract Documents. Each automatic transfer shall consist of an inherently double throw power transfer switch mechanism and a microprocessor controller to provide automatic operation. All transfer switches and controllers shall be the products of the same manufacturer.

### 1.2 CODES AND STANDARDS

**a.** The automatic transfer switches and controls shall conform to the requirements of:

**1.** UL 1008 - Standard for Transfer Switch Equipment
**2.** IEC 60947-6-1 Low-voltage Switchgear and Control gear; Multifunction equipment; Automatic Transfer Switching Equipment
**3.** NFPA 70 - National Electrical Code
**4.** NFPA 99 - Essential Electrical Systems for Health Care Facilities
**5.** NFPA 110 - Emergency and Standby Power Systems
**6.** IEEE Standard 446 - IEEE Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications
**7.** NEMA Standard ICS10-1993 (formerly ICS2-447) - AC Automatic Transfer Switches
**8.** UL 508 Industrial Control Equipment

### 1.3 ACCEPTABLE MANUFACTURERS

**a.** Automatic transfer switches shall be ASCO 300 Series or accepted equivalent.

## PART 2 - PRODUCTS

### 2.1 MECHANICALLY HELD TRANSFER SWITCH

**a.** The transfer switch shall be electrically operated and mechanically held. The electrical operator shall be a momentarily energized, single-solenoid mechanism. Main operators which include overcurrent disconnect devices, linear motors or gears shall not be acceptable. The switch shall be mechanically interlocked to ensure only two possible positions, normal or emergency.

**b.** All transfer switch sizes shall use only one type of main operator for ease of maintenance and commonality of parts.

**c.** The switch shall be positively locked and unaffected by momentary outages, so that contact pressure is maintained at a constant value and contact temperature rise is minimized for maximum reliability and operating life.

**d.** All main contacts shall be silver composition. Switches rated 800 amperes and above shall have segmented, blow-on construction for high withstand and close-on capability and be protected by separate arcing contacts.

**e.** Inspection of all contacts shall be possible from the front of the switch without disassembly of operating linkages and without disconnection of power conductors. Switches rated 600 amps and higher shall have front removable and replaceable contacts. All stationary and moveable contacts shall be replaceable without removing power conductors and/or bus bars.

**f.** Designs utilizing components of molded-case circuit breakers, contactors, or parts thereof, which are not intended for continuous duty, repetitive switching or transfer between two active power sources are not acceptable.

**g.** Where neutral conductors must be switched as shown on the plans, the ATS shall be provided with fully rated overlapping neutral transfer contacts. The neutrals of the normal and emergency power sources shall be connected together only during the transfer and retransfer operation and remain connected together until power source contacts close on the source to which the transfer is being made. The overlapping neutral contacts shall not overlap for a period greater than 100 milliseconds. Neutral switching contacts which do not overlap are not acceptable.

## 2.2 MICROPROCESSOR CONTROLLER

**a.** The controller's sensing and logic shall be provided by a single built-in microprocessor for maximum reliability, minimum maintenance, and the ability to communicate serially through an optional serial communication module.

**b.** Voltage sensing shall be true RMS type and shall be accurate to ± 1% of nominal voltage. Frequency sensing shall be accurate to ± 0.1 Hz. The panel shall be capable of operating over a temperature range of -20 to +60 degrees C and storage from -55 to +85 degrees C.

**c.** All customer connections shall be wired to a common terminal block to simplify field-wiring connections.

**d.** The controller shall meet or exceed the requirements for Electromagnetic Compatibility (EMC) as follows:

1. EN 55011:1991 Emission standard - Group 1, Class A
2. EN 50082-2:1995 Generic immunity standard, from which:
3. EN 61000-4-2:1995 Electrostatic discharge (ESD) immunity
4. ENV 50140:1993 Radiated Electro-Magnetic field immunity
5. EN 61000-4-4:1995 Electrical fast transient (EFT) immunity
6. EN 61000-4-5:1995 Surge transient immunity
7. EN 61000-4-6:1996 Conducted Radio-Frequency field immunity

## 2.3 ENCLOSURE

**a.** The ATS enclosure shall be the NEMA Type as noted in the Contract Documents. See Contract Documents for additional requirements.

**b.** All standard and optional door-mounted switches and pilot lights shall be 16-mm industrial grade type or equivalent for easy viewing & replacement. Door controls shall be provided on a separate removable plate, which can be supplied loose for open type units.

# PART 3 - OPERATION

## 3.1 CONTROLLER DISPLAY AND KEYPAD

**a.** A four-line, 20 character LCD display and keypad shall be an integral part of the controller for viewing all available data and setting desired operational parameters. Operational parameters shall also be available for viewing and limited control through the serial communications input port. The following parameters shall only be adjustable via DIP switches on the controller:

1. Nominal line voltage and frequency
2. Single or three phase sensing
3. Operating parameter protection
4. Transfer operating mode configuration
   Open transition

**b.** All instructions and controller settings shall be easily accessible, readable and accomplished without the use of codes, calculations, or instruction manuals. See Contract Documents for additional requirements.

## 3.2 VOLTAGE, FREQUENCY AND PHASE ROTATION SENSING

**a.** Voltage and frequency on both the normal and emergency sources (as noted below) shall be continuously monitored, with the following pickup, dropout, and trip setting capabilities (values shown as % of nominal unless otherwise specified):

| Parameter | Sources | Dropout / Trip | Pickup / Reset |
|---|---|---|---|
| Undervoltage | N&E,3$\phi$ | 70 to 98% | 85 to 100% |
| Overvoltage | N&E,3$\phi$ | 102 to 115% | 2% below trip |
| Underfrequency | N&E | 85 to 98% | 90 to 100% |
| Overfrequency | N&E | 102 to 110% | 2% below trip |
| Voltage unbalance | N&E | 5 to 20% | 1% below dropout |

**b.** Repetitive accuracy of all settings shall be within ± 0.5% over an operating temperature range of -20°C to 60°C.

**c.** Voltage and frequency settings shall be field adjustable in 1% increments either locally with the display and keypad or remotely via serial communications port access.

**d.** The controller shall be capable (when activated by the keypad or through the serial port) of sensing the phase rotation of both the normal and emergency sources. The source shall be considered unacceptable if the phase rotation is not the preferred rotation selected (ABC or CBA).

**e.** Source status screens shall be provided for both normal & emergency to provide digital readout of voltage on all 3 phases, frequency, and phase rotation.

## 3.3 TIME DELAYS

**a.** An adjustable time delay of 0 to 6 seconds shall be provided to override momentary normal source outages and delay all transfer and engine starting signals. Capability shall be provided to extend this time delay to 60 minutes by providing an external 24 VDC power supply.

**b.** A time delay shall be provided on transfer to emergency, adjustable from 0 to 60 minutes, for controlled timing of transfer of loads to emergency.

**c.** Two time delay modes (which are independently adjustable) shall be provided on re-transfer to normal. One time delay shall be for actual normal power failures and the other for the test mode function. The time delays shall be adjustable from 0 to 60 minutes. Time delay shall be automatically bypassed if the emergency source fails and the normal source is acceptable.

**d.** A time delay shall be provided on shut down of engine generator for cool down, adjustable from 0 to 60 minutes.

**e.** The controller shall also include the following built-in time delays for optional Closed Transition and Delayed Transition operation:.

**f.** All time delays shall be adjustable by using the LCD display and keypad or with a remote device connected to the serial communications port.

## 3.4 ADDITIONAL FEATURES

**a.** A three position momentary-type test switch shall be provided for the test / automatic / reset modes. The test position will simulate a normal source failure. The reset position shall bypass the time delays on either transfer to emergency or retransfer to normal. Optional maintained type test switch shall be available.

**b.** A SPDT contact, rated 5 amps at 30 VDC, shall be provided for a low-voltage engine start signal. The start signal shall prevent dry cranking of the engine by requiring the generator set to reach proper output and run for the duration of the cool down setting, regardless of whether the normal source restores before the load is transferred.

**c.** Auxiliary contacts rated 10 amps, 250 VAC shall be provided consisting of one contact, closed when the ATS is connected to the normal source and one contact closed, when the ATS is connected to the emergency source. Additionally, source acceptability contact should be provided. 2 pole double throw contacts that operate when emergency and normal source voltage is present at transfer switch terminal.

**d.** LED indicating lights (16 mm industrial grade, type 12) shall be provided; one to indicate when the ATS is connected to the normal source (green) and one to indicate when the ATS is connected to the emergency source (red).

**e.** LED indicating lights (16 mm industrial grade, type 12) shall be provided and energized by controller outputs. The lights shall provide true source availability of the normal and emergency sources, as determined by the voltage sensing trip and reset settings for each source.

**f.** The following features shall be built-in to the controller, but capable of being activated through keypad programming or the serial port only when required by the user:

1. Provide the ability to select “commit/no commit to transfer” to determine whether the load should be transferred to the emergency generator if the normal source restores before the generator is ready to accept the load.

2. An in-phase monitor shall be provided in the controller. The monitor shall control transfer so that motor load inrush currents do not exceed normal starting currents, and shall not require external control of power sources. The in-phase monitor shall be specifically designed for and be the product of the ATS manufacturer. The in-phase monitor shall be equal to ASCO Feature 27.

3. The controller shall be capable of accepting a normally open contact that will allow the transfer switch to function in a non-automatic mode using an external control device.

4. Engine Exerciser - The controller shall provide an internal engine exerciser. The engine exerciser shall allow the user to program up to seven different exercise routines. For each routine, the user shall be able to:

a) Enable or disable the routine.
b) Enable or disable transfer of the load during routine.
c) Set the start time:

    1) time of day
    2) day of week
    3) week of month (1st, 2nd, 3rd, 4th, alternate or every)

d) Set the duration of the run.

e) At the end of the specified duration the switch shall transfer the load back to normal and run the generator for the specified cool down period. A 10-year life battery that supplies power to the real time clock in the event of a power loss will maintain all time and date information.

5. The following feature shall be built - into the controller, but capable of being activated through keypad programming or the communications interface port.

Note: The transfer switch will operate in a non-automatic mode with this feature activated.

**g.** Terminals shall be provided for a remote contact which opens to signal the ATS to transfer to emergency and for remote contacts which open to inhibit transfer to emergency and/or retransfer to normal. Both of these inhibit signals can be activated through the keypad or serial port.

**h.** System Status - The controller LCD display shall include a “System Status” screen which shall be readily accessible from any point in the menu by depressing the “ESC” key a maximum of two times. This screen shall display a clear description of the active operating sequence and switch position. For example:

Normal Failed

Load on Normal

TD Normal to Emerg

2 min 15 sec

Controllers that require multiple screens to determine system status or display “coded” system status messages, which must be explained by references in the operator’s manual, are not permissible.

1. Self Diagnostics - The controller shall contain a diagnostic screen for the purpose of detecting system errors. This screen shall provide information on the status input signals to the controller which may be preventing load transfer commands from being completed.

**i. DATA LOGGING** – The controller shall have the ability to log data and to maintain the last 99 events, even in the event of total power loss. The following events shall be time and date stamped and maintained in a non-volatile memory:

1. Event Logging

   a) Data and time and reason for transfer normal to emergency.
   b) Data and time and reason for transfer emergency to normal.
   c) Date and time and reason for engine start.
   d) Date and time engine stopped.
   e) Date and time emergency source available.
   f) Date and time emergency source not available.

2. Statistical Data

   a) Total number of transfers.
   b) Total number of transfers due to source failure.
   c) Total number of days controller is energized.
   d) Total number of hours both normal and emergency sources are available.

**j. COMMUNICATIONS MODULE** - An Ethernet interface shall be installed in the ATS controller to enable Modbus/TPC communications. The Ethernet communications module shall

provide speed of 10/100Mbps and 128-bit encryption when required. Web application access should be provided for up to 8 clients or third-party Modbus devices. This module shall allow for the seamless integration of existing or new communication transfer devices. The Ethernet communication interface shall be equal to ASCO Accessory 72E.

**k. EXTERNAL DC POWER SUPPLY** – An optional provision shall be provided to connect an external 24 VDC power supply to allow the LCD and power manager/ to be functional when both power sources are dead or the switch is in the isolation position. Feature should provide and extended engine starting time delay (0-60 min 59 sec). This option shall be equivalent to ASCO accessory 1G2.

## PART 4 - ADDITIONAL REQUIREMENTS

### 4.1 WITHSTAND AND CLOSING RATINGS

**a.** The ATS shall be rated to close on and withstand the available RMS symmetrical short circuit current at the ATS terminals with the type of overcurrent protection shown on the plans.

**b.** The ATS shall be UL listed in accordance with UL 1008 and be labeled in accordance with that standard's 1½ and 3 cycle, long-time ratings. ATSs which are not tested and labeled with 1½ and 3 cycle (any breaker) ratings and have series, or specific breaker ratings only, shall not be acceptable.

### 4.2 TESTS AND CERTIFICATION

**a.** The complete ATS shall be factory tested to ensure proper operation of the individual components and correct overall sequence of operation and to ensure that the operating transfer time, voltage, frequency and time delay settings are in compliance with the specification requirements.

**b.** The ATS manufacturer shall be certified to ISO 9001 International Quality Standard and the manufacturer shall have third party certification verifying quality assurance in design/development, production, installation and servicing in accordance with ISO 9001.

### 4.3 SERVICE REPRESENTATION

**a.** The ATS manufacturer shall maintain a national service organization of company-employed personnel located throughout the contiguous United States. The service center's personnel must be factory trained and must be on call 24 hours a day, 365 days a year. In addition, the manufacturer shall have a service technician located within a 75-mile radius of the jobsite. Third party service centers do not met this requirement.

**b.** The manufacturer shall maintain records of each switch, by serial number, for a minimum of 20 years.

**c.** Warranty - Equipment furnished under this section shall be guaranteed against defective parts or workmanship under terms of the manufacturer's and dealer's standard warranties, but in no event shall it be for a period of less than two (2) years from date of initial acceptance of the system.

## PART 5 – METHOD OF MEASUREMENT

### 5.1 METHOD OF MEASUREMENT

**a.** The items described in this item are incidental to other items and shall not be measured for payment.

## PART 6 – BASIS OF PAYMENT

### 6.1 BASIS OF PAYMENT

**a.** No direct payment shall be made for the work described in Item 26 23 00. The work described in Item 26 23 00 is incidental to the respective L-109 pay item and shall be paid for in the respective bid item of which it is a component part.

**END OF SECTION SP-109S-26 23 00**

# SP-109S-26 23 10 MANUAL TRANSFER SWITCH WITH INTEGRATED LOAD BANK AND GENERATOR QUICK CONNECTS

## PART 1 – GENERAL

### 1.1 SCOPE

**A.** Furnish and install manual transfer switches as shown on the plans. Each manual transfer switch shall consist of a 3 position center off mechanically held power transfer switch unit and a mechanical operating mechanism to provide complete manual operation. All transfer switches and mechanical operating mechanisms shall be the product of the same manufacturer.

Manual transfer switch number of poles, amperage, voltage criteria denoted on individual plans.

### 1.2 BASIS OF DESIGN - ACCEPTABLE MANUFACTURERS

**A.** Manual transfer switches shall be ASCO Series 300 MTDQ or accepted equivalent.

### 1.3 CODES AND STANDARDS

The manual transfer switches and accessories shall conform to the requirements of:

**A.** UL 1008 Listed for Optional Standby Transfer Switches (Manual Transfer Switches)

**B.** UL 891 Switch Boards

**C.** CSA C22.2 No.178 –1978

**D.** IEC 60947-6-1 Low – Voltage Switchgear and Controller

**E**. NFPA 70 - National Electrical Code

**F**. NFPA 99 – Essential Electrical Systems for Health Care Facilities

**G**. IEEE Standard 446 - IEEE Recommended Practice for Emergency and Standby Power Systems for Commercial and Industrial Applications

**H.** UL 508 Industrial Control Equipment

**I.** NEC Article 700.3 (F)

**J**. International Standards Organization ISO 90estrication 01: 2008

**K**. RoHs compliant (Restriction of Hazardous Substances)

**L.** Seismic qualification – International Building Code & OSHPD to SDS level of 2.5

## PART 2 – PRODUCTS

### 2.1 MECHANICALLY HELD TRANSFER SWITCH

**A.** The transfer switch unit shall be manually operated and mechanically held. The switch shall be mechanically interlocked to ensure only one of three possible positions, Source 1, Source 2, or Center Off. Fused disconnect type switches, circuit breakers, or interlocked combinations shall not be acceptable.

**B.** The switch shall be positively locked and unaffected by momentary outages so that contact pressure is maintained at a constant value and temperature rise at the contacts is minimized for maximum reliability and operating life.

**C.** All main contacts shall be silver composition. Switches rated 600 amperes and above shall have segmented blow-on construction for high withstand current capability and be protected by separate arcing contacts.

**D.** Inspection of all contacts shall be possible from the front of the switch without disassembly of operating linkages and without disconnection of power conductors.

**E.** Designs utilizing components of molded-case circuit breakers, contactors, or parts thereof which are not intended for continuous duty, repetitive switching or transfer between two active power sources are not acceptable.

**F.** Where neutral conductors must be switched, the manual transfer switch shall be provided with fully- rated neutral transfer contacts.

**G.** Where neutral conductors are to be solidly connected, a neutral terminal plate with fully-rated AL-CU pressure connectors shall be provided.

**H.** The manual transfer switch shall be tested in accordance with UL 1008 for transfer switches. Switch ratings of 260 amperes and less shall have endurance rating of 6000 cycles, 400 ampere shall have endurance rating of 4000 cycles, and 600 – 3000 ampere shall have endurance rating of 3000 cycles.

## PART 3 – OPERATION

### 3.1 MANUAL OPERATIONS PROVISIONS

**A.** The transfer switch shall be arranged for manually actuated manual operation.

**B.** The manual transfer shall be actuated via a mechanical operating mechanism.

**C.** The manual operating handle shall be capable of external operation without opening the enclosure door.

**D.** Contacts shall change states in 45ms or less.

**E.** There shall be three positions for manual operation:

1. Connected to Source 1 (preferred)
2. Connected to Source 2 (alternate)
3. Connected to center off (disconnected position)

**F.** Switch position when connected to Source 1, or Source 2 shall be pad – lockable

## 3.2 ENCLOSURE

**A**. The manual transfer switch shall be furnished in a NEMA type 3RX enclosure.

**B.** Enclosures shall be free standing, floor mounted.

**C.** 3RX enclosures shall be available in 304 or 316 stainless steel.

## 3.3 ADDITIONAL FEATURES

**A.** Mechanical position indicators (yellow) visible to the operator shall be included for Source 1 (preferred), Source 2, (alternate), and Center Off (disconnected).

**B.** LED indicators shall be provided for Source 1 (preferred), and Source 2 (alternate).

**C.** Auxiliary position indicating contacts, rated 10 amps, 250 Vac shall be provided consisting of one closed when the manual transfer switch is connected to Source 1 (preferred), and one contact closed when the manual transfer switch is connected to Source 2 (alternate)

**D.** A form A contact shall be provided to indicate switch is in the Center Off (disconnected) position.

**E.** A Load Dump disconnect breaker shall be provided between source 1 of the transfer switch and 16 Series Outlets for Load Bank Connection.

**F.** Auto Start Destination Toggle Switch shall be provided to allow for the user to select which generator the ATS will start when the engine start signal is sent from the ATS.

**G.** Dual Purpose Manual Transfer Switch with Integrated Quick Connects contains 16 Series quick connects which provides a connecting means for connecting a portable generator or a load bank.

**H.** Generator quick connects are located on the front or back side of the manual transfer switch.

1. For 400A and below models, there shall be one (1) row of up to five (5) series single pole connections.
2. For 600A - 800A models, there shall be two (2) rows of up to five (5) single pole connections.

I. Load Bank connects are located on the front side of the manual transfer switch. Neutral connections are not provided for Load Bank connections.

1. For 400A and below models, there shall be one (1) row of up to four (4) series single pole connections.
2. For 600A - 800A models, there shall be two (2) rows of up to four (4) single pole connections.

J. All electrical connectors shall be 16 Series cam type single pole connectors, available color coded as per industry standard practice:

1. 240V and below: phase 1 = black, phase 2 = red, phase 3 = blue (if required).
2. 480V: phase 1 = brown, phase 2 = orange, phase 3 = yellow.
3. Ground shall always be green.
4. Neutral shall always be white.
5. A 100% Ground shall be provided for portable generator and load bank connections.

## PART 4 – ACCESSORIES

### 4.1 OPTIONAL FEATURES

**A. Surge Suppression** – A TVSS with a surge current rating of 65kA shall be provided with individually matched fused metal oxide varistors (MOVs). It shall include LED status indication of normal operation, under voltage, power loss, phase loss or component failure. Shall include form C dry contacts for external alarm or monitoring. The unit shall be enclosed in a Noryl housing rated NEMA 4, 12, and 4X. Shall comply with UL 1449 3rd edition. (This feature shall be equal to ASCO accessory 73).

**B. Shunt Trip Option on the Load Bank Breaker- 119LC -** 24VDC Shunt Trip on Load Bank breaker, **119LE –** 48VDC Shunt Trip on Load Bank breaker **119LG –** 120VAC Shunt Trip on Load Bank breaker

**C. Power Meter** - ASCO 5210 Power Meter Connected to Load Side (135L)

**D. Phase Rotation Meter** – Furnish and install phase rotation meter.

**E. Strip Heater** – Strip heater wired to load terminals (44G).

**F. Manual Transfer Switch Position** Monitoring - In accordance with NEC section 700.3(F) the temporary source switching means shall contain a contact for indicating the permanent emergency power source is disconnected. This signal must be annunciated at the same location as the generator remote annunciator.

**G. Temporary Generator Engine start considerations** - In accordance with NEC section 700.3(F)(2) (references NEC 700.12) furnish and install engine starting wiring and components required for temporary emergency power sources, which requires the generator to start and transfer the load within 10 seconds. To comply with this requirement, engine start wiring shall be provided from the transfer switch generator start terminals to the docking station, providing a convenient point for the temporary generator installer to access the start signal wiring.

**H. Warning Nameplate** – Add phenolic nameplate RED background/white letters that states the following:

> OVERCURRENT PROTECTION FOR THE TEMPORARY GENERATOR SHALL BE PROVIDED WITH THE TEMPORARY GENERATOR. THE TEMPORARY GENERATOR OVERCURRENT PROTECTION RATING SHALL NOT EXCEED THE PERMANENT GENERATOR CIRCUIT BREAKER RATING.

**I. ACCESSORY 171 BASE PACKAGE BUNDLE** – Two form C contacts shall be connected to customer terminal block that operate when Source 1 and Source 2 voltage is present at transfer switch terminals. The following indicators shall be provided:

1. Load Connected to Source 1 (Green).
2. Load Connected to Source 2 (Red).
3. Source 1 Available (Green).
4. Source 2 Available (Red).
5. Load Disconnect (Yellow)

(This feature shall be equal to ASCO accessory 171EP1).

*Other options shall be made available phase rotation, maintained engine start switch, and keyed maintained engine start*

## PART 5 – ADDITIONAL REQUIREMENTS

### 5.1 Withstand and Closing Ratings

**A.** The manual transfer switch shall be rated to close on and withstand the available RMS symmetrical short circuit current at the manual transfer switch terminals with the type of overcurrent protection shown on the plans.

1. Source 1 WCR manual transfer switch (MTS) ratings @ 480v shall be as follows when used with specific circuit breakers or current limiting fuses:

| **MTS Size** | **Source 1 Withstand & Closing RATING MCCB** | **Source 1 W/CLF** |
|---|---|---|
| 150A – 600A | 50,000A | 200,000A |

2. Source 2 WCR MTS ratings @ 600v shall be as follows when used with any molded case circuit breaker:

| **MTS Size** | **Source 2 Withstand & Closing Rating MCCB at Source Wired to Quick Connects** |
|---|---|
| 150A – 600A | 35,000A |

## 5.2 TESTS AND CERTIFICATION

**A**. The complete manual transfer switch shall be factory tested to ensure proper operation of the individual components and correct overall sequence of operation and to ensure compliance with the specification requirements.

**B**. Upon request, the manufacturer shall provide a notarized letter certifying compliance with all of the requirements of this specification including compliance with the above codes and standards and withstand and closing ratings. The certification shall identify, by serial number(s), the equipment involved. No exceptions to the specifications, other than those stipulated at the time of the submittal, shall be included in the certification.

**C**. The manual transfer switch manufacturer shall be certified to ISO 9001: 2008 International Quality Standard and the manufacturer shall have third party certification verifying quality assurance in design/development, production, installation and servicing in accordance with ISO 9001: 2008.

## 5.3 SERVICE REPRESENTATION

**A.** The manual transfer switch manufacturer shall maintain a national service organization of company- employed personnel located throughout the contiguous United States. The service center's personnel must be factory trained and must be on call 24 hours a day, 365 days a year.

**B.** The manufacturer shall maintain records of switch shipments, by serial number, for a minimum of 20 years.

**C.** For ease of maintenance, the transfer switch nameplate shall include drawing numbers and serviceable part numbers.

# PART 6 – METHOD OF MEASUREMENT

## 6.1 METHOD OF MEASUREMENT

**A.** The items described in Item 26 23 10 are incidental to other pay items and shall not be measured for payment.

## PART 7 – BASIS OF PAYMENT

### 7.1 BASIS OF PAYMENT

**A.** No direct payment shall be made for the work described in Item 26 23 10. The work described in Item 26 23 10 is incidental to the respective L-109 pay item and shall be paid for in the respective bid item of which it is a component part.

**END OF ITEM SP-109S-26 23 10**

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# ITEM SP-109S-26 41 00 LIGHTNING PROTECTION SYSTEM

## GENERAL

### 1.1 RELATED DOCUMENTS

**a.** Drawings and general provisions of the Contract Documents, including General Conditions, Special Conditions, and other sections apply to this section.

### 1.2 SUMMARY

**a.** This section includes the requirements for provision and installation of a complete lightning protection system.

### 1.3 DESCRIPTION

**a.** The lightning protection design shown in the plans shall be considered the minimum acceptable design criteria. The lightning protection systems provided under this specification shall equal or exceed the minimum requirements shown in the plans and shall comply with this specification.

**b.** A Lightning Protection System shall be provided and installed on the generator enclosures by experienced LPI Certified or UL Listed Installers in compliance with provisions of National Fire Protection Association (NFPA) 780, Standard for the Installation of Lightning Protection Systems and Underwriters' Laboratories (UL) UL 96 and UL 96A. All equipment to that result shall be included whether or not specifically called for herein with the additional requirement that the system shall meet all the requirements of the Lightning Protection Institute (LPI).

**c.** Materials shall comply in weight, size and composition with the requirements of Underwriters' Laboratories UL 96 and NFPA 780 relating to this type of installation and shall be UL Labeled.

**d.** All materials, where available by any one manufacturer, shall be cast.

**e.** System shall be inspected by an independent third-party organization. As a result of the inspection the third party shall provide the following endorsement/accreditation.

**1.** New Installation:

a) UL Master Label Service.
b) LPI Master Label Certificate.

**2.** Reconditioned Installation:

a) UL Master Label Service.
b) LPI Reconditioned Master Label Certificate.

**3.** Modified or partial installation:

a) UL Letter of Finding.
b) LPI Limited Scope Inspection.

**4.** All prerequisite work and coordination necessary to obtain the independent third-party inspection (including required coordination/work/shop drawings, etc. prior to the actual lightning protection system installation) is the responsibility of the Contractor.

## 1.4 REFERENCES

**a.** NFPA 780 - Standard for the Installation of Lightning Protection Systems.

**b.** UL 96 – Standard for Safety - Lightning Protection Components.

**c.** UL 96A – Standard for Safety - Installation Requirements for Lightning Protection Systems.

**d.** LPI 175 – Standard for the Design – Installation – Inspection of Lightning Protection Systems.

**e.** LPI 177 – Inspection Guide for Certified Systems.

## 1.5 SUBMITTALS

**a.** Submit shop drawings showing layout of air terminals, strike termination devices, grounding electrodes, conductors, bonding connections to structure and other metal objects. Include air terminal, electrode, and conductor sizes, and connection and termination details. Shop drawings shall include complete dimensioned layout of all components, conductors, electrodes, and bonding points, and connections. **Shop drawings/submittal shall be prepared by a LPI Certified or UL Listed Installer.**

**b.** Submit product data showing dimensions and materials of each component and include verification of listing in accordance with UL 96.

**c.** Submit manufacturer's installation instructions.

## 1.6 PROJECT AS-BUILT DOCUMENTS

**a.** Record actual locations of strike termination devices, grounding electrodes, bonding connections, and routing of system conductors on red lined as-built documents.

## 1.7 QUALIFICATIONS

**a.** Manufacturer: Company specialized in lightning protection equipment with minimum five (5) years documented experience.

**b.** Installer: Authorized installer of manufacturer with minimum five (5) years documented experience and LPI Certified or UL Listed Installer.

### 1.8 PRE-INSTALLATION CONFERENCE

**a.** Convene a pre-installation conference one (1) week prior to commencing lightning protection work. All submittals shall be complete and accepted prior to scheduling conference.

### 1.9 SEQUENCING AND SCHEDULING

**a.** Coordinate the work of this Section with Owner, RPR and all other site Contractors.

## PRODUCTS

### 2.1 MANUFACTURERS

**a.** Harger Lightning & Grounding, Inc.: Premium Line.

**b.** Thompson Lightning Protection, Inc.: Premium Line.

**c.** Heary Bros. Lightning Protection: Premium Lines.

### 2.2 MATERIALS

**a.** Components: In accordance with UL 96 and LPI. All materials shall be Class II.

**b.** Air Terminals:

**1.** Air Terminals shall be solid (aluminum) as required to match roof conductors and shall have proper base support for surface on which they are attached, and shall be securely anchored to this surface.

**2.** Terminal length: Comply with NFPA 780.

**c.** Conductors:

**1.** Roof conductors shall consist of aluminum complying with the weight and construction requirements of the standard. Roof conductor material shall match and be compatible with enclosure and any roof flashing material.

**2.** Down conductors shall be copper, and shall be provided where shown installed in PVC conduit and hidden within the structure. Use approved bi-metal connector for transition from aluminum to copper.

**d.** Fastener: Conductor fasteners shall be of the same material as the conductor, having ample strength to support conductor.

**e.** Connectors and Splicers: Bronze or aluminum as required to be compatible with conductor being connected.

**f.** Ground Rods: Comply with all requirements of SP-109S- 26 05 26.

**g.** Comply with additional minimum requirements shown in Contract Documents.

## EXECUTION

### 3.1 EXAMINATION

**a.** Verify that surfaces are ready to receive work.

**b.** Verify that field measurements are as shown on shop drawings.

**c.** Beginning of installation means installer accepts existing conditions.

### 3.2 PROTECTION OF SURROUNDING ELEMENTS

**a.** Protect elements surrounding work of this Section from damage or disfiguration.

### 3.3 INSTALLATION

**a.** Install in accordance with manufacturer's instructions.

**b.** Install in accordance with UL 96A, NFPA 780, and LPI 175.

**c.** Install ground rods in accordance with SP-109S- 26 05 26. Where conflict exists between the requirements of SP-109S- 26 05 26 and this Section, the most stringent shall govern.

**d.** Installation shall be made in an inconspicuous manner with conductors routed to conceal as much as possible. Conductors shall be routed parallel to building/enclosure lines. Conductors shall not be subject to physical damage and shall not present a tripping hazard.

**e.** Where fasteners are to be mounted in masonry or structural work, they shall be furnished to the Masonry or Structural Contractor so they may be installed during construction of the project.

**f.** Conductors concealed in steel reinforced concrete shall be installed and bonded per NFPA 780 4.17.3. Specific attention is brought to the requirements of 4.8.13 requiring down conductors to be connected to reinforced steel at its upper and lower ends.

**g.** Lightning protection system shall be bonded to metal bodies as required by NFPA 780 4.15.

**h.** Provide proper connections of lightning protection system to all grounded media in and around the protected structure per NFPA 780 4.14 "Potential Equalization".

**i.** Provide proper grounding of all grounding media in, on and around structure to provide common ground potential per NFPA 780 4.13 including electric service, telephone and antenna system grounds as well as underground metallic piping systems, underground metal conduits, etc.

**j.** Ground loop: Bond to ground loop system. See SP-109S- 26 05 26. Items required to be bonded/connected in 'H' and 'I" above shall be bonded/connected via ground loop system where available and applicable.

**k.** All exposed conductors located 6 ft. or less above finished floor or finished grade are to be suitably protected/shielded as well as other exposed locations where conductor is subject to mechanical damage.

**l.** Coordinate and receive approval of all penetrations of roofing system and mounting to roofing system with Architect and Roofing Contractor prior to submittal of shop drawings.

**m.** Coordinate and receive approval of all connections to structural steel, rebar, and other structural elements with Structural Engineer prior to submittal of shop drawings.

**n.** Ground connections shall be made in accordance with requirements of all applicable codes and SP-109S- 26 05 26 and SP-111 (including but not limited to requirements for testing, ground rods, materials, wells, etc.).

### 3.4 FIELD QUALITY CONTROL

**a.** Test lightning protection system components in accordance with Item SP-111.

**b.** Obtain the service of UL or LPI to provide third party inspection and certification of the lightning protection system to NFPA 780. Submit certification and submit in O & M Manual.

**c.** Submit test results on each grounding electrode, include location including final length of each ground rod and final distance between each installed ground rod in O & M Manual.

## METHOD OF MEASUREMENT

### 4.1 METHOD OF MEASUREMENT

**a.** The items described in Item 26 41 00 are incidental to other pay items and shall not be measured for payment.

## BASIS OF PAYMENT

### 5.1 BASIS OF PAYMENT

**a.** No direct payment shall be made for the work described in Item 26 41 00. The work described in Item 26 41 00 is incidental to the respective L-109 pay item and shall be paid for in the respective bid item of which it is a component part.

**END OF ITEM SP-109S-26 41 00**

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## ITEM FF-101 PERFORMANCE SPECIFICATION – FUEL FARM

### SCOPE OF SERVICES OVERVIEW

The work to be performed under this project consists of design, procurement, fabrication and installation (i.e., full design\build construction) and permitting of a fuel farm tank and dispenser system which shall consist of two (2) 12,000-gallon tanks: one (1) Jet-A tank and one (1) AVGAS tank to replace an existing 10,000 gallon AVGAS tank within the existing spill containment basin. The tanks shall be fabricated and installed complete with all appurtenances and components necessary for operation within the proposed Fuel Farm receiving and delivery system. The tanks shall meet all applicable code and FAA requirements and Industry Standards for AVGAS and Jet-A fuel storage and delivery systems. The tanks shall be horizontal above-ground, double wall, steel tanks. The Design Build Contractor shall prepare a Phasing Plan to execute this work, to include removal and legal disposal and close-out permitting of the existing tank and appurtenances. The Owner understands that fueling services will not be available during the contruction of the project.

Suggested Sequence of Work (To be finalized by DB Contractor):

1. Design completion of the tanks on the site and permitting.
2. New tank fabrication, complete. Installation of tanks shall meet minimum tank-to-tank separations and building set-back distances per AHJ requirements.
3. Lift, remove, and legally dispose of existing tank offsite (Contractor takes ownership). The Contractor is responsible for prepping/rinsing the tanks to be removed and properly disposed of, rinse water, and in all other ways make the tanks safe for transport and proper disposal. The Airport will sell as much of the fuel as can be pumped from the tanks utilizing the floating suction, and the balance shall be drained and legally managed and disposed of by the Contractor. The Contractor shall allow adequate time and phasing of the work to allow FBO use of remnant existing Fuel.
4. Assess condition of existing concrete apron and prepare \ modify as necessary for new tanks and fueling system.
5. Lift and set new tanks on existing modified foundations in spill containment basin with minimum code separation of tanks to all components, including the tanks. Verify tank grounding to new or existing main site ground lugs.
6. Fabricate and install interconnecting piping for tank(s) to inlet and outlet piping.
7. Install new conduits and electrical, datacomm\technology feeds, equipment, and distribution, grounding, and connect to new self-service pay dispenser(s).
8. Touch-up paint tank coatings as necessary and apply decals if not equipped from the factory.
9. Provide Certification Documents that interior tank coatings are fully compliant with performance and purity requirements of EI Standard 1541 for aviation fuel storage.
10. Perform soak testing for tank(s).

The intent of this criteria package for replacing the existing AVGAS tank with new AVGAS and Jet-A tanks is to cover industry standards and provide guidance to the Proposer to complete the Final Design for review and approval. <u>This is a turn-key project with the fuel tanks and their systems shall be fully complete with all new equipment for the intended self-service pay and fuel management hardware and software systems, monitoring capability, functional and operational at the completion of the project, ready to use by the Owner</u>.

Classifications of work for this project include but are not limited to: Self-Service AVGAS and Jet-A fuel tank system, payment module, and equipment fabrication and installation, commercial/industrial electrical work, and any civil work required such as assessment and modification of the existing concrete apron as support foundation. This work shall also include all work required to comply with the construction safety and phasing requirements of the CSPP. The Contractor shall coordinate a minimum of 72 hours in advance with the Owner's representative, prior to using a crane at the fuel farm.

All references to “Contractor,” “Bidder,“ or “Proposer” within the Bidding Documents shall refer to the responsible party submitting a Bid for this project.

## SITE INFORMATION

This project is sited within an existing General Aviation Fueling area located on the airport. The Contractor shall conduct, phase, and sequence his work to minimize disruption to normal airport operations. Access is controlled to and from the fuel farm through security fencing and automated roll gates to airside operations area (AOA). Gates are to remain secured at all times, or they shall be manned by trained and badged security personnel when open.

## TANKS AND SYSTEMS FUNCTIONALITY

A. GENERAL SCOPE OF WORK

1. The work to be performed under this specification section shall consist of fabricating, delivering, installing, connecting, inspection, certification, and testing two (2) 12,000-gallon horizontal, above-ground, double-wall steel tanks. One tank will be used for AVGAS and one tank will be used for Jet-A fuel. A single or multiple waste fuel recovery tank(s) shall be provided, 50 - 100 gallons minimum total capacity, integrated into the system(s). The basis of performance design for the tanks is the Envirotech self-service and self-pay aviation tank/fueling systems with QTPod (M4000+) self-service pay and fuel management system.

2. The tanks shall include all painted coatings, signs, and labels. The work shall include all installation, accessories, connections to existing power and datacomm\technology, start-up testing, and incidentals required for a complete and functional installation. Fuel for start-up and testing will be furnished by the Contractor and paid for by a separate pay item by the Owner as an allowance item per gallon-allowance. Fuel provision may be made either by the Owner’s supplier, or the Contractor’s depending on the price of fuel at the time of proposed delivery.

3. The work performed under this contract shall include all necessary self-service pay equipment, monitoring equipment, electrical, grounding, lightning protection, fuel emergency stop switches, panel boards, lighting, and all other equipment, labor, materials, necessary for a turnkey installation. The self-service pay dispenser(s) shall be a modern system capable of the intended purpose of secure credit\debit card, RFID\EMV card authorization \ authentication for payment of fuel. One electronic pay module or dispenser may be used for both new tanks, or one pay module per tank may be used. The proposed system will need to use wireless\cell\satellite\Starlink and\or Internet Service Provider lines (cable\fiber\wireless), currently Rapid Systems is the

local provider. The existing telephone lines are not feasible to run the new systems. The Owner is amenable to changing carriers for this function to Starlink, T-Mobile, or Verizon\other cell kit to increase the bandwidth and speeds over the current carrier. The new systems shall have the capability of remote computer monitoring of fuel transactions and levels over the internet \ cloud. The basis of performance design is the QTPod (M4000+) system with SiteMinder Fuel Management Software Technology due to the aging POT copper lines and new cellular\satellite solution required.

4. The work performed under this contract shall include an assessment of the existing pcc concrete apron for potential modification of\ or additional support for the particular tank skid mounts supplied by the manufacturer. Upon initial inspection by the engineer, it appears to be 6 inches to 8 inches thick, but this has not been confirmed.

5. The work performed under this contract shall include coordination with the power company, and demo or modification of existing power supply and fuel shut off systems, power distribution panels, provision of new power supply systems including but not limited to connections, conduit, cable, detection tape, handholes, panels/panel boards, grounding, counterpoise, lightning protection, etcetera.

B. QUALITY ASSURANCE - MATERIALS AND EQUIPMENT

1. Aviation Fuel Tanks, ancillary equipment and assemblies shall be manufactured, fabricated, and assembled by firms specializing in the manufacture, fabrication, and assembly of aviation fueling systems, with a minimum of ten (10) years of documented experience, with tanks of similar size, in-use at general aviation and/or commercial air carrier service airports.

2. Detailed shop drawings, certifications, and other manufacturer's information shall be submitted to the Engineer for approval for tanks, equipment and other items, except minor generic hardware items. The submittal shall include a certification by the fuel tank/equipment fabricator/installer that the submitted items conform to the requirements of these specifications, with any technical differences specifically noted in the certification, with a request for approval. Copies of sample tank warranties shall be included in the submittal. Submit only enough information to clearly describe the item to be furnished, generally not more than one or two pages for each item. Detailed backup information, MSDS sheets, etc., which the engineer can usually find online if needed, should not be submitted. Mark all options and selections for each item; do not leave it to the Engineer to mark options and selections for the Contractor. Items shall not be ordered prior to the return to the Contractor of the accepted, stamped submittals.

3. All tanks to be installed shall be listed on the “Approved/Registered Storage Tank Equipment List, Rule 62-762.851.” published by the Florida Department of Environmental Protection (FDEP), If the Proposer wishes to furnish equipment from other than the specified manufacturer or fabricator, the Proposer shall be prepared to justify the acceptability of the equipment that Contractor intends to use, as a condition of award of contract, if Contractor is the apparent successful Proposer. If the Proposer intends to furnish major equipment from other than the specified manufacturer or fabricator, Contractor shall include basic (not detailed) manufacturer's information describing the equipment to be furnished and the experience and qualifications of the manufacturer or fabricator, as well as availability of service support, with bid.

C. QUALIFICATIONS OF CONTRACTOR, FUELING EQUIPMENT INSTALLER, AND PERSONNEL

1. The Contractor shall be a qualified Aviation Fueling Contractor and/or Aviation Fueling Equipment Fabricator, having not less than five (5) years' experience in aviation fueling fabrication and/or installations. Aviation fueling systems are defined as Avgas and Jet-A fuel storage and dispensing tanks and equipment. During bidding, the Contractor shall provide a list of five (5) previous aviation fuel system customers along with the associated airport location, contact names and telephone numbers. The five (5) customers shall be of similar tank sizes and systems to this project. Additionally, the Contractor shall be a licensed Pollutant Storage System Contractor registered with the Florida Department of Business and Professional Regulation.

2. Installation of tanks shall be performed only by personnel who have a minimum of two (2) years' continuous experience installing this type of equipment and who have attended a training seminar conducted by the tank manufacturer within the past two (2) years.

D. GOVERNING STANDARDS

1. Unless otherwise noted, equipment and installation necessary to accomplish the work specified herein shall be consistent with the latest editions of all applicable federal, state, and local codes, rules, and regulations regarding fuel storage, transfer, and dispensing systems, including but not limited to the following:

   a. 40 CFR Part 112 Oil Pollution Prevention (SPCC rule)

   b. Florida Administrative Code, Chapter 62-762, Aboveground Storage Tank Systems

   c. National Fire Protection Association (NFPA)

      1) NFPA 30, Flammable and Combustible Liquids Code
      2) NFPA 70, National Electric Code (NEC)
      3) NFPA 407, Standard for Aircraft Fuel Servicing
      4) NFPA 780, Standard for the installation of lightning Protection Systems.

   d. Air Transport Association (ATA) Specification No. 103 - Standards for Jet Fuel Quality Control at Airports.

   e. Energy Institute Standard 1541, Requirements for Internal Protective Coating Systems Used in Aviation Fuel Handling Systems

   f. All work specified herein shall conform to or exceed the requirements of the above-referenced codes, rules, and regulations; provided that whenever the provisions of said publications are in conflict with the requirements specified herein, the more stringent requirement shall apply.

2. Where governing standards listed above reference industry standards, the following standards shall be followed as applicable:

a. Petroleum Equipment Installation Institute (PEI).

1) Publication RP 200 (Recommended Practices for Installation of Aboveground Storage Systems for Motor Vehicle Fueling).
2) Publication RP 300 (Recommended Practices for Installation and Testing of Vapor Recovery Systems at Vehicle Fueling Sites).

b. American Petroleum Institute (API).

1) API Publication 1500, Storage and Handling of Aviation Fuels at Airports.
2) API Bulletin 1529, Aviation Fueling Hose.
3) API Bulletin 1542, Airport Equipment Marking for Fuel Identification.
4) API 1581, Specifications and Qualification Procedures for Aviation Jet Fuel Filter/Separators.
5) API Standard No. 2000, Venting Atmospheric and Low-Pressure Storage Tanks.
6) Manual of Petroleum Measurement Standards Chapter 6 - Metering, Section 4 - Metering Systems for Aviation Fueling Facilities.

c. Underwriters Laboratories, Inc. (UL).

1) UL - 142, Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids.
2) Certification to meet UL Standard 2085.

E. START UP AND TRAINING

1. A soak test is required for the Jet-A tank(s). The Owner will provide fuel for the soak test. The contractor is fully responsible for all other items required to achieve a successful test, including fuel disposal in the event of a failed test. The Contractor shall provide the soak test method for review and approval by the Engineer. The soak period shall be for a minimum of four days, and a maximum of seven days. Upon completion of the soak duration, the fuel shall be submitted to a certified laboratory, and tested for the following:

a. ASTM D4176 Appearance
b. ASTM D381 Gum content
c. ASTM D1094 Water reaction
d. ASTM D2887 Simulated distillation
e. ASTM D156 Saybolt color test
f. ASTM D3948 MSEP
g. ASTM D2624 Electrical conductivity
h. ASTM D3241 Jet fuel thermal oxidation test
i. ASTM D56 Flash point

2. Analytical results shall be provided to the Engineer. Should the soak test analytical results fail the required standards, the Contractor shall be responsible for the removal and disposal of the fuel that failed the test, and for the replacement of the same quantity of fuel.

3. Training shall meet Federal Aviation Administration, AC 150/5230-4C, Aircraft Fuel Storage, Handling, and Dispensing on Airports, most current edition.

F. SPECIFIC REQUIREMENTS -

1. General: Provide one (1) 12,000-gallon horizontal, above-ground, double-wall, complete Jet-A fuel storage tank, and one (1) 12,000-gallon horizontal above-ground, double wall AVGAS storage tank prefabricated of steel, as described herein.

   a. Tank diameter, length, and other dimensions and configuration for the volume required shall be designed by the DB contractor and tank manufacturer. The tanks shall be UL 2085 listed tanks.

   b. The type of system required shall be capable of electronic fuel management, flow regulation, self-service payment via secure credit card and other electronic payment methods (such as pay apps including but not limited to paypal, applepay, etcetera). The basis of design\build shall be the QTPod or FuelMaster by SynTech or approved equivalent. The system shall be capable of all fuel sales and tracking by the Owner via computer.

   c. The new fuel system shall be capable of self-serve underwing, overwing, or direct to refueler self-service fueling.

   d. The new fueling tank system shall be capable of variable fueling rates adjustable up to 250 gallons per minute.

   e. The new fueling tank system shall be capable of the addition of fuel additives for the purposes of fuel cleaning and polishing, for the removal of water and contaminants. The fuel cleaning apparatus should be integral to the delivered system and be capable of recirculation and filtration.

   f. The new fueling tank system shall be capable of the ability to detect contaminated fuel and prevent its release from the system, including removal of any water or particulates.

   g. Each tank shall include all necessary and appropriately sized NPT type fittings for inlet and outlet pipe connections, and appropriately sized fittings on the tank top for connections to overfill protection, automatic tank gauge, float gauge, and spare. Each tank shall have appropriately designed flanges for an emergency and atmospheric vent(s). Each tank shall have the appropriately sized fittings for the necessary sump devices per code.

   h. Each tank shall have at least one 24” manway at the top of the tank. Manways shall be bolted connections with code compliant gaskets.

   i. Tanks shall include spill and overfill prevention equipment in accordance with 40 CFR Part 280.20. Tanks shall include product monitoring equipment and liquid level system including remote monitoring and alarms. Tanks shall have floating suction piping for product delivery. A cable shall be attached to the floating suction such that operators shall have a tactile means of confirming position from the exterior of the tank within the containment area.

j. Structural Lifting Lugs: Provide lifting lugs designed to support the weight of the entire fuel tank and be strategically placed for even weight distribution as recommended by the tank manufacturer.

k. Tanks shall meet NFPA 30 codes for aboveground storage tanks. Tanks shall be factory pressure tested in accordance with the code under which it is fabricated.

g. Finish: Tank interior and all exterior surfaces (other than glass, stainless steel, nameplates, and similar items) shall be factory sandblasted to SSPC SP6, primed and top coated with an industrial epoxy coating system to be submitted to and accepted by the Owner's Representative. Interior coating shall be compatible with, and approved for use with AVGAS and Jet-A Fuel, and shall be fully compliant with Energy Institute Standard 1541, Requirements for Internal Protective Coating Systems Used in Aviation Fuel Handling Systems. Interior color shall be white and finish shall be gloss.

h. Exterior color shall be white, and the finish shall be gloss. The epoxy system for the tank exterior shall include a polyurethane topcoat. Tank exterior shall include tank identification labels and all mandatory tank signage and markings as follows:

I. Location All four sides of storage tank.
Size: Approx. 2'-0" x 8" (Min letter height 3 inches)
Face Color White
Text Color Black
Text "JET-A FUEL -TANK X" (X being 1, 2, & 3)

II. Location All four sides of storage tank.
Size: Approx. 2'-0" x 8" (Min letter height 3 inches)
Face Color White
Text Color Red
Text "FLAMMABLE - NO SMOKING"

III. Location All four sides of storage tank.
Size: Approx. 1'-4" x 1'-4" (Diamond; Min letter height 3 inches)
Face Color Red
Text Color White
Text "1863" (Fire Hazard Classification)

IV. Location All four sides of storage tank.
Size: Approx. 1'-4" x 1'-4" (Diamond; Min letter height 3 inches)
Face Color Blue, Red, Yellow, White
Text Color Black
Text "1 2 0 Blank" (Safety Hazard Diamond)

i. Engraved Nameplate Labeling: The tanks shall receive proper nameplate labeling with engraved brass labels, cautionary wording, and color code, per NFPA 407, API 1542, and UL-142. Where discrepancies in labeling may appear, notify the Owner's Representative for direction. In addition, the engraved tank nameplate shall indicate the following:

1) Standard of design by which tank was manufactured

2) Name of product to be stored in the tank (AVGAS and Jet-A Fuel)
3) Year in which tank was manufactured
4) Unique identification number (coordinate with Owner)
5) Dimensions, design, working capacity, and tank model number
6) Name of tank manufacturer
7) Date of installation

j. All piping, valves and fittings shall be of stainless-steel suitable for AVGAS and Jet A aviation fuel service, designed for the working pressure, and mechanically & thermally produced structural stresses to which they could be subjected. and shall comply with ANSI B31.3.

k. System and components shall meet standards as required by major aviation fuel suppliers for the storage and dispensing of AVGAS and Jet-A fuel.

l. Electrical Items Integral with the Fuel Tanks/Fueling Equipment: All electrical equipment, wiring, counterpoise, air terminals, lightning protection, and grounding that is a part of the fueling equipment assembly shall conform to and be installed in accordance with the National Electrical Code (NFPA 70.) All fuel facility control boxes, wiring components, motors, starters, and electrical equipment located in the hazardous area shall be of explosion proof design. All electrical components (cabinets, etc.) shall be rated NEMA 4X. Refer to the Electrical Drawings and Technical Specifications shown elsewhere in these criteria documents.

m. Each Tank shall have stand-alone ladders/stairs and service catwalks and platforms positioned to access all port openings. Ladders shall be equipped with a minimum diameter 29-inch, starting from 72” up to full ladder- height Safety Cage. The guardrail, stairs and service platform shall be compliant with 29 CFR Part 1910 Subpart D, and 29 CFR Part 1910.66. Stairs and platform heights shall be sufficient for the particular installation on modified foundations.

2. Furnish and install one (1) UL Rated 80-B:C fire extinguisher with 22 lb. Capacity and Wall Mounting Bracket. The location of the fire hydrant shall be approved by the Owner, which shall be protected from the elements, and appropriately signed per applicable regulations.

3. Warranty: Tanks shall be warranted to be free from defects in manufacturing, workmanship, and materials for a period of twenty (20) years after date of acceptance and Final Completion.

4. ***All equipment shall be new and in unused condition.*** The FAA and FDOT do not pay for any re-used or refurbished equipment.

5. The double wall tanks shall be fully monitorable interstitial space for leak detection and shall meet all FDEP criteria.

G. MATERIAL SUBMITTALS

1. Submit manufacturer’s information for tanks, pipes, and all other appurtenances. including structural hardware items. Submit electronically except where physical copies or samples are required. Submit only enough information to clearly describe the items

to be furnished; do not include unnecessary back-up information. Indicate all manufacturer selections and options, do not leave it to the reviewer to mark options. Do not order any items until the submittals have been returned accepted.

H. PERMITTING, EQUIPMENT DELIVERY, AND INSTALLATION

1. Contractor shall be responsible for obtaining all applicable permits. Design Permit reviewing fees will be paid by the Contractor and reimbursed by the Owner through a separate allowance pay item . Contractor shall provide assistance to the Owner in registering the tanks with the FDEP.

2. Contractor shall be responsible for all coordination and logistics required to deliver the tank and equipment assemblies to the site via public roads, set the assemblies in place and secure it to the foundation.

3. **IMPORTANT - FAA CRANE COORDINATION**: The use of a crane to set the tanks (or for any other purpose) requires close coordination with the Airport, who will coordinate with the FAA. The Contractor shall provide to the Owner the height of crane equipment proposed for use at the pre-construction conference. The Contractor shall allow 90 days for submittal and approval of FAA Airspace Study Form 7460-1 and provide the Airport Manager with at least 72 hours advance notice of the arrival of the crane. The height of the crane, and the times and date(s) of use, shall be specified. The crane boom shall be erected only after approval is given by the Airport Manager. The boom may be raised during daylight hours only and must be lowered at night and during times of poor visibility. A standard 3' square orange and white checkerboard pattern flag shall be flown at the top of the crane boom.

4. Off-load and install the tanks and equipment in accordance with manufacturer's written instructions and approved submittals. Set the tanks, and particularly the cradles (saddles), at the exact location shown on the installation drawing. Refer to the minimum tank to building structure specified elsewhere and shown on the drawings for important information on placement of tanks on the existing modified structure foundations, (See Structural Drawings).

5. Safeguard all manuals, parts lists, and other manufacturer's information that is packed with the equipment for later inclusion in the Owner's Manuals (see Section I below).

6. Repair damage to coatings with suitable repair materials to a condition equal or better than original.

I. FIELD QUALITY CONTROL, COMPLETION AND CLOSE-OUT

1. Contractor shall arrange for a qualified service representative to supervise the installation, start-up, functional test, and training. The combined period of onsite service shall not be less than one 8-hour day, or as necessary to complete testing and training.

2. Details pertaining to operation and maintenance of the tanks, and related components, shall be thoroughly explained to Airport fueling operations personnel. Any special tools required for adjusting and maintaining the tanks and pay/fuel management system, or training materials, shall be provided by the service representative, to the Airport operations personnel.

3. Any leaks, malfunctions, and punch list items shall be corrected to the satisfaction of the Owner and FDEP prior to final acceptance.

4. Contractor shall furnish to the Owner two copies of the Owner's Operations and Maintenance Manual, each including as a minimum, operating instructions, copies of approved submittals, manufacturer's instructions and parts lists that were shipped with the tanks, and warranties (at least one copy of each warranty shall be the original). These documents shall be neatly organized, tabbed, and bound in 3-ring binders. In addition, a digital copy of the Owner’s Manual shall be submitted to the Owner.

5. Contractor shall coordinate with all permitting agencies having jurisdiction (AHJs) to ensure that all final inspections and tank system registrations have been performed and all permit requirements have been satisfied, including but not limited to FDEP\EPA.

6. The effective date of the warranties shall be the date on which the items, including the fuel tanks, have been completed and the operation of the facility has been turned over to the Owner, accepted in place.

**ELECTRICAL WORK**

A. Electrical Work is specified elsewhere in this Project Manual.

**PERMITS, FEES AND INSPECTIONS**

The successful proposer is responsible for all permit applications and coordination of all inspections associated with the fuel tank project. Payment of any permit fees shall be the responsibility of the Contractor, to be applied against the Allowance pay item established for Permitting. Submit receipts with Pay Application. The Contractor shall provide the Owner assistance with FDEP Tank registration, including but not limited to:

A. For installation of the new tanks, registration updated within 7 days of the completion of the work, unless otherwise specified in writing by the applicable AHJ.

B. Any other registration activities as requested by the Owner and required by the project.

The Contractor shall coordinate all inspections with the City\County building departments and FDEP, and make sure the final inspection and approval is obtained.

**MEASUREMENT AND PAYMENT**

Payment of the lump-sum bid prices listed below shall be full compensation for furnishing all permits, material, labor, equipment, incidentals, supplies, start-up, testing, adjustment, factory representation, training, full tank of fuel, etc., required to complete the work under this contract

as a complete and functional unit. In the event that an item is partially complete on a monthly pay request cut-off date, payment will be allowed based on the percentage complete.

Payment will be made under:

Item FF-101-1 Final Engineer of Record Design Documents -- Lump Sum (LS)
(Plans and Specifications for Permitting)

Includes the Design/Build entity preparation of final design documents to be signed and sealed by the EOR, and submitted for any necessary permits (See Item FF-101-5). The Design/Build entity can have use of the Criteria Documents except Title Block Information.

Item FF-101-2 Fabricate, Furnish and Install (Construct) One (1) Double Wall 12,000 Gallon AVGAS Self Service Fuel Tank and Pay Management/Dispenser System, with All Equipment, Complete Turnkey-- Lump Sum (LS)

Includes one (1) 12,000-gallon AVGAS Tank with all appurtenances and equipment, ladders, stairs, safety cages, platforms, double wall tanks, pumps, motors, ground straps, electrical connections, testing, and startup, connection to the existing or modified concrete foundation, supports, electrical, datacomm, and fuel piping system, (delivery, crane, offloading, setting, securing to foundations, etc.).

Item FF-101-3 Fabricate, Furnish and Install (Construct) One (1) 12,000 Gallon Jet-A Self-Service Fuel Tank and Pay Management/Dispenser System and All Equipment, Complete Turnkey -- Lump Sum (LS)

Includes (1) 12,000-gallon Jet-A Tank with all appurtenances and equipment, ladders, stairs, safety cages, platforms, double wall tanks, pumps, motors, ground straps, electrical connections, testing, and startup, connection to the existing or modified concrete foundation, supports, electrical, datacomm, and fuel piping system, (delivery, crane, offloading, setting, securing to foundations, etc.).

Item FF-101-4 Civil Site Construction -- Lump Sum (LS)

Includes Erosion Control and Stormwater Pollution Prevention (SWPPP) .demolition, preparation, structural PCC foundations or existing apron modifications, pipe bollard removal\replacement, signage, marking, protection, tertiary containment\expansion, discharge, lock-off inlet, storm discharge pipe , Removal, Hauling, and legal Disposal\FDEP Close-out of existing 10K gal AVGAS tank; and all other necessary sitework construction for a complete project.

Item FF-101-5 Electrical Site Construction (Division 26 and Electrical Drawings) -- Lump Sum (LS)

Includes demolition of existing panelboard and feeder conductors, fuel

pumps, and fuel inventory system, along with associated conduit and conductors. Construction work includes providing new 120/240V, 1 phase panelboard with new feeder and branch conductors, grounding with counterpoise, and remote fuel tank monitoring system for the proposed fuel tanks. Additionally provide a new emergency fuel shutoff button and new ground rod adjacent to panelboard.

Item FF-101-6 Design Build Permitting Fees -- Allowance (AL)

Includes only actual cost and/or fees incurred for permit(s). The allowance does not cover any other costs for labor and/or material incurred by the Design/Build Team paid for by FF-101-1. Any efforts required to properly apply for, remit payment for, and obtain design permits to construct the project, including all necessary field investigations and sampling, coordination with permit agencies, and any other pre-construction efforts required for the project shall be at the sole expense of the Design/Build Team and paid for by other items. This item is inclusive of all bid items specified in other sections of this Project Manual.

Item FF-101-7 SPCC Plan, Fuel System Operation and Training, Certification -- Lump Sum (LS)

Item FF-101-8 AVGAS – Full Tank of Fuel – 85% capacity-- per Gallon-Allowance (GAL-AL) (AL)

Item FF-101-9 Jet-A – Full Tank of Fuel – 85% capacity-- per Gallon-Allowance (GAL-AL)

**END OF ITEM FF-101**

October 19, 2017

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
# APPROVED/REGISTERED STORAGE TANK SYSTEM EQUIPMENT LIST
# RULES 62-761.850 and 62-762.851, F.A.C.

The following is a list of manufacturers of approved/registered storage tank system equipment. The list contains equipment that has been approved after December 10, 1990, and does not include equipment approved under Chapter 17-61, Florida Administrative Code (F.A.C.). Effective January 11, 2017, new or updated equipment will be registered with a five-year renewal requirement. Equipment approved prior to January 11, 2017, must be renewed by January 10, 2022, to remain on the list. See subsections 62-761.850(2) and 62-762.851(2), F.A.C., for requirements. The Florida Department of Environmental Protection does not specifically endorse any manufacturer nor is the Department responsible for any failure or malfunction of the product or equipment. It is the responsibility of the tank owner to verify that materials of storage tank systems and their components are compatible with the regulated substance stored in the tank system. All installed storage tank system equipment containing blends of ethanol, biodiesel, or other biofuels and additives shall be compatible with the regulated substances stored in the storage tank systems. Contact information on the list is updated by the manufacturer and may not be current.

For technical inquiries regarding equipment, please contact Elena Compton via email at Elena.Compton@dep.state.fl.us or call 850-245-8911.

For corrections or questions about this list, please contact Kim Curran via email at Kimberley.Curran@dep.state.fl.us or call 850-245-8849.

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**Tanks AST Single-Wall Only**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-338 | Newberry Tanks & Equipment LLC | Brian Brinkley | 800-643-9395 | 10/08/1998 | UL 142 Single-Wall tank | UL 142 Single-Walled tanks that are only installed in approved steel dikes or concrete dikes shall meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-352 | Modern Welding Company Florida, Inc. | Gene Schober | 407-843-1270 | 11/22/1998 | UL 142 Single-Wall tank | UL 142 Single-Walled tanks that are only installed in approved steel dikes or concrete dikes shall meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-354 | Specialty Tank & Equipment Company | William Mann | 904-353-8761 | 12/17/1998 | UL 142 Single-Wall tank | UL 142 Single-Walled tanks that are only installed in approved steel dikes or concrete dikes shall meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-374 | Turner Equipment Company, Inc. | Joe McMichael | 919-734-2351 | 4/22/1999 | UL 142 Single-Wall tank | UL 142 Single-Walled tanks that are only installed in approved steel dikes or concrete dikes shall meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-429 | Freeman Brothers Tank Manufacturing, Inc. | Gary Freeman | 912-759-6210 | 3/16/2000 | Ul-142 Single-Wall Tanks | UL 142 Single-Walled tanks that are only installed within approved steel dikes or concrete dikes shall meet all applicable provisions of Rule 62-761.500, F.A.C. |

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**Tanks AST Single-Wall Only (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-446 | Cave Hill Corporation | Gary Snyder | 800-833-7655 | 8/23/2000 | UL-142 Single-Wall Tanks | UL 142 Single-Walled tank must be installed in an approved steel or concrete dike, and it must meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-490 | Service Welding & Machine Co., Inc. | Carl Greer | 502-585-4295 | 5/10/2001 | UL-142 Single-Wall Tanks | UL 142 Single-Walled tank must be installed in an approved steel or concrete dike, and it must meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-501 | General Industries, Inc. | Jamie Stanley | 919-751-1791 | 7/30/2001 | UL-142 Single-Wall Tanks | The UL 142 Single-Walled tank must be installed in an approved steel or concrete dike, and it must meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-521 | Tampa Tank, Inc./Florida Structural Steel | Adam Bourgeois | 813-241-4261 Ext. 209 | 3/19/2002 | UL 142 Single-Wall Aboveground Storage Tank | UL 142 Single-Walled tank must be installed in an approved steel or concrete dike, and it must meet all applicable provisions of Rule 62-761.500, F.A.C. |

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## Tanks/ AST Single-Wall Only (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-542 | Alabama Tank, Inc. | Kevin Woods | 251-577-6415 | 10/03/2002 | UL-142 Single-Walled Aboveground Storage Tank Model No. ATISW | The UL 142 Single-Walled tank must be installed in an approved steel or concrete dike, and it must meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-573 | Highland Tank & MFG. Co. | John Schmucker | 336-218-0801 | 1/20/2004 | UL-142 Single-Walled Aboveground Storage Tank, UL Model Number MH5086 | Tanks must be installed in an approved steel or concrete dike, and that it must meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-619 | Smith Tank & Equipment Co. | Jim Blair, III | 903-597-5541 | 11/23/2005 | UL-142 Single-Walled Aboveground Storage Tank, UL Model Number MH3582 | Conditional Approval |
| EQ-702 | Metal Products Company | Burcher Gammage | 770-945-8383 | 3/12/2008 | UL-142 Single-Walled Aboveground Storage Tank, UL Model Number MH3513 | The tank must be installed in an approved steel or concrete dike, and that it must meet all applicable provisions of Rule 62-762.501, F.A.C. |
| EQ-703 | Heatec Inc. | Russ Earp | 800-235-5200 | 3/27/2008 | UL-142 Single-Walled Aboveground Storage Tank, UL Model Number MH14038 | The tank must be installed in an approved steel or concrete dike, and that it must meet all applicable provisions of Rule 62-762.501, F.A.C. |
| EQ-711 | Hall Tank Company LLC | Jonathan Hill | 501-945-8729 Ext. 231 | 7/3/2008 | Single-Wall UL Listed Aboveground Storage Tank, UL File No. MH6146 | The tank must be installed in an approved steel or concrete dike, and that it must meet all applicable provisions of Rule 62-762.501, F.A.C. |

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**Tanks/ Single-Wall Only (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-728 | Clawson Tank Company | Brian Shelton | 800-272-1367 | 2/26/2009 | Single-Wall UL Listed Aboveground Storage Tank, UL File No. MH17150 | The tank must be installed in an approved steel or concrete dike, and that it must meet all applicable provisions of Rule 62-762.501, F.A.C. |
| EQ-761 | Lide Industries | Dwain Broussard | 254-562-0233 | 12/15/2010 | Lide Industries UL-142 Aboveground Storage Tank | Approved in the State of Florida as a shop fabricated AST provided that any single-walled AST is installed in an impervious dike field area that meets the performance standards in Rule 62-762.501, F.A.C. |
| EQ-766 | Hamilton Tanks, LLC | Mike Davis | 800-627-8265 | 4/27/2011 | UL-142 Listed Aboveground Tanks for flammable liquids: Vertical Secondary Containment Tanks (Double-Wall), Horizontal Secondary Containment Tanks (Double-Wall), Horizontal Single-Wall Tanks on Saddles, Horizontal Secondary Containment Tanks on Saddles and Skids (Double-Wall), Horizontal Single-Wall and Secondary Containment Tanks on Skids, Open Top Dike Aboveground Tanks for Flammable Liquids, Rectangular Tanks | Approved in the State of Florida as a shop fabricated UL 142 listed AST. |
| EQ-845 | Jake's Machining & Rebuilding Services Inc. | Jake Krippelz III | 630-892-3291 | 3/23/2015 | Part #836-1715- 572 gallon Single Wall Aboveground Storage Tank, Part #836-1689- 849 gallon Single Wall Aboveground Storage Tank, and Part #836-1690- 1100 gallon Single Wall Aboveground Storage Tank | The aboveground single-walled storage tanks must be installed with secondary containment and the installation, operation, and maintenance procedures for the aboveground single-walled storage tanks shall be made in accordance with the manufacturer's recommendations. |

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**Tanks/ Single-Wall Only (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-848 | OnQuest | Christopher Fox | 909-451-0500 | 7/15/2015 | SLOPS Aboveground Storage Tank | Aboveground Storage Tank shall be installed within an impervious secondary containment system. |
| EQ-857 | Assmann Corporation of America | Steve Rowlison | 888-357-3181 | 12/23/2015 | Assmann Corporation of America Single-Walled Polyethylene Aboveground Storage Tank | Aboveground Storage Tank shall only store contents that are chemically compatible with the polyethylene wall and be installed with an impervious secondary containment system. |
| EQ-860 | Kennedy Tank & Mfg. Co., Inc. | Paul Bolin | 800-445-1344 | 1/8/2016 | UL 142 Single-Walled and Double-Walled Aboveground Storage Tanks | The UL 142 Single-Walled AST must be installed within secondary containment and installation and tightness testing of the aboveground storage tanks must be in accordance with the manufacturer's recommendations as provided in Exhibit A. |

## Bulk Product Piping with Secondary Containment

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-465 | International Paint Co., LLC (Formerly Industrial Environmental Coatings Corporation) | Curtis Harvey<br>Benny Carver | 404-433-7563<br>229-247-0240 | 12/04/2000 | Enviromat™ System | Conditional Approval as a method of secondary containment for underground bulk product piping. **DISCONTINUED PRODUCT** |

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## Coatings (Liners) AST/UST Synthetic or Concrete

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-034 | Poly Flex, Inc. | A.M. Yazdoni | 800-527-3323 | 7/03/1991 | Polyflex HDPE | Minimum 60 mils thickness |
| EQ-049 | Futura Coating, Inc. | Lee Curry | 770-596-9551 | 10/28/1991 | Geothane | Minimum 60 mils on earthen substrate and 30 mils on concrete substrate |
| EQ-056 | Seaman Corporation | Felon R. Wilson | 615-691-9476 | 1/14/1992 | XR-5 Geomembrane | Minimum 30 mils thickness |
| EQ-085 | PolySpec Corporation | Phillip Greer | 704-566-0387 | 8/05/1992 | ITW Poly Spec / Thiokol Products | Minimum 60 mils on earthen substrate and 30 mils on concrete substrate |
| EQ-160 | Bixby International Corporation | Paul Darby | 508-465-4100 | 3/03/1994 | VLPU-40 | Minimum 42 mils on earthen and concrete substrate |
| EQ-163 | Palco Lining, Inc. | Wayne Behrsin | 908-753-6262 | 3/14/1994 | Elvaloy Fabric Reinforced System | Minimum 36 mils on earthen and concrete substrate |
| EQ-189 | Polymerica, Inc. | Christine Benette | 813-794-6850 | 2/17/1995 | Polymerica Secondary Containment Coating system | Used for concrete sealant. Polymerica Crop. Needs to be consulted for the design. |
| EQ-205 | In-Line Plastics, Inc. | Paul Jopline | 800-364-7688 | 5/26/1995 | In-Liner HDPE Liners | Minimum 60 mils on earthen substrate and 60 mils on concrete substrate. |

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## Coatings AST/UST Synthetic or Concrete (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-220 | MPC Containment Systems, Inc. | Dennis O'Brien | 800-621-0146 | 10/09/1995 | Petrogard VI , and Petrogard X | Petrogard VI with a minimum of 30 mils over earthen or concrete substrate and Petrogard X with a minimum of 40 mils over earthen or concrete substrate. |
| EQ-238 | CIM Industries | Dr. Stephens | 603-924-9481 | 2/05/1996 | CIM 1000, CIM 1061 | Minimum 60 mils on steel and concrete substrate. |
| EQ-251 | Cooley, Inc. | Richard Cunnigham | 401-724-9000 | 4/22/1996 | FML87, FML87-23, L2810-6174H(Hytrel), Coolguard HR 36 Coolguard HR 45 | Minimum of Following thickness on steel, concrete, or earth substrate: FML87 is 40 mils, FML87-23 is 30 mils, L2810-6174H (Hytrel) is 36 mils, Coolguard HR 36 is 36 mils, and Coolguard HR 45 is 45 mils. |
| EQ-281 | Willamet Valley Company | Rob Loomis | 541-484-9621 | 5/02/1997 | PolyQuick® Polyurea Coating Synthetic Liners, X-Shield Polyurea Coating synthetic Liner | Minimum 60 mils on earthen and concrete substrate. |
| EQ-287 | Colloid Environmental Technologies Company | Gary Ezell | 813-527-0605 | 7/08/1997 | Claymax and Bentomax Clay Liners | Condition (e) Removed 10/23/2015 |
| EQ-290 | International Paint Co. LLC (Formerly Ceilcote Corrosion Control, Division of KCH) | Curtis Harvey<br>Benny Carter | 404-433-7563<br>229-247-0240 | 7/31/1997 | Ceilcote, Interline® (850, 984, 994), Enviroline® 376, Devoe Lining Systems (MBT Ceilcote AST Lining Installation) | Lining of aboveground tank bottoms. Installed per manufacturer's recommendations. |

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## Coatings AST/UST Synthetic or Concrete (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-350 | Madewell Products Corporation | Jon Steele | 770-475-8199 | 12/01/1998 | Madewell 927 Penetrating Epoxy Primer/Sealer and Madewell 1103 Epoxy Coal Tar Coating | Minimum of 31 mils thickness over concrete or steel substrate |
| EQ-357 | International Paint Co. LLC (Formerly Industrial Environmental Coating) | Curtis Harvey<br>Benny Carter | 404-433-7563<br>229-247-0240 | 12/17/1998 | Enviroline® 376F (Enviroline 376F Epoxy Coating) | Minimum of 30 mils thickness over concrete or steel substrate, and for internal lining of aboveground storage tanks in accordance API 653. |
| EQ-362 | Specialty Products, Inc. | Chas Weatherford | 800-627-0773 | 2/19/1999 | Polyshield SS-100 Coating | Minimum of 80 mils thickness over concrete, steel, or geofabric textile substrate |
| EQ-390 | International Paint Co. LLC (Formerly Ceilcote Corrosion Control, Division of KCH | Curtis Harvey<br>Benny Carter | 404-433-7563<br>229-247-0240 | 8/30/1999 | Ceilcote Crack Bridging Linings (Flakeline and Ceiline 40 Coating Systems) | Ceiline BC Coating System with a minimum of 45 mils thickness over concrete, and for Flakeline Coating Systems with a minimum of 45 mils thickness over concrete. |
| EQ-412 | Rust-Oleum Corporation | Rick Braunshausen | 847-816-2264 | 12/22/1999 | Overkote® Concrete Protective System™ | Minimum of 30 mils thickness over concrete |
| EQ-415 | Vernon Plastics | Roxanne Smith | 978-373-1551 | 12/22/1999 | "Vernoguard™ OR" and "Vernoguard™ PR" synthetic liners | Minimum of 30 mils thickness over concrete or earthen substrate |

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## Coatings AST/UST Synthetic or Concrete (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-420 | Tnemec Company, Inc. | Gene Ponder | 407-322-1243 | 12/20/2000 | Tnemec Coating 61, 120, and 201* Systems<br><br>*System 201 was updated August 2012 | Tnemec Coating 201 System is applied with a minimum of 42 mils thickness over concrete and the Tnemec Coating 61, and 120 System are applied with a minimum of 30 mils thickness over concrete. |
| EQ-426 | Pipeline Energy (Formerly C.T. Petroleum Contractors, Inc.) | Chuck Strickland | 386-292-2306 | 3/16/2000 | Retro-Liner Containment System | Retro-Liner Containment System is applied with a minimum of 125 mils thickness over concrete. |
| EQ-428 | Thermal-Chem Corporation | Albert Grennsburg | 800-635-3773 | 3/16/2000 | Thermal-Chem Containment System | The Thermal-Chem Containment System is applied with a minimum of 30 mils thickness over concrete for non-traffic bearing areas and 60 mils thickness over concrete for traffic bearing areas. |
| EQ-438 | General Polymers | Robert Johnson | 813-968-9630 | 5/08/2000 | EPO-FLEX 85 CR system, SEWER-FLEX system, COR-CAST RM & MRM reinforced lining systems, COR-COTE C unreinforced coating and lining system, COR-COTE FC & TF flake reinforced system, and COR-CAST L reinforced lining system | The EPO-FLEX 85 CR system, SEWER-FLEX system, COR-COTE C unreinforced coating and lining system, COR-COTE FC & TF flake reinforced system, and COR-CAST L reinforced lining system must be applied with a minimum of 30 mils thickness over concrete areas. The COR-CAST RM & MRM reinforced lining systems must be applied with a minimum of 65 mils thickness over concrete areas. |

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## Coatings AST/UST Synthetic or Concrete (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-442 | Belzona, Inc. | Kevin McGinley | 305-594-4994 | 7/24/2000 | Belzona® 5811 (Immersion Grade) secondary containment coating | The Belzona® 5811 (Immersion Grade) secondary containment coating must be applied with a minimum of 30 mils thickness over concrete or steel areas. |
| EQ-447 | Benjamin Moore & Co. | Todd Bulgrin | 800-216-9658 Ext. 5028 | 8/31/2000 | All Season Epoxy Mastic Coating X10 secondary containment coating | The All Season Epoxy Mastic Coating X10 secondary containment coating must be applied with a minimum of 30 mils thickness over concrete or steel areas. |
| EQ-448 | PPG Industries (Formerly Porter Coatings) | Mike Eady | 863-859-9297 | 8/31/2000 | PorterGlaze 4721 Flexible Epoxy Coating secondary containment coating | The PorterGlaze 4721 Flexible Epoxy Coating secondary containment coating must be applied with a minimum of 30 mils thickness over concrete or steel areas. |
| EQ-449 | JBT & Associates, Inc. | Michael Whitener | 239-275-6235 | 9/08/2000 | REA 303 Polyurea Spray Elastomer secondary containment coating system | The REA 303 Polyurea Spray Elastomer secondary containment coating system must be applied with a minimum of 80 mils thickness over concrete, steel, or earthen substrate areas. |
| EQ-455 | PPG Industries (Formerly Porter Coatings) | Mike Eady | 863-859-9297 | 9/26/2000 | PPG Pitt Guard Rapid Coat DTR 95245 (Formerly PorterMastic™ 7000) Surface Tolerant Epoxy Coating secondary containment coating | The PPG Pitt Guard Rapid Coat DTR 95245 (Formerly PorterMastic™ 7000) Surface Tolerant Epoxy Coating secondary containment coating must be applied with a minimum of 30 mils thickness over concrete or steel areas. |

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## Coatings AST/UST Synthetic or Concrete (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-457 | DUROMAR, Inc. | Daniel Toft | 813-205-2020 | 10/04/2000 Updated 4/27/2015 | HPL 1110, HPL 2221, HPL 3320, HPL 4310, and DF-1301 (previously named HPL 1301) DUROMAR concrete secondary containment protection systems | Initially, the concrete sealer DF-1301 (previously named HPL 1301) is applied with a thin film (5-10 mil thickness). Then, the top coat HPL 1110, HPL 2221, or HPL 3320 must be applied with a minimum of 30 mils thickness or, HPL 4310 with a minimum of 40 mils thickness over concrete areas. |
| EQ-472 | MRC, Inc. | Howard Golden | 888-276-1400 | 12/22/2000 | Marseal 2000 and 4000 secondary containment sheet membrane lining | The Marseal 4000 secondary containment sheet membrane lining must be applied with a minimum of 90 mils thickness over concrete or steel areas and the Marseal 2000 secondary containment sheet membrane lining must be applied with a minimum of 60 mils thickness over earthen substrate. |
| EQ-476 | International Coating, Inc. | Michael Kramer | 800-624-8919 | 2/09/2001 | ICO Floor Coating, ICO Guard Coating, ICO Hi Guard Coating, and ICO Super Guard Coating | The ICO Floor Coating, ICO Guard Coating, ICO Hi Guard Coating, and ICO Super Guard Coating must be applied with a minimum of 60 mils thickness. In addition, these coatings must be applied with a minimum of 250 mils thickness over concrete or steel in heavy traffic areas. |

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## Coatings AST/UST Synthetic or Concrete (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-477 | International Paint Co. LLC (Formerly ICI Devoe Coating) | Curtis Harvey<br>Benny Carter | 404-433-7563<br>229-247-0240 | 2/09/2001 | Devran® 124 Epoxy System with optional Enviroline 9450 Caulk (Pre-Prime™ 167 and Devran® 124 epoxy coating) | The (Pre-Prime™ 167 and) Devran® 124 epoxy coatings must be applied with a minimum of 30 mils thickness over concrete areas. |
| EQ-509 | Richard's Paint Manufacturing Co., Inc. | James Peterson | 321-636-6200 | 11/02/2001 | Richard's 2200 Polyamide epoxy coating | The Richard's 2200 Polyamide epoxy coating must be applied with a minimum of 30 mils thickness over concrete areas. |
| EQ-510 | Dudick, Inc. | Thomas Parenete | 800-322-1970 | 11/02/2001 | Protecto-Coat PS, Caulk PSC, Protecto-Coat 800, Protecto-Flex 100XT, and Protecto-Glass 160XT coatings | The Protecto-Coat PS and the Protecto-Coat 800 coating must be applied with a minimum of 40 mils thickness over concrete areas. The Protecto-Coat 100XT coating must be applied with a minimum of 100 mils thickness over concrete areas. The Protecto-Glass 160XT coating must be applied with a minimum of 90 mils thickness over concrete areas. The Caulk PSC can be used on joints or cover cracks up to 2 inches wide at a minimum of 125 mils on concrete surfaces or on the tank chimes. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-512 | The Sherwin Williams Company | William Fite | 407-658-9875 | 12/14/2001 | DEP-01 coatings, consisting of the COROBOND 100 epoxy primer/sealer Number B58WQ5100/ B60VQ5100, the KEM CATI-COAT HS epoxy filler/sealer Number B42W400/B42V400, and the SHELLCOTE II Epoxy Amine, Number 920-W-355/700-C-764 | The DEP-01 coatings must be applied with a minimum of 30 mils thickness over concrete areas. The Department's previous approval EQ-170, dated April 29, 1994, is no longer in effect. |
| EQ-531 | The Sherwin Williams Company | William Fite | 407-658-9875 | 5/14/2002 | General Polymer Envirolastic AR 425 Polyurea Coating | The coating must be applied with a minimum of 40 mils thickness over concrete areas. |
| EQ-534 | Madison Chemical Industries, Inc. | Ron Chunko | 770-339-7858 | 7/03/2002 | Flexcell II, Flexcell II TX, EC-120, and Corrocote Plus w/ Acr 85 top coating | The Flexcell, Flexcell II TX, EC-120 applied with a minimum of 40 mils thickness over concrete areas, Corrocote plus w/ Acr 85 top coat must be applied with a minimum of 30 mils thickness over steel areas. |
| EQ-541 | Freecom, Inc. | Kevin Freeman | 915-263-8497 | 9/23/2002 | Ceram-Kote SPG22 Coating | The Ceram-Kote SPG22 coating must be applied with a minimum of 30 mils thickness over concrete areas. |
| EQ-559 | Mobil Paint Mfg. Co., Inc. | Mark Mann | 251-443-6110 Ext. 229 | 6/23/2003 | MoPoxY™ Pre-Prep sealer, Clear, 41-AF-2 and MoPoxY™ Mastic Epoxy Coating, Down Gray, 40-AH-51 | The MoPoxY™ Pre-Prep sealer, Clear, 41-AF-2 and MoPoxY™ Mastic Epoxy Coating, Down Gray,40-AH-51 must be applied with a total minimum of 30 mils thickness over steel or concrete areas. |

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## Coatings AST/UST Synthetic or Concrete (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-560 | GSE Lining Technology, Inc. | Nathan Ivy | 800-435-2008 | 7/25/2003 | GSE HD Liner | The GSE HD Liner must be applied with a minimum of 60mils thickness over earthen substrate. The Department Final Orders EQ-006 issued on April 21, 1991, and EQ-008 issued on May 30, 1991 are no longer in effect. |
| EQ-564 | GSE Lining Technology, Inc. | Kristen Hardin | 800-435-2008 | 9/26/2003 | GSE Studliner | The GSE StudLiner must be applied with a minimum of 80 mils thickness over concrete substrate. |
| EQ-592 | Hempel USA Inc. | Shane Prudhomme | 936-523-6000 | 7/23/2004 | Hempadur Multi-Strength® 35530 Concrete Sump Sealant and the Hempadur® Filler 35250 | Hemp Hempadur Multi-Strength® 35530 Concrete Sump Sealant must be applied with a total minimum of 30 mils thickness over steel or concrete areas and the Hempadur® Filler 35250 must be applied in accordance with the manufacturer's recommendations. |
| EQ-599 | International Paint Co. LLC (Formerly ICI Paint) | Curtis Harvey Benny Carter | 404-433-7563 229-247-0240 | 10/27/2004 | International Paint Co - Devoe Bar Rust 236 Multi-Purpose Epoxy Coating (Formerly ICI/Devoe Bar-Rust 236 Multi-Purpose Epoxy Coating) | The International Paint Co - Devoe Bar-Rust 236 Multi-Purpose Epoxy Coating must be applied with a total minimum of 30 mils thickness over steel or concrete areas and must be applied in accordance with the manufacturer's recommendations. |

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## Coatings AST/UST Synthetic or Concrete (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-603 | Agru-America, Inc. | Paul Barker | 843-546-0600 | 12/16/2004 | Agru-America HDPE Liner | The Agru-America HDPE Liner must be applied with a minimum of 60 mils thickness over earthen substrate. |
| EQ-608 | International Paint Co. LLC (Formerly Carboline Company) | Curtis Harvey<br>Benny Carter | 404-433-7563<br>229-247-0240 | 3/02/2005 | Polibrid® 705 Elastomeric Polyurethane Coating | The Polibrid® 705 is to be applied directly to concrete and steel surface at 60 – 120+ mils DFT. It can also be used in conjunction with Geotextile Fabric for concrete and earthen dike walls. Must be applied in accordance with the manufacturer's recommendations. |
| EQ-630 | Benjamin Moore & Co. (Formerly Coronado Paint Company) | Mark Mangan | 407-385-1717 | 1/18/2006<br><br>Updated 12/18/2013 | Insl-x Corotech Polyamide Epoxy (Formerly Coronado 101 epoxy with 101-252B high build activator) | Insl-x Corotech Polyamide Epoxy must be applied with a minimum of 30 mils thickness over steel or concrete areas and must be applied in accordance with the manufacturer's recommendations. |
| EQ-643 | Premier Coating Systems, Inc. | Ron Fake | 904-824-1799 | 7/31/2006 | PCS # 200 Surface Tolerant Epoxy Sealer, and PCS # 1100 Modified Epoxy Novolac Polysulfide Coating | Approved in the State of Florida as a coating for concrete or steel secondary containment of aboveground storage tanks containing kerosene analytical group. The PCS # 200 Surface Tolerant Epoxy Sealer, and PCS # 1100 Modified Epoxy Novolac Polysulfide Coating must be applied with a minimum of 30 mils thickness over steel or concrete areas and must be applied in accordance with the manufacturer's recommendations. |

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## Coatings AST/UST Synthetic or Concrete (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-651 | Polycoat Products | Ashish Dhuldhoya | 562-802-8834 | 10/18/2006 | Polycoat Polyeuro 552 coating | Approved in the State of Florida as a coating for concrete or steel secondary containment of aboveground storage tanks containing petroleum products. The Polycoat Polyeuro coating must be applied with a minimum of 40 mils thickness over steel or a minimum of 60 mils thickness over concrete areas and must be applied in accordance with the manufacturer's recommendations. |
| EQ-658 | Pilgrim Permocoat, Inc. | Robert Forlong | 800-637-3328 | 1/25/2007 | Pilgrim Plastic Coating | The Pilgrim Plastic coating must be applied with a minimum of 30 mils thickness over steel or over concrete areas and must be applied in accordance with the manufacturer's recommendations. |
| EQ-678 | Solmax International Inc. | Paul Payeur | 800-571-3904 | 6/27/2007 | Solmax HDPE and LLDPE Liner | Approved in the State of Florida as a liner for secondary containment over earthen substrate. The Solmax HDPE and LLDPE Liner must be applied with a minimum of 60 mils thickness over earthen substrate. |

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## Coatings AST/UST Synthetic or Concrete (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-686 | VersaFlex Incorporated | David Cerchie | 913-321-1000 | 10/12/2007 | VersaFlex VF-380 and PV-380 coatings | Approved in the State of Florida as coatings for concrete or steel secondary containment of aboveground storage tanks containing petroleum products. The VersaFlex VF-380 and PV-380 coatings must be applied with a minimum of 40 mils thickness over steel or a minimum of 60 mils thickness over concrete areas and must be applied in accordance with the manufacturer's recommendations. |
| EQ-693 | Rhino Linings USA | Bharat Naik | 858-450-0441 | 12/12/2007 | Rhino Hi Chem and Rhino Extreme coatings | Approved in the State of Florida as coatings for concrete or steel secondary containment of aboveground storage tanks containing petroleum products. The Rhino Hi Chem and Rhino Extreme coatings must be applied with a minimum of 80 mils thickness over steel or concrete areas and must be applied in accordance with the manufacturer's recommendations. |
| EQ-748 | Seaman Corporation | Bill Shehane | 704-987-0055 | 2/17/2010 | Seaman 1932 PTF polyurethane liner | Approved in the State of Florida as a liner for secondary containment over earthen substrate underneath a field - erected tank. The Seaman 1932 PTF Polyurethane liner must be applied with a minimum of 35 mils thickness over earthen substrate. |

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## Coatings AST/UST Synthetic or Concrete (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-756 | VersaFlex Incorporated | Art Weiss | 913-321-9000 | 7/22/2010 | VersaFlex FSS 45DCF coating | Approved in the State of Florida as coatings for concrete or steel secondary containment aboveground storage tanks containing petroleum products. The VersaFlex FSS 45DCF must be applied with a minimum of 80 mils thickness over steel or concrete areas and must be applied in accordance with the manufacturer's recommendations. |
| EQ-758 | Rawell Environmental, Ltd. | Steven Flynn | +44(0) 151-632-5771 | 11/10/2010 | RAWMAT HDB Type P and RAWMAT HDB Type PP Lining System | Approved in the State of Florida as secondary containment over earthen substrate of a field-erected tank. Installation of the lining system may be installed on embankments with slopes greater than 45 degrees provided that the lining system is anchored in place according to good engineering practices. The Final Order EQ-755 issued on June 17, 2010, has been rescinded. |
| EQ-771 | Corotech Coatings (Formerly Benjamin Moore & Co.) | Guy Schnatter | 800-225-5554 | 6/28/2011<br><br>Updated: 8/1/2014 | Corotech® V160 Surface Tolerant Epoxy Mastic (Previously - Super Spec® Epoxy Mastic P45 Coating System for Concrete - Secondary Containment Coating) | Application and maintenance shall be according to the manufacturer's recommendations. |
| EQ-782 | Specialty Products, Inc. | Chas Weatherford | 800-627-0773 | 3/16/2012 | Specialty Products, Inc. Coatings: Polyprime-100™ Primer, PTU™, PTU-AR™, Polyshield HT-SL™, K5™, Watersafe II™ and HT-100F UB™ | All products are approved in the State of Florida as base coats or sealants that may be applied to either aboveground or underground storage tank secondary containment systems according to manufacturer's recommendations. |

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## Coatings AST/UST Synthetic or Concrete (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-789 (System 1) | Carboline Company | Debbie Simmons | 678-455-5821 | 7/06/2012 | Carboline Company Protective Coatings and Linings: System #1: Primer - Carboguard 1340WB and Finish - Reactamine ET | System #1 may be used as approved coatings for concrete or steel substrate secondary containment systems for AST systems. Surface prep, chemical compatibility and application procedures shall be according to the manufacturer's recommendations. Primer applied at min. 1.5-2.0 mils DFT and Finish applied at min. 40.0 mils DFT. |
| EQ-789 (System 2) | Carboline Company | Debbie Simmons | 678-455-5821 | 7/06/2012 | Carboline Company Protective Coatings and Linings: System #2: Primer - Semstone 110 and Finish - Semstone 140 | System #2 may be used as approved coatings for concrete or steel substrate secondary containment systems for AST systems. Surface prep, chemical compatibility and application procedures shall be according to the manufacturer's recommendations. Primer applied at min. 5.0-6.0 mils and Finish applied at min. 30.0 mils DFT. |
| EQ-790 | New Life Coatings | Ken Barton | 863-438-8783 | 7/06/2012 | NLC-101S Epoxy Spray System | Approved as a protective coating for concrete secondary containment systems for AST systems. Surface prep, chemical compatibility and application shall be according to the manufacturer's recommendations. |
| EQ-793 | Epoxytec | Michael Caputi | 877-463-7699 | 10/24/2012 | Uroflex™ (UME38) Part A & Part B Coating System | Approved for concrete or steel secondary containment components. Surface prep and application thickness shall be in accordance with manufacturer's recommendations. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-796 | Stephen's Technologies, Inc. | Ken Barton | 888-783-7436 | 11/06/2012 | Newlife Liner Epoxy Lamination System | Approved coating system for secondary containment components and meets the compatibility requirements with the pollutant stored in the AST. Surface prep and application thickness shall be in accordance with manufacturer's recommendations. |
| EQ-800 | AET Compliance | Jason Wiles | 800-989-8298 | 1/30/2013 | Tanks and Pipeworks Ltd. Try-Line System for Underground Storage Tanks - 100% of tank is provided with interstice monitoring installed with either class 1 or class 2 detection systems | A lining system for USTs containing petroleum, petroleum products and ethanol up to E-85 and a release detection system for the Try-Line System. Only Tanks and Pipeworks Ltd. trained personnel can perform installation and must be according to manufacturer's protocol. |
| EQ-802 | Corrocoat USA, Inc. | Josh Tankersley | 904-268-4559 | 2/19/2013 | Corrocoat Limited Zipcoat & Polyglass VEF Coating for Sulfuric Acid Secondary Containment and AR3 Coating for Sulfuric Acid Secondary Containment | Approved coatings to be applied to concrete or metallic secondary containment associated with USTs or ASTs. The surface prep and application thickness shall be made in accordance with manufacturer's recommendations. |
| EQ-811 | Industrial Maintenance Group, Inc. | Pete Van Fossen | 800-627-0773 | 7/22/2013 | Patented Polyseam™ Coating, SC-3900-F-UB Coating, and CR-3000-F Coating | Approved as coatings or sealants of secondary containment for storage tank systems. The installation and operation shall be made in accordance with the manufacturer's recommendations. |
| EQ-812 | HEMPLE (USA) Inc. | Teresa Valdes | 936-523-6000 | 7/29/2013 | HEMPLE (USA) Inc. - Blome CP-83MP Epoxy Adhesive, Blome EC-66, Blome EC-90, Blome EC-R590, Blome Primer 75, and Blome TL-47-S Coatings | Approved as coatings or sealants of secondary containment for storage tank systems. The installation and operation shall be made in accordance with the manufacturer's recommendations. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-822 | Corrocoat USA, Inc. | Julie S. Forte | 904-268-4000 | 3/24/2014 | Corrocoat USA, Inc., Corroglass AR4 Coating | May be used as a lining material for concrete or steel secondary containment systems associated with USTs and ASTs |
| EQ-830 | Epps Decorating Center | Scott Epps | 850-385-6649 | 9/19/2014 | Benjamin Moore Super Spec® Epoxy Mastic P45 and The Corotech Coatings Surface Tolerant Epoxy Mastic Coating V160 | Surface preparation and application procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-833 | Enecon Corporation | Elizabeth Kessler | 888-436-3266 | 12/23/2014 | CHEMCLAD-P4C Primer and CHEMCLAD SC Polymer Coating | Can be used on concrete or metallic surfaces. 100% solid polymer coating for tanks and secondary containment systems |
| EQ-835 | ArmorThane USA, Inc. | Hank Strathman | 417-831-5090 | 12/23/2014 | EnviroThane Polyurea Coating | Surface preparation and application procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-841 | Corrocoat USA, Inc. | Peter Smyth | 904-268-4559 | 3/23/2015 | Corrocoat Zip-E Coating | The Corrocoat Zip-E Coating may be used as a protective coating system for concrete or metallic secondary containment systems associated with aboveground storage tank systems storing ammonia, petroleum lubricants and Fyrquel EHC (a fire-resistant hydraulic fluid). |
| EQ-842 | Sika Corporation, Pecora Corporation and De Neef Construction Chemicals, Inc. | Nora Ervolino | 772-597-7642 | 5/15/2015 | Sika Corporation: Sikafloor® 161 primer, Sikafloor® 700 Coating, and Sikafloor® 340 aliphatic urethane, the Pecora Corporation: Pecora P-53-VOC primer, and Synthacalk™ GC2+ sealant, Prime Resins, Inc.: Prime Flex™ 900 MV foam injection resin and the De Neef Construction Chemicals, Inc. Dry Oakum jute oakum crack filler. | The Sika Corporation, the Pecora Corporation, Prime Resins, Inc. and the De Neef Construction Chemicals, Inc. products may be used as a primer, a protective coating system or materials for filling cracks for secondary containment systems associated with aboveground storage tank systems. |

## Coatings AST/UST Synthetic or Concrete (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-846 | Total Containment Solutions, Inc. | Sherry Currie | 239-275-6235 | 5/15/2015 | Total Containment Solutions, Inc.: TCS 380-25 and TCS 380-CL Polyurea Spray Elastomer Systems for Secondary Containment Coating | The coating must be installed in accordance with the manufacturer recommendations for surface preparation, application, and maintenance. |
| EQ-847 | Enecon Corporation | Elizabeth Kessler | 888-436-3266 | 5/15/2015 | Enecon Corporation's CHEMCLAD XC, ENCRETE-DuraQuartz and ENCRETE-DuraFill Coatings | The Enecon Corporation's CHEMCLAD XC, ENCRETE-DuraQuartz and ENCRETE-DuraFill Coatings may be used as surface coating for tanks and secondary containment systems associated with aboveground or underground storage tank systems. |
| EQ-852 | CETCO | Michael Rublaitus | 800-527-9948 | 10/23/2015 | CETCO Geosynthetic Clay Liners, Bentomat and Claymax Systems | See Conditions (a) through (g) on the Approval Order |
| EQ-853 | Raptor USA, LLC | Ryan Richetti | 844-727-8678 | 10/23/2015 | Raptor-CO/SC Secondary Containment Coating | The surface preparation of the concrete and the application of the coating shall be made in accordance with the manufacturer's recommendations. |
| EQ-880 | Tank Tech, Inc. | Jonathon McNeely | 888-405-2369 | 7/24/2017 | Tank Tech, Inc., UL 1856 FRP Lining System | Installer must be a Tank Tech, Inc. approved technician, and if the Braddock Method is used for testing, a Tank Tech Technician must be used and the interstitial integrity test must be performed in accordance with manufacturers instructions. |

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## Leak Detection/ Automatic Tank Gauging

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-004 | Egemin Naamloze Vennootschap | Tom Berebrouckx | 011-32-3-031/ 64527590 | 5/02/1991 | ESPI Series | |
| EQ-014 | Franklin Fueling Systems (Formerly EBW, Inc.) | Dan Marston | 207-283-0156 | 5/06/1991 | Autostik | |
| EQ-033 | Veeder-Root | Tech Support Customer Svc | 800-323-1799 888-561-7942 | 6/17/1991 | TLS 250, TLS 250i, TLS 350, EMC Enhanced, ProMax | |
| EQ-040 | Mine Safety Appliances | Bill Freeman | 800-672-4678 | 9/05/1991 | RTM-1 Tank Gauging | |
| EQ-041 | Gasboy International | Tom Glahn | 215-885-4631 | 9/05/1991 | Gasboy TMS-500 | |
| EQ-046 | Franklin Fueling Systems (Formerly Incon Intelligent Controls, Inc.) | Dan Marston | 207-571-1151 | 10/15/1991 | TS-2000 | |
| EQ-059 | Ronan Engineering Company | Todd Stewart | 800-327-6626 | 1/16/1992 | Ronan X-76 | |
| EQ-064 | PC Interaction, Inc. (Formerly Alert Technologies) | John Ainley | 815-337-1600 | 2/14/1992 | Anilay Tank master ( Formerly Alert Model 2000 ATG) | |
| EQ-080 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 7/07/1992 | RLM 5001 | |
| EQ-081 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 7/07/1992 | RLM 5000 | |
| EQ-084 | Andover Controls Corporation | Alan Williams | 978-470-0555 | 1/08/1992 | Andover Automatic Tank Gauging | |
| EQ-093 | Tidel Engineering, Inc. | David Tucker | 800-678-7577 | 9/29/1992 | EMS 2000 | |
| EQ-094 | Tidel Engineering, Inc. | David Tucker | 800-678-7577 | 9/29/1992 | EMS 3000 | |

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## Leak Detection/ Automatic Tank Gauging (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-096 | Franklin Fueling Systems (Formerly Incon Intelligent Controls, Inc.) | Dan Marston | 207-283-0156 | 10/08/1992 | TS-1000 | |
| EQ-105 | OPW (Formerly Petro Vend, Inc.) | Gene Pope | 813-969-1900 | 12/081992 | Site Sentinel 1 & 2 | |
| EQ-113 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 3/10/1993 | ST System | |
| EQ-121 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 4/22/1993 | Auto Stik II | |
| EQ-127 | Veeder-Root Company | Tech Support Customer Svc | 800-323-1799 888-561-7942 | 4/29/1993 | CEI 3000 | |
| EQ-130 | Gilbarco, Inc. | Steve Phillippie | 336-547-5154 | 6/10/1993 | Gilbarco TM-2, TM-3, EMC | |
| EQ-135 | Andover Controls, Inc. | Alan Williams | 497-470-0555 | 7/12/1993 | Andover Infinity System | |
| EQ-151 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 1/04/1994 | Auto Stik Jr | |
| EQ-178 | Arizona Instrument Corporation | Katy Reed | 602-470-1414 | 9/09/1994 | Encompass Automatic Tank Gauging System | |
| EQ-186 | USTest, Inc. | James Mitchell | 337-839-0107 | 1/10/1995 | USTest 2001 Automatic Tank Gauging | |
| EQ-196 | Veeder-Root Company | Tech Support Customer Svc | 800-323-1799 888-561-7942 | 5/12/1995 | TLS-200, TLS-200i, TLS-300, TLS-400, EMC Basic, ProPlus, | |
| EQ-214 | Environment & Safety, Inc. | Alexander Jekat | 408-954-9081 | 7/21/1995 | Easi-Level Tru | |
| EQ-237 | L & J Technologies | Ronald Davis | 708-236-6000 | 2/05/1996 | L & J MCG 1100 and MCG 8100 | |
| EQ-278 | Simmons Corp (Formerly Caldwell Systems Corp) | Howard Dockery | 800-848-8378 | 4/22/1997 | Tank Manager Automatic Tank Gauging | |
| EQ-303 | Pneumercator Co., Inc. | Jonathon Levy | 800-209-7858 | 12/11/1997 | Pneumercator TMS 2000 and TMs 3000 Automatic Tank Gauging | |
| EQ-327 | Franklin Fueling Systems (Formerly Incon Intelligent Controls, Inc.) | Dan Marston | 207-283-0156 | 8/03/1998 | TS 1001, and TS 2001 Automatic Tank Gauging | |

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## Leak Detection/ Automatic Tank Gauging (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-380 | Practical Tank Management, Inc. | W. R. Dean | 713-529-8734 | 7/20/1999 | Digital Level Sensor Automatic Tank Gauging | |
| EQ-500 | Omntec Mfg., Inc. | Tara Traganas | 631-981-2001 | 7/30/2001 | Omntec OEL 8000, K-OEL 8000, OEL 8000 II, K-OEL 8000 II with MTG Stainless Steel Magnetostrictive Probe | Omntec OEL 8000, K-OEL 8000, OEL 8000 II, K-OEL 8000 II with MTG Stainless Steel Magnetostrictive Probe is approved for automatic tank gauging in underground storage tanks with capacities up to 30,000 gallons in the State of Florida. The Department's previous approval EQ-245, dated April 5, 1996, is no longer in effect. |
| EQ-514 | OPW ( Formerly Tuthill Transfer Systems and the Emco Electronics Division) | Gene Pope | 813-969-1900 | 12/31/2001 | EECO Systems 3000, 2000, 1500, 1000, 1000EG and Galaxy ATG systems with the QQ0400-4xx Magnetostrictive Probe | The product is approved for automatic tank gauging in underground storage tanks with capacities up to 20,000 gallons in the State of Florida. The Department's previous approvals EQ-070, dated May 19, 1992, and EQ-071, dated May 19, 1992, are no longer in effect. |
| EQ-549 | Barton Instruments Systems, LLC | Jerry Copeland | 760-243-9771 | 11/23/2002 | Barton 3500 ATG System | Approved for automatic tank gauging in underground storage tanks with capacities up to 75,000 gallons in the State of Florida. A copy of the annual operability test shall be given by the manufacturer or distributor to any tank owner purchasing or using this system in the state of FL. |

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**Leak Detection/ Automatic Tank Gauging (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-563 | Advanced Telemetrics Limited | Drake Dunn | 210-828-1482 | 9/26/2003 | Advanced Telemetrics Tank Gauge Model 1100LD/2 | Approved for automatic tank gauging in underground storage tanks with capacities up to 30,000 gallons in the State of Florida. |
| EQ-623 | Varec, Inc. | John Vawser | 770-335-8172 | 12/15/2005 | Varec Tank Gauge Model MTG | Approved for automatic tank gauging in underground storage tanks with capacities up to 75,000 gallons and in field–erected underground storage tanks with capacities up to 100,000 gallons in the State of FL. |
| EQ-644 | WorldTelemetry , Inc. | Jennifer Corser | 918-232-7419 | 7/31/2006 | WorldTelemetry Data Link ATGS v2.6-h with magnetostrictive probe | Approved for automatic tank gauging in underground storage tanks with capacities up to 20,000 gallons in the State of Florida. |
| EQ-679 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 7/12/2007 | Incon Tank Sentinel ATG with SCALD 2.0, Model TS-750, with magnetostrictive probe automatic tank gauging | Incon Model TS-750 with magnetostrictive probe automatic tank gauging is approved in the State of Florida for automatic tank gauging with maximum tank capacity of 30,000 gallons for 0.2 gph and maximum tank capacity of 15,000 gallons for 0.1 gph, and approved as a continuous automatic tank gauging in underground storage tanks with maximum capacities of 49,336 gallons for a single tank or for all tanks manifolded together. |

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## Leak Detection/ Automatic Tank Gauging (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-719 | OPW | Gene Pope | 813-969-1900 | 12/12/2008 | OPW Site Sentinel iSite Automatic Tank Gauging | Approved for use as an automatic tank gauging for underground storage tanks in the State of Florida for tanks up to maximum capacity of 20,000 gallons, provided that the system is installed and tested annually in accordance with Exhibit A prior to being placed into service and recorded in accordance with Rule 62-761.710, F.A.C., requirements in Exhibit A attached with this Final Order. |
| EQ-863 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 3/04/2016 | OPW SiteSentinel®Nano® Console Tank Gauge, Probes and Sensors | May be used as an automatic tank gauge, as an approved overfill protection device when equipped with an alarm, and as an interstitial release detection device for secondary containment systems for underground and aboveground storage tank systems. |
| EQ-876 | Veeder-Root Company | Tech Support Customer Svc | 800-323-1799 888-561-7942 | 5/18/2017 | Veeder-Root TLS4i (up to 4 tanks) and TLSc (up to two tanks) - 8601 Series ATG Console and associated equipment | Installation, operation and maintenance shall be in accordance with the manufacturer's recommendations. |

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## Leak Detection/ Continuous Automatic Tank Gauging

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-180 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 12/16/1994 | ProMax/CSLD | No monitoring wells are required if system shall be kept in continuous mode with daily print-out. |
| EQ-198 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 5/12/1995 | TLS-300/CSLD, TLS-400/CSLD, EMC Basic/CSLD, ProPlus/CSLD | No monitoring wells are required if system shall be kept in continuous mode with daily print-out. |
| EQ-337 | Franklin Fueling Systems (Formerly Incon Intelligent Controls, Inc.) | Dan Marston | 207-283-0156 | 10/08/1998 | Incon Continuous Leak Detection System (CITLDS) | |
| EQ-409 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 12/14/1999 | ST System , Pro-Link System | |
| EQ-422 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 1/21/2000 | Auto/Stik Series 960 & 970 C.A.T.G.S. | |
| EQ-513 | OPW (Formerly Tuthill Transfer Systems and the Emco Electronics Division) | Gene Pope | 813-969-1900 | 12/31/2001 | EECO Systems 3000, 2000, 1500, 1000, 1000EG and Galaxy ATG systems with the QQ0400-4xx Magnetostrictive Probe | The product is approved for continuous automatic tank gauging in underground storage tanks with capacities up to 20,000 gallons in the State of Florida. |
| EQ-546 | Omntec Mfg., Inc. | Tara Traganas | 631-981-2001 | 11/21/2002 | OEL 8000II and KOEL 8000II controllers with the Omntec CITLD ATG system | The system is approved for continuous automatic tank gauging in underground storage tanks with capacities up to 18,000 gallons. |
| EQ-652 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 10/18/2006 | Incon Models TS-5, TS-550, TS-5000 with magnetostrictive probe automatic tank gauging | The Incon Models TS-5, TS-550, TS-550 evo, TS-5000 and TS-5000 EVO with magnetostrictive probe automatic tank gauging is approved for continuous automatic tank gauging in underground storage tanks with maximum capacities of 49,336 gallons for a single tank or for all tanks manifolded together. |
| EQ-652 Amended | Franklin Fueling Systems | Sandra Adams | 800-225-9787 | 5/21/2012 | Model TS-550 evo Fuel Management System and TS-5000 EVO (added 11/24/2014) | |

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## Leak Detection/ Continuous Automatic Tank Gauging (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-679 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 7/12/2007 | Incon Tank Sentinel ATG with SCALD 2.0, Model TS-750, with magnetostrictive probe automatic tank gauging | Incon Model TS-750 with magnetostrictive probe automatic tank gauging is approved in the State of Florida for automatic tank gauging with maximum tank capacity of 30,000 gallons for 0.2 gph and maximum tank capacity of 15,000 gallons for 0.1 gph, and approved as a continuous automatic tank gauging in underground storage tanks with maximum capacities of 49,336 gallons for a single tank or for all tanks manifolded together. |
| EQ-719 | OPW | Gene Pope | 813-969-1900 | 12/12/2008 | OPW Site Sentinel iSite Automatic tank Gauging | Approved in the State of Florida for continuous automatic tank gauging in underground storage tanks with maximum capacities of 30,258 gallons and a maximum monthly throughput of 397,883 gallons provided that the system is installed and tested annually in accordance with Exhibit A prior to being placed into service and recorded in accordance with Rule 62-761.710, F.A.C., requirements in Exhibit A attached with this Final Order. |

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## Leak Detection/ Continuous Automatic Tank Gauging (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-723 | Veeder-Root | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 12/23/2008 | Veeder-Root TLS-450 ATG CSLD monitoring system | Approved in the State of Florida for continuous automatic tank gauging in underground storage tanks with maximum capacities of 38,170 gallons for a single tank or for all tanks manifolded together and monthly maximum throughput of 221,890 gallons. |
| EQ-798 | OPW | Gene Pope | 813-969-1900 | 1/03/2013 | OPW Fuel Management Systems Site Sentinel iSite Series of Automatic Tank Gauges with Integra Console | Approved for continuous automatic tank gauging in underground storage tanks with maximum capacities of 30,258 gallons and a monthly throughput of 397,883 gallons. Also includes sensor and probe release detection in interstices, sumps and liners. Installation should be in accordance with the manufacturer's recommendations. |
| EQ-803 | OMNTEC Mfg., Inc. | Tara Longobardi | 631-468-8360 | 2/27/2013 | OMNTEC Mfg., Inc. PROTEUS Line of Automatic Tank Line Gauging and Leak Detection Systems | Release detection methods associated with the ATG of USTs and the interstitial monitoring of UST systems or ASTs |
| EQ-834 | Morrison Bros. Co. | Kelly Briant | 800-553-4840 | 12/23/2014 | Model 918AC System Interface | Installation, operation and maintenance shall be in accordance with the manufacturer's recommendations. |

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## Leak Detection/ Statistical Inventory Reconciliation (SIR)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| ~~EQ-179~~ | ~~Syscorp, Inc.~~ | ~~Richard Forester~~ | ~~205-853-0004~~ | ~~10/05/1994~~ | ~~StoreVision Statistical Inventory Reconciliation~~ | Final Order was rescinded on 4/25/2001 per manufacturer's request. |
| EQ-377 | USTMAN Technologies, Inc. | Cliff Miller | 800-253-8054 | 6/01/1999 | USTMAN SIR Version 95.2A System | |
| EQ-451 | Entropy Limited | Deborah Talanian | 781-259-8901 | 9/15/2000 | PTIC Rev. 90 | The Department's previous approval EQ-018, dated June 20, 1991, is hereby revoked. |
| EQ-453 | Horner Products, Inc. | Jack Horner | 800-443-0711 | 9/29/2000 | SIR Pro 1 Version 3.0 | The Department's previous approval EQ-126, dated May 10, 1993, is hereby revoked due to the fact the SIR PRO 1 Version 3.0 supersedes the previously issued equipment approval. |
| EQ-458 | USTMAN Industries, Inc. | Cliff Miller | 800-253-8054 | 10/04/2000 | USTMAN SIR Version 95.2B System | The Department's previous approvals EQ-065, dated February 20, 1992, and EQ-104, dated December 8, 1992, are hereby revoked due to the fact that EQ-065, and EQ-104 are not being used in the State of Florida, and by the company's request the orders are revoked. |

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## Leak Detection/ Statistical Inventory Reconciliation (SIR) (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-466 | TeleData, Inc. | Tony Weston | 561-219-4661 | 11/29/2000 | TankMate Version 3.12 | The Department's previous approval EQ-241, dated April 5, 1996, is no longer in effect. |
| EQ-468 | SIR International, Inc. | Jim Flynn | 918-479-5800 | 2/27/2001 | Mitchell's SIR Program, Version 2.6 | The Department's previous approval EQ-069, dated May 19, 1992, is hereby rescinded and no longer in effect. |
| EQ-473 | Computerizing, Inc. | Bob Starkey | 256-259-1805 | 1/12/2001 | Computank Version 3.0 SIR System | The Department's previous approval EQ-98, dated October 19, 1992, is no longer in effect. |
| EQ-480 | Warren Rogers Associates, Inc. | William Jones | 401-846-4747 | 2/14/2001 | WRA SIR Version 5.1 | The Department's previous approval EQ-134, dated June 14, 1993, is no longer in effect. |
| EQ-492 | Sir Phoenix, Inc. | Walter Morgan | 931-852-4121 | 4/18/2001 | LEOMA Version 1.50 SIR Method | The Department's previous approval EQ-171, dated June 6, 1994, is no longer in effect. |
| EQ-502 | Simmons Corporation | Howard Dockery | 800-848-8378 | 7/30/2001 | Wilco Data Collection Unit and SIR 5.7 L.M. | Conditional Approval |

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## Leak Detection/ Statistical Inventory Reconciliation (SIR) (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-508 | Precision Tank Services, Inc. | Sandy Hicks | 704-892-8600 | 10/26/2001 | TotalSIR Version 1.0 | TotalSIR Version 1.0 approved as a statistical inventory reconciliation method for manifolded tanks and single tanks with a capacity of up to 45,000 gallons in the State of Florida. The Department's previous approval EQ-307, dated January 12, 1998 is no longer in effect. |
| EQ-520 | Warren Rogers Associates, Inc. | William Jones | 401-846-4747 | 3/01/2002 | WRA Version 5.2, SIR Method | The product is approved as a statistical inventory reconciliation method for single tanks and manifolded tanks up to three tanks with a capacity of up to 36,000 gallons in the State of Florida. |
| EQ-532 | Advanced Telemetrics Limited | Drake Dunn | 210-828-1482 | 5/23/2002 | Tanknetics Version V.2.1 SIR Method | Tanknetics Version V.2.1 SIR Method approved in the State of Florida as a statistical inventory reconciliation method for single tanks with individual capacities up to 45,000 gallons, and for up to four manifolded tanks with a total sum of their capacities of up to 45,000 gallons. |

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## Leak Detection/ Statistical Inventory Reconciliation (SIR) (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-539 | Sir International, Inc. | Jim Flynn | 918-479-5800 | 8/21/2002 | Mitchell's Sir version 2.7 | Approved as a statistical inventory reconciliation method for single tanks and for manifolded tanks, up to four tanks maximum, and with a total capacity of up to 45,000 gallons. |
| EQ-624 | Simmons Corporation | Howard Dockery | 800-848-8378 | 12/27/2005 | SIR 5.7 L.M. | Approved in the State of Florida as a statistical inventory reconciliation method for single tanks and for manifolded tanks, up to five tanks maximum, and with a total capacity of up to 60,000 gallons. |
| EQ-701 | Warren Rogers Associates, Inc. | William Jones | 401-846-4747 | 3/06/2008 | WRA PetroNetwork S3 (Version D) with magnetostrictive probe automatic tank gauging and pressurized line leak detector | Conditional Approval |

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**AST/ Overfill Protection**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-225 | OPW | Gene Pope | 813-969-1900 | 10/25/1995 | OPW 61F-Stop Overfill Prevention Valve | AST Overfill Protection |
| EQ-227 | Morrison Bros. Co | Jerry Schollemeyer | 800-553-4840 | 10/25/1995 | AST Overfill Alarm | AST Overfill Protection |
| EQ-234 | Vaporless Manufacturing, Inc. | Steve Wilson | 800-367-0185 | 12/11/1995 | OFP-2/1, OFP-2/2, OFP-3/1, and OFP-3/2 Overfill protection Valve | AST Overfill Protection |
| EQ-257 | Clay & Bailey Mfg. Co. | Brad Holmes | 800-821-6583 | 5/09/1996 | Solo Overfill Protection Valve #1228, The Overfill Protection Valve, Model Number, F-30, F-35, F-40 and the Mino Filling Limiter #1228. | AST Overfill Protection |
| EQ-301 | Universal Valve Company | Bill Tobias | 800-255-4783 | 9/29/1997 | Model 49-02, Model 49-04 Aboveground Overfill Protection and Model HL-TA Aboveground Overfill Alarm Tank Monitor | AST Overfill Protection |
| EQ-355 | K-Tek Corporation | Thomas Crnko | 225-673-6100 | 12/17/1998 | SPM 100 and SPM 200 Series | AST Overfill Protection |
| EQ-356 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 12/17/1998 | 9095A Overfill Protection Valve | AST Overfill Protection |
| EQ-370 | Scully Signal Company | Frank Stemorzewski | 617-692-8600 | 3/12/1999 | ST-15Series, ST-12, SP-M Series, SP-O Series, SP-TOM Series, SP-BL Series, SP-LD,And SP-H Overfill Protection Devices | AST Overfill Protection |
| EQ-379 | Enraf, Inc. | Robert Arias | 281-443-4291 | 6/15/1999 | Enraf 873 SmartRadar, and the 854 Servo Level Gauge | AST Overfill Protection |
| EQ-384 | Endress+Hauser Coggins System | Richard Entralgo | 281-480-5273 | 8/24/1999 | Whessoe Varec/ Sakura Endress Proservo NMS Series and Promonitor NRF 560 | AST Overfill Protection |

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## AST/ Overfill Protection (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ- 388 | Magnetrol International | Scott Stewart | 630-969-4000 | 8/30/1999 | Buoyancy Technology<br>• EZ Modulevel<br>• Pnumatic Modulevel<br>• External Cage<br>• Displacer • Side Mount<br>• Top Mount • High Pressure<br>• Tuffy<br><br>Capacitance Technology<br>• Tip Sensitive<br>• 810 • 811 • 80/81 • 82 CE<br>• Sentinel 822 • Sentinel 832<br>• Sentinel 842 • 801 • 804<br><br>Contact Ultrasonic<br>• 910 • 911/921 • 91S/92S<br>• 919 • 915 • 916 • 918 • 91E<br><br>Non-Contact Ultrasonic<br>• 352 • 350/351 • 341 • 344<br>• 300/301 • 3P1<br><br>Magnetostrictive<br>• Microtel<br><br>Thermal Dispersion<br>• Microtel<br><br>Guided Wave Radar<br>• Eclipse | AST Overfill Protection |
| EQ-389 | Trans Data Corp., Division of Fournier Associates, Inc. | John Wehler | 516-223-4840 | 8/30/1999 | Series 6761, Series 6693, and Series 6699 | AST Overfill Protection |
| EQ-393 | Enraf, Inc. | Robert Arias | 281-443-4291 | 8/30/1999 | Enraf Alarm Scout and 744 Alarm Controller/ 748 IR Probe | AST Overfill Protection |

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## AST/ Overfill Protection (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-396 | Drexelbrook Engineering Company | Jack Roushey | 215-674-1234 | 9/02/1999 | Drexelbrook LCT and VeriGap Level Detector | AST Overfill Protection |
| EQ-404 | Omntec Mfg., Inc. (Formerly Innovative Sensor Solution Ltd.) | Tara Traganas | 631-981-2001 | 11/16/1999 | FillCheck® overfill protection devices | AST Overfill Protection, Conditional Approval |
| EQ-406 | Miltronics, Inc. | Doug Duncan | 817-277-3543 | 11/23/1999 | Miltronics Ultrasonic Level Measuring Systems | AST Overfill Protection |
| EQ-408 | L & J Engineering Company | Larry Grygienc | 708-236-6000 | 12/14/1999 | MCG 1090 line of high level alarms and the Omnitrol line of level controls | AST Overfill Protection |
| EQ-411 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 12/22/1999 | Model 1018 Aboveground Storage Tank Gauge | AST Overfill Protection |
| EQ-435 | Delta Controls Corporation | Randy Wyatt | 318-424-8471 | 5/08/2000 | Delta Models 709, and 715 Aboveground Storage Tank Gauge | AST Overfill Protection |
| EQ-456 | Intelligent Controls, Inc. | Kevin Devinney | 207-283-0156 | 10/04/2000 | HIS, HLS, ULS, DIS, EIS, PS, DDS, DTS, and MWS interstitial liquid sensors | AST Overfill and Liquid Leak Detector |
| EQ-464 | Franklin Fueling Systems | Allan Busch | 608-838-8786 | 10/25/2000 | 709 Warden overfill prevention valve | AST Overfill Protection |
| EQ-488 | Meco, Inc. | Kenneth Mroz | 619-466-1469 | 4/18/2001 | MecoAlarm System | AST Overfill Protection |
| EQ-527 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 4/19/2002 | Morrison 918 AST Clock Gauge with an Alarm System | The system is approved for overfill prevention for aboveground storage tanks up to 12 feet in diameter for horizontal tanks, and up to 12 feet in height for vertical tanks. |

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## AST/ Overfill Protection (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-536 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 8/05/2002 | Morrison 918CP AST Alarm System | Approved for overfill prevention for aboveground storage tanks up to 50 feet in height in the State of Florida. |
| EQ-548 | Gauging Systems, Inc. | Ana Figueroa | 800-444-1327 | 12/20/2002 | GSI-HIAS Overfill Alarm System | A copy of this order shall be distributed to any facility that uses this product. A copy of annual operability test shall be given to any tank owner purchasing or using this system In the State of Florida. |
| EQ-570 | Robetshaw Industrial Products | Dave Cahill | 865-981-3113 | 12/22/2003 | Centeron Level Alarm System | AST Overfill Protection |
| EQ-576 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 2/09/2004 | Morrison FMM ASO Valve | AST Overfill Protection |
| EQ-577 | Pneumercator Co., Inc. | Jonathan Levy | 800-209-7858 | 2/09/2004 | Pneumercator LS600 Series Liquid Level Float | AST Overfill Protection |
| EQ-610 | OPW | Gene Pope | 813-969-1900 | 4/11/2005 | OPW 144TA & 444TA High Level Tank Alarm | AST Overfill Protection |
| EQ-637 | Guillotine, Inc. | Don Shackelford | 800-824-1394 | 3/30/2006 | UL Listed Guillotine Flow Restrictor, UL File Number MH18426 | AST Overfill Protection |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-576 Amendment | Samson Company | Jerry Schollmeyer | 800-553-4840 | 1/26/2007 | ASO Valve # OA-1 | AST Overfill Protection Samson Company's product Valve # OA- that is identical to Morrison FMM ASO Valve which was approved in the original Order. The Samson Valve OA-1 has been manufactured since February 9, 2004 is approved to be installed after the effective date of this amended Order. The valve must have the marking or labeling states: Model Samson # OA-1, ULC Listed, and MANUFACTURED BY MORRISON BROS. |
| EQ-669 | Clay & Bailey Mfg. Co. | Brad Holmes | 800-821-6583 | 4/18/2007 | UL Listed Clay & Bailey Overfill Prevention Valves Model Numbers 1228-03-2200 2", and 1228-03-2400 4", UL File Number MH25085 | The use of the UL Listed Clay & Bailey Overfill Prevention Valves Model Numbers 1228-03-2200 2", and 1228-03-2400 4", UL File Number MH25085, is approved for overfill prevention for aboveground storage tanks in the State of Florida, provided the tank is equipped with tight fill connections and is not filled beyond 95% of nominal capacity. |
| EQ-669 | Clay & Bailey Mfg. Co. | Brad Holmes | 800-821-6583 | 4/18/2007 | UL Listed Clay & Bailey Overfill Prevention Valves Model Numbers 1228-03-2200 2", and 1228-03-2400 4", UL File Number MH25085 | The use of the UL Listed Clay & Bailey Overfill Prevention Valves Model Numbers 1228-03-2200 2", and 1228-03-2400 4", UL File Number MH25085, is approved for overfill prevention for aboveground storage tanks in the State of Florida, provided the tank is equipped with tight fill connections and is not filled beyond 95% of nominal capacity. |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-682 | Madison Company | Steven Hilaire | 203-488-4477 Ext. 101 | 9/16/2007 | M7000 Vertical Mount, Single Point Level Switch, PBT Stem & Buna N Float, SPST 30VA Switch, M7700Horizontal Mount, Single Point Level Switch, PBT Stem & Float, SPST 30VA Switch, M8700 Horizontal Mount, Single Point Level Switch, Polypropylene Stem and Float, SPST 30VA Switch | Conditional Approval |
| EQ-696 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 12/27/2007 | UL Listed Morrison Bros. Overfill Prevention Valve Model Number 9095S, UL File Number MH21138 | The tank is equipped with tight fill connections and is not filled beyond 95% of nominal capacity. The systems must be installed and tested upon installation in accordance with Exhibit A, and at least once on annual basis in accordance with Exhibit A, for Rule 62-762.701, F.A.C., annual operability requirements. |
| EQ-698 | Omntec Mfg., Inc. | Tara Traganas | 631-981-2001 | 1/10/2008 | Omntec L- Series sensors when used with associated controllers LPD, LU and OEL 8000 | Approved in the State of Florida for overfill protection of underground storage tanks and overfill protection of aboveground storage tanks provided the tanks are not filled beyond 95% of nominal capacity. The systems must be tested upon installation, and at least once on annual basis in accordance with Exhibit A, and Exhibit B, for Rule 62-762.701, F.A.C., annual operability requirements. |

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## AST/ Overfill Protection (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-705 | Pneumercator Co., Inc. | Jonathan Levy | 800-209-7858 | 4/24/2008 | The Pneumercator Model LS600/LS600A Series and Model LS600/LS600A NCL series Float Sensors for use with Pneumercator LC1000 and LC2000 series Alarm Panels, PC1000 series Pump Controllers and TMS Series Tank Management Systems | A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the State of Florida. |
| EQ-706 | Simplex, Inc. | David Hurtado | 386-690-6361 | 5/08/2008 | TC 9 Tank Commander, TC-9 Tank Commander with Automatic Fuel Port Series Model CAFP-x, and AFP-x, and multi-versions, TC-9 Tank Commander with Smart Pump Series Model SP-x, multi versions, and TC-9 Tank Commander with Mini-Smart Pump Series Model MSP-x | This product is equipped with the FuelPort Spill Containment that was approved under the Department File EQ-481. The used of the Pneumercator LS 600, LS 601, and RSU 800 approved under EQ-240 is acceptable to be used with this product. A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the State of Florida. |
| EQ-713 | Greenleaf Gauge | Brad Holton | 888-884-2843 | 8/18/2008 | Greenleaf Gauge Model EFG-8000 Overfill Protection | A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the State of Florida. |

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## AST/ Overfill Protection (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-730 | Krueger Sentry Gauge | Lee Geurts | 920-434-8897 | 3/26/2009 | Krueger Therma Gauge and Overfill Alert Gauge | A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the State of Florida. The annual operability test shall be done in accordance of Exhibit A attached to the Final Order. |
| EQ-732 | Simplex, Inc. | David Hurtado | 386-690-6361 | 5/11/2009 | Simplex SST Controller | The use of the Pneumercator LS 600, LS 601, and RSU 800 approved under EQ-240 is acceptable to be used with this product. A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the State of Florida. |
| EQ-743 | Fozmula Limited | Chris Hands | UK +44(0)1926 466700 | 11/10/2009 | T/LL70 Float Switch and the T/LL 140 series sensor | A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the State of Florida. |
| EQ-780 | Preferred Utilities MFG. Corp. | Dexter Bullard | 203-743-6741 | 2/14/2012 | Tank Fil-A-Larm Switch Model SDI-HLS; Tank Gauge Model SDI-TG-EL-D5; Discriminating Sensor Models SDI-HD-A2-C & SDI-HD-A2-C-8 | Products are approved as either overfill protection or release detection devices associated with ASTs or USTs. Installation and operation shall be made in accordance with the manufacturer's recommendations. |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-783 | Preferred Utilities MFG. Corp. | Dexter Bullard | 203-743-6741 | 3/05/2012 | Tank Gauge Model SDI-TG-EL-D4A and [Discriminating Sensor Models SDI-HD-A2-C & SDI-HD-A2-C-8 (see EQ-780)] | All products are approved as either overfill protection or release detection devices associated with ASTs or USTs. Installation and operation shall be made in accordance with the manufacturer's recommendations. |
| EQ-805 | Fozmula Limited | Marty Hendrickx | 815-623-7326 or UK +44(0)1926 466700 | 4/03/2013 | Fozmula Limited T/LL350 Float Switch Fuel Level Sensor for ASTs | Installation and operation of the liquid level sensor shall be made in accordance with the manufacturer's procedures. Does not require recalibration to stored fuel type like EQ-743 - T/LL 140 series. |
| EQ-807 | Mott-Smith Consulting Group, LLC | Marshall Mott-Smith | 850-391-9835 | 4/18/2013 | Husky Corporation 007 product line; Jarhead product line; Leak Guard product line; Black Knight product line; Red Fox product line and Sentry product line for Aboveground Storage Tank Systems | Approved in the State of Florida as product level sensors that could provide high level information for overfill protection and for product inventory information for AST systems. Intended to be used with medium and heavy distillates and not intended for use with light distillates such as diesel fuel. The installation and operation shall be in accordance with the manufacturer's recommendations. |
| EQ-817 | FPI Sensors International | Gary Maas | 800-852-9984 | 1/13/2014 | FPI Sensors International Model Numbers: LD 1001 Generic Leak Detection System – LD FPI BB15; CL 1001 Generic Continuous Level 4-20 mA Sensor – LD FPI SP15; LS 1001 Generic Level Float Switch – LD FPI SP12 | Release detection sensors for monitoring secondary containment systems associated with USTs and ASTs and for an associated float switch associated with the sensors. EQ-817 covers overfill protection devices when connected to an operator alarm. |
| EQ-819 | Preferred Utilities MFG. Corp. | Dexter Bullard | 203-743-6741 | 3/24/2014 | Overfill Protection Devices: Liquid Level Switch, Model PLS and Overfill Models FA-AV and FA-AV-D3 | The installation and operation shall be in accordance with the manufacturer's recommendations. |
| EQ-831 | Component Specialists, Inc. | Marty Hendrickx | 815-623-7326 | 10/17/2014 | Fozmula Limited G/LL65 Liquid Level Contents Gauge, T/LL200 Series Liquid Level Sensor, G/LL64 Liquid Level Contents Gauge, and T/LL130 Liquid Level Sensor | Devices may be used as part of the overfill protection device so long as the product level information is provided to the product transfer operator. Department approval for inventory management purposes is not required. |

**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-832 | Advanced Control Technology, Inc. | John Tate | 877-800-8820 | 10/17/2014 | Advanced Control Technology, Inc. 10 Series Miniature Fluid Level Switches | Devices may be used as part of the overfill protection device so long as the product level information is provided to the product transfer operator. Department approval for inventory management purposes is not required. |
| EQ-840 | Emerson Process Management-Rosemount Tank Gauging Division | Carl-Johan Roos | +46-31-3370144 | 2/02/2015 | Emerson Process Management-Rosemount Tank Gauging System | The installation, operation, and maintenance procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-851 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 10/23/2015 | Morrison Bros. Co. 2 inc and 3 inch Model 9095AA Series of Overfill Prevention Valves | The installation, operation, and maintenance procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-854 | Design By Initiative | Reid McLean | 404-996-1282 | 11/09/2015 | SMD Fluid Controls Fuelogic Model FS and Models FM Float Switches for Overfill Protection and Release | May be used as part of an overfill protection device or a release detection sensor for underground and aboveground storage tank systems. The installation, operation, and maintenance procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-858 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 12/07/2015 | Morrison Brothers Co. Model 9095X Series and Model 9095 SA Series Overfill Protection Valves | May be used as overfill protection devices for underground and aboveground storage tank systems The installation and maintenance of the overfill protection devices must be in accordance with the manufacturer's recommendations. |
| EQ-861 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 2/01/2016 | Morrison Brothers Co. Model 918DP Clock Gauge | The installation and maintenance of the clock gauge shall be made in accordance with the manufacturer's recommendations. |
| EQ-862 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 2/01/2016 | Morrison Brothers Co. Model 924 & 924S, 924LS, 925 & 925S Series Liquid Sensors | The installation and maintenance shall be made in accordance with the manufacturer's recommendations. |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-863 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 3/04/2016 | OPW SiteSentinel®Nano® Console Tank Gauge, Probes and Sensors | May be used as an automatic tank gauge, as an approved overfill protection device when equipped with an alarm, and as an interstitial release detection device for secondary containment systems for underground and aboveground storage tank systems. |
| EQ-867 | Solutions with Innovation, LLC | Thomas Williams | 203-729-6434 | 6/27/2016 | L170-0101-3002 and L007-0402-0203 Series Liquid Level Switches | For overfill protection, the switch will be set at a specified liquid level in the storage tank and an alarm will be provided to the transfer operator. For interstitial release detection, the switch will be placed on the low area of the secondary containment interstice that is being monitored that will alarm when liquid is detected. |
| EQ-868 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 12/16/2016 | Models 918SB, 918DB, and 918QB Series Alarms | May be used as a visible and audible alarm for overfill protection devices or release detection sensors for aboveground and underground storage tank systems, in accordance with the requirements of Chapter 62-761, and Chapter 62-762, F.A.C. |
| EQ-872 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 3/06/2017 | Models 1218C Console & 1218S Sensor | Follow manufacturer's instructions. |
| EQ-873 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 4/26/2017 | Model 818 Series Clock Gauges | To be used for overfill protection, the Model 818 Series gauges must be visible and facing the product transfer operator, it must be clearly marked at 90% capacity and cannot be filled over that amount. All overfill protection devices require annual operability test. Follow manufacturer's instructions. |
| EQ-877 | Veeder-Root | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 5/19/2017 | Veeder-Root Overfill Alarm and Acknowledgement Switch | The installation and maintenance shall be in accordance with the manufacturer's recommendation. Registered for UST or AST overfill protection. |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-878 | Endress+Hauser | Gene Henry | 888-363-7377 | 8/01/2017 | Endress+Hauser Overfill Prevention System - Models SOPX00. | The installation and maintenance shall be in accordance with the manufacturer's recommendation. Registered for AST overfill protection. Meets API 2350 requirements. |

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## Miscellaneous

### A. Foam

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Conditions |
|---|---|---|---|---|---|---|
| EQ-293 | Petro Fill, Inc. | Mike Dugger | 803-871-6124 | 9/23/1997 | Petro-Fill | Conditional Approval |
| EQ-328 | PolyMasters, Inc. | Steve Sayers | 423-966-3005 | 7/31/1998 | PolyMaster | Conditional Approval |
| EQ-445 | Thermal Corporation of America | Jim Brau | 888-385-3626 | 8/16/2000 | Thermco insulation Foam | Conditional Approval |
| EQ-505 | The Perma Fill Corporation | Scott Sanders | 800-755-2097 | 9/28/2001 | Perma-Fill Foam | Conditional Approval |
| EQ-591 | C.P. Chemical, Inc. | Walter Hasselman | 914-428-2517 | 7/16/2004 | Tripolymer® 105-TM Tank Media Foam | Conditional Approval |
| EQ-672 | cfiFoam, inc. | Richard Porter | 865-588-4464 | 5/02/2007 | Tank Foam | Conditional Approval |

### B. Inventory

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-152 | Miami Software Corporation | Annelie Piccioni | 305-242-6264 | 12/16/1993 | Miami Software | Inventory Reconciliation for gas station |

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## C. Pump & Accessories

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-288 | Amoco Corporation | David Killingsworth | 954-938-2735 | 7/01/1997 | Amoco Submercible Pump Containment | |

## D. Flex Connector Cover Material

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-330 | Jack Pittman & Associates | Bill Tobias | 800-255-4783 | 7/31/1998 | Austin Engineering Zip Boot | |
| EQ-340 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 11/02/1998 | Red Jacket Unisump | |
| EQ-346 | 3M | Sales Department | 407-855-7100 | 11/02/1998 | FP-301 and EPS-300 flexible polyolefin heat shrink tubing, and the 8440 Series silicone rubber Cold Shrink Tubes | The heat source for shrinking the FP-301 and EPS-300 flexible polyefin heat shrink tubing shall not be used in situ, and the heat shrinking process for the FP-301 and EPS-300 products shall only be applied when the flex connectors are away from flammable and combustible products or vapor conditions. |
| EQ-369 | OPW (Formerly Environ Products, Inc.) | Gene Pope | 813-969-1900 | 3/10/1999 | Environ Isolation Tube | |

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## E. Monitoring Well Accessories

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-204 | Dickey Manufacturing Company | James Hawkins | 708-584-2918 | 5/12/1995 | The Dickey Globe Seals and The Dickey Premier Car Seals(MW Seals) | |
| EQ-230 | Enviro Design Products, Inc. | Bill Watts | 800-422-9355 | 11/15/1995 | EX-CAP | Monitoring Well Cap |

## F. Aboveground Valve Cover

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-402 | Environmental Protection Services | Robert Haddox | 281-362-0022 | 11/05/1999 | EPS Valve Shield | |
| EQ-405 | CMS Engineering, Inc. | David Schultz | 813-247-6112 | 11/17/1999 | CMS Valve Containment | |

## G. Internal Inspection

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-418 | Tank Tech, Inc. | Bud Mattox | 800-871-4008 | 1/14/2000 | Tank Tech Scope™ Inspection Method | Approved as an equivalent method to internal inspection of internally lined underground storage tanks in accordance NLPA 631, Chapter B. |

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## H. Overfill Retention

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-517 | Eco-Tank Systems, LLC | Greg Ludwig | 610-495-9583 | 2/26/2002 | Tank Shell Monitoring System GTÜ-TABS | The System is approved for aboveground storage tank overfill retention and tank shell monitoring in the State of Florida provided the tank is equipped with an approved overfill detection device. |
| EQ-659 | Industrial Maintenance Group, Inc. | Peter Van Fossem | 813-659-3512 | 2/07/2007 | TRAPS System | Conditional Approval |
| EQ-699 | Eco-Tank Systems, LLC | Greg Ludwig | 610-495-9583 | 1/29/2008 | Eco-Tank Systems TABS 02 | Conditional Approval |
| EQ-738 | Eco-Tank Systems, LLC | Greg Ludwig | 610-495-9583 | 8/11/2009 | Eco-Tank TABS-C, TABS-CF & TABS-F Systems | Conditional Approval |
| EQ-739 | Chevron Corporation | Rick Garrett | 813-805-941 | 9/15/2009 | Concrete Alternative Dike-field Containment System | Conditional Approval |

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## I. Hydrostatic Testing

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-600 | Enhanced Leak Detection, Inc. | Dan McGill | 714-523-0194 | 11/17/2004 | Hydro-Tite Test | Approved as a Hydrostatic test for underground dispenser and piping sump. |
| EQ-628 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 1/17/2006 | Veeder Root Mag Sensor Hydrostatic Test, and Secondary Containment Vacuum Sensing System | Conditional Approval |
| EQ-670 | Praxair Services, Inc. | Randy Golding | 520-888-9400 | 4/30/2007 | Praxair Pressure/Vacuum Decay Containment Testing Method | Approved as a containment integrity test for single-walled underground dispenser and piping sumps in the State of Florida. |

## J. Double-Walled UST System Tightness Testing

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-635 | Praxair Services, Inc. | Randy Golding | 520-888-9400 | 3/28/2006 | Tracer Tight© Method for tightness testing of double-walled underground tanks and integral small diameter double-walled piping | Approved as a tightness test for double-walled underground tanks and double-walled underground small diameter piping (excluding piping sumps and dispenser liners) before the tank system is placed into service in the State of Florida. |

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## K. AST Cathodic Protection Systems

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-813 | Northern Technologies International Corporation | Customer Service techsupport@zerust.com | 763-404-8701 763-404-8702 | 9/13/2013 | Northern Technologies International Corporation Zerust® Oil & Gas - ReCAST-SSB System | Approved as a corrosion inhibitor system. The application system shall be designed by a corrosion professional. The installation, testing and operation shall be made in accordance with manufacturer's recommendations. |

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**October 19, 2017**

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
# APPROVED/REGISTERED STORAGE TANK SYSTEM EQUIPMENT LIST
# RULES 62-761.850 and 62-762.851, F.A.C.

The following is a list of manufacturers of approved/registered storage tank system equipment. The list contains equipment that has been approved after December 10, 1990, and does not include equipment approved under Chapter 17-61, Florida Administrative Code (F.A.C.). Effective January 11, 2017, new or updated equipment will be registered with a five-year renewal requirement. Equipment approved prior to January 11, 2017, must be renewed by January 10, 2022, to remain on the list. See subsections 62-761.850(2) and 62-762.851(2), F.A.C., for requirements. The Florida Department of Environmental Protection does not specifically endorse any manufacturer nor is the Department responsible for any failure or malfunction of the product or equipment. It is the responsibility of the tank owner to verify that materials of storage tank systems and their components are compatible with the regulated substance stored in the tank system. All installed storage tank system equipment containing blends of ethanol, biodiesel, or other biofuels and additives shall be compatible with the regulated substances stored in the storage tank systems. Contact information on the list is updated by the manufacturer and may not be current.

For technical inquiries regarding equipment, please contact Elena Compton via email at Elena.Compton@dep.state.fl.us or call 850-245-8911.

For corrections or questions about this list, please contact Kim Curran via email at Kimberley.Curran@dep.state.fl.us or call 850-245-8849.

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TANKS/ UST WITH INTERNAL SECONDARY CONTAINMENT UPGRADE ..... 8

TANKS/ UST SYSTEM – TOTAL SYSTEMS ..... 11

TANKS/ UST SECONDARY CONTAINMENT SYSTEMS ONLY ..... 12

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**Tanks/ UST with Secondary Containment**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-129 | Southeast Tank Co. | David Palazzo | 813-986-1043 | 5/10/1993 | PermaTank | Conditional Approval |
| EQ-154 | Gold Coast Coating, Inc | Derick Sharp | 606-654-8265 | 1/04/1994 | GCR-100 | Conditional Approval |
| EQ-156 | Modern Welding Co. | Gene Schober | 407-843-1270 | 3/15/1994 | Glassteel II | |
| EQ-162 | Specialty Tank & Equipment | William Mann | 800-228-1039 | 3/23/1994 | Sti-p3 and Glasscote | |
| EQ-166 | Total Containment, Inc. | Tony Adamson | 610-666-2170 | 3/18/1994 | Underground Double Walled Tank Jacket Storage Tank | |
| ~~EQ-169~~ | ~~Mepco, Inc.~~ | ~~Steve Holmes~~ | ~~800-880-5878~~ | ~~5/27/1994~~ | ~~AMUST System~~ | The Final Order was rescinded On October 5, 2001 |
| EQ-191 | Containment Solutions, Inc. | Kevin Soeder | 936-756-7731 | 2/17/1995 | Owens-Corning Double Wall Tanks | BTU Coating for Biofuel Storage |
| EQ-200 | Xerxes Corporation | Gene Pope | 813-969-1900 | 5/12/1995 | Xerxes Double Wall Tanks | |
| EQ-236 | KCL Products Ltd. | Dr. Kaempen | 714-978-9708 | 2/05/1996 | Kaempen Double Wall Tanks | |
| EQ-275 | Containment solutions, Inc. (Formerly Beta Tank, Inc.) | Kevin Soeder | 936-756-7731 | 2/07/1997 | Sti-p3 and Act-100 double Wall storage tanks | |
| EQ-277 | Alabama Tank, Inc. | Kevin Woods | 251-577-6415 | 3/14/1997 | Sti-P3 Double-Wall Underground Storage tank | |
| EQ-289 | Alabama Tank, Inc. | Kevin Woods | 251-577-6415 | 8/04/1997 | Double-Wall Fiberglass Coated Steel | |
| EQ-317 | Titan Tank Company of Florida, Inc. | David Palazzo | 813-986-7996 | 2/16/1998 | Titan Double-Wall Underground Tank | |
| EQ-333 | Metal Products Company | Burcher Gammage | 800-424-7373 | 9/08/1998 | Type I, and Type II, and Elutron tank | |
| EQ-339 | Newberry Tanks & Equipment LLC | Brian Brinkley | 800-643-9395 | 10/08/1998 | Double-Wall Underground Tank Type 1 & 2 , Sti-P3, and Type 1 & 2 Act 100 | |

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**Tanks/ UST with Secondary Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-339 | Newberry Tanks & Equipment LLC | Brian Brinkley | 800-643-9395 | 10/08/1998 | Double-Wall Underground Tank Type 1 & 2 , Sti-P3, and Type 1 & 2 Act 100 | |
| EQ-341 | ZCL-USA, Inc. | Ron Koch | 604-209-1457 | 11/02/1998 | Prezerver Double-Wall UST | |
| EQ-491 | Service Welding & Machine Co., Inc. | Carl Greer | 502-585-4295 | 5/10/2001 | Service Welding & Machine Co., Inc.'s manufacturing the Titan, Permatank, ACT-100, and STI-P3 | |
| EQ-495 | Xerxes Corporation | Gene Pope | 813-969-1900 | 4/18/2001 | Xerxes triple wall UST | An initial tightness test during installation is performed in accordance with Exhibit A or Exhibit B. A record of the test shall be kept in accordance with Rule 62-761.710, F.A.C. |
| EQ-506 | Highland Tank Mfg., Co. | Scott Matarazzi | 717-664-0600 | 10/05/2001 | Highland Tank Manufacturing Company's manufacturing of the Titan underground storage tank | Conditional Approval |
| EQ-507 | Steel Tank Institute | Dana Schmidt | 847-438-8265 | 10/08/2001 | ACT-100® and ACT-100U® double-wall underground storage tanks | Conditional Approval |
| EQ-537 | Xerxes Corporation | Gene Pope | 813-969-1900 | 9/19/2002 | Xerxes Corporation " X " Tank | The Xerxes Corporation "X" Tank is approved as a method for providing secondary containment for single-walled Xerxes tanks. |
| EQ-553 | General Industries, Inc. | Jamie Stanley | 919-751-1791 | 1/30/2003 | General Industries Inc.'s manufacturing of the PermaTank double-walled underground storage tank, UL File Number MH16166 | Conditional Approval |

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**Tanks/ UST with Secondary Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-583 | Steel Tank Institute | Dana Schmidt | 847-438-8265 | 4/14/2004 | ACT-100 and ACT-100-U Double-Walled USTs | |
| EQ-584 | Bertotto Boglione, S.A. | Eduardo Borri | Argentina 54-3472-425095 | 4/15/2004 | Bertotto Boglione, S.A., manufacturing of the Plasteel Elutron Jacketed Fiberglass underground storage tank, UL File Numbers MH18314 and MH26494 | |
| EQ-611 | Edwards Fiberglass, Inc. | Brian Gately | 781-829-1188 | 5/06/2005 | Edwards Fiberglass Double-Wall tanks, UL File Number MH14359 | The system is tightness tested in accordance with Rule 62-761.500(2)(d), F.A.C., prior to being placed into service; equipped with only dry interstitial monitoring, and recorded in accordance with Rule 62-761.710, F.A.C, requirements specified in Exhibit A attached with this Final Order. |
| EQ-626 | Plasteel International, Inc. | Rick Sharp | 760-729-1093 | 12/10/2005 | Plasteel Composite® and Elutron® FRP jacketed Double-Walled USTs, UL File Number MH118314 | Conditional Approval |
| EQ-674 | Highland Tank Mfg. Co. | Todd Shearer | 717-664-0600 | 6/11/2007 | Double-Walled 360° USTs, UL File Number MH25373 | |
| EQ-691 | Highland Tank Mfg. Co. | Paul Balint | 814-893-5701 Ext. 113 | 12/03/2007 | Highland Highguard UL 58/1746Double-Walled UST, UL File Number MH4242 | The system is tightness tested at installation in accordance with Exhibit A. |

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**Tanks/ UST with Secondary Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-694 | Modern Welding of Florida, Inc. | Gene Schober | 407-843-1270 | 12/14/2007 | Modern Welding Double-Wall Tank GS-16, UL File Number MH3217 | The system is tightness tested in accordance with Exhibit A and Exhibit B, prior to being placed into service and recorded in accordance with Rule 62-761.710, F.A.C, requirements in Exhibit A and Exhibit B attached with this Final Order. |
| Q-716 | Steel Tank Institute | Dana Schmidt | 847-438-8265 | 9/26/2008 | STI-P3 double-wall underground storage tanks | The tank manufacturers are authorized to manufacture the STI-P3 double-wall underground storage tanks under the Steel Tank Institute are licensed for use in the State of Florida. |
| EQ-733 | Newberry Tanks & Equipment LLC | Brian Brinkley | 800-643-9395 | 5/18/2009 | Newberry Permatank Double-Wall Tank, UL File Number MH3704 | The system is tightness tested in accordance with Exhibit A and Exhibit B, prior to being placed into service and recorded in accordance with Rule 62-761.710, F.A.C, requirements in Exhibit A attached with this Final Order. |

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**Tanks/ UST with Internal Secondary Containment Upgrade**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-087 | Derscot, Inc. | Derick Sharp | 606-654-8265 | 8/21/1992 | DS-9000 | Conditional Approval |
| EQ-112 | D.I. Chadbourne Enterprises | Dan Chadbourne | 650-344-1428 | 3/10/1993 | PolyFlex System | Conditional Approval |
| EQ-187 | Controls on Environmental Systems, Inc. | John Lewis | 704-764-7745 | 1/31/1995 | C.O.E. Containment System | Conditional Approval |
| EQ-264 | Bell Avon, Inc. | David Poole | 601-799-1217 | 8/27/1996 | Vigilant system | Conditional Approval |
| EQ-306 | HT Technologies LLC | David Dudding | 888-287-9595 | 12/11/1997 | PrimaGuard Secondary Containment | Conditional Approval |
| EQ-403 | ZCL-USA, Inc. | Lee Brownson | 803-210-9371 | 11/16/1999 | ZCL-USA's Phoenix System™ | Conditional Approval |
| EQ-403 Amendment | ZCL Composites, Inc. | Lee Brownson | 803-210-9371 | 9/12/2008 | ZCL-USA's Phoenix System™ | Conditional Approval |
| EQ-403 Second Amendment | Tank Tech, Inc. | David Russell | 573-471-1932 | 7/31/2009 | ZCL-USA's Phoenix System™ | **a)** The following condition e is added to the provisions of the original Order stating that the systems installed after November 16, 1999 shall be tightness tested in accordance with Exhibit A of this Order; and **b)**The conditions of original Order remains in effect. |
| EQ-454 | Containment Solutions, Inc. | Kevin Soeder | 936-756-7731 | 9/29/2000 | Double-Wall Re-Tank® Underground Storage Tank | Conditional Approval/BTU Coating for Biofuel Storage |
| EQ-621 | UST Environmental Services, Inc. | John Collins | 800-992-1293 | 12/14/2005 | In-Situ Double-walled System | Conditional Approval |
| EQ-667 | ZCL Composites, Inc. | Ron Koch | 604-209-1457 | 3/28/2007 | UL Listed Phoenix System, UL File Number MH45077 | Conditional Approval |

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**Tanks/ UST with Internal Secondary Containment Upgrade (continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-668 | K-Tank Systems, LLC (Formerly Petrofuse ZP LLC) | Lissette & Ralph Calderon | 305-856-8283 | 4/16/2007 | Petrofuse Four-Coat Tank Lining System, with the Ashland Aropol corrosion resistant resin (UL certification number EGVV2.MH28980), the Correx Grade 3/450 interstitial membrane, and the Petrofuse Dual Contained Leak monitoring System Model T3300 Series Leak detector | Conditional Approval |
| EQ-668 Amendment | K-Tank Systems, LLC (Formerly Petrofuse ZP LLC) | Lissette & Ralph Calderon | 305-856-8283 | 11/22/2008 | Petrofuse Four-Coat Tank Lining System | Conditional Approval |
| EQ-668 Second Amendment | K-Tank Systems, LLC (Formerly Petrofuse ZP LLC) | Lissette & Ralph Calderon | 305-856-8283 | 7/28/2009 | Petrofuse Four-Coat Tank Lining System, with the Ashland Aropol corrosion resistant resin (UL certification number EGVV2.MH28980), the Nida-Core Hxx SBPP interstitial membrane, and the Petrofuse Dual Contained Leak monitoring System | **a)** Allows the replacement of the Correx Grade 3/450 interstitial membrane with Nida-Core Hxx SBPP membrane; and **b)** The conditions of original Order remain in effect. |
| EQ-729 | Tank Tech, Inc. | David Russell | 573-471-1932 | 3/17/2009 | UL Listed Phoenix Hybrid System and Phoenix Epoxy System, UL file number MH46218 | Conditional Approval |

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**Tanks/ UST with Internal Secondary Containment Upgrade (continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-729 Amendment | Tank Tech, Inc. | David Russell | 573-471-1932 | 7/31/2009 | UL Listed Phoenix Hybrid System and Phoenix Epoxy System, UL file number MH46218 | **a)** The following condition f is added to the provisions of the original Order stating that the systems installed after March 17, 2009 shall be tightness tested in accordance with Exhibit A of this Order; and **b)** The conditions of original Order remains in effect. |
| EQ-777 | PCE Petroleum Contractors Enterprise | Raul (Nick) Necoechea | 407-342-1385 | 8/19/2011 | PCE Double-Walled Containment System for Lined Tanks | The preparation of the interior of the single-walled underground storage tank shall be made to provide a strong bond between the tank outer wall and the secondary containment system. A communication test shall be performed and passed before the tank is placed into operation to assure proper release detection is taking place. Any Cathodic protection system employed on the single-walled storage tanks shall be continued to be operated and maintained according to the rule. |
| EQ-781 | Tank Tech, Inc. | Dave Russell | 850-391-9835 | 3/08/2012 | Tank Tech, Inc. Stand Alone System<br>UL listed as Internal Stand Alone Tank System | Approved as a fiberglass double-walled UST installed within a fiberglass or steel UST. Installation and initial integrity testing must be performed by companies and personnel that have been approved, trained and certified by Tank Tech, Inc. according to the test procedures and quality assurance protocols provided by Tank Tech, Inc. |

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**Tanks/ UST System – Total systems**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-076 | Euro Tank & Ecosafe System, Inc. | Manfred Fiech | 352-629-3700 | 6/29/1992 | Euro Tank | These systems are equipped with spill containment overfill protection, release detection, MPDs, and canopy. |
| EQ-258 | Petro-First | Art Sabatinelli | 954-971-9598 | 5/09/1996 | Petro-First Facility Equipment Storage Tank System | These systems are equipped with spill containment overfill protection, release detection, MPDs, and canopy. |
| EQ-276 | EuroTank & Ecosafe Systems, Inc. | Manfred Fiech | 352-629-3700 | 3/27/1997 | Euro-Tank® & Ecosafe System II | These systems are equipped with spill containment overfill protection, release detection, MPDs, and canopy. |
| EQ-587 | UST Environmental Services, Inc. | John Collins | 800-992-1293 | 6/02/2004 | Ameri-System | These systems are equipped with spill containment overfill protection, release detection, MPDs, and canopy. The system components, tank, overfill protection, and spill containment are Department approved and the integral steel piping is designed and installed in accordance with Chapter 62-761, F.A.C. requirements. |

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## Tanks/ UST Secondary Containment Systems Only

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| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-015 | Fiberstone N.C., Inc. | D. Sudrakin | 704-891-7474 | 5/05/1991 | Fiberstone | |

**Tanks/ AST with Enclosed Secondary Containment** ***These Tanks are Equipped with Overfill Protection, Spill Containment, and Interstitial Release Detection***

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-002 | RECoVault, Inc. | Bob Green | 800-879-3989 | 4/25/1991 | Ecovault | These tanks are Equipped with Overfill Protection, Spill Containment, and Interstitial Release Detection. |
| EQ-009 | Tesco Resources, Inc. | Hank Berberat | 203-758-3270 | 5/02/1991 | Tesco | |
| EQ-010 | Davis Industries, Inc. | D. Harriford | 813-355-2971 | 5/20/1991 | IT2 | |
| EQ-013 | Phoenix Products, Company | Christopher Morter | 904-366-2277 | 5/06/1991 | Enviro-Vault | |
| EQ-031 | PWH Equipment & Services Co., Inc. | James Hudson | 813-621-2077 | 7/03/1991 | Duocon, and Duotank Tanks | Secondary containment shall be at min 90% coverage of primary tank. The System shall have an overfill shut off at a min 90% and have a spill containment. |
| EQ-037 | Industrial Environmental Supply | Jim Burns | 919-274-4817 | 8/20/1991 | Scat Tanks | |
| EQ-042 | Petro-Tank Sales, Inc. | Raulph Suarez | 800-528-6722 | 9/05/1991 | Centurion Tanks | |
| EQ-047 | Brown Minneapolis Tank | Brian DiGrado | 612-454-6750 | 10/15/1991 | Sure-Check | |
| EQ-053 | Hall Mark Industries | Shannon McMillian | 800-872-2770 | 1/14/1992 | Hall Mark Tank Vaults | |
| EQ-062 | Hausner, Inc. | John Hausner | 800-533-9509 | 2/14/1992 | Hi-Tech Vault | |
| EQ-068 | The Boss Group, Inc. | David Riggie | 410-783-9633 | 4/16/1992 | Fuel Pack | |
| EQ-082 | Ultra Tank Company | Don Schurr | 800-330-8871 | 7/27/1992 | Ultra Vault | |
| EQ-116 | Clawson Tank Company | Brian Shelton | 800-272-1367 | 3/10/1993 | Liqui Vault | |

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**Tanks/ AST with Enclosed Secondary Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-124 | Containment Solutions, Inc. (Formerly Hoover Containment Systems, Inc.) | Kevin Soeder | 936-756-7731 | 4/05/1993 | Safewaste & Fuel Master | |
| EQ-125 | Liquid Management Product | Jake Magish | 203-778-2018 | 4/05/1993 | Super-Tank | |
| EQ-146 | PWH Equipment and Services Company, Inc. | James Hudson | 813-623-6871 | 10/20/1993 | Master Tank & Master Vault | |
| EQ-153 | Trusco Tank, Inc. | Ken Jakes | 805-544-9155 | 1/04/1994 | Super Vault | |
| EQ-155 | Containment Solutions, Inc. (Formerly Hoover Group, Inc.) | Kevin Soeder | 936-756-7731 | 1/21/1994 | Tank-Vault | |
| EQ-158 | East Coast Engineering | David Kardish | 904-783-1142 | 2/04/1994 | Igloo Tank | |
| EQ-173 | General Industries, Inc. | Jamie Stanley | 919-751-1791 | 6/14/1994 | Trisafe Vault Systems | |
| EQ-175 | Boss Petroleum Products, Inc. | David Riggie | 800-759-9988 | 6/14/1994 | Boss Fire guard | |
| EQ-190 | The Gateway Group, Inc. | Robert Becon | 602-244-8664 | 2/17/1995 | The Gateway Aboveground Storage System | |
| EQ-207 | Porta Tank Manufacturing, Inc. | Bill Hudson | 813-633-3092 | 6/26/1995 | Porta Tank Model # 100 | |
| EQ-208 | Garsite, Inc. | Mark Kendrick | 913-342-5600 | 6/26/1995 | ITI Aboveground Storage Tank System | |

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**Tanks/ AST with Enclosed Secondary Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-232 | Paul Moore Associates, Inc. | Jeff Smith | 404-452-7377 | 11/22/1995 | Aero Power Type I | Secondary containment shall be at min 90% coverage of primary tank. The System shall have an overfill shut off at a min 90% and have a spill containment. |
| EQ-233 | Steca, Inc. | Carol Latiolais | 804-436-0000 | 11/20/1995 | Generator Base Fuel Tank | |
| EQ-235 | Southern Pre-Cast, Inc. | Charles Davidson | 800-669-2278 | 12/07/1995 | Strongbox | |
| EQ-239 | Memco MFG, Inc. | Bill Stamp | 407-656-5601 | 2/07/1996 | Envirosafe | Secondary containment shall be at min 90% coverage of primary tank. The System shall have an overfill shut off at a min 90% and have a spill containment. |
| EQ-254 | Stor-Safe Systems | Ronald Lieper | 407-589-5830 | 4/22/1996 | Stor-Safe Model #200 | |
| EQ-255 | Dunn Industries/Tommy Tank | Tom Morris | 800-253-8265 | 4/26/1996 | Tommy Tank Double Wall Steel Storage Tank System | |
| EQ-274 | Containment solutions, Inc. (Formerly Beta Tank, Inc.) | Kevin Soeder | 936-756-7731 | 2/07/1997 | Fireguard Double Wall Storage Tank system | |
| EQ-279 | Floyd Manufacturing | Joseph Floyd | 800-868-2018 | 4/22/1997 | Floyd AST OE279 Double Wall Aboveground Storage Tank System | |
| EQ-280 | Prichard Brown of Florida, Inc. (Formerly Electric Specialty, Inc.) | John Lundahl | 800-231-2258 | 4/22/1997 | Electric Specialty Sub-Base Aboveground Storage Tank System | |
| EQ-309 | Atlas Fuel & Liquid Storage Tanks | Kelly Stanton | 800-797-8265 | 12/15/1997 | Atlas Tank Aboveground Storage Tank System | |

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**Tanks/ AST with Enclosed Secondary Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-314 | Porta Tank Manufacturing, Inc. | Bill Hudson | 813-633-3092 | 2/04/1998 | Porta Tank Model # 200 | Secondary containment shall be at min 97% coverage of primary tank. The System shall have an overfill shut off at a min 95% and have a spill containment. This order supersedes EQ-58. |
| EQ-315 | Phoenix Metal Products, Inc. | Pierre Dionne | 540-334-2100 | 1/27/1998 | Phoenix Metal Products UL 142 Double-Wall Aboveground System | |
| EQ-336 | Alabama Tank, Inc. | Kevin Woods | 251-577-6415 | 9/08/1998 | Fireguard and F921 Double-Wall Aboveground Storage Tank | |
| EQ-338 | Newberry Tanks & Equipment LLC | Brian Brinkley | 800-643-9395 | 10/08/1998 | Dual Wall Aboveground Storage Tank, the Fireguard Double-Wall Aboveground Tank, the F921 Double-Wall Aboveground Tank | |
| EQ-338 | Newberry Tanks & Equipment LLC | Brian Brinkley | 800-643-9395 | 10/08/1998 | UL 142 single-wall tanks with steel dikes that are equipped with a rain shield | UL 142 single-walled tanks with steel dikes that are equipped with a rain shield shall have secondary containment at a minimum of 90% of the primary tank. The system shall be equipped with overfill shut-off at a minimum of 90% of the primary tank capacity. The system shall be equipped with spill containment. |

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**Tanks/ AST with Enclosed Secondary Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-342 | Metal Products Company | Burcher Gammage | 770-945-8383 | 11/02/1998 | Fireguard and UL-142 Double-Wall AST | |
| EQ-347 | 1st Fueling System | Taylor Hall | 888-478-3835 | 12/01/1998 | UL 142 Double-Wall Tank With Pumping System For Aviation Fuel | |
| EQ-352 | Modern Welding Company Florida, Inc. | Gene Schober | 407-843-1270 | 11/22/1998 | UL 142 single-wall tanks with steel dikes that are equipped with a rain shield | UL 142 Single-Walled tanks with steel dikes that are equipped with a rain shield shall have secondary containment at a minimum of 90% of the primary tank. The system shall be equipped with overfill shut-off at a minimum of 90% of the primary tank capacity. The system shall be equipped with spill containment. |
| EQ-352 | Modern Welding Company Florida, Inc. | Gene Schober | 407-843-1270 | 11/22/1998 | Double-Wall UL142 Aboveground Storage Tank, the Fireguard Double-Wall Aboveground Tank | |
| EQ-371 | U-Fuel, Inc. | Michael Webb | 715-836-0905 | 3/12/1999 | U-Fuel System | |
| EQ-375 | Altrofer Packaging | Kevin Nunn | 309-697-1234 | 6/04/1999 | UL-142 Double-Wall Altorfer Sub-Base Generator Tank Sy | |
| EQ-498 | Sigam Engineering Inc. (Formerly SuperSafe™ Tanks, Inc.) | Jacob Magish | 317-255-5387 | 5/23/2001 | SuperSafe™ Aboveground Petroleum Storage and Dispensing System | The product is approved in the State of Florida as an aboveground storage tank and containment system equipped with spill containment, overfill protection, Warwick Controls Model 470/570 series interstitial release detection, and a dispensing system. |

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**Tanks/ AST with Enclosed Secondary Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-821 | Phoenix Products | Christopher Morter | 904-354-1858 | 3/24/2014 | Phoenix Products USL-DW-WM-25 Secondary Containment Aboveground Storage Tanks | The installation and integrity testing procedures for the AST system shall be made in accordance with the manufacturer's recommendations. |
| EQ-866 | Krampitz International CA | Christopher Leigh | +49(0)5851/9443-0 | 7/5/2016 | Krampitz International CA Minotaur®Petrol Station Systems and Krampitz Tank Systems | The installation, testing, and operation of the systems shall be made in accordance with the manufacturer's recommendations. |

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**Tanks/ AST Secondary Containment Only**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-206 | Stor-Safe Systems | Ronald Lieper | 407-489-5830 | 7/03/1995 | Stor Safe Model #100 | |
| EQ-213 | Southern Pre-cast, Inc. | John True | 800-669-2278 | 7/21/1995 | Spill/Leak Containment Vessel | An FDEP-Approved coating is applied in accordance with manufacturer's instruction and NACE standard RP0892-92. |
| EQ-749 | Hennig, Inc. | Christian Grobe | 866-910-1784 | 2/17/2010 | UL 142 Listed double wall aboveground tank with spill containment, UL File Number MH45787 | The tanks must be equipped with approved overfill protection and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of the Petroleum Equipment Institute's Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment** ***These Tanks are required to be equipped with Approved Overfill Protection, Spill Containment and Interstitial Release Detection***

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-354 | Specialty Tank & Equipment Company | William Mann | 904-353-8761 | 12/17/1998 | UL 142 Double-Wall Aboveground Storage Tank, the F921 Double Wall Tank | Tanks are required to be equipped with approved overfill protection, spill containment, and interstitial release detection prior to dispensing products. |
| EQ-372 | Turner Equipment Company, Inc. | Joe McMichael | 800-672-4770 | 4/02/1999 | UL 142 Double-Wall Aboveground Storage Tank | Tanks are required to be equipped with approved overfill protection, spill containment, and interstitial release detection prior to dispensing products. |
| EQ-376 | Cave Hill Corporation | Gary Snyder | 800-833-7655 | 6/04/1999 | Atlantic Fabritech UL 142 Double-Wall Storage Tank | Tanks are required to be equipped with approved overfill protection, spill containment, and interstitial release detection prior to dispensing products. |
| EQ-386 | Com-Fab, Inc. | Jim Patton | 740-857-1107 | 8/30/1999 | Com-Fab Double Wall aboveground Tanks | Tanks are required to be equipped with approved overfill protection, spill containment, and interstitial release detection prior to dispensing products. |
| EQ-387 | Newco Fabrication Division | AL Vogel | 608-755-4774 | 8/30/1999 | Newco Generator Base Double Wall UL Tank | Tanks are required to be equipped with approved overfill protection, spill containment, and interstitial release detection prior to dispensing products. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-400 | Steel Tank Institute | Dana Schmidt | 847-438-8265 | 11/03/1999 | Fireguard Double-Wall Aboveground Storage Tank | Conditional Approval |
| EQ-401 | Steel Tank Institute | Dana Schmidt | 847-438-8265 | 11/03/1999 | F921 Double-Wall Aboveground Storage Tank | Conditional Approval |
| EQ-401 Amendment | Steel Tank Institute | Dana Schmidt | 847-438-8265 | 6/17/2003 | F921 Double-Wall Aboveground Storage Tank | Conditional Approval |
| EQ-410 | Assmann Corporation of America | William Zielinski | 219-357-3181 | 12/22/1999 | Assmann Double-Wall Aboveground Storage Tank | Tanks are required to be equipped with approved overfill protection, spill containment, and interstitial release detection prior to dispensing products. The storage tank shall be hydro-statically tested by filling the tank completely with water prior to dispensing product. |
| EQ-417 | MGS Incorporated | Ronald Speth | 717-336-7528 | 1/12/2000 | MGS Double-Wall Sub-Base Generator Tank | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing products. The storage tank shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI-RP 200-96 prior to dispensing product. |
| EQ-429 | Freeman Brothers Tank Manufacturing, Inc. | Gary Freeman | 912-759-6210 | 3/16/2000 | Ul-142 Single-Wall with steel dike | Conditional Approval |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-431 | Specialty Tank & Equipment Company | William Mann | 904-353-8761 | 3/28/2000 | Flameshield Doubled-Wall Aboveground Storage Tank | Tanks are required to be equipped with approved overfill protection, spill containment, and interstitial release detection prior to dispensing products. The storage tank shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-434 | Steel Tank Institute | Dana Schmidt | 847-438-8766 | 5/08/2000 | Flameshield Doubled-Wall Aboveground Storage Tank | Conditional Approval |
| EQ-434 Amendment | Steel Tank Institute | Dana Schmidt | 847-438-8766 | 6/17/2003 | Flameshield Doubled-Wall Aboveground Storage Tank | Conditional Approval |
| EQ-469 | Leeds Fabrication Services, Inc. | Jack Ranney | 303-659-6801 | 12/22/2000 | Double-wall Base Fuel Tank | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-471 | Engine & Compressor Accessories, Inc. | Bill Pafford | 713-466-8679 | 12/22/2000 | Closed Top Dike Generator Base Tank and the Secondary Containment Generator Base Tank | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-474 | Containment Solutions, Inc. | Kevin Soeder | 936-756-7731 | 2/09/2001 | Hoover Vault and Lube Cube Tank | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-479 | Cummins Southeastern Power, Inc. | Greg Shapiro | 813-635-5701 | 2/14/2001 | Closed Top Dike Generator Base Tank and the Secondary Containment Generator Base Tank | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-522 | Power Enclosures | Rakesh Komar | 309-274-9000 | 4/05/2002 | Double-Wall Generator Base Tank | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-523 | Professional Power Products, Inc. | Tom Birchman | 815-943-9000 | 4/05/2002 | UL Listed 142 and 2085 double-wall Tank, UL File No. MH 26043 | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-538 | Bendel Corporation | William Beaver | 704-596-5112 | 11/20/2002 | UL-142 Horizontal and Vertical Double-Walled Aboveground Tank | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-542 | Alabama Tank, Inc. | Kevin Woods | 251-577-6415 | 10/03/2002 | UL-142 Double-Walled Sub-Base Generator Aboveground Storage Tank | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-543 | Prichard Brown | Robert Ropp | 800-231-2258 Ext.102 | 10/09/2002 | Ul-142 Listed Closed-Top Diked Generator Base Tank, UL File No. MH 15307 | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-547 | Horizon MFG., LLC | David Evans | 352-787-7000 | 11/21/2002 | UL-142 Closed Top Generator Base Fuel Tank, UL File No. MH 28640 | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-561 | Steel Tank Institute | Dana Schmidt | 847-438-8265 | 7/25/2003 | Flameshield Double-Walled UL-142 Listed Aboveground Storage Tank | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-575 | Acoustical Sheetmetal, Inc. | William Tolbert | 757-456-9720 | 1/30/2004 | ASI's UL-142 Listed Sub-Base Double-Wall Tank, UL File Number MH115323 | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-581 | Steel Tank Institute | Dana Schmidt | 847-438-8265 | 4/14/2004 | Fireguard Double-Walled UL-142 Listed Aboveground Tank | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-582 | Steel Tank Institute | Dana Schmidt | 847-438-8265 | 4/14/2004 | F921 Double-Walled UL-142 Listed Aboveground Tank | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-590 | Steel Tank Institute | Dana Schmidt | 847-438-8265 | 7/14/2004 | Gen-Tank Double-Walled Sub-Base Generator UL Listed Aboveground Tank | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-595 | Acoustical Control Systems, Inc. | Ron Schulz | 252-243-0150 | 9/30/2004 | ACS's UL-142 Listed Double-Wall Sub-Base Generator Tank with Spill Containment | Tanks are required to be equipped with approved overfill protection and with an interstitial release detection system if Acoustical Control System Inc. provides the spill containment devices prior to dispensing product. If not, the tanks must be equipped with approved overfill protection, spill containment system and with an interstitial release detection system if the spill containment is not provided by Acoustical Control Systems, Inc. The storage tanks shall be tested in accordance with Chapter 13 of the Petroleum Equipment Institute's Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-613 | Arc-Rite, Inc. | Mike Bullock | 386-325-3523 | 7/20/2005 | Arc-Rite's UL-142 Listed Double-Wall Tank, UL File Number MH30000 | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |
| EQ-616 | Robinson Custom Enclosures | Jim Birkholz | 920-615-3406 | 9/12/2005 | Enclosed Top Dike and Secondary Containment Sub-Base Generator UL Listed Aboveground Storage Tank, UL File No. MH26813 | Tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |
| EQ-619 | Smith Tank & Equipment Co. | Jim Blair, III | 903-597-5541 | 11/23/2005 | UL-142 Double-Walled, and Single-Walled with Open Secondary Containment Equipped with Rain-shields Aboveground Storage Tank, UL Model Number MH3582 | Conditional Approval |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-622 | Armstrong Power Systems, LLC | Mubarak Kazan | 305-470-0058 | 12/14/2005 | Enclosed Top Dike and Secondary Containment Sub-Base Generator UL Listed Aboveground Storage Tank, UL File No. MH29496, | The tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |
| EQ-625 | Phoenix Products, LLC | Christopher Morter | 904-366-2277 | 12/27/2005 | The Phoenix Fire Steel UL-142 and UL 2085 Listed Double-Wall Sub-Base Generator Tank with Spill Containment, UL File Number MH15322 | Refer to the Final Order |
| EQ-632 | International Supply Co., Inc. | Chad Jenkins | 309-249-6211 | 2/07/2006 | Enclosed Top Dike and Secondary Containment Sub-Base Generator UL 142 and 2085 Listed Aboveground Storage Tank, UL File Numbers MH17176 and MH17561 | The tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tanks. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-633 | Zierke Built Manufacturing | Kyle Zierke | 800-269-2222 | 2/20/2006 | Enclosed Top Dike Containment Sub-Base Generator UL Listed Aboveground Storage Tank, UL File No. MH26824 | The tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tanks. |
| EQ-634 | Sauk Technologies | John Bohm | 262-268-3800 | 3/27/2006 | UL 142 Listed Double-Walled Sub-Base Generator Aboveground Storage Tank, UL File Number MH25145 | The tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tanks. The Department Final Order EQ-249 issued on April 12, 1996 is no longer in effect. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-650 | Pryco, Inc. | Dennis Womack | 217-364-4467 | 11/07/2006 | Double-Wall Sub-Base Generator UL Listed Aboveground Storage Tank, UL File No. MH17469 | The tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. The Department Final Order EQ-229 issued on October 31, 1995 is no longer in effect. |
| EQ-661 | PowerSecure, Inc. (Formerly JAS Integrated Products Corporation) | Randy Slaven | 813-882-3118 | 2/08/2007 | PowerFab Double-Wall Sub-Base Generator UL Listed Aboveground Storage Tank, UL File No. MH45666 *(See modified* EQ-661 *in category Tanks/ AST with Secondary Containment and Spill Containment)* | The tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-663 | Power Equipment Co. Inc. | David Berube | 508-226-3410 | 2/26/2007 | Double-Wall Sub-Base Generator UL Listed Aboveground Storage Tank, UL File No. MH29115 | The tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |
| EQ-665 | Hardin Industries, Inc. | Dennis Black | 309-246-8456 | 3/20/2007 | Double-Wall Sub-Base Generator UL Listed Aboveground Storage Tank, UL File No. MH26771 | The tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-673 | Highland Tank Mfg. Co. | Todd Shearer | 717-664-0600 | 6/11/2007 | Double-Wall, and Double-Wall Pitch Top UL Listed Aboveground Storage Tank, UL File No. MH5086 | The tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The Double-Wall storage tanks shall be tested in accordance with Exhibit A section 3.0 and Double-Wall Pitch Top storage tanks shall be tested in accordance with Exhibit B section 3.0 and Exhibit C prior to dispensing any regulated substances from the tank. The Department Final Orders EQ-268 issued on November 25, 1996, and EQ-270 issued on November 25, 1996, is no longer in effect. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-677 | Steel Tank Institute | Dana Schmidt | 847-438-8265 | 6/20/2007 | Flameshield and F921 UL-142 Listed Aboveground Storage Tank with 95% Secondary Containment Wrap | The tanks are required to be equipped with approved spill containment, overfill protection that shuts off the flow at 95% of nominal capacity of the primary tank, and interstitial release detection prior to dispensing product. The Secondary containment coverage of the primary tank shall be at a minimum of 95% containment of primary tank. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |
| EQ-681 | Pee Dee Tank Company of SC LLC | Mike Moran | 800-868-8265 | 8/14/2007 | Double-Wall UL Listed Aboveground Storage Tank, UL File No. MH12846 | The tanks are required to be equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-700 | Engineering Manufacturing Corp. | Lisley Jimenz | 305-639-0089 | 2/20/2008 | Double-Wall Sub-Base Generator UL Listed Aboveground Storage Tank, UL File No. MH30019 | The tanks are equipped with approved spill containment; overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |
| EQ-707 | Freeman Bros. Tank MFG., Inc. | Gary Freeman | 229-759-6210 | 5/12/2008 | Double-Wall UL Listed Aboveground Storage Tank, UL File No. MH14128 | The tanks are equipped with approved spill containment; overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |
| EQ-710 | Cab Construction, Inc. | Paul Schley | 507-625-2233 | 6/30/2008 | Double-Wall UL Listed Sub-Base Aboveground Storage Tank, UL File No. MH10130 | The tanks are equipped with approved spill containment; overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-721 | E.K. Machine Co., Inc. | Gino Klein | 262-492-4600 | 12/18/2008 | Double-Wall UL Listed Sub-Base Aboveground Storage Tank, UL File No. MH46187 | Approved as an aboveground storage tank and containment system in the State of Florida provided that the tanks are equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |
| EQ-744 | Mayville Engineering Company, Inc. | Michael Wicke | 920-387-4500 Ext. 6477 | 2/02/2010 | Double-Wall UL Listed Sub-Base Aboveground Storage Tank, UL File No. MH74278 | Approved as an aboveground storage tank and containment system in the State of Florida provided that the tanks are equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-747 | Nogales Highway Iron & Steel, Inc. | Sal Fragozo | 520-294-1542 | 2/12/2010 | Double-Wall UL Listed Aboveground Storage Tank, UL File No. MH7760 | Approved as an aboveground storage tank and containment system in the State of Florida provided that the tanks are equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |
| EQ-752 | Atlantic Tank | Kevin Clemmer | 540-437-1203 | 2/24/2010 | Double-Wall UL Listed Aboveground Storage Tank, UL File No. MH15058 | Approved as an aboveground storage tank and containment system in the State of Florida provided that the tanks are equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-766 | Hamilton Tanks, LLC | Mike Davis | 800-627-8265 | 4/27/2011 | UL-142 Listed Aboveground Tanks for flammable liquids: Vertical Secondary Containment Tanks (Double-Wall), Horizontal Secondary Containment Tanks (Double-Wall), Horizontal Single-Wall Tanks on Saddles, Horizontal Secondary Containment Tanks on Saddles and Skids (Double-Wall), Horizontal Single-Wall and Secondary Containment Tanks on Skids, Open Top Dike Aboveground Tanks for Flammable Liquids, Rectangular Tanks | Approved as an aboveground storage tank and containment system in the State of Florida provided that the tanks are equipped with approved spill containment, overfill protection, and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing any regulated substances from the tank. |
| EQ-768 | Southern Fire Protection of Orlando, Inc. | Bobby Caldwell | 407-323-4200 | 5/26/2011 | WE-Mac Manufacturing Co. - Pentair Water Double Wall Steel Storage Tanks - UL 142 | The tanks must be equipped with approved overfill protection, spill containment and with an interstitial release detection system prior to dispensing product. Installation and leakage testing shall be done according to the manufacturing recommendations. |
| EQ-792 | Metal Products Company | Burcher Gammage | 770-945-8383 | 8/24/2012 | Metal Products Company UL 2075 and UL 142 Generator Sub Base AST | Installation and testing shall be in accordance with the manufacturer's recommendations. |
| EQ-809 | Yancey Engineered Solutions | Gino Klein | 770-233-4397 | 6/26/2013 | Yancey Engineered Solutions Sub-base Aboveground Storage Tank UL File No. MH48006 | Installation and operation shall be in accordance with the manufacturer's recommendations. |

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**Tanks/ AST with Secondary Containment Requiring Additional Equipment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-824 | ACS Manufacturing, Inc. | Ken Whisenhunt | 903-462-2008 | 5/16/2014 | ACS Manufacturing, Inc., Model EFVT.MH 28123 Special-Purpose Aboveground Storage Tank | Installation and testing shall be in accordance with the manufacturer's recommendations. |
| EQ-826 | Western Global Holdings, Western House, Yate, UK | Ahmed Khan | +1 204-772-6525 | 8/15/2014 | P Series and T Series Aboveground Storage Tanks under File # MH45150 | The installation and integrity testing procedures shall be completed in accordance with the manufacturer's recommendations. |
| EQ-860 | Kennedy Tank & Mfg. Co., Inc. | Paul Bolin | 800-445-1344 | 1/8/2016 | UL 142 Single-Walled and Double-Walled Aboveground Storage Tanks | Installation and tightness testing of the aboveground storage tanks must be in accordance with the manufacturer's recommendations as provided in Exhibit A. |
| EQ-869 | Delta Tank, Inc. | Chris Steelman | 972-977-0337 chris@steelmanequipment.com | 1/17/2017 | 3000 Double-walled UL 142 Aboveground Storage Tank | The tanks must be equipped with registered overfill protection, spill containment and with an interstitial release detection system prior to dispensing product. Installation and testing shall be done according to the manufacturer's recommendations. |
| EQ-881 | Nation Tank and Trailer | Robbey Barnts | 877-207-0320 barnts@nationtt.com | 10/19/2017 | Nation Tank and Trailer Double Wall Fuel Tanks UL142A Listed. Models RTD-1000-10-12 and RTD-2000 gallon-10-12. UL File No. MH48804 | The tanks must be equipped with registered overfill protection, spill containment and with an interstitial release detection system prior to dispensing product. Installation and testing shall be done according to the manufacturer's recommendations. |

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### Tanks/ AST Vault System

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-419 | ConVault Florida | Jim Remington | 800-642-1540 | 1/14/2000 | FuelVault™ System | |
| EQ-568 | Guardian Containment, Corp. | Kelly Stanton | 800-797-8265 | 12/11/2003 | UL Listed Armor Vault System File Number MH18494 | Conditional Approval |
| EQ-765 | Western Global Holdings, Western House, Yate, UK | Ahmed Khan | +1 204-772-6525 | 4/15/2011 | TRANSCUBE as 05TCG, 10TCG, 20TCG, 30TCG, 50TCG-AST, 100TCG-AST, UNICUBE AST as FCP250, FCP500, FCP1000, 200TTS-AST, 400TTS-AST, 100TT-IMDG, 200TT-IMDG and 200TT-IMDG-CAB under UL File # MH-45322 | Approved in the State of Florida as a secondarily contained UL 142 listed AST with spill containment and dispensing system containment. |

### Tanks/ AST with Secondary Containment and Spill Containment

***These Tanks are Required to be Equipped with Approved Overfill Protection and Interstitial Release Detection***

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-385 | American Access Technologies, Inc. (Formerly Genco, Inc.) | Steve Watkins | 352-473-5400 | 8/30/1999 | Genco Double-Wall Sub Base Generator Tank | Tanks are required to be equipped with approved overfill protection and interstitial release detection prior to dispensing products |
| EQ-413 | Control Equipment & Sales, Inc. | Robert Melton | 205-989-0090 | 11/22/1999 | Wedlake Fabricating Double-Wall Sub-Base Generator Tank | Tanks are required to be equipped with approved overfill protection and interstitial release detection prior to dispensing products. The storage tank shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-427 | TAW Custom Equipment | Daniel Barron | 813-621-5661 | 3/16/2000 | Taw Custom Equipment Double-Wall Sub-Base Generator Tank | Tanks are required to be equipped with approved overfill protection and interstitial release detection prior to dispensing products. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-432 | Prichard Brown of Florida, Inc. (Formerly Electric Specialty, Inc.) | Charles Gears | 800-866-9486 | 3/28/2000 | Electric Specialty double-Wall closed dike generator base tank | Tanks are required to be equipped with approved overfill protection, and interstitial release detection prior to dispensing products. The storage tank shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-460 | Chillicothe Metal Co., Inc. | Jeff Bessler | 309-274-5421 | 10/12/2000 | Double-Wall & closed top dike tank | Tanks are required to be equipped with approved overfill protection and interstitial release detection prior to dispensing products. The storage tank shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-478 | Bendel Corporation | Bill Beaver | 704-596-5112 | 2/09/2001 | Double-Wall Generator Base Tank | Tanks are required to be equipped with approved overfill protection and interstitial release detection prior to dispensing products. The storage tank shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-482 | Wilson MFG., Inc. | Greg Lepine | 800-446-3500 | 2/12/2001 | UL 142 Double-Wall and UL-142 Closed Top Diked Generator Base Tanks | Tanks are required to be equipped with approved overfill protection and interstitial release detection prior to dispensing products. The storage tank shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-483 | Isom Brothers, Inc. | Scott Frerichs | 208-459-6077 | 2/27/2001 | UL 142 Double-Wall Base Tan<br>UL 2085 Double-Wall Vault Ta | Tanks are required to be equipped with approved overfill protection and interstitial release detection prior to dispensing products. The storage tank shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-484 | Prichard Brown of Florida, Inc. | Frank Miller | 352-742-7125 | 2/27/2001 | UL-142 Double-Wall Tank, PB Style | Tanks are required to be equipped with approved overfill protection and interstitial release detection prior to dispensing products. The storage tank shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-496 | BN Manufacturing | Erik Kientz | 800-684-9096 | 4/17/2001 | Double-wall Generator Base Tank | Tanks are required to be equipped with approved overfill protection and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-497 | Fidelity Manufacturing, LLC. (Formerly JRS Custom Fabrication, Inc.) | Mark Stromwall | 352-414-4700 | 5/10/2001 | Double-Wall Generator Base Tank | Tanks are required to be equipped with approved spill containment, overfill protection and interstitial release detection prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-504 | Bob Gerena Fabricating, Inc. | Robert Gerena | 863-425-1771 | 9/27/2001 | UL-142 Double-Wall Sub-Base Generator Tank | Tanks are required to be equipped with approved overfill protection and interstitial release detection prior to dispensing products. The storage tank shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-518 | Harvard Integrations (Formerly Lecturus Corporation and originally D.T.S., Inc.) | Adam Aasen | 605-498-9171 | 2/19/2002 | UL 142 Double-Wall Sub-Base Generator Tank | Tanks are required to be equipped with approved overfill protection device and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-528 | Total Energy Systems, LLC | Christopher Stiles | 888-548-1400 | 4/29/2002 | Double-Wall Generator Base Tank with Spill Containment | Tanks are required to be equipped with approved overfill protection device and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-533 | Advanced Manufacturing & Power Systems, Inc. | Jim Sanders | 386-822-5565 | 5/23/2002 | Double-Wall Generator Base Tank with Spill Containment | Tanks are required to be equipped with approved overfill protection device and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-544 | Precision Quincy Industries, a Division of The Armor Group (Formerly Victory Industrial Products, Inc.) | The Armor Group | 888-312-5442 | 11/05/2002 Updated 9/22/2015 | Double-Wall Generator Base Tank With Spill Containment, UL File Number MH 17934 | Tanks are required to be equipped with approved overfill protection device and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-554 | Bendel Corporation | William Beaver | 704-596-5112 | 3/21/2003 | Tent tank, UL 142 Listed Horizontal Double-Wall Tank With Spill Containment, UL File Number MH8552 Vol. 2 | Tanks are required to be equipped with approved overfill protection device and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-565 | United Alloy, Inc. | Mark Gossens | 608-758-4717 Ext. 109 | 10/23/2003 | United Alloy's UL-142 Listed Sub-Base Double-Wall Tank With Spill Containment, UL File Number MH28874 | Tanks are required to be equipped with approved overfill protection device and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-565R | United Alloy, Inc. | Mark Gossens | 608-758-4717 Ext. 109 | 10/23/2003 | United Alloy's UL-142 Listed Sub-Base Double-Wall Tank With Spill Containment, UL File Number MH28847 (Correction of UL File Number MH28874 to MH28847) | Tanks are required to be equipped with approved overfill protection device and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-566 | Generac Power Systems, Inc. | Don Vanderbrook | 262-544-4811 Ext. 2372 | 10/23/2003 | Generac's UL-142 Listed Sub-Base Double-Wall Tank with Spill Containment, UL File Number MH18459 | Tanks are required to be equipped with approved overfill protection device and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-567 | Global Power Components Corporation | Mark Hopkins | 414-475-3000 | 11/28/2003 | Global Power Components' UL-142 Listed Sub-Base Double-Wall Tank with Spill Containment, UL File Number MH18481 | Tanks are required to be equipped with approved overfill protection device and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. The Department Final Order EQ-246 issued on April 5, 1996 is no longer in effect. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-572 | Heatec, Inc. | Terry Rutlege | 423-821-5200 | 1/16/2004 | Heatec, Inc.'s UL-142 Listed Double-Wall Tank with Spill Containment, UL File Number MH14038 | Tanks are required to be equipped with approved overfill protection device and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of Petroleum Equipment Institute Standard PEI/RP 200-96 prior to dispensing product. The Department Final Order EQ-246 issued on April 5, 1996 is no longer in effect. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-593 | Fidelity Manufacturing, LLC. (Formerly JRS Custom Fabrication, Inc.) | Mark Stromwall | 352-414-4700 | 9/24/2004 | JRS Fill Spill Containment for ASTs | Approved for use for spill containment for double-walled sub-base generator aboveground tanks that were approved under Department file number EQ-497 on May 10, 2001 in the State of Florida. |
| EQ-595 | Acoustical Control Systems, Inc. | Ron Schulz | 252-243-0150 | 9/30/2004 | ACS's UL-142 Listed Double-Wall Sub-Base Generator Tank with Spill Containment | Tanks must be equipped with approved overfill protection and with an interstitial release detection system if Acoustical Control System Inc. provides the spill containment devices prior to dispensing product. If not, the tanks must be equipped with approved overfill protection, spill containment system and with an interstitial release detection system if the spill containment is not provided by Acoustical Control Systems, Inc. The storage tanks shall be tested in accordance with Chapter 13 of the Petroleum Equipment Institute's Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-609 | TankSafe, Inc. | Reinhard Schuetz | 403-291-3937 | 4/08/2005 | UL Listed Double-Wall Tank with Spill Containment, UL File Number MH29775 | The tanks are required to be equipped with approved overfill protection and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with manufacturer's instruction attached as Exhibit A prior to dispensing product. |
| EQ-620 | Robinson Custom Enclosures | Jim Birkholz | 920-615-3406 | 11/23/2005 | External Fuel Fill box used with the Aboveground Storage Tank, UL File No. MH26813 | Spill containment device used with the aboveground storage tank that was approved under Department File Number EQ-616 issued on September 12, 2005, State of Florida. |
| EQ-625 | Phoenix Products, LLC | Christopher Morter | 904-366-2277 | 12/27/2005 | The Phoenix Fire Steel UL-142 and UL 2085 Listed Double-Wall Sub-Base Generator Tank with Spill Containment, UL File Number MH15322 | Refer to the Final Order |
| EQ-636 | Advanced Manufacturing & Power Systems, Inc. | Jim Sanders | 386-822-5565 | 3/29/2006 | UL 2085 Listed Double-Walled Sub-Base Generator Aboveground Storage Tank with Spill Containment, UL File Number MH16661 | The tanks are required to be equipped with approved overfill protection and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of the Petroleum Equipment Institute's Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-647 | Superior Systems & Technologies, Ltd. | Zachary Hoover | 325-690-6248 | 8/08/2006 | UL 142 Listed Double-Walled Sub-Base Generator Aboveground Storage Tank with Spill Containment, UL File Number MH10272 | Approved as an aboveground storage tank with secondary containment and with spill containment in the State of Florida. The tanks must be equipped with approved overfill protection and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of the Petroleum Equipment Institute's Standard PEI/RP 200-96 prior to dispensing product. |
| EQ-655 | Safe-T-Tank Corp. | Amy Bartis | 203-237-6320 | 10/30/2006 | UL 142 Listed Double-Walled Sub-Base Generator Aboveground Storage Tank with Spill Containment, UL File Number MH16800 | Approved as an aboveground storage tank with secondary containment and with spill containment in the State of Florida. The tanks must be equipped with approved overfill protection and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of the Petroleum Equipment Institute's Standard PEI/RP 200-96 prior to dispensing product. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-661 | Power Secure | John Saunders | 336-202-5497 | 3/23/2017 | Double-wall sub-base generator modified with fill/spill container* (*The 2007 submission of EQ-661 required tanks to be equipped with approved spill containment) | The tanks are required to be equipped with approved / registered overfill protection and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with PEI/RP 200-13 and spill containment with PEI/RP1200-12 prior to dispensing product. |
| EQ-662 | Tramont Corporation | Logan Tatem | 414-906-2041 | 2/09/2007 | the UL 142 Listed Double-Walled Sub-Base Generator Aboveground Storage Tank with Spill Containment, UL File Number MH17470 | The tanks are required to be equipped with approved overfill protection and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of the Petroleum Equipment Institute's Standard PEI/RP 200-96 prior to dispensing product. The Department Final Order EQ-228 issued on October 25, 1995 is no longer in effect. |
| EQ-736 | Pryco, Inc. | Dan Lyons | 217-364-4467 | 7/23/2009 | DEP Approval of the UL 142 Listed Pryco's double wall day tank with spill containment, UL File Number MH12807 | The tanks must be equipped with approved overfill protection and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of the Petroleum Equipment Institute's Standard PEI/RP 200-96 prior to dispensing product. |

**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-750 | ConVault, Inc. | Dan Rockefeller | 800-642-1540 | 2/22/2010 | UL 142 Listed double wall aboveground tank with spill containment, UL File Number MH15966 | The tanks must be equipped with approved overfill protection and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of the Petroleum Equipment Institute's Standard PEI/RP 200-96 prior to dispensing product. The Department Final Orders EQ-201 issued on May 3, 1995, is no longer in effect. |
| EQ-785 | Freeman Enclosure Systems LLC | Dale Freeman | 513-488-8563 | 4/11/2012 | Special purpose AST Tanks under UL Listings UL142 & UL2085 Reference File #s: MH47836 Vol. 1; MH47836 Vol. ST1; MH47836 Vol. ST2; MH47836 Vol. CN1; MH48714 Vol. ST1; and MH48714 Vol. CN1 | The listed special purpose ASTs are to be used primarily as stand-by generator tanks. Installation shall be made in accordance with the manufacturer's recommendations. |
| EQ-785-R | Freeman Enclosure Systems LLC | Cassie Freeman | 513-488-8563 | 4/26/2017 | 1) UL 142, 2085 listed AST special purpose to be used as standby generator tank. Drawings updated. 2) Spill containment, 7 (new) and 5 gallon (updated) capacities. 3) Alarm Panels (updated wiring and look) both 12V and 24V. AP3 and AP3R to be replaced. | The listed special purpose ASTs are to be used primarily as stand-by generator tanks. Installation shall be made in accordance with the manufacturer's recommendations. |

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**Tanks/ AST with Secondary Containment and Spill Containment (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-754 | Del Zotto Products of Florida | Donald Trumble | 352-351-3834 | 3/11/2010 | UL 142, and UL 2085, Listed double wall aboveground tank with spill containment, UL File Numbers MH17021 and MH16810 | The tanks must be equipped with approved overfill protection and with an interstitial release detection system prior to dispensing product. The storage tanks shall be tested in accordance with Chapter 13 of the Petroleum Equipment Institute's Standard PEI/RP 200-96 prior to dispensing product. The Department Final Orders EQ-043 issued on September 17, 1991, is no longer in effect. |
| EQ-850 | Advanced Manufacturing and Power Systems | Joseph Scofield | 386-822-5565 | 10/23/2015 | UL 2085 Above Ground Fuel Storage Tank UL 142 File #MH29522 | The tanks shall be installed according to the manufacturer's requirements. |
| EQ-865 | Tower Power Solutions LLC | Steve Zastrow | 414-214-7700 | 6/07/2016 | Special-Purpose Aboveground Storage Tanks | The tank must be equipped with an approved interstitial release detection system prior to dispensing. Installation, testing and operation shall be made in accordance with manufacturer's recommendations. |

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**Tanks AST Single-Wall Only**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-338 | Newberry Tanks & Equipment LLC | Brian Brinkley | 800-643-9395 | 10/08/1998 | UL 142 Single-Wall tank | UL 142 Single-Walled tanks that are only installed in approved steel dikes or concrete dikes shall meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-352 | Modern Welding Company Florida, Inc. | Gene Schober | 407-843-1270 | 11/22/1998 | UL 142 Single-Wall tank | UL 142 Single-Walled tanks that are only installed in approved steel dikes or concrete dikes shall meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-354 | Specialty Tank & Equipment Company | William Mann | 904-353-8761 | 12/17/1998 | UL 142 Single-Wall tank | UL 142 Single-Walled tanks that are only installed in approved steel dikes or concrete dikes shall meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-374 | Turner Equipment Company, Inc. | Joe McMichael | 919-734-2351 | 4/22/1999 | UL 142 Single-Wall tank | UL 142 Single-Walled tanks that are only installed in approved steel dikes or concrete dikes shall meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-429 | Freeman Brothers Tank Manufacturing, Inc. | Gary Freeman | 912-759-6210 | 3/16/2000 | Ul-142 Single-Wall Tanks | UL 142 Single-Walled tanks that are only installed within approved steel dikes or concrete dikes shall meet all applicable provisions of Rule 62-761.500, F.A.C. |

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**Tanks AST Single-Wall Only (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-446 | Cave Hill Corporation | Gary Snyder | 800-833-7655 | 8/23/2000 | UL-142 Single-Wall Tanks | UL 142 Single-Walled tank must be installed in an approved steel or concrete dike, and it must meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-490 | Service Welding & Machine Co., Inc. | Carl Greer | 502-585-4295 | 5/10/2001 | UL-142 Single-Wall Tanks | UL 142 Single-Walled tank must be installed in an approved steel or concrete dike, and it must meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-501 | General Industries, Inc. | Jamie Stanley | 919-751-1791 | 7/30/2001 | UL-142 Single-Wall Tanks | The UL 142 Single-Walled tank must be installed in an approved steel or concrete dike, and it must meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-521 | Tampa Tank, Inc./Florida Structural Steel | Adam Bourgeois | 813-241-4261 Ext. 209 | 3/19/2002 | UL 142 Single-Wall Aboveground Storage Tank | UL 142 Single-Walled tank must be installed in an approved steel or concrete dike, and it must meet all applicable provisions of Rule 62-761.500, F.A.C. |

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**Tanks/ AST Single-Wall Only (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-542 | Alabama Tank, Inc. | Kevin Woods | 251-577-6415 | 10/03/2002 | UL-142 Single-Walled Aboveground Storage Tank Model No. ATISW | The UL 142 Single-Walled tank must be installed in an approved steel or concrete dike, and it must meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-573 | Highland Tank & MFG. Co. | John Schmucker | 336-218-0801 | 1/20/2004 | UL-142 Single-Walled Aboveground Storage Tank, UL Model Number MH5086 | Tanks must be installed in an approved steel or concrete dike, and that it must meet all applicable provisions of Rule 62-761.500, F.A.C. |
| EQ-619 | Smith Tank & Equipment Co. | Jim Blair, III | 903-597-5541 | 11/23/2005 | UL-142 Single-Walled Aboveground Storage Tank, UL Model Number MH3582 | Conditional Approval |
| EQ-702 | Metal Products Company | Burcher Gammage | 770-945-8383 | 3/12/2008 | UL-142 Single-Walled Aboveground Storage Tank, UL Model Number MH3513 | The tank must be installed in an approved steel or concrete dike, and that it must meet all applicable provisions of Rule 62-762.501, F.A.C. |
| EQ-703 | Heatec Inc. | Russ Earp | 800-235-5200 | 3/27/2008 | UL-142 Single-Walled Aboveground Storage Tank, UL Model Number MH14038 | The tank must be installed in an approved steel or concrete dike, and that it must meet all applicable provisions of Rule 62-762.501, F.A.C. |
| EQ-711 | Hall Tank Company LLC | Jonathan Hill | 501-945-8729 Ext. 231 | 7/3/2008 | Single-Wall UL Listed Aboveground Storage Tank, UL File No. MH6146 | The tank must be installed in an approved steel or concrete dike, and that it must meet all applicable provisions of Rule 62-762.501, F.A.C. |

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**Tanks/ Single-Wall Only (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-728 | Clawson Tank Company | Brian Shelton | 800-272-1367 | 2/26/2009 | Single-Wall UL Listed Aboveground Storage Tank, UL File No. MH17150 | The tank must be installed in an approved steel or concrete dike, and that it must meet all applicable provisions of Rule 62-762.501, F.A.C. |
| EQ-761 | Lide Industries | Dwain Broussard | 254-562-0233 | 12/15/2010 | Lide Industries UL-142 Aboveground Storage Tank | Approved in the State of Florida as a shop fabricated AST provided that any single-walled AST is installed in an impervious dike field area that meets the performance standards in Rule 62-762.501, F.A.C. |
| EQ-766 | Hamilton Tanks, LLC | Mike Davis | 800-627-8265 | 4/27/2011 | UL-142 Listed Aboveground Tanks for flammable liquids: Vertical Secondary Containment Tanks (Double-Wall), Horizontal Secondary Containment Tanks (Double-Wall), Horizontal Single-Wall Tanks on Saddles, Horizontal Secondary Containment Tanks on Saddles and Skids (Double-Wall), Horizontal Single-Wall and Secondary Containment Tanks on Skids, Open Top Dike Aboveground Tanks for Flammable Liquids, Rectangular Tanks | Approved in the State of Florida as a shop fabricated UL 142 listed AST. |
| EQ-845 | Jake's Machining & Rebuilding Services Inc. | Jake Krippelz III | 630-892-3291 | 3/23/2015 | Part #836-1715- 572 gallon Single Wall Aboveground Storage Tank, Part #836-1689- 849 gallon Single Wall Aboveground Storage Tank, and Part #836-1690- 1100 gallon Single Wall Aboveground Storage Tank | The aboveground single-walled storage tanks must be installed with secondary containment and the installation, operation, and maintenance procedures for the aboveground single-walled storage tanks shall be made in accordance with the manufacturer's recommendations. |

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**Tanks/ Single-Wall Only (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-848 | OnQuest | Christopher Fox | 909-451-0500 | 7/15/2015 | SLOPS Aboveground Storage Tank | Aboveground Storage Tank shall be installed within an impervious secondary containment system. |
| EQ-857 | Assmann Corporation of America | Steve Rowlison | 888-357-3181 | 12/23/2015 | Assmann Corporation of America Single-Walled Polyethylene Aboveground Storage Tank | Aboveground Storage Tank shall only store contents that are chemically compatible with the polyethylene wall and be installed with an impervious secondary containment system. |
| EQ-860 | Kennedy Tank & Mfg. Co., Inc. | Paul Bolin | 800-445-1344 | 1/8/2016 | UL 142 Single-Walled and Double-Walled Aboveground Storage Tanks | The UL 142 Single-Walled AST must be installed within secondary containment and installation and tightness testing of the aboveground storage tanks must be in accordance with the manufacturer's recommendations as provided in Exhibit A. |

### Tanks/ AST Field Erected AST with Release Prevention Barriers

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-305 | Kingsno Projects | Steve Coats | 800-874-7712 | 12/11/1997 | Deltaliner System | Conditional Approval For Field Erected Tanks |
| EQ-351 | MEPCO | Steve Holmes | 800-880-5878 | 12/22/1998 | Amust Dual Floor and Monitoring System | Conditional Approval For Field Erected Tanks |
| EQ-358 | International Paint Co. LLC (Formerly ICI Devoe Coating) | Curtis Harvey Benny Carver | 404-433-7563 or 229-247-0240 | 12/22/1998 | Interline 984 with mat reinforcement (DeVmat 3D Plus System) | Conditional Approval For Field Erected Tanks. Meets API-653 |
| EQ-430 | International Paint Co. LLC (Formerly Industrial Environmental Coatings Corporation) | Curtis Harvey Benny Carter | 404-433-7563 or 229-247-0240 | 3/28/2000 | Interline 994 with mat reinforcement (Enviromat™ System) | Conditional Approval For Field Erected Tanks. Meets API-653 |
| EQ-487 | Eco-Tank Systems, LLC | Tom Keefer | 610-659-3156 | 3/15/2001 | Tank Bottom Monitoring System | Conditional Approval |
| EQ-585 | Toscano Engineering, Inc. | John Toscano | 954-524-2809 | 4/15/2004 | Enviro-Steel Double Bottom system | |
| EQ-684 | Toscano Engineering, Inc. | John Toscano | 954-524-2809 | 8/30/2007 | Steel-Shield™ Double Bottom system | |
| | | | | | | |

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## Tanks/ AST Field Erected AST with Release Prevention Barriers (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-737 | Atkinson, Diner, Stone, Mankuta & Ploucha, P.A. representing B2 Secondary Containment System, LLC | Kyle Hooper | 954-925-5501 | 8/07/2009 | B2 DBS secondary containment system | |
| EQ-745 | Mott-Smith Consulting Group, LLC (Tankbau GmbH) | Marshall Mott-Smith | 850-391-9835 | 2/10/2010 | Tankbau IV, IV-A, V, and V-A Release Prevention Barrier System | The base line inspection and API 653 are performed prior to the installation of the release prevention barrier in accordance with Chapter 62-762, F.A.C. requirements. |

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## Piping Piping With Enclosed Secondary Containment Equipped with Sump Liner, Dispenser Liner, and Interstitial Release Detection (Flexible Piping)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-181 | Containment Technologies, Inc. | Michael Nolan | 215-993-8140 | 10/05/1994 | Perma Flexx Piping System | |
| ~~EQ-188~~ | ~~Total Containment, Inc.~~ | ~~Tony Adamson~~ | ~~610-666-2170~~ | ~~2/17/1995~~ | ~~Enviroflex~~ | The Final Order was rescinded on 10/17/2002. |
| EQ-215 | Furon Company | Lucas Ford | 813-896-4540 | 8/16/1995 | Furon Co-Flex System | |
| EQ-242 | Smith Fiberglass Products, Inc. | Bill Pierpont | 813-784-9607 | 4/08/1996 | SmithFlex | |
| EQ-265 | Total Containment, Inc. | Tony Adamson | 610-666-2170 | 8/27/1996 | Vaporflex | |
| EQ-266 | Total Containment, Inc. | Tony Adamson | 610-666-2170 | 8/27/1996 | Omniflex | |
| EQ-285 | OPW | Gene Pope | 813-969-1900 | 5/07/1997 | OPW PISCES | |
| EQ-361 | Western Fiberglass, Inc. | Rick Lewis | 800-688-3375 | 2/16/1999 | 34C9 Double Wall Co-Flex Piping | |
| EQ-511 | OPW (Formerly Environ Products, Inc.) | Gene Pope | 813-969-1900 | 12/01/2001 | GeoFlex-D, and GeoFlex-S Piping Systems | The Department's previous approvals EQ-140, dated August 12, 1993, and EQ-174 dated June 14, 1994, are no longer in effect. |
| EQ-526 | OPW (Formerly Environ Products, Inc.) | Gene Pope | 813-969-1900 | 4/19/2002 | GeoDuct piping system | All GeoDuct piping shall be installed with appropriate GeoDuct entry boots and reducer donuts when single wall pressurized or suction piping is used. |
| EQ-550 | Total Containment, Inc. | Tony Adamson | 610-666-2170 | 1/24/2003 | Enviroflex PP1503, PP1503F, PP2503, PP2503F, and SF4500 piping systems | Conditional Approval |
| EQ-552 | Total Containment, Inc. | Tony Adamson | 610-666-2170 | 1/24/2003 | Omniflex model numbers CP 1503, CP 1503F, CP 1503BF, CP2503F, and CP2503BF piping systems | Conditional Approval |

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**Piping/ Piping with Enclosed Secondary Containment Equipped with Sump Liner, Dispenser Liner, and Interstitial Release Detection (Flexible Piping Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-569 | Franklin Fueling Systems (Formerly Advanced Polymer Technology, Inc.) | Gary Saltz | 608-838-8786 | 1/05/2004 | APT model numbers P-075SC, P-100-SC, P-150-SC, P-175-SC, P-200-SC, and P-250-SC piping systems | Conditional Approval - **This Order is only valid until 7/7/2009** |
| EQ-569 Amendment | Franklin Fueling Systems (Formerly Advanced Polymer Technology, Inc.) | Gary Saltz | 608-838-8786 | 7/07//2004 | APT model numbers P-075SC, P-100-SC, P-150-SC, P-175-SC, P-200-SC, and P-250-SC piping systems | Conditional Approval – **This Order is only valid until 7/7/2009** |
| EQ-618 | Franklin Fueling Systems | Gary Saltz | 608-838-8786 | 11/03/2005 | APT model numbers XP Series piping systems | |
| EQ-648 | OPW | Gene Pope | 813-969-1900 | 8/15/2006 | OPW Pisces Model CPN15, CPN20, UL File Number MH19528 Series piping systems | |
| EQ-649 | OPW (Formerly Environ Products, Inc.) | Gene Pope | 813-969-1900 | 10/12/2006 | OPW Flexworks models c075(3/4"), c10(1"), c15(1.5"), UL File Number MH16678 Series piping systems | |
| EQ-692 | Brugg Pipesystems | Urs Maire | 706-346-4011 | 12/10/2007 | Flexwell-HL piping system, UL File Number MH45398 | Flexwell-HL has been updated on EQ-791 |
| EQ-709 | OPW | Gene Pope | 813-969-1900 | 6/26/2008 | OPW Loop System, UL File No. MH16678 | Conditional Approval |
| EQ-715 | OmegaFlex, Inc. | David Strick | 610-524-6484 | 9/02/2008 | DoubleTrack Piping System, UL File No. MH 45578 | |
| EQ-772 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 7/21/2011 | OPW Flexwork Piping - Models C075A; C10A; C15A; C20A and C30A | Installation and maintenance shall be according to the manufacturer's recommendations. |

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**Piping/ Piping with Enclosed Secondary Containment Equipped with Sump Liner, Dispenser Liner, and Interstitial Release Detection (Flexible Piping Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-779 | OmegaFlex, Inc. | David Strick | 610-524-6484 | 12/14/2011 | OmegaFlex DoubleTrac Double Containment Pipe | OmegaFlex DoubleTrac Double Containment Pipe may be used as a double-walled piping system associated with aboveground or underground storage tanks. Installation shall be in accordance with the manufacturer's recommendations. |
| EQ-791 | Priority Sales Associates, Inc. | Steve Tretter | 407-389-0199 | 8/16/2012 | Brugg Pipesystems Metallic Underground Fuel Pipe Product Type: SECON X, SECON X II and FLEXWELL-HL. UL File No. MH45398 | Approved for underground or aboveground piping. Install and test according to manufacturer's recommendations. |
| EQ-791R | Priority Sales Associates, Inc. | Steve Tretter | 407-389-0199 | 4/11/16 | Brugg Pipesystems Metallic Underground Fuel Pipe and Piping Over Water, Product Type: SECON X, SECON X II, and FLEXWELL HL | Approved in the State of Florida as an underground piping system and as piping over water. Installation and testing shall be in accordance with the manufacturer's recommendations. |

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**Piping/ Piping with Enclosed Secondary Containment Equipped with Sump Liner, Dispenser Liner, and Interstitial Release Detection (Piping Entry Fittings)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-820 | S. Bravo Systems, Inc. | Micah Nelson | 800-282-7286<br>323-888-4133 | 3/24/2014 | S. Bravo Systems Entry Fittings and Entry Fitting Retrofits for Fiberglass Sumps: F Series Retrofit-S Fittings | The fittings may be used to provide piping access through piping sumps and dispenser liners associated with underground and aboveground storage tanks. |
| EQ-864 | S. Bravo Systems, Inc. | Jonathan Smith | 800-282-7286<br>323-888-4133 | 5/10/2016 | S. Bravo Systems, Inc.<br>Direct Replacement – Bolted Fittings and Direct Replacement – Thread on Penetration Fittings | The fittings may be used to provide piping access through piping sumps and dispenser liners associated with underground and aboveground storage tanks. |

**Piping/ Piping with Enclosed Secondary Containment Equipped with Sump Liner, Dispenser Liner, and Interstitial Release Detection (Semi Rigid Piping)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-297 | Franklin Fueling Systems (Formerly PetroTechnik Ltd.) | Sandra Adams | 608-838-5668 | 10/29/1997 | UPP Pipework Underground Fuel Piping System | |
| EQ-525 | Nupi Americas, Inc. | Kym Clayton | 281-590-4471 | 4/19/2002 | Smartflex Containment Plus Piping Systems, UL File Number MH25887 | |
| EQ-666 | Franklin Fueling Systems (Formerly PetroTechnik, Inc.) | Sandra Adams | 856-273-9700 | 3/23/2007 | UPP Extra Series Piping system, UL File Number MH 25274 | |
| EQ-683 | Advantage Earth Products, Inc. (Formerly - Innovative Petroleum Products, LLC) | George Boyazis | 608-838-5668 | 8/20/2007 | AEP Electr-O-Fuze MH47372 (Formerly - Petroplas Piping System, UL File Number MH29826) | |
| EQ-816 | Franklin Fueling Systems | Sandra Adams | 608-838-5668 | 10/28/2013 | UPP EVOH Piping System | The installation and operation of the semi-rigid piping shall be in accordance with the manufacturer's recommendations. |
| EQ-825 | Hurtado.cc | David Hurtado | 386-690-6361 | 5/15/2014 | Perma-Pipe, Inc. Type FS Secondary Containment Piping | Installation and integrity testing in accordance with manufacturer recommendations. |

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## Piping/ Piping with Enclosed Secondary Containment Equipped with Sump Liner, Dispenser Liner, and Interstitial Release Detection (Rigid Piping)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-123 | Centron Corporation | Jim Stevens | 817-325-1341 | 4/05/1993 | Centron Fiberglass Piping | |
| EQ-252 | Smith Fiberglass Products, Inc. | Bill Pierpont | 813-784-9607 | 4/23/1996 | Red Thread IIA | |
| EQ-291 | Ameron International | Joie Folkers | 713-690-7777 | 7/30/1997 | Dualoy® 3000/LCX | |
| EQ-378 | Ameron International | Joie Folkers | 713-690-7777 | 6/01/1999 | Dualoy® 3000/L | |
| EQ-660 | K-Tank Systems, LLC (Formerly Petrofuse ZP LLC) | Lissette & Ralph Calderon | 305-856-8283 | 2/07/2007 | Petrofuse ZP Series Piping system, UL File number MH29320 | |
| EQ-856 | Hurtado.cc | David Hurtado | 386-690-6361 | 11/24/2015 | Perma-Pipe Ultra-FS™ Secondary Containment Piping for fuel-oil applications | |

**Piping Over Water**

## Piping Over Water/ Piping with Enclosed Secondary Containment Equipped with Sump Liner, Dispenser Liner, and Interstitial Release Detection

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-433 | Advanced Polymer Technology, Inc. | Gary Saltz | 608-838-8786 | 5/08/2000 | Pressure Series Piping with MD Ducting | Approval of this storage tank system equipment by the Department of Environmental Protection Bureau of Petroleum Storage Systems (currently Division of Waste Management) does not grant authority for installing structures over the waters of the state without appropriate local, state or federal permits or other authorizations, as applicable. |

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**Piping Over Water / Piping with Enclosed Secondary Containment Equipped with Sump Liner, Dispenser Liner, and Interstitial Release Detection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-441 | OPW (Formerly Environ Products, Inc.) | Gene Pope | 813-969-1900 | 6/19/2000 | GeoFlex-M Piping System | The manufacturer shall submit all continuing test results (including air pressure tests) along with a necessary design changes related to this Order to the Department within one year from January 21, 2000. Approval of this storage tank system equipment by the Department of Environmental Protection Bureau of Petroleum Storage Systems (currently Division of Waste Management), does not grant authority for installing structures over the waters of the state without appropriate local, state or federal permits, or other authorizations, as applicable. The Department's previous approval EQ-421, dated January 21, 2000, is hereby revoked. |

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**Piping Over Water / Piping with Enclosed Secondary Containment Equipped with Sump Liner, Dispenser Liner, and Interstitial Release Detection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-562 | Ameron International | Joie Folkers | 713-690-7777 | 8/28/2003 | Ameron MCX System for the Ameron Marina Piping System | Approval of this storage tank system equipment by the Department of Environmental Protection's Bureau of Petroleum Storage Systems (currently Division of Waste Management), does not grant authority for installing structures over the waters of the state without appropriate local, state or federal permits, or other authorizations, as applicable. |
| EQ-617 | Advantage Earth Products, Inc. (Formerly - Innovative Petroleum Products, LLC) | Georges Boyazis | 404-610-5793 | 9/09/2005 | AEP Electr-O-Fuze (Formerly - Petroplas FR) Piping for Marina Piping Systems | Approval of this storage tank system equipment by the Department of Environmental Protection's Bureau of Petroleum Storage Systems (currently Division of Waste Management), does not grant authority for installing structures over the waters of the state without appropriate local, state or federal permits, or other authorizations, as applicable. |

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**Piping Over Water / Piping with Enclosed Secondary Containment Equipped with Sump Liner, Dispenser Liner, and Interstitial Release Detection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-712 | Nupi Americas, Inc. | Kym Clayton | 281-590-4471 | 7/25/2008 | Smartflex Piping System for Marina Piping Systems | The piping slope of 1/8" per foot between dispenser sump, transition sump on the dock and shoreline is not required provided the dispenser and transition sump is equipped with approved electronic liquid sensors. Approval of this storage tank system equipment by the Department of Environmental Protection's Bureau of Petroleum Storage Systems, does not grant authority for installing structures over the waters of the state without appropriate local, state or federal permits, or other authorizations, as applicable. |
| EQ-717 | Brugg North America, Inc. | Urs Maire | 706-346-4011 | 12/10/2007 | Flexwell-HL piping system for Marine Piping System | The piping slope of 1/8" per foot between dispenser sump, transition sump on the dock and shoreline is not required provided the dispenser and transition sump is equipped with approved electronic liquid sensors. Approval of this storage tank system equipment by the Department of Environmental Protection's Bureau of Petroleum Storage Systems, does not grant authority for installing structures over the waters of the state without appropriate local, state or federal permits, or other authorizations, as applicable. |

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**Piping Over Water / Piping with Enclosed Secondary Containment Equipped with Sump Liner, Dispenser Liner, and Interstitial Release Detection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-731 | Franklin Fueling Systems (Formerly PetroTechnik Ltd.) | Sandra Adams | 608-838-5668 | 4/08/2009 Updated 9/02/2015 | PetroTechnik UPP Piping System for Marina Piping Systems (New Modifications effective 9/02/2015 – see on-line file for details) | The piping slope of 1/8" per foot between dispenser sump, transition sump on the dock and shoreline is not required provided the dispenser and transition sump is equipped with approved electronic liquid sensors. Approval of this storage tank system equipment by the Department of Environmental Protection's Bureau of Petroleum Storage Systems, does not grant authority for installing structures over the waters of the state without appropriate local, state or federal permits, or other authorizations, as applicable. |
| EQ-751 | OmegaFlex, Inc. | David Strick | 800-355-1039 | 2/23/2010 | DoubeTrac Series Piping System for Marina Piping Systems | The piping slope of 1/8" per foot between dispenser sump, transition sump on the dock and shoreline is not required provided the dispenser and transition sump is equipped with approved electronic liquid sensors. Approval of this storage tank system equipment by the Department of Environmental Protection's Bureau of Petroleum Storage Systems, does not grant authority for installing structures over the waters of the state without appropriate local, state or federal permits, or other authorizations, as applicable. |
| EQ-791R | Priority Sales Associates, Inc. | Steve Tretter | 407-389-0199 | 4/11/16 | Brugg Pipesystems Metallic Underground Fuel Pipe and Piping Over Water, Product Type: SECON X, SECON X II, and FLEXWELL HL | Approved in the State of Florida as an underground piping system and as piping over water. Installation and testing shall be in accordance with the manufacturer's recommendations. |

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## Bulk Product Piping with Secondary Containment

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-465 | International Paint Co., LLC (Formerly Industrial Environmental Coatings Corporation) | Curtis Harvey<br>Benny Carver | 404-433-7563<br>229-247-0240 | 12/04/2000 | Enviromat™ System | Conditional Approval as a method of secondary containment for underground bulk product piping. **DISCONTINUED PRODUCT** |

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## Coatings (Liners) AST/UST Synthetic or Concrete

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-034 | Poly Flex, Inc. | A.M. Yazdoni | 800-527-3323 | 7/03/1991 | Polyflex HDPE | Minimum 60 mils thickness |
| EQ-049 | Futura Coating, Inc. | Lee Curry | 770-596-9551 | 10/28/1991 | Geothane | Minimum 60 mils on earthen substrate and 30 mils on concrete substrate |
| EQ-056 | Seaman Corporation | Felon R. Wilson | 615-691-9476 | 1/14/1992 | XR-5 Geomembrane | Minimum 30 mils thickness |
| EQ-085 | PolySpec Corporation | Phillip Greer | 704-566-0387 | 8/05/1992 | ITW Poly Spec / Thiokol Products | Minimum 60 mils on earthen substrate and 30 mils on concrete substrate |
| EQ-160 | Bixby International Corporation | Paul Darby | 508-465-4100 | 3/03/1994 | VLPU-40 | Minimum 42 mils on earthen and concrete substrate |
| EQ-163 | Palco Lining, Inc. | Wayne Behrsin | 908-753-6262 | 3/14/1994 | Elvaloy Fabric Reinforced System | Minimum 36 mils on earthen and concrete substrate |
| EQ-189 | Polymerica, Inc. | Christine Benette | 813-794-6850 | 2/17/1995 | Polymerica Secondary Containment Coating system | Used for concrete sealant. Polymerica Crop. Needs to be consulted for the design. |
| EQ-205 | In-Line Plastics, Inc. | Paul Jopline | 800-364-7688 | 5/26/1995 | In-Liner HDPE Liners | Minimum 60 mils on earthen substrate and 60 mils on concrete substrate. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-220 | MPC Containment Systems, Inc. | Dennis O'Brien | 800-621-0146 | 10/09/1995 | Petrogard VI , and Petrogard X | Petrogard VI with a minimum of 30 mils over earthen or concrete substrate and Petrogard X with a minimum of 40 mils over earthen or concrete substrate. |
| EQ-238 | CIM Industries | Dr. Stephens | 603-924-9481 | 2/05/1996 | CIM 1000, CIM 1061 | Minimum 60 mils on steel and concrete substrate. |
| EQ-251 | Cooley, Inc. | Richard Cunnigham | 401-724-9000 | 4/22/1996 | FML87, FML87-23, L2810-6174H(Hytrel), Coolguard HR 36 Coolguard HR 45 | Minimum of Following thickness on steel, concrete, or earth substrate: FML87 is 40 mils, FML87-23 is 30 mils, L2810-6174H (Hytrel) is 36 mils, Coolguard HR 36 is 36 mils, and Coolguard HR 45 is 45 mils. |
| EQ-281 | Willamet Valley Company | Rob Loomis | 541-484-9621 | 5/02/1997 | PolyQuick® Polyurea Coating Synthetic Liners, X-Shield Polyurea Coating synthetic Liner | Minimum 60 mils on earthen and concrete substrate. |
| EQ-287 | Colloid Environmental Technologies Company | Gary Ezell | 813-527-0605 | 7/08/1997 | Claymax and Bentomax Clay Liners | Condition (e) Removed 10/23/2015 |
| EQ-290 | International Paint Co. LLC (Formerly Ceilcote Corrosion Control, Division of KCH) | Curtis Harvey<br>Benny Carter | 404-433-7563<br>229-247-0240 | 7/31/1997 | Ceilcote, Interline® (850, 984, 994), Enviroline® 376, Devoe Lining Systems (MBT Ceilcote AST Lining Installation) | Lining of aboveground tank bottoms. Installed per manufacturer's recommendations. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-350 | Madewell Products Corporation | Jon Steele | 770-475-8199 | 12/01/1998 | Madewell 927 Penetrating Epoxy Primer/Sealer and Madewell 1103 Epoxy Coal Tar Coating | Minimum of 31 mils thickness over concrete or steel substrate |
| EQ-357 | International Paint Co. LLC (Formerly Industrial Environmental Coating) | Curtis Harvey<br>Benny Carter | 404-433-7563<br>229-247-0240 | 12/17/1998 | Enviroline® 376F (Enviroline 376F Epoxy Coating) | Minimum of 30 mils thickness over concrete or steel substrate, and for internal lining of aboveground storage tanks in accordance API 653. |
| EQ-362 | Specialty Products, Inc. | Chas Weatherford | 800-627-0773 | 2/19/1999 | Polyshield SS-100 Coating | Minimum of 80 mils thickness over concrete, steel, or geofabric textile substrate |
| EQ-390 | International Paint Co. LLC (Formerly Ceilcote Corrosion Control, Division of KCH | Curtis Harvey<br>Benny Carter | 404-433-7563<br>229-247-0240 | 8/30/1999 | Ceilcote Crack Bridging Linings (Flakeline and Ceiline 40 Coating Systems) | Ceiline BC Coating System with a minimum of 45 mils thickness over concrete, and for Flakeline Coating Systems with a minimum of 45 mils thickness over concrete. |
| EQ-412 | Rust-Oleum Corporation | Rick Braunshausen | 847-816-2264 | 12/22/1999 | Overkote® Concrete Protective System™ | Minimum of 30 mils thickness over concrete |
| EQ-415 | Vernon Plastics | Roxanne Smith | 978-373-1551 | 12/22/1999 | "Vernoguard™ OR" and "Vernoguard™ PR" synthetic liners | Minimum of 30 mils thickness over concrete or earthen substrate |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-420 | Tnemec Company, Inc. | Gene Ponder | 407-322-1243 | 12/20/2000 | Tnemec Coating 61, 120, and 201* Systems<br><br>*System 201 was updated August 2012 | Tnemec Coating 201 System is applied with a minimum of 42 mils thickness over concrete and the Tnemec Coating 61, and 120 System are applied with a minimum of 30 mils thickness over concrete. |
| EQ-426 | Pipeline Energy (Formerly C.T. Petroleum Contractors, Inc.) | Chuck Strickland | 386-292-2306 | 3/16/2000 | Retro-Liner Containment System | Retro-Liner Containment System is applied with a minimum of 125 mils thickness over concrete. |
| EQ-428 | Thermal-Chem Corporation | Albert Grennsburg | 800-635-3773 | 3/16/2000 | Thermal-Chem Containment System | The Thermal-Chem Containment System is applied with a minimum of 30 mils thickness over concrete for non-traffic bearing areas and 60 mils thickness over concrete for traffic bearing areas. |
| EQ-438 | General Polymers | Robert Johnson | 813-968-9630 | 5/08/2000 | EPO-FLEX 85 CR system, SEWER-FLEX system, COR-CAST RM & MRM reinforced lining systems, COR-COTE C unreinforced coating and lining system, COR-COTE FC & TF flake reinforced system, and COR-CAST L reinforced lining system | The EPO-FLEX 85 CR system, SEWER-FLEX system, COR-COTE C unreinforced coating and lining system, COR-COTE FC & TF flake reinforced system, and COR-CAST L reinforced lining system must be applied with a minimum of 30 mils thickness over concrete areas. The COR-CAST RM & MRM reinforced lining systems must be applied with a minimum of 65 mils thickness over concrete areas. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-442 | Belzona, Inc. | Kevin McGinley | 305-594-4994 | 7/24/2000 | Belzona® 5811 (Immersion Grade) secondary containment coating | The Belzona® 5811 (Immersion Grade) secondary containment coating must be applied with a minimum of 30 mils thickness over concrete or steel areas. |
| EQ-447 | Benjamin Moore & Co. | Todd Bulgrin | 800-216-9658 Ext. 5028 | 8/31/2000 | All Season Epoxy Mastic Coating X10 secondary containment coating | The All Season Epoxy Mastic Coating X10 secondary containment coating must be applied with a minimum of 30 mils thickness over concrete or steel areas. |
| EQ-448 | PPG Industries (Formerly Porter Coatings) | Mike Eady | 863-859-9297 | 8/31/2000 | PorterGlaze 4721 Flexible Epoxy Coating secondary containment coating | The PorterGlaze 4721 Flexible Epoxy Coating secondary containment coating must be applied with a minimum of 30 mils thickness over concrete or steel areas. |
| EQ-449 | JBT & Associates, Inc. | Michael Whitener | 239-275-6235 | 9/08/2000 | REA 303 Polyurea Spray Elastomer secondary containment coating system | The REA 303 Polyurea Spray Elastomer secondary containment coating system must be applied with a minimum of 80 mils thickness over concrete, steel, or earthen substrate areas. |
| EQ-455 | PPG Industries (Formerly Porter Coatings) | Mike Eady | 863-859-9297 | 9/26/2000 | PPG Pitt Guard Rapid Coat DTR 95245 (Formerly PorterMastic™ 7000) Surface Tolerant Epoxy Coating secondary containment coating | The PPG Pitt Guard Rapid Coat DTR 95245 (Formerly PorterMastic™ 7000) Surface Tolerant Epoxy Coating secondary containment coating must be applied with a minimum of 30 mils thickness over concrete or steel areas. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-457 | DUROMAR, Inc. | Daniel Toft | 813-205-2020 | 10/04/2000 Updated 4/27/2015 | HPL 1110, HPL 2221, HPL 3320, HPL 4310, and DF-1301 (previously named HPL 1301) DUROMAR concrete secondary containment protection systems | Initially, the concrete sealer DF-1301 (previously named HPL 1301) is applied with a thin film (5-10 mil thickness). Then, the top coat HPL 1110, HPL 2221, or HPL 3320 must be applied with a minimum of 30 mils thickness or, HPL 4310 with a minimum of 40 mils thickness over concrete areas. |
| EQ-472 | MRC, Inc. | Howard Golden | 888-276-1400 | 12/22/2000 | Marseal 2000 and 4000 secondary containment sheet membrane lining | The Marseal 4000 secondary containment sheet membrane lining must be applied with a minimum of 90 mils thickness over concrete or steel areas and the Marseal 2000 secondary containment sheet membrane lining must be applied with a minimum of 60 mils thickness over earthen substrate. |
| EQ-476 | International Coating, Inc. | Michael Kramer | 800-624-8919 | 2/09/2001 | ICO Floor Coating, ICO Guard Coating, ICO Hi Guard Coating, and ICO Super Guard Coating | The ICO Floor Coating, ICO Guard Coating, ICO Hi Guard Coating, and ICO Super Guard Coating must be applied with a minimum of 60 mils thickness. In addition, these coatings must be applied with a minimum of 250 mils thickness over concrete or steel in heavy traffic areas. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-477 | International Paint Co. LLC (Formerly ICI Devoe Coating) | Curtis Harvey<br>Benny Carter | 404-433-7563<br>229-247-0240 | 2/09/2001 | Devran® 124 Epoxy System with optional Enviroline 9450 Caulk (Pre-Prime™ 167 and Devran® 124 epoxy coating) | The (Pre-Prime™ 167 and) Devran® 124 epoxy coatings must be applied with a minimum of 30 mils thickness over concrete areas. |
| EQ-509 | Richard's Paint Manufacturing Co., Inc. | James Peterson | 321-636-6200 | 11/02/2001 | Richard's 2200 Polyamide epoxy coating | The Richard's 2200 Polyamide epoxy coating must be applied with a minimum of 30 mils thickness over concrete areas. |
| EQ-510 | Dudick, Inc. | Thomas Parenete | 800-322-1970 | 11/02/2001 | Protecto-Coat PS, Caulk PSC, Protecto-Coat 800, Protecto-Flex 100XT, and Protecto-Glass 160XT coatings | The Protecto-Coat PS and the Protecto-Coat 800 coating must be applied with a minimum of 40 mils thickness over concrete areas. The Protecto-Coat 100XT coating must be applied with a minimum of 100 mils thickness over concrete areas. The Protecto-Glass 160XT coating must be applied with a minimum of 90 mils thickness over concrete areas. The Caulk PSC can be used on joints or cover cracks up to 2 inches wide at a minimum of 125 mils on concrete surfaces or on the tank chimes. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-512 | The Sherwin Williams Company | William Fite | 407-658-9875 | 12/14/2001 | DEP-01 coatings, consisting of the COROBOND 100 epoxy primer/sealer Number B58WQ5100/ B60VQ5100, the KEM CATI-COAT HS epoxy filler/sealer Number B42W400/B42V400, and the SHELLCOTE II Epoxy Amine, Number 920-W-355/700-C-764 | The DEP-01 coatings must be applied with a minimum of 30 mils thickness over concrete areas. The Department's previous approval EQ-170, dated April 29, 1994, is no longer in effect. |
| EQ-531 | The Sherwin Williams Company | William Fite | 407-658-9875 | 5/14/2002 | General Polymer Envirolastic AR 425 Polyurea Coating | The coating must be applied with a minimum of 40 mils thickness over concrete areas. |
| EQ-534 | Madison Chemical Industries, Inc. | Ron Chunko | 770-339-7858 | 7/03/2002 | Flexcell II, Flexcell II TX, EC-120, and Corrocote Plus w/ Acr 85 top coating | The Flexcell, Flexcell II TX, EC-120 applied with a minimum of 40 mils thickness over concrete areas, Corrocote plus w/ Acr 85 top coat must be applied with a minimum of 30 mils thickness over steel areas. |
| EQ-541 | Freecom, Inc. | Kevin Freeman | 915-263-8497 | 9/23/2002 | Ceram-Kote SPG22 Coating | The Ceram-Kote SPG22 coating must be applied with a minimum of 30 mils thickness over concrete areas. |
| EQ-559 | Mobil Paint Mfg. Co., Inc. | Mark Mann | 251-443-6110 Ext. 229 | 6/23/2003 | MoPoxY™ Pre-Prep sealer, Clear, 41-AF-2 and MoPoxY™ Mastic Epoxy Coating, Down Gray, 40-AH-51 | The MoPoxY™ Pre-Prep sealer, Clear, 41-AF-2 and MoPoxY™ Mastic Epoxy Coating, Down Gray,40-AH-51 must be applied with a total minimum of 30 mils thickness over steel or concrete areas. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-560 | GSE Lining Technology, Inc. | Nathan Ivy | 800-435-2008 | 7/25/2003 | GSE HD Liner | The GSE HD Liner must be applied with a minimum of 60mils thickness over earthen substrate. The Department Final Orders EQ-006 issued on April 21, 1991, and EQ-008 issued on May 30, 1991 are no longer in effect. |
| EQ-564 | GSE Lining Technology, Inc. | Kristen Hardin | 800-435-2008 | 9/26/2003 | GSE Studliner | The GSE StudLiner must be applied with a minimum of 80 mils thickness over concrete substrate. |
| EQ-592 | Hempel USA Inc. | Shane Prudhomme | 936-523-6000 | 7/23/2004 | Hempadur Multi-Strength® 35530 Concrete Sump Sealant and the Hempadur® Filler 35250 | Hemp Hempadur Multi-Strength® 35530 Concrete Sump Sealant must be applied with a total minimum of 30 mils thickness over steel or concrete areas and the Hempadur® Filler 35250 must be applied in accordance with the manufacturer's recommendations. |
| EQ-599 | International Paint Co. LLC (Formerly ICI Paint) | Curtis Harvey<br>Benny Carter | 404-433-7563<br>229-247-0240 | 10/27/2004 | International Paint Co - Devoe Bar Rust 236 Multi-Purpose Epoxy Coating (Formerly ICI/Devoe Bar-Rust 236 Multi-Purpose Epoxy Coating) | The International Paint Co - Devoe Bar-Rust 236 Multi-Purpose Epoxy Coating must be applied with a total minimum of 30 mils thickness over steel or concrete areas and must be applied in accordance with the manufacturer's recommendations. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-603 | Agru-America, Inc. | Paul Barker | 843-546-0600 | 12/16/2004 | Agru-America HDPE Liner | The Agru-America HDPE Liner must be applied with a minimum of 60 mils thickness over earthen substrate. |
| EQ-608 | International Paint Co. LLC (Formerly Carboline Company) | Curtis Harvey<br>Benny Carter | 404-433-7563<br>229-247-0240 | 3/02/2005 | Polibrid® 705 Elastomeric Polyurethane Coating | The Polibrid® 705 is to be applied directly to concrete and steel surface at 60 – 120+ mils DFT. It can also be used in conjunction with Geotextile Fabric for concrete and earthen dike walls. Must be applied in accordance with the manufacturer's recommendations. |
| EQ-630 | Benjamin Moore & Co. (Formerly Coronado Paint Company) | Mark Mangan | 407-385-1717 | 1/18/2006<br><br>Updated 12/18/2013 | Insl-x Corotech Polyamide Epoxy (Formerly Coronado 101 epoxy with 101-252B high build activator) | Insl-x Corotech Polyamide Epoxy must be applied with a minimum of 30 mils thickness over steel or concrete areas and must be applied in accordance with the manufacturer's recommendations. |
| EQ-643 | Premier Coating Systems, Inc. | Ron Fake | 904-824-1799 | 7/31/2006 | PCS # 200 Surface Tolerant Epoxy Sealer, and PCS # 1100 Modified Epoxy Novolac Polysulfide Coating | Approved in the State of Florida as a coating for concrete or steel secondary containment of aboveground storage tanks containing kerosene analytical group. The PCS # 200 Surface Tolerant Epoxy Sealer, and PCS # 1100 Modified Epoxy Novolac Polysulfide Coating must be applied with a minimum of 30 mils thickness over steel or concrete areas and must be applied in accordance with the manufacturer's recommendations. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-651 | Polycoat Products | Ashish Dhuldhoya | 562-802-8834 | 10/18/2006 | Polycoat Polyeuro 552 coating | Approved in the State of Florida as a coating for concrete or steel secondary containment of aboveground storage tanks containing petroleum products. The Polycoat Polyeuro coating must be applied with a minimum of 40 mils thickness over steel or a minimum of 60 mils thickness over concrete areas and must be applied in accordance with the manufacturer's recommendations. |
| EQ-658 | Pilgrim Permocoat, Inc. | Robert Forlong | 800-637-3328 | 1/25/2007 | Pilgrim Plastic Coating | The Pilgrim Plastic coating must be applied with a minimum of 30 mils thickness over steel or over concrete areas and must be applied in accordance with the manufacturer's recommendations. |
| EQ-678 | Solmax International Inc. | Paul Payeur | 800-571-3904 | 6/27/2007 | Solmax HDPE and LLDPE Liner | Approved in the State of Florida as a liner for secondary containment over earthen substrate. The Solmax HDPE and LLDPE Liner must be applied with a minimum of 60 mils thickness over earthen substrate. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-686 | VersaFlex Incorporated | David Cerchie | 913-321-1000 | 10/12/2007 | VersaFlex VF-380 and PV-380 coatings | Approved in the State of Florida as coatings for concrete or steel secondary containment of aboveground storage tanks containing petroleum products. The VersaFlex VF-380 and PV-380 coatings must be applied with a minimum of 40 mils thickness over steel or a minimum of 60 mils thickness over concrete areas and must be applied in accordance with the manufacturer's recommendations. |
| EQ-693 | Rhino Linings USA | Bharat Naik | 858-450-0441 | 12/12/2007 | Rhino Hi Chem and Rhino Extreme coatings | Approved in the State of Florida as coatings for concrete or steel secondary containment of aboveground storage tanks containing petroleum products. The Rhino Hi Chem and Rhino Extreme coatings must be applied with a minimum of 80 mils thickness over steel or concrete areas and must be applied in accordance with the manufacturer's recommendations. |
| EQ-748 | Seaman Corporation | Bill Shehane | 704-987-0055 | 2/17/2010 | Seaman 1932 PTF polyurethane liner | Approved in the State of Florida as a liner for secondary containment over earthen substrate underneath a field - erected tank. The Seaman 1932 PTF Polyurethane liner must be applied with a minimum of 35 mils thickness over earthen substrate. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-756 | VersaFlex Incorporated | Art Weiss | 913-321-9000 | 7/22/2010 | VersaFlex FSS 45DCF coating | Approved in the State of Florida as coatings for concrete or steel secondary containment aboveground storage tanks containing petroleum products. The VersaFlex FSS 45DCF must be applied with a minimum of 80 mils thickness over steel or concrete areas and must be applied in accordance with the manufacturer's recommendations. |
| EQ-758 | Rawell Environmental, Ltd. | Steven Flynn | +44(0) 151-632-5771 | 11/10/2010 | RAWMAT HDB Type P and RAWMAT HDB Type PP Lining System | Approved in the State of Florida as secondary containment over earthen substrate of a field-erected tank. Installation of the lining system may be installed on embankments with slopes greater than 45 degrees provided that the lining system is anchored in place according to good engineering practices. The Final Order EQ-755 issued on June 17, 2010, has been rescinded. |
| EQ-771 | Corotech Coatings (Formerly Benjamin Moore & Co.) | Guy Schnatter | 800-225-5554 | 6/28/2011<br><br>Updated: 8/1/2014 | Corotech® V160 Surface Tolerant Epoxy Mastic (Previously - Super Spec® Epoxy Mastic P45 Coating System for Concrete - Secondary Containment Coating) | Application and maintenance shall be according to the manufacturer's recommendations. |
| EQ-782 | Specialty Products, Inc. | Chas Weatherford | 800-627-0773 | 3/16/2012 | Specialty Products, Inc. Coatings: Polyprime-100™ Primer, PTU™, PTU-AR™, Polyshield HT-SL™, K5™, Watersafe II™ and HT-100F UB™ | All products are approved in the State of Florida as base coats or sealants that may be applied to either aboveground or underground storage tank secondary containment systems according to manufacturer's recommendations. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-789 (System 1) | Carboline Company | Debbie Simmons | 678-455-5821 | 7/06/2012 | Carboline Company Protective Coatings and Linings: System #1: Primer - Carboguard 1340WB and Finish - Reactamine ET | System #1 may be used as approved coatings for concrete or steel substrate secondary containment systems for AST systems. Surface prep, chemical compatibility and application procedures shall be according to the manufacturer's recommendations. Primer applied at min. 1.5-2.0 mils DFT and Finish applied at min. 40.0 mils DFT. |
| EQ-789 (System 2) | Carboline Company | Debbie Simmons | 678-455-5821 | 7/06/2012 | Carboline Company Protective Coatings and Linings: System #2: Primer - Semstone 110 and Finish - Semstone 140 | System #2 may be used as approved coatings for concrete or steel substrate secondary containment systems for AST systems. Surface prep, chemical compatibility and application procedures shall be according to the manufacturer's recommendations. Primer applied at min. 5.0-6.0 mils and Finish applied at min. 30.0 mils DFT. |
| EQ-790 | New Life Coatings | Ken Barton | 863-438-8783 | 7/06/2012 | NLC-101S Epoxy Spray System | Approved as a protective coating for concrete secondary containment systems for AST systems. Surface prep, chemical compatibility and application shall be according to the manufacturer's recommendations. |
| EQ-793 | Epoxytec | Michael Caputi | 877-463-7699 | 10/24/2012 | Uroflex™ (UME38) Part A & Part B Coating System | Approved for concrete or steel secondary containment components. Surface prep and application thickness shall be in accordance with manufacturer's recommendations. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-796 | Stephen's Technologies, Inc. | Ken Barton | 888-783-7436 | 11/06/2012 | Newlife Liner Epoxy Lamination System | Approved coating system for secondary containment components and meets the compatibility requirements with the pollutant stored in the AST. Surface prep and application thickness shall be in accordance with manufacturer's recommendations. |
| EQ-800 | AET Compliance | Jason Wiles | 800-989-8298 | 1/30/2013 | Tanks and Pipeworks Ltd. Try-Line System for Underground Storage Tanks - 100% of tank is provided with interstice monitoring installed with either class 1 or class 2 detection systems | A lining system for USTs containing petroleum, petroleum products and ethanol up to E-85 and a release detection system for the Try-Line System. Only Tanks and Pipeworks Ltd. trained personnel can perform installation and must be according to manufacturer's protocol. |
| EQ-802 | Corrocoat USA, Inc. | Josh Tankersley | 904-268-4559 | 2/19/2013 | Corrocoat Limited Zipcoat & Polyglass VEF Coating for Sulfuric Acid Secondary Containment and AR3 Coating for Sulfuric Acid Secondary Containment | Approved coatings to be applied to concrete or metallic secondary containment associated with USTs or ASTs. The surface prep and application thickness shall be made in accordance with manufacturer's recommendations. |
| EQ-811 | Industrial Maintenance Group, Inc. | Pete Van Fossen | 800-627-0773 | 7/22/2013 | Patented Polyseam™ Coating, SC-3900-F-UB Coating, and CR-3000-F Coating | Approved as coatings or sealants of secondary containment for storage tank systems. The installation and operation shall be made in accordance with the manufacturer's recommendations. |
| EQ-812 | HEMPLE (USA) Inc. | Teresa Valdes | 936-523-6000 | 7/29/2013 | HEMPLE (USA) Inc. - Blome CP-83MP Epoxy Adhesive, Blome EC-66, Blome EC-90, Blome EC-R590, Blome Primer 75, and Blome TL-47-S Coatings | Approved as coatings or sealants of secondary containment for storage tank systems. The installation and operation shall be made in accordance with the manufacturer's recommendations. |

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**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-822 | Corrocoat USA, Inc. | Julie S. Forte | 904-268-4000 | 3/24/2014 | Corrocoat USA, Inc., Corroglass AR4 Coating | May be used as a lining material for concrete or steel secondary containment systems associated with USTs and ASTs |
| EQ-830 | Epps Decorating Center | Scott Epps | 850-385-6649 | 9/19/2014 | Benjamin Moore Super Spec® Epoxy Mastic P45 and The Corotech Coatings Surface Tolerant Epoxy Mastic Coating V160 | Surface preparation and application procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-833 | Enecon Corporation | Elizabeth Kessler | 888-436-3266 | 12/23/2014 | CHEMCLAD-P4C Primer and CHEMCLAD SC Polymer Coating | Can be used on concrete or metallic surfaces. 100% solid polymer coating for tanks and secondary containment systems |
| EQ-835 | ArmorThane USA, Inc. | Hank Strathman | 417-831-5090 | 12/23/2014 | EnviroThane Polyurea Coating | Surface preparation and application procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-841 | Corrocoat USA, Inc. | Peter Smyth | 904-268-4559 | 3/23/2015 | Corrocoat Zip-E Coating | The Corrocoat Zip-E Coating may be used as a protective coating system for concrete or metallic secondary containment systems associated with aboveground storage tank systems storing ammonia, petroleum lubricants and Fyrquel EHC (a fire-resistant hydraulic fluid). |
| EQ-842 | Sika Corporation, Pecora Corporation and De Neef Construction Chemicals, Inc. | Nora Ervolino | 772-597-7642 | 5/15/2015 | Sika Corporation: Sikafloor® 161 primer, Sikafloor® 700 Coating, and Sikafloor® 340 aliphatic urethane, the Pecora Corporation: Pecora P-53-VOC primer, and Synthacalk™ GC2+ sealant, Prime Resins, Inc.: Prime Flex™ 900 MV foam injection resin and the De Neef Construction Chemicals, Inc. Dry Oakum jute oakum crack filler. | The Sika Corporation, the Pecora Corporation, Prime Resins, Inc. and the De Neef Construction Chemicals, Inc. products may be used as a primer, a protective coating system or materials for filling cracks for secondary containment systems associated with aboveground storage tank systems. |

**Coatings AST/UST Synthetic or Concrete (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-846 | Total Containment Solutions, Inc. | Sherry Currie | 239-275-6235 | 5/15/2015 | Total Containment Solutions, Inc.: TCS 380-25 and TCS 380-CL Polyurea Spray Elastomer Systems for Secondary Containment Coating | The coating must be installed in accordance with the manufacturer recommendations for surface preparation, application, and maintenance. |
| EQ-847 | Enecon Corporation | Elizabeth Kessler | 888-436-3266 | 5/15/2015 | Enecon Corporation's CHEMCLAD XC, ENCRETE-DuraQuartz and ENCRETE-DuraFill Coatings | The Enecon Corporation's CHEMCLAD XC, ENCRETE-DuraQuartz and ENCRETE-DuraFill Coatings may be used as surface coating for tanks and secondary containment systems associated with aboveground or underground storage tank systems. |
| EQ-852 | CETCO | Michael Rublaitus | 800-527-9948 | 10/23/2015 | CETCO Geosynthetic Clay Liners, Bentomat and Claymax Systems | See Conditions (a) through (g) on the Approval Order |
| EQ-853 | Raptor USA, LLC | Ryan Richetti | 844-727-8678 | 10/23/2015 | Raptor-CO/SC Secondary Containment Coating | The surface preparation of the concrete and the application of the coating shall be made in accordance with the manufacturer's recommendations. |
| EQ-880 | Tank Tech, Inc. | Jonathon McNeely | 888-405-2369 | 7/24/2017 | Tank Tech, Inc., UL 1856 FRP Lining System | Installer must be a Tank Tech, Inc. approved technician, and if the Braddock Method is used for testing, a Tank Tech Technician must be used and the interstitial integrity test must be performed in accordance with manufacturers instructions. |

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## Leak Detection Equipment – Sensors, Alarms and Control Panels

### Leak Detection/ Vapor Detector

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-039 | Mine Safety Appliances | Bill Freeman | 800-672-4678 | 9/05/1991 | Tankgard | |
| EQ-054 | Teledyne GeoTech Corporation | Mike Martin | 512-327-9840 | 1/14/1992 | Lasp Monitor System | |
| EQ-063 | HNU System, Inc. | Albert Wilshire | 617-694-6690 | 2/20/1992 | Model DL-101 | |
| EQ-066 | HNU System, Inc. | Albert Wilshire | 617-694-6690 | 3/16/1992 | Model PI-101 | |
| EQ-067 | HNU System, Inc. | Albert Wilshire | 617-694-6690 | 3/17/1992 | Model HW-101 | |
| EQ-089 | Campo Miller, Inc. | Mary Filippi | 209-781-6862 | 9/01/1992 | VS-200 | |
| EQ-101 | Arizona Instruments | Terry Kiss | 800-528-7411 | 12/08/1992 | Sentry 12X | |
| EQ-106 | OPW (Formerly Petro Vend, Inc.) | Gene Pope | 813-969-1900 | 12/08/1992 | Site Sentinel | |
| EQ-185 | FCI Environmental, Inc. | Dan Wien | 800-363-9892 | 1/10/1995 | AHP 100 Vapor Sensor | |
| EQ-248 | OPW Fuel Management Systems (Formerly Petro Vend, Inc.) | Gene Pope | 813-969-1900 | 4/12/1996 | Petro vend Model TLD III Vapor Sensor | |

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## Leak Detection/ Liquid Detector

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-044 | In-Situ, Inc. | William Mann | 307-742-8213 | 9/17/1991 | KW-140/KW 240 | |
| EQ-057 | Pneumercator Co, Inc. | Jonathan Levy | 800-209-7858 | 1/13/1992 | Pneumercator LDE 9000 | |
| EQ-100 | Mallory Controls, Inc. | Mark Becker | 317-328-4020 | 11/03/1992 | Pollulert Probe FD 241R | |
| EQ-110 | Mallory Controls, Inc. | Mark Becker | 317-328-4020 | 2/18/1993 | Pollulert Probe FD 221G | |
| EQ-119 | Tidel Engineering, Inc. | David Tucker | 800-678-7577 | 4/05/1993 | EMS-3500 | |
| EQ-128 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 5/10/1993 | CEI 3000 | |
| EQ-136 | Arizona Instruments Corporation | Terry Kiss | 800-528-7411 | 7/12/1993 | Liquid 330 | |
| EQ-147 | Pneumecator Company | Jonathon Levy | 631-293-8450 | 10/13/1993 | Pneumecator Probes 9-901, 9-902, 9-903 | |
| EQ-159 | One Plus, Inc. | Gene Forman | 708-498-0955 | 2/04/1994 | Leak Edge | |
| EQ-161 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 3/14/1994 | Liquid Sensors, LS-3A N.C., LS-3A N.O., LS-30A, and LS-7 | |
| EQ-164 | Southeast Tank Company | David Palazzo | 813-986-1043 | 3/11/1994 | Perma Tel | |
| EQ-168 | Raychem Corporation | Terry Warren | 901-382-4761 | 7/07/1994 | TraceTek Leak Detection Systems with TT5000 (fuel) Sensors for use with TTG, TTDM-PLUS, TTA, TTC, and TT-Sim Control Modules | |

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**Leak Detection/ Liquid Detector (continued)**

| File No. | Company Name | Contact | Telephone | Approval date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-177 | FCI Environmental, Inc. | Dan Wien | 800-363-9682 | 9/01/1994 | AHP 100, and DHP 100 Liquid sensors | |
| EQ-197 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 5/03/1995 | TLS-250, TLS-250i, TLS-350,TLS-350R, ILS-250, ILS-250i,and ILS-350, EMC Enhanced, EMC w/BIR | |
| EQ-202 | Arizona Instrument Corporation | Terry Kiss | 800-528-7411 | 5/12/1995 | TLS-830 | |
| EQ-216 | Beadreau Electronic, Inc. | Jim Goodman | 203-443-6570 | 9/21/1995 | Model 406 Pump Cut-off | |
| EQ-240 | Pneumercator Co., Inc. | Jonathon Levy | 800-209-7858 | 2/24/1996 | Pneumercator LS 600, LS 601, and RSU 800 | See EQ-706 & EQ-732 under AST Overfill Protection |
| EQ-247 | OPW ( Formerly Petro Vend, Inc.) | Gene Pope | 813-969-1900 | 4/12/1996 | Petro Sentry and Site Sentinel Groundwater Sensor | |
| EQ-263 | Ronan Engineering Company | Todd Stewart | 800-327-6626 | 8/14/1996 | Liquid Sensors LS-3N.C., LS-3.N.O., LS-7, LS-30, and HAV(mini sensor) | |
| EQ-269 | Pneumercator Co., Inc. | Jonathon Levy | 800-209-7858 | 11/26/1996 | Pneumercator ES825-100-F, and ES825-200-F (Formerly Pneumercator ES820-100, and ES820-200) | |
| EQ-286 | AC-DC Services, Inc. | David Langdon | 813-823-6859 | 5/07/1997 | DISC-1 | |
| EQ-304 | OPW Fueling Containment Systems (Formerly Environ Products, Inc.) | Gene Pope | 813-969-1900 | 12/11/1997 | LDS System | |
| EQ-316 | Warrick Controls, Inc. | Lawrence Tripp | 800-378-1600 | 1/28/1998 | DLP-2-NC, DLP-2-NO Sensors | |
| EQ-319 | Pneumercator Company, Inc. | Jonathon Levy | 631-293-8450 | 2/17/1998 | Pneumercator LC 1000 | |
| EQ-320 | Raychem Corporation | Terry Warren | 901-382-4761 | 4/03/1998 | Sensor Comm Model TLD 5000 with Raychem Model TT5000 Fuel Sensing Cable | |

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**Leak Detection/ Liquid Detector (continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-391 | Omtec Mfg., Inc. | Tom D'Alessandro | 516-467-5787 | 8/30/1999 | L-R-1, LS-ASC, PDS, PDWS, PDWF, and LWF sensors, when used with associated controllers LPD, LU, and OEL8000 | The Department's previous approval of EQ-137, dated July 20, 1993, is hereby revoked. The new documentation submitted to the Department in the recent equipment approval request supersedes the conditions of the previous approval. |
| EQ-407 | Beaudreau Electronics, Inc. | Stephen Bessette | 560-599-3100 Ext. 223 | 12/14/1999 | Model 510 and 516 Discriminating Sump Sensors | |
| EQ-416 | Titan Tank Company of Florida | David Palazzo | 813-986-7996 | 1/03/2000 | Pematel/Titan tank Leak Detection System | |
| EQ-425 | Eco-Tank Systems, Inc. | Tom Keefer | 610-495-9583 | 12/25/2000 | ECO-TANK TABS 01 leak detection system | Liquid interstitial release detection system for double-bottom aboveground tanks. |
| EQ-443 | Simmons Corporation (Formerly Caldwell Systems Corporation) | Howard Dockery | 800-848-8378 | 7/25/2000 | Tank Manager Liquid Detector | |
| EQ-456 | Intelligent Controls, Inc. | Kevin Devinney | 207-283-0156 | 10/04/2000 | HIS, HLS, ULS, DIS, EIS, PS, DDS, DTS, and MWS interstitial liquid sensors | |
| EQ-467 | Preferred Utilities MFG. Corp. | Peter Lavelle | 203-743-6741 | 11/29/2000 | TG-EL-D3 Leak Detection System | |
| EQ-499 | Omntec Mfg., Inc. | Tara Traganas | 631-981-2001 | 7/30/2001 | OEL 8000 II and K-OEL 8000 II Controller with BX Series Sensors | |
| EQ-516 | OPW ( Formerly Tuthill Transfer Systems and the Emco Electronics Division) | Gene Pope | 813-969-1900 | 2/18/2002 | EECO System Liquid Sensors Models Q0001-005, Q0003-001, Q0003-002, Q0003-003, Q0003-104/154/204, Q0003-005, Q0003-006, and Q0003-009 | The Department's previous approvals EQ-072, dated May 19, 1992, and EQ-194 dated March 1, 1995, are no longer in effect. |

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## Leak Detection/ Liquid Detector (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-519 | Pneumercator Co., and Phoenix Products, Inc. | Jonathon Levy | 800-209-7858 | 2/20/2002 | Pneumercator E-700-1, LDE-700, and Phoenix Midg-It Tank Gauging Leak Detection Systems | |
| EQ-570 | Robetshaw Industrial Products | Dave Cahill | 865-981-3113 | 12/22/2003 | Centeron Level Alarm System | |
| EQ-586 | Beaudreau Electronic, Inc. | Stephen Bessette | 560-599-3100 Ext. 223 | 5/07/2004 | Model EOS 100 Discriminating Sensor and Model 522 and 522Tmonitoring System | |
| EQ-589 | Pneumercator Co., Inc. | Jonathan Levy | 800-209-7858 | 7/12/2004 | LDE 740 with level sensor models LS600AB, LS600LDBN, LS610, RSU800, and with sensor probe 9-901, 9-902, 9-903 | |
| EQ-596 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 10/18/2004 | Veeder-Root Mag Sensor Model 857080-xxx for use with Veeder-Root TLS-350 or EMC Consoles | |
| EQ-598 | Western Fiberglass, Inc. | Mike Lewis | 707-523-2050 | 10/28/2004 | Co-Flow™ Hydraulic Coaxial Monitoring System for the Western Fiberglass Co-Flex #34C9 Piping System | Conditional Approval |
| EQ-607 | SGB | Jost Berg | 49(0)271-4896440 | 3/01/2005 | Vacuum Leak Detection System Models VL 30P, VL 350P, and VL 400P | Conditional Approval |
| EQ-614 | Veeder-Root company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 8/31/2005 | Veeder-Root Sensors Model 794380-3xx, 794390-4xx, and 7943980-2xx for use with Veeder-Root TLS-300 Series Consoles, EMC Basics and ProPlus Series Consoles | |
| EQ-628 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 1/17/2006 | Veeder Root Mag Sensor Hydrostatic Test, and Secondary Containment Vacuum Sensing System | Conditional Approval |

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**Leak Detection/ Liquid Detector (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-641 | International Supply Company | Steve Gelling | 309-249-6211 | 6/23/2006 | ISCO-100 Rupture Basin Float Sensor | Approved for Interstitial Monitoring |
| EQ-645 | WorldTelemetry , Inc. | Jennifer Corser | 918-232-7419 | 7/31/2006 | World Telemetry's Liquid Sump sensor, Model # TSF-0001 | Approved for Interstitial Monitoring |
| EQ-657 | Industrial Heater | Terry Warren | 901-382-4761 | 1/24/2007 | TTS-FFS TraceTek Fast Fuel Sensor & TraceTek TT BFA Panel | Approved for Interstitial Monitoring |
| EQ-675 | Krueger Sentry Gauge Co. Inc. | Lee Geurtus | 920-434-8860 | 6/12/2007 | AT-A-GLANCE Leak Gauge | Approved for interstitial monitoring of shop-fabricated aboveground storage tanks in the State of Florida. |
| EQ-676 | Veeder Root | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 6/14/2007 | Stand-Alone Dispenser Pan Sensor 847990-001 and Differentiating Stand-Alone Dispenser Pan Sensor 847990-002 with Dispenser Control Interface | Approved for interstitial monitoring of dispenser liners in the State of Florida. |
| EQ-682 | Madison Company | Steven Hilaire | 203-488-4477 Ext. 101 | 9/16/2007 | M7000 Vertical Mount, Single Point Level Switch, PBT Stem & Buna N Float, SPST 30VA Switch, M7700 Horizontal Mount, Single Point Level Switch, PBT Stem & Float, SPST 30VA Switch, M8700 Horizontal Mount, Single Point Level Switch, Polypropylene Stem and Float, SPST 30VA Switch | Conditional Approval |
| EQ-689 | Omntec Mfg., Inc. | Tara Traganas | 631-981-2001 | 11/05/2007 | Omntec L-R-1, LS, LS-ASC, PDS, PDWF sensors when used with associated controllers LPD, LU and OEL 8000 | The systems must be tested upon installation, and at least once on annual basis in accordance with Exhibit A, and Exhibit B, for Rule 2-762.701, F.A.C., annual operability requirements. |
| EQ-704 | Franklin Fueling Systems | Allan Busch | 608-838-8786 | 4/17/2008 | Franklin Fueling Systems Phil-Tite Model 40X-FS-XPR-Gray with **TS-ULS sensor universal liquid sensor**, UL File no. MH21091. See also EQ-704 under UST/Spill Containment Devices | The system is tested in accordance with Exhibit A prior to being placed into service and the sensor is tested annually and recorded in accordance with Rule 62-761.710, F.A.C., requirements in Exhibit A attached with this Final Order. |
| EQ-706 | Simplex, Inc. | David Hurtado | 386-690-6361 | 5/08/2008 | See EQ-706 under AST Overfill Protection | Also see EQ-240 under this category |

**Leak Detection/ Liquid Detector (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-714 | Greenleaf Gauge | Brad Holton | 888-884-2843 | 8/18/2008 | Greenleaf Gauge Model EFG-8000 Overfill Protection | A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the state of FL |
| EQ-720 | OPW | Gene Pope | 813-969-1900 | 12/17/2008 | OPW iSite tank monitoring sensor system, Model Number 30-3233-12, 30-3233-24, 30+0232-DH-10, 30-0232-20, 30-0236-LW, 30-0234-HW-01, 30-0231-S,30-0230-S, 30-0232-D-10, 30-0232-D-20, 30-D-10B,30-0232-D-20B, and 30-235-V | Approved for interstitial monitoring in the State of Florida. The systems must be tested upon installation, and at least once on annual basis in accordance with Exhibit A, for Rule 62-761.700, F.A.C., annual operability requirements and recorded in accordance with Rule 62-761.710, F.A.C., requirements in Exhibit A attached with this Final Order. |
| EQ-724 | Veeder-Root | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 12/24/2008 | Veeder-Root TLS-450 tank monitoring sensor system, Model Number 794380-208, 794380-209, 794380-303, 79380-320, 794380-322, 794380-323, 794380-343, 794380-344, 794380-345, 794380-350, 794380-351, 794380-352, 794390-401, 794380-430, 857060-xxx, 857080-xxx, and 86009x-xxx | Approved for interstitial monitoring in the State of Florida. The systems must be tested upon installation, and at least once on annual basis in accordance with Exhibit A, for Rule 62-761.700, F.A.C., annual operability requirements and recorded in accordance with Rule 62-761.710, F.A.C., requirements in Exhibit A attached with this Final Order. |
| EQ-732 | Simplex, Inc. | David Hurtado | 386-690-6361 | 5/11/2009 | See EQ-732 under AST Overfill Protection | Also see EQ-240 under this category |
| EQ-769 | Industrial Heater | Terry Warren | 901-382-4761 | 6/15/2011 | TraceTek – TT5000-HUV Fuel Sensing Cable for Leak Detection for Aboveground Storage Tanks, Aboveground Piping, Piping Sumps and Dispenser Liners & TraceTek TT BFA Panel | Installation and operation shall be in accordance with the manufacturer's recommendations. |

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**Leak Detection/ Liquid Detector (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-773 | PCE Petroleum Contractors Enterprise | Raul (Nick) Necoechea | 407-342-1385 | 7/28/2011 | PCE Tank D/W Containment Interstitial Monitoring System for Lined Tanks – wet or dry interstitial monitoring of lined USTs | The release detection methodology for the interstice shall be according to the manufacturer's recommendations. May be used for wet or dry interstitial monitoring of lined USTs. |
| EQ-780 | Preferred Utilities MFG. Corp. | Dexter Bullard | 203-743-6741 | 2/14/2012 | Tank Fil-A-Larm Switch Model SDI-HLS; Tank Gauge Model SDI-TG-EL-D5; Discriminating Sensor Models SDI-HD-A2-C & SDI-HD-A2-C-8 | All products are approved as either overfill protection or release detection devices associated with ASTs or USTs. Installation and operation shall be made in accordance with the manufacturer's recommendations. |
| EQ-800 | AET Compliance | Jason Wiles | 800-989-8298 | 1/30/2013 | Tanks and Pipeworks Ltd. Try-Line System for Underground Storage Tanks – 100% of tank is provided with interstice monitoring installed with either class 1 or class 2 detection systems | A lining system for USTs containing petroleum, petroleum products and ethanol up to E-85 and a release detection system for the Try-Line System. Only Tanks and Pipeworks Ltd. Trained personnel can perform installation and must be according to manufacturer's protocol. |
| EQ-817 | FPI Sensors International | Gary Maas | 800-852-9984 | 1/13/2014 | FPI Sensors International Model Numbers: LD 1001 Generic Leak Detection System – LD FPI BB15; CL 1001 Generic Continuous Level 4-20 mA Sensor – LD FPI SP15; LS 1001 Generic Level Float Switch – LD FPI SP12 | Release detection sensors for monitoring secondary containment systems associated with USTs and ASTs and for an associated float switch associated with the sensors. EQ-817 covers overfill protection devices when connected to an operator alarm. |

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**Leak Detection/ Liquid Detector (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-818 | Franklin Fueling Systems | Sandy Adams | 608-838-5668 | 3/24/2014 | Colibri Tank Monitor | Used to provide static release detection for monitoring secondary containment systems associated with USTs and ASTs |
| EQ-832 | Advanced Control Technology, Inc. | John Tate | 877-800-8820 | 10/17/2014 | Advanced Control Technology, Inc. 10 Series Miniature Fluid Level Switches | Devices may be used as part of the overfill protection device and leak detection so long as the product level information is provided to the product transfer operator. |
| EQ-843 | Talon Industries, Inc. | Clyde Williamson | 817-265-5511 | 3/23/2015 | TraceTek LDS_LS-3 Float Sensor and TraceTek TTDM-128 Leak Detection Master Module | Either a product or liquid release detection sensor may be used as the TraceTek LDS_LS-3 Sensor within the interstice of secondary containment associated with underground or aboveground storage tank systems. The TraceTek LDS_LS-3 Sensor must be placed at the low point of the secondary containment system being monitored. |
| EQ-854 | Design By Initiative | Reid McLean | 404-996-1282 | 11/09/2015 | SMD Fluid Controls Fuelogic Model FS and Models FM Float Switches for Overfill Protection and Release Detection | May be used as part of an overfill protection device or a release detection sensor for underground and aboveground storage tank systems. The installation, operation, and maintenance procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-862 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 2/01/2016 | Morrison Brothers Co. Model 924 & 924S, 924LS, 925 & 925S Series Liquid Sensors | The installation and maintenance shall be made in accordance with the manufacturer's recommendations. |

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**Leak Detection/ Liquid Detector (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-863 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 3/04/2016 | OPW SiteSentinel®Nano® Console Tank Gauge, Probes and Sensors | May be used as an automatic tank gauge, as an approved overfill protection device when equipped with an alarm, and as an interstitial release detection device for secondary containment systems for underground and aboveground storage tank systems. |
| EQ-867 | Solutions with Innovation, LLC | Thomas Williams | 203-729-6434 | 6/27/2016 | L170-0101-3002 and L007-0402-0203 Series Liquid Level Switches | For overfill protection, the switch will be set at a specified liquid level in the storage tank and an alarm will be provided to the transfer operator. For interstitial release detection, the switch will be placed on the low area of the secondary containment interstice that is being monitored that will alarm when liquid is detected. |
| EQ-868 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 12/16/2016 | Models 918SB, 918DB, and 918QB Series Alarms | May be used as a visible and audible alarm for overfill protection devices or release detection sensors for aboveground and underground storage tank systems, in accordance with the requirements of Chapter 62-761, and Chapter 62-762, F.A.C. |
| EQ-871 | Solutions with Innovation, LLC | Robert Budnik | 203-729-6434 | 1/25/2017 | Models L312, L312E, L500 and L500E Series Liquid Level Switches | Follow manufacturer's recommendations. |
| EQ-872 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 3/06/2017 | Models 1218C Console & 1218S Sensor | Follow manufacturer's instructions. |

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## Leak Detection/ Automatic Tank Gauging

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-004 | Egemin Naamloze Vennootschap | Tom Berebrouckx | 011-32-3-031/ 64527590 | 5/02/1991 | ESPI Series | |
| EQ-014 | Franklin Fueling Systems (Formerly EBW, Inc.) | Dan Marston | 207-283-0156 | 5/06/1991 | Autostik | |
| EQ-033 | Veeder-Root | Tech Support Customer Svc | 800-323-1799 888-561-7942 | 6/17/1991 | TLS 250, TLS 250i, TLS 350, EMC Enhanced, ProMax | |
| EQ-040 | Mine Safety Appliances | Bill Freeman | 800-672-4678 | 9/05/1991 | RTM-1 Tank Gauging | |
| EQ-041 | Gasboy International | Tom Glahn | 215-885-4631 | 9/05/1991 | Gasboy TMS-500 | |
| EQ-046 | Franklin Fueling Systems (Formerly Incon Intelligent Controls, Inc.) | Dan Marston | 207-571-1151 | 10/15/1991 | TS-2000 | |
| EQ-059 | Ronan Engineering Company | Todd Stewart | 800-327-6626 | 1/16/1992 | Ronan X-76 | |
| EQ-064 | PC Interaction, Inc. (Formerly Alert Technologies) | John Ainley | 815-337-1600 | 2/14/1992 | Anilay Tank master ( Formerly Alert Model 2000 ATG) | |
| EQ-080 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 7/07/1992 | RLM 5001 | |
| EQ-081 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 7/07/1992 | RLM 5000 | |
| EQ-084 | Andover Controls Corporation | Alan Williams | 978-470-0555 | 1/08/1992 | Andover Automatic Tank Gauging | |
| EQ-093 | Tidel Engineering, Inc. | David Tucker | 800-678-7577 | 9/29/1992 | EMS 2000 | |
| EQ-094 | Tidel Engineering, Inc. | David Tucker | 800-678-7577 | 9/29/1992 | EMS 3000 | |

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## Leak Detection/ Automatic Tank Gauging (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-096 | Franklin Fueling Systems (Formerly Incon Intelligent Controls, Inc.) | Dan Marston | 207-283-0156 | 10/08/1992 | TS-1000 | |
| EQ-105 | OPW (Formerly Petro Vend, Inc.) | Gene Pope | 813-969-1900 | 12/081992 | Site Sentinel 1 & 2 | |
| EQ-113 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 3/10/1993 | ST System | |
| EQ-121 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 4/22/1993 | Auto Stik II | |
| EQ-127 | Veeder-Root Company | Tech Support Customer Svc | 800-323-1799 888-561-7942 | 4/29/1993 | CEI 3000 | |
| EQ-130 | Gilbarco, Inc. | Steve Phillippie | 336-547-5154 | 6/10/1993 | Gilbarco TM-2, TM-3, EMC | |
| EQ-135 | Andover Controls, Inc. | Alan Williams | 497-470-0555 | 7/12/1993 | Andover Infinity System | |
| EQ-151 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 1/04/1994 | Auto Stik Jr | |
| EQ-178 | Arizona Instrument Corporation | Katy Reed | 602-470-1414 | 9/09/1994 | Encompass Automatic Tank Gauging System | |
| EQ-186 | USTest, Inc. | James Mitchell | 337-839-0107 | 1/10/1995 | USTest 2001 Automatic Tank Gauging | |
| EQ-196 | Veeder-Root Company | Tech Support Customer Svc | 800-323-1799 888-561-7942 | 5/12/1995 | TLS-200, TLS-200i, TLS-300, TLS-400, EMC Basic, ProPlus, | |
| EQ-214 | Environment & Safety, Inc. | Alexander Jekat | 408-954-9081 | 7/21/1995 | Easi-Level Tru | |
| EQ-237 | L & J Technologies | Ronald Davis | 708-236-6000 | 2/05/1996 | L & J MCG 1100 and MCG 8100 | |
| EQ-278 | Simmons Corp (Formerly Caldwell Systems Corp) | Howard Dockery | 800-848-8378 | 4/22/1997 | Tank Manager Automatic Tank Gauging | |
| EQ-303 | Pneumercator Co., Inc. | Jonathon Levy | 800-209-7858 | 12/11/1997 | Pneumercator TMS 2000 and TMs 3000 Automatic Tank Gauging | |
| EQ-327 | Franklin Fueling Systems (Formerly Incon Intelligent Controls, Inc.) | Dan Marston | 207-283-0156 | 8/03/1998 | TS 1001, and TS 2001 Automatic Tank Gauging | |

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## Leak Detection/ Automatic Tank Gauging (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-380 | Practical Tank Management, Inc. | W. R. Dean | 713-529-8734 | 7/20/1999 | Digital Level Sensor Automatic Tank Gauging | |
| EQ-500 | Omntec Mfg., Inc. | Tara Traganas | 631-981-2001 | 7/30/2001 | Omntec OEL 8000, K-OEL 8000, OEL 8000 II, K-OEL 8000 II with MTG Stainless Steel Magnetostrictive Probe | Omntec OEL 8000, K-OEL 8000, OEL 8000 II, K-OEL 8000 II with MTG Stainless Steel Magnetostrictive Probe is approved for automatic tank gauging in underground storage tanks with capacities up to 30,000 gallons in the State of Florida. The Department's previous approval EQ-245, dated April 5, 1996, is no longer in effect. |
| EQ-514 | OPW ( Formerly Tuthill Transfer Systems and the Emco Electronics Division) | Gene Pope | 813-969-1900 | 12/31/2001 | EECO Systems 3000, 2000, 1500, 1000, 1000EG and Galaxy ATG systems with the QQ0400-4xx Magnetostrictive Probe | The product is approved for automatic tank gauging in underground storage tanks with capacities up to 20,000 gallons in the State of Florida. The Department's previous approvals EQ-070, dated May 19, 1992, and EQ-071, dated May 19, 1992, are no longer in effect. |
| EQ-549 | Barton Instruments Systems, LLC | Jerry Copeland | 760-243-9771 | 11/23/2002 | Barton 3500 ATG System | Approved for automatic tank gauging in underground storage tanks with capacities up to 75,000 gallons in the State of Florida. A copy of the annual operability test shall be given by the manufacturer or distributor to any tank owner purchasing or using this system in the state of FL. |

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**Leak Detection/ Automatic Tank Gauging (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-563 | Advanced Telemetrics Limited | Drake Dunn | 210-828-1482 | 9/26/2003 | Advanced Telemetrics Tank Gauge Model 1100LD/2 | Approved for automatic tank gauging in underground storage tanks with capacities up to 30,000 gallons in the State of Florida. |
| EQ-623 | Varec, Inc. | John Vawser | 770-335-8172 | 12/15/2005 | Varec Tank Gauge Model MTG | Approved for automatic tank gauging in underground storage tanks with capacities up to 75,000 gallons and in field–erected underground storage tanks with capacities up to 100,000 gallons in the State of FL. |
| EQ-644 | WorldTelemetry , Inc. | Jennifer Corser | 918-232-7419 | 7/31/2006 | WorldTelemetry Data Link ATGS v2.6-h with magnetostrictive probe | Approved for automatic tank gauging in underground storage tanks with capacities up to 20,000 gallons in the State of Florida. |
| EQ-679 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 7/12/2007 | Incon Tank Sentinel ATG with SCALD 2.0, Model TS-750, with magnetostrictive probe automatic tank gauging | Incon Model TS-750 with magnetostrictive probe automatic tank gauging is approved in the State of Florida for automatic tank gauging with maximum tank capacity of 30,000 gallons for 0.2 gph and maximum tank capacity of 15,000 gallons for 0.1 gph, and approved as a continuous automatic tank gauging in underground storage tanks with maximum capacities of 49,336 gallons for a single tank or for all tanks manifolded together. |

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## Leak Detection/ Automatic Tank Gauging (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-719 | OPW | Gene Pope | 813-969-1900 | 12/12/2008 | OPW Site Sentinel iSite Automatic Tank Gauging | Approved for use as an automatic tank gauging for underground storage tanks in the State of Florida for tanks up to maximum capacity of 20,000 gallons, provided that the system is installed and tested annually in accordance with Exhibit A prior to being placed into service and recorded in accordance with Rule 62-761.710, F.A.C., requirements in Exhibit A attached with this Final Order. |
| EQ-863 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 3/04/2016 | OPW SiteSentinel®Nano® Console Tank Gauge, Probes and Sensors | May be used as an automatic tank gauge, as an approved overfill protection device when equipped with an alarm, and as an interstitial release detection device for secondary containment systems for underground and aboveground storage tank systems. |
| EQ-876 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 5/18/2017 | Veeder-Root TLS4i (up to 4 tanks) and TLSc (up to two tanks) - 8601 Series ATG Console and associated equipment | Installation, operation and maintenance shall be in accordance with the manufacturer's recommendations. |

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## Leak Detection/ Continuous Automatic Tank Gauging

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-180 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 12/16/1994 | ProMax/CSLD | No monitoring wells are required if system shall be kept in continuous mode with daily print-out. |
| EQ-198 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 5/12/1995 | TLS-300/CSLD, TLS-400/CSLD, EMC Basic/CSLD, ProPlus/CSLD | No monitoring wells are required if system shall be kept in continuous mode with daily print-out. |
| EQ-337 | Franklin Fueling Systems (Formerly Incon Intelligent Controls, Inc.) | Dan Marston | 207-283-0156 | 10/08/1998 | Incon Continuous Leak Detection System (CITLDS) | |
| EQ-409 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 12/14/1999 | ST System , Pro-Link System | |
| EQ-422 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 1/21/2000 | Auto/Stik Series 960 & 970 C.A.T.G.S. | |
| EQ-513 | OPW (Formerly Tuthill Transfer Systems and the Emco Electronics Division) | Gene Pope | 813-969-1900 | 12/31/2001 | EECO Systems 3000, 2000, 1500, 1000, 1000EG and Galaxy ATG systems with the QQ0400-4xx Magnetostrictive Probe | The product is approved for continuous automatic tank gauging in underground storage tanks with capacities up to 20,000 gallons in the State of Florida. |
| EQ-546 | Omntec Mfg., Inc. | Tara Traganas | 631-981-2001 | 11/21/2002 | OEL 8000II and KOEL 8000II controllers with the Omntec CITLD ATG system | The system is approved for continuous automatic tank gauging in underground storage tanks with capacities up to 18,000 gallons. |
| EQ-652 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 10/18/2006 | Incon Models TS-5, TS-550, TS-5000 with magnetostrictive probe automatic tank gauging | The Incon Models TS-5, TS-550, TS-550 evo, TS-5000 and TS-5000 EVO with magnetostrictive probe automatic tank gauging is approved for continuous automatic tank gauging in underground storage tanks with maximum capacities of 49,336 gallons for a single tank or for all tanks manifolded together. |
| EQ-652 Amended | Franklin Fueling Systems | Sandra Adams | 800-225-9787 | 5/21/2012 | Model TS-550 evo Fuel Management System and TS-5000 EVO (added 11/24/2014) | |

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## Leak Detection/ Continuous Automatic Tank Gauging (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-679 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 7/12/2007 | Incon Tank Sentinel ATG with SCALD 2.0, Model TS-750, with magnetostrictive probe automatic tank gauging | Incon Model TS-750 with magnetostrictive probe automatic tank gauging is approved in the State of Florida for automatic tank gauging with maximum tank capacity of 30,000 gallons for 0.2 gph and maximum tank capacity of 15,000 gallons for 0.1 gph, and approved as a continuous automatic tank gauging in underground storage tanks with maximum capacities of 49,336 gallons for a single tank or for all tanks manifolded together. |
| EQ-719 | OPW | Gene Pope | 813-969-1900 | 12/12/2008 | OPW Site Sentinel iSite Automatic tank Gauging | Approved in the State of Florida for continuous automatic tank gauging in underground storage tanks with maximum capacities of 30,258 gallons and a maximum monthly throughput of 397,883 gallons provided that the system is installed and tested annually in accordance with Exhibit A prior to being placed into service and recorded in accordance with Rule 62-761.710, F.A.C., requirements in Exhibit A attached with this Final Order. |

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## Leak Detection/ Continuous Automatic Tank Gauging (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-723 | Veeder-Root | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 12/23/2008 | Veeder-Root TLS-450 ATG CSLD monitoring system | Approved in the State of Florida for continuous automatic tank gauging in underground storage tanks with maximum capacities of 38,170 gallons for a single tank or for all tanks manifolded together and monthly maximum throughput of 221,890 gallons. |
| EQ-798 | OPW | Gene Pope | 813-969-1900 | 1/03/2013 | OPW Fuel Management Systems Site Sentinel iSite Series of Automatic Tank Gauges with Integra Console | Approved for continuous automatic tank gauging in underground storage tanks with maximum capacities of 30,258 gallons and a monthly throughput of 397,883 gallons. Also includes sensor and probe release detection in interstices, sumps and liners. Installation should be in accordance with the manufacturer's recommendations. |
| EQ-803 | OMNTEC Mfg., Inc. | Tara Longobardi | 631-468-8360 | 2/27/2013 | OMNTEC Mfg., Inc. PROTEUS Line of Automatic Tank Line Gauging and Leak Detection Systems | Release detection methods associated with the ATG of USTs and the interstitial monitoring of UST systems or ASTs |
| EQ-834 | Morrison Bros. Co. | Kelly Briant | 800-553-4840 | 12/23/2014 | Model 918AC System Interface | Installation, operation and maintenance shall be in accordance with the manufacturer's recommendations. |

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## Leak Detection/ Statistical Inventory Reconciliation (SIR)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| ~~EQ-179~~ | ~~Syscorp, Inc.~~ | ~~Richard Forester~~ | ~~205-853-0004~~ | ~~10/05/1994~~ | ~~StoreVision Statistical Inventory Reconciliation~~ | Final Order was rescinded on 4/25/2001 per manufacturer's request. |
| EQ-377 | USTMAN Technologies, Inc. | Cliff Miller | 800-253-8054 | 6/01/1999 | USTMAN SIR Version 95.2A System | |
| EQ-451 | Entropy Limited | Deborah Talanian | 781-259-8901 | 9/15/2000 | PTIC Rev. 90 | The Department's previous approval EQ-018, dated June 20, 1991, is hereby revoked. |
| EQ-453 | Horner Products, Inc. | Jack Horner | 800-443-0711 | 9/29/2000 | SIR Pro 1 Version 3.0 | The Department's previous approval EQ-126, dated May 10, 1993, is hereby revoked due to the fact the SIR PRO 1 Version 3.0 supersedes the previously issued equipment approval. |
| EQ-458 | USTMAN Industries, Inc. | Cliff Miller | 800-253-8054 | 10/04/2000 | USTMAN SIR Version 95.2B System | The Department's previous approvals EQ-065, dated February 20, 1992, and EQ-104, dated December 8, 1992, are hereby revoked due to the fact that EQ-065, and EQ-104 are not being used in the State of Florida, and by the company's request the orders are revoked. |

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**Leak Detection/ Statistical Inventory Reconciliation (SIR) (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-466 | TeleData, Inc. | Tony Weston | 561-219-4661 | 11/29/2000 | TankMate Version 3.12 | The Department's previous approval EQ-241, dated April 5, 1996, is no longer in effect. |
| EQ-468 | SIR International, Inc. | Jim Flynn | 918-479-5800 | 2/27/2001 | Mitchell's SIR Program, Version 2.6 | The Department's previous approval EQ-069, dated May 19, 1992, is hereby rescinded and no longer in effect. |
| EQ-473 | Computerizing, Inc. | Bob Starkey | 256-259-1805 | 1/12/2001 | Computank Version 3.0 SIR System | The Department's previous approval EQ-98, dated October 19, 1992, is no longer in effect. |
| EQ-480 | Warren Rogers Associates, Inc. | William Jones | 401-846-4747 | 2/14/2001 | WRA SIR Version 5.1 | The Department's previous approval EQ-134, dated June 14, 1993, is no longer in effect. |
| EQ-492 | Sir Phoenix, Inc. | Walter Morgan | 931-852-4121 | 4/18/2001 | LEOMA Version 1.50 SIR Method | The Department's previous approval EQ-171, dated June 6, 1994, is no longer in effect. |
| EQ-502 | Simmons Corporation | Howard Dockery | 800-848-8378 | 7/30/2001 | Wilco Data Collection Unit and SIR 5.7 L.M. | Conditional Approval |

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## Leak Detection/ Statistical Inventory Reconciliation (SIR) (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-508 | Precision Tank Services, Inc. | Sandy Hicks | 704-892-8600 | 10/26/2001 | TotalSIR Version 1.0 | TotalSIR Version 1.0 approved as a statistical inventory reconciliation method for manifolded tanks and single tanks with a capacity of up to 45,000 gallons in the State of Florida. The Department's previous approval EQ-307, dated January 12, 1998 is no longer in effect. |
| EQ-520 | Warren Rogers Associates, Inc. | William Jones | 401-846-4747 | 3/01/2002 | WRA Version 5.2, SIR Method | The product is approved as a statistical inventory reconciliation method for single tanks and manifolded tanks up to three tanks with a capacity of up to 36,000 gallons in the State of Florida. |
| EQ-532 | Advanced Telemetrics Limited | Drake Dunn | 210-828-1482 | 5/23/2002 | Tanknetics Version V.2.1 SIR Method | Tanknetics Version V.2.1 SIR Method approved in the State of Florida as a statistical inventory reconciliation method for single tanks with individual capacities up to 45,000 gallons, and for up to four manifolded tanks with a total sum of their capacities of up to 45,000 gallons. |

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## Leak Detection/ Statistical Inventory Reconciliation (SIR) (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-539 | Sir International, Inc. | Jim Flynn | 918-479-5800 | 8/21/2002 | Mitchell's Sir version 2.7 | Approved as a statistical inventory reconciliation method for single tanks and for manifolded tanks, up to four tanks maximum, and with a total capacity of up to 45,000 gallons. |
| EQ-624 | Simmons Corporation | Howard Dockery | 800-848-8378 | 12/27/2005 | SIR 5.7 L.M. | Approved in the State of Florida as a statistical inventory reconciliation method for single tanks and for manifolded tanks, up to five tanks maximum, and with a total capacity of up to 60,000 gallons. |
| EQ-701 | Warren Rogers Associates, Inc. | William Jones | 401-846-4747 | 3/06/2008 | WRA PetroNetwork S3 (Version D) with magnetostrictive probe automatic tank gauging and pressurized line leak detector | Conditional Approval |

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**Leak Detection/ Line Leak Detector with Automatic Shut-off**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition (s) |
|---|---|---|---|---|---|---|
| EQ-074 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 6/23/1992 | LLP-2 | |
| EQ-077 | Mallory Controls | Mark Becker | 317-328-4020 | 7/07/1992 | Pollulert FD-200 PRSA | |
| EQ-078 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 7/07/1992 | PPM-4000 | |
| EQ-079 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 7/07/1992 | RLM-9000 | |
| EQ-083 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 7/29/1992 | TLS-350 LLD, EMC Enhanced LLD, EMC-J LLD, ProMax LLD, TLS-350/CSLD, EMC Enhanced/CSLD, EMC-J/CSLD | |
| EQ-119 | Tidel Engineering, Inc. | David Tucker | 800-678-7577 | 4/05/1993 | EMS-3500 | |
| EQ-131 | Gilbarco, Inc. | Steve Phillippie | 336-547-515 | 6/10/1993 | Gilbarco in line leak detector | |
| EQ-139 | Hasstech, Inc. | Paul Muehleisen | 619-457-5880 | 8/12/1993 | LineTite Pipeline monitor | |
| EQ-144 | Campo Miller, Inc. | Mary Filippi | 209-781-6862 | 9/17/1993 | LS 300-120 Series | |
| EQ-182 | Ronan Engineering Company | Todd Stewart | 800-327-6626 | 10/18/1994 | X-76 Line Leak Detector | |
| EQ-221 | Franklin Fueling Systems (Formerly Incon Intelligent Controls, Inc.) | Dan Marston | 207-283-0156 | 10/03/1995 | INCON TS LLD | |
| EQ-271 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 11/26/1996 | Pressurized Line Leak Detector Series 8494, and LLD-300 | |
| EQ-311 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 1/20/1998 | ST1401L, ST1801L, CPT, and Pro Link Line Leak Detector | |
| EQ-332 | Vaporless Manufacturing, Inc. | Steve Wilson | 800-367-0185 | 7/31/1998 | PLC-5000 | |
| EQ-515 | OPW Fuel Management Systems (Formerly Tuthill Transfer Systems and the Emco Electronics Division) | Gene Pope | 813-969-1900 | 2/08/2002 | EECO LLD-Plus system | The Department's previous approval EQ-195, dated March 1, 1995, is no longer in effect. |

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## Leak Detection/ Line Leak Detector with Automatic Shut-off (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition (s) |
|---|---|---|---|---|---|---|
| EQ-652 | Franklin Fueling Systems | Dan Marston | 207-283-0156 | 10/18/2006 | Incon TS-LS 500 electronic line leak detection | The use of TS-LS 500 electronic line leak detection is also approved as an automatic line leak detector with flow shut-off for underground storage tank systems in the State of Florida. |
| EQ-722 | Veeder Root | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 12/23/2008 | Veeder-Root Console Model TLS-450 PLLD pipeline leak detection system | Approved for pressurized piping leak detection in the State of Florida. The systems must be tested upon installation, and at least once on annual basis in accordance with Exhibit A, for Rule 62-761.700, F.A.C., annual operability requirements and recorded in accordance with Rule 62-761.710, F.A.C, requirements in Exhibit A attached with this Final Order. |
| EQ-810 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 7/02/2013 | OPW Fuel Management Systems - OPW Model 327 VLLD - Line Leak Detector with Automatic Shut-off | The installation and operation shall be in accordance with the manufacturer's recommendations. |

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## Leak Detector/ Mechanical Line Leak Detector with Flow Restrictor

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-329 | Vaporless Manufacturing, Inc. | Steve Wilson | 800-367-0185 | 7/31/1998 | Model 98 LD-2000, Model 98 LD-2000 PLS, Model LD-3000, and Model 3000S Mechanical Line Leak Detectors | |
| EQ-335 | Franklin Fueling Systems (Formerly FE Petro, Inc.) | Sandra Adams | 608-838-5668 | 9/08/1998 | STP-MLD+G, STP MLD+AG, STP-MLD+D and STP-MLD+BD Pipeline Leak Detector and STP-MLD Mechanical Line Leak Detectors | |
| EQ-360 | Vaporless Manufacturing, Inc. | Steve Wilson | 800-367-0185 | 2/18/1999 | Model 99 LD-2000, Model 99 LD-2200 Mechanical Line Leak Detectors | |
| EQ-373 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 4/08/1999 | Red Jacket Models FX1, FX2, FX1D, FX2D, FX1V, FX2V, FXD1V, and FX2DV Mechanical Line Leak Detectors | |
| EQ-646 | Vaporless Manufacturing,Inc. | Steve Wilson | 928-775-5191 | 8/03/2006 | Vaporless Manufacturing Inc. Model ISM-4080 Integrated Shutdown Module | Approved for small diameter piping mechanical line leak detector with pump shut-off in the State of Florida. |

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## Leak Detection/ Single Wall UST and AST System

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-019 | World Enviro System, Inc. | John Hendershot | 405-275-7565 | 6/20/1991 | Vacuum Monitor System | Tightness test the tanks before applying the system. |
| EQ-091 | PermAlert ESP | Art Giesler | 817-849-1998 | 9/29/1992 | PAL-AT and LiquidWatch leak detection (Formerly Tank Watch leak detection) | Conditional approval for piping leak detection. |
| EQ-138 | Geotech Industries, Inc. | Randell Thompson | 904-787-0608 | 8/23/1993 | Geotech Dilution Method | Conditional Approval |
| EQ-141 | W.L. & Associates | Samuel Berkman | 602-438-6905 | 9/17/1993 | LEAK LEARN System | Conditional approval for piping leak detection. |
| EQ-149 | Omega Environmental, Inc. | Michael Bailey | 415-989-3400 | 1/04/1994 | TC-110 System | Double wall systems only. Provides pneumatic leak prevention, pump shut down, inventory controls, overfill protection. It is not approved for overfill protection & inventory control. |
| EQ-398 | FCI Environmental, Inc. | Dan Wien | 800-363-9682 | 12/06/1999 | PetroSense DHP-100 Probe (Models SDI-12 and RS485) Continuous Monitoring System (hereinafter DHP-100 Probe), and the PetroSense Portable Hydrocarbon Analyzer AHP-100 Probe | |
| EQ-399 | Industrial Heater | Terry Warren | 901-382-4761 | 11/03/1999 | Sensorcomm TLD 5000 | Conditional Approval |

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## Leak Detection/ Single Wall UST and AST System (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-551 | Pentair (Formerly Tyco Thermal Controls) | Terry Warren | 901-382-4761 | 11/26/2002 | TraceTek TT5000 leak detection system for single-walled underground bulk product piping | Conditional Approval |
| EQ-558 | Praxair Services, Inc. | Randy Golding | 520-888-9400 | 6/12/2003 | Tracer Tight | Conditional Approval |

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**Leak Detection/ Breach of Integrity**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-218 | EuroTank Systems, LLC | Manfred Fiech | 352-629-3700 | 9/21/1995 | Euro Vac Leak Detector Model Vakumatic IIIF, Euro Vac Leak Detector Vakumatic 17Ex, and Euro Guard Detector Model D9 | Interstitial monitoring for double-wall tanks. |
| EQ-416 | Titan Tank Company of Florida | David Palazzo | 813-986-7996 | 1/03/2000 | Pematel/Titan tank Leak Detection System | If vacuum interstitial release detection is employed, and the initial vacuum was set at 15 inches of mercury, a vacuum decrease of 5 inches of mercury in less than 12 hours will constitute an incident in accordance with subsection 62-761.450(2), F.A.C. |
| EQ-470 | Euro-Tank Systems, LLC | Manfred Fiech | 352-629-3700 | 12/22/2000 | Euro-Guard Leak preventer Model DL-4000 | **(a)** The system triggers the alarm when the pressure drops to 4.64 psi and below; **(b)** The groundwater is not more than 9.51 feet above the tank bottom; and **(c)** The hydrostatic pressure of the product acting on the tank bottom shall not exceed 4.2 psi. |

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**Leak Detection/ Breach of Integrity (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-556 | Ameron International | Joie Folkers | 713-690-7777 | 5/23/2003 | Ameron Brine System for the Ameron Double-Wall Dualoy®/3000 LCX Piping System | **a)** The system is designed by the manufacturer based upon piping length, reservoir size, location of water table, and location of the reservoir at each site; **b)** The sensors and the system are tested annually as required by Rule 62-761.700, F.A.C. requirements; and **c)** A copy of this order shall be distributed to any facility that uses this product. |
| EQ-598 | Western Fiberglass, Inc. | Mike Lewis | 707-523-2050 | 10/28/2004 | Co-Flow™ Hydraulic Coaxial Monitoring System for the Western Fiberglass Co-Flex #34C9 Piping System | Conditional Approval |
| EQ-601 | Enhanced Leak Detection, Inc. | Dan McGill | 714-523-0194 | 11/17/2004 | Vacu-Tite Test | Approved as a breach of integrity test for small diameter piping systems. |
| EQ-607 | SGB | Jost Berg | 49(0)271-4896440 | 3/01/2005 | Vacuum Leak Detection System Models VL 30P, VL 350P, and VL 400P | Conditional Approval |
| EQ-628 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 1/17/2006 | Veeder Root Mag Sensor Hydrostatic Test, and Secondary Containment Vacuum Sensing System | Conditional Approval |

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**Leak Detection/ Breach of Integrity (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-773 | PCE Petroleum Contractors Enterprise | Raul (Nick) Necoechea | 407-342-1385 | 7/28/2011 | PCE Tank D/W Containment Interstitial Monitoring System for Lined Tanks – wet or dry interstitial monitoring of lined USTs | The release detection methodology for the interstice shall be according to the manufacturer's recommendations. May be used for wet or dry interstitial monitoring of lined USTs. |
| EQ-808 | Leak Detection Technologies, Inc. | David Rabb | 855-255-5325 x700 | 5/31/2013 | Minimum Detectible Leak Test (MDleak®) Enhanced Leak Detection and Leak Location Test Method | May be used as a monthly release detection method or integrity testing for single-walled underground bulk product piping, for interstitial monitoring or an integrity testing of UST systems and for interstitial monitoring or integrity testing for AST system components that are in contact with soil. |

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**UST/ Tank and Line Tightness Tester Manufacturers**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-023 | Associated Environmental Services | Don James | 805-326-0173 | 6/20/1991 | AES System II | Overfill test |
| EQ-035 | Xerxes Corporation | Glen Nylannder | 612-887-1890 | 8/19/1991 | Hydrostat | These systems could be used as continuous leak detection in the interstitial space **for Xerxes double wall tanks only**. The system could tightness test the **tanks only** and have been approved accordingly. |
| EQ-036 | Containment Solution, Inc. | Kevin Soeder | 936-756-7731 | 8/19/1991 | Hydrostatic | These systems could be used as continuous leak detection in the interstitial space **for O/C tanks only**. The system could tightness test the **tanks only** and have been approved accordingly. |
| EQ-050 | Schuster Instruments | Peter Schuster | 989-684-6638 | 10/28/1991 | Tele-a-leak | Overfill test |
| EQ-051 | Ainlay | John R. Ainlay | 708-658-2799 | 11/08/1991 | Soiltest Ainlay Tank Tegrity Tester | Overfill test |

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**UST/ Tank and Line Tightness Tester Manufacturers (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-111 | Lab One Analytical | Jerry Wiley | 918-250-1013 | 3/08/1993 | Search and Line Test | The storage tank and piping must be inoculated **14** days prior to testing. This system shall not be used in high water table area. This system is not used for an urgent testing. The test shall evaluate the entire system. |
| EQ-183 | Metal Products Company | John Gammage | 404-945-8383 | 10/24/1994 | Interstitial Vacuum Test(IVT) | For initial tightness testing of **Plasteel double wall tanks** and **Plasteel Elutron tanks** per manufacturer's protocol on the forms provided by Metal Products tanks. |
| EQ-219 | Southeast Tank Corporation | David Palazzo | 813-986-1043 | 9/21/1995 | Permatank/Permatel Precision Test System | For initial tightness testing of **Permatank with secondary containment jacked tanks** per manufacturer's protocol on the forms provided by Southeast Tank Corp. |

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**UST/ Tank and Line Tightness Tester Manufacturers (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-222 | Modern Welding Company of Florida, Inc. | Gene Schober | 407-843-1270 | 10/09/1995 | Precision Test System | For initial tightness testing of **Glasteel 2 Jacketed tanks, GlasteelDouble wall Type I, and Gasteel Double Wall Type II** per manufacturer's protocol on the forms provided by Modern Welding Company. |
| EQ-243 | USTEST, Inc. | James Mitchell | 337-839-1070 | 4/08/1996 | 2000/LL & 2000/U | Perform two tests. First test at a minimum 65% full and the second test the ullage area (remainder 35%). Check overfill and spill containment devices. |
| EQ-250 | Leak Detection Systems, Inc. | Jeffery Riotte | 617-878-7766 | 4/22/1996 | Tank Auditor | Overfill Test |
| EQ-284 | Horner Creative Products, Inc. | Brad Estabrook | 989-891-9868 | 5/07/1997 | EZ 3 | **(a)** For non-volatile products, the ullage area shall be between 500 and 1500 gallons. Therefore, the smallest tank that can be tested is 1500 gallons, **(b)** For volatile products, the ullage area shall be between 800 and 2500 gallons. Therefore, the smallest tank that can be tested is 2300 gallons; and **(c)** Overfill and spill containment shall be checked for proper operation. |

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**UST/ Tank and Line Tightness Tester Manufacturers (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-324 | USTEST, Inc. | James Mitchell | 337-839-1070 | 4/16/1998 | 2000/P & 2000/U | Perform two tests. First test at a minimum 78.6% full and the second test the ullage area (remainder 21.4%). Check overfill and spill Containment devices. The EQ-061 dated 1/27/92 and EQ-092 dated 9/29/92 are revoked. |
| EQ-325 | Tanknology –NDE | James Boeka | 800-964-0070 | 8/06/1998 | Vacutect, Sure Test Assured Tight System and NDE U3 ullage tests | Conditional Approval |
| EQ-325 Amendment | Tanknology –NDE | James Boeka | 800-964-0070 | 6/17/2003 | VacuTect Non-Volumetric Tightness Test method, Sure Test-Assured Tight System Series IV Volumetric Tank Tightness Test method, and the PTK-88 and the TLD-1 Line Tightness Test method | Conditional Approval |
| EQ-359 | Titan Tank Company of Florida | Jan Burnette | 813-986-7996 | 12/17/1998 | Titan tank Double Wall Tightness Test | For initial tightness testing of Double wall Titan Tank per manufacturer's protocol on the forms provided by Titan Tank Company of Florida. |
| EQ-365 | Purpora Engineering, Inc. (Formerly Alert Technologies) | Chris Ramshaw | 262-536-4081 | 3/3/1999 Updated 2012, 2013 & 2015 | Alert1000 (revised 2012); Alert 1050 (revised 2012); Alert 1050X (revised 2012); Alert 2000 (revised 2012); & Alert 8200 Sonde (revised 2013) | Conditional Approval |

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**UST/ Tank and Line Tightness Tester Manufacturers (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-381 | Mass Technology Corporation | Jimmy Wolford | 610-275-6146 | 8/30/1999 | Precision Mass Measurement System | Conditional Approval |
| EQ-452 | Estabrook's, Inc. | Brad Estabrook | 989-891-9868 | 9/29/2000 | EZY 3 Locator Plus Tank Tightness Equipment | The tanks being tested using EZY 3 Locator Plus tank tightness equipment are less than 20,000 gallons. The Department's previous approvals EQ-020, dated June 20, 1991, and EQ-075, dated June 15, 1992 are hereby revoked due to the fact that EQ-020 is not being used in the State of Florida and by the company's request, the order is revoked. EQ-284 dated May 7, 1997, supersedes EQ-075. |

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**UST/ Tank and Line Tightness Tester Manufacturers (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-452 Amendment | Estabrook's, Inc. | Brad Estabrook | 989-891-9868 | 5/02/2003 | EZY 3 Locator Plus tank tightness method and the EZY-CHEK Line Leak Detector | The EZY-CHEK Line Leak Detector may be used only on small diameter piping made of rigid fiberglass or corrosion protected steel. The EZY 3 Locator Plus tank tightness equipment and the EZY-CHEK Line Leak Detector must be calibrated annually in accordance with Rule 62-761.600(1)(a)2., F.A.C. Only certified testers, re-certified by Estabrook's, Inc. every two years, may perform the EZY 3 Locator Plus tank tightness method as stated in third party evaluation of system. |

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**UST/ Tank and Line Tightness Tester Manufacturers (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-489 | Service Welding & Machine Co., Inc. | Carl Greer | 502-585-4295 | 5/10/2001 | **PermaTel leak detection system** | a) This Order is only applicable for Rule 62-761.500(2)(a)4., F.A.C., for testing of PermaTank's UST secondary containment at the time of installation; (b)The tightness tests, vacuum level readings, and other information shall be recorded pursuant to Rule 62-761.710, F.A.C., on the Installation Checklist Form marked as Exhibit A, and the Tank Delivery Acceptance Report marked as Exhibit B; and (c) After completion of the installation, the tank installer shall send copies of Exhibit A and Exhibit B to the manufacturer to verify that the tank is tight. |
| EQ-506 | Highland Tank Mfg. Co. | Steve Soldner | 717-664-0617 | 10/05/2001 | Highland Tank Manufacturing Company's manufacturing of the Titan underground storage tank initial tightness test | Conditional Approval |

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## UST/ Tank and Line Tightness Tester Manufacturers (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-529 | AAA Tank Testers, Inc. | Ed Price | 800-749-2219 | 5/03/2002 | Triangle T.E.I. 5000 tank tightness method and the Petro Tite Line Tester for pressurized small diameter line testing | The tanks being tested using the Triangle T.E.I. 5000 tank tightness equipment are less or equal than 20,000 gallons and are in porous backfill. |
| EQ-530 | Sound Products Manufacturing, Inc. | James Mitchell | 337-235-1184 | 5/09/2002 | UST 2001/P and 2000/U test methods | Conditional Approval |
| EQ-557 | Training and Services Corp. | Mike Treat | 281-934-3839 | 6/02/2003 | Leak Computer Leak Test method, and the Acurite Line Test method | The tanks being tested using Leak Computer Leak Test method are less than or equal to 12,000 gallons and the Acurite Line Test method may be used only on small diameter piping made of rigid fiberglass, corrosion protected steel, or flexible approved piping. The Department's previous approval EQ-21, dated June 20, 1991, is no longer in effect. |
| EQ-558 | Praxair Services, Inc. | Randy Golding | 520-888-9400 | 6/12/2003 | Tracer Tight | Conditional Approval |

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**UST/ Tank and Line Tightness Tester Manufacturers (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-571 | Purpora Engineering, Inc. | Chris Ramshaw | 262-536-4081 | 1/14/2004 (Updated 2/17/2015) | Petro Tite II, and Petro Comp Tank Test methods, and the Petro Tite Line Test method (*4/11/2011 Revisions:* PetroTite Line Tester Certification & PetroTite Line Tester for Flex Lines Certification) | The tanks being tested using Petro Tite II and Petro Comp must be less than or equal to 15,000 gallons and the Petro Tite Line Test method may be used only on small diameter piping made of rigid fiberglass, corrosion-protected steel, or FDEP-approved thermoplastic flexible piping. The Department Final Orders EQ-005 issued on May 21, 1991, EQ-016 issued on June 20, 1991, and EQ-017 issued on June 20, 1991 are hereby revoked and are no longer in effect. |
| EQ-602 | Enhanced Leak Detection, Inc. | Dan McGill | 714-523-0194 | 12/03/2004 | Vacu-Tite and Heli-Tite Test | Approved for small diameter piping systems tightness testing. |
| EQ-671 | Praxair services, Inc. | Randy Golding | 520-888-9400 | 5/01/2007 | Praxair Pressure Line Tightness Testing Method | Approved for single-walled and double-walled small diameter piping system tightness testing in the State of Florida. |
| EQ-694 | Modern Welding of Florida, Inc. | Gene Schober | 407-843-1270 | 12/14/2007 | Modern Welding Double-Wall Tank GS-16, UL File Number MH3217 | For initial tightness testing of Double Wall Modern Welding Tank GS-16 per manufacturer's protocol on the forms Exhibit A and Exhibit B provided by Modern Welding of Florida, Inc. |

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**UST/ Tank and Line Tightness Tester Manufacturers (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-760 | Tank Tech, Inc. | Clark Braddock / Marshall T. Mott-Smith | 850-391-9835 | 12/15/2010 | Braddock Double-Wall Integrity Test and Braddock Phoenix Hybrid Tank Integrity Test | The Braddock Double-Wall Tank Integrity Test is approved in the State of Florida as an installation tightness test, an integrity test for double-walled underground storage tanks and a breach of integrity test for USTs provided that the interstitial space does not exceed 28 gallons on any test. The Braddock Phoenix Hybrid Tank Integrity Test is approved as an installation tightness test, an integrity test, and a breach of integrity test for Phoenix Hybrid USTs approved under EQ-403 and EQ-667. |
| EQ-775 | Leighton O'Brien, Inc. | Jeff Stevenson | 888-275-3781 | 8/30/2011 | Leighton O'Brien Technologies, Qualitative Dry Line Test PM2 and Quantitative Wet Line Test PM2; the MassTech International, Ltd., ML3P Line and the MassTech 2 Wet Test and 002 Ullage Test System | Approved in the state of Florida for tightness testing or integrity testing of small diameter piping in contact with the soil or USTs. These tests shall be performed by individuals trained and knowledgeable with the test method and procedures. |

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**AST/ Tank Testers, API 653 Inspection**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-086 | Industrial NDT Company | James Moon | 800-845-1923 | 8/11/1992 | Vessel Inspection Program | |
| EQ-103 | MQS Inspection, Inc. | Dennis Ross | 904-731-2472 | 12/08/1992 | Vessel Inspection Program | |
| EQ-107 | Longview Inspection, Inc. | Walter Matulewicz | 800-256-5442 | 12/10/1992 | Aboveground Tank Inspection Program | |
| EQ-165 | Physical Acoustics Corporation | Peter Whitfield | 609-884-0800 | 3/11/1994 | Aboveground Tank Inspection Program | |
| EQ-172 | Space Science Services | Steven Crowley | 904-730-3213 | 5/27/1994 | Aboveground Storage Tank Inspection Program | |
| EQ-176 | Tank Engineering and Management Consultant | Donald Andreatta | 813-935-6697 | 7/07/1994 | Team Aboveground Tank Inspection Program | |
| EQ-211 | NerG Enterprises, Inc. | Herb Askwith | 561-848-5252 | 6/26/1995 | TASTS Tank Inspection Program | |
| EQ-273 | Law Engineering And Environmental Services, Inc. | Gregg Lentz | 904-396-5173 | 1/17/1997 | Aboveground tank Inspection Program | |
| EQ-302 | ARD Environmental, Inc. | Eugene Silverman | 301-497-0477 | 10/07/1997 | In-Service Aboveground Inspection Program | |

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**AST/ Tank Testers, API 653 Inspection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-799 | Vista Precision Solutions, Inc. | Stephen Ford | 931-667-5875 | 1/10/2013 | Vista Precision Solutions, Inc. Low Range Differential-Pressure leak Detection and Integrity Monitoring System for ASTs | Approved as a release detection system and an integrity monitoring system for bulk tanks with a capacity of 50,000 gals or greater capacity. Individual test periods shall be at least 20 hours in duration. Evaluations shall be made in accordance with the manufacturer's protocols. |

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**Piping Testers/ Bulk Product Piping Testing; API 1110 Testing or Equivalent**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-212 | NerG Enterprises, Inc. | Herb Askwith | 561-848-5252 | 6/26/1995 | TASTS Piping Inspection Integrity Program | |
| EQ-259 | Vista Precision Solutions, Inc. (Formerly Vista Research, Inc.) | Stephen Ford | 937-669-5875 | 6/12/1996 | LT-100, and HT-100 | |
| EQ-461 | Caldon, Inc. | Anthony Mediate | 412-341-9920 | 4/16/2000 | Caldon Linewatch™ 2000DLS Systems | |
| EQ-462 | HansaConsult of North America, LLC | Walter Phelps | 603-422-8833 | 4/16/2000 | HansaConsult Pressure-Step Tightness Control System | |
| EQ-485 | Vista Precision Solutions, Inc. (Formerly Vista Research, Inc.) | Stephen Ford | 937-669-5875 | 2/28/2001 | HT-100-n (v1.0) and HT-100-n (v1.1) detection systems | The product is approved for pressure testing of bulk product piping and hydrant piping in the State of Florida. It is also approved for monthly release detection of bulk product piping and hydrant piping at a release detection rate of 0.2 gallons per hour, provided that the line segments of bulk product piping is isolated for testing with a maximum capacity of 47,500 gallons. |
| EQ-558 | Praxair Services, Inc. | Randy Golding | 520-888-9400 | 6/12/2003 | Tracer Tight | Conditional Approval |
| EQ-642 | Hansa Consult of North America | Skip Phelps | 603-766-5890 | 7/24/2006 | HCNA Leak Detection System, Version 2.0 | Approved for annual bulk product piping testing. |
| EQ-690 | Praxair Services, Inc. | Randy Golding | 520-888-9400 | 11/15/2007 | SeeperTrace™ method for single-walled bulk product piping release detection | Conditional Approval |

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**Piping Testers/ Bulk Product Piping Testing; API 1110 Testing or Equivalent (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-804 | Leak Detection Technologies, Inc. | David Rabb | 855-255-5325 | 3/08/2013 | Leak Detection Technologies, Inc. Pipeline Hydrostatic (PHDleak®) Tightness Test Leak Detection Method | Approved as a monthly release detection method for single-walled underground bulk product piping and an integrity test for single-walled underground bulk product piping. |
| EQ-804 Amended | Leak Detection Technologies, Inc. | David Rabb | 855-255-5325 | 5/15/2015 | Leak Detection Technologies, Inc. Pipeline Hydrostatic (PHDleak®) Tightness Test Leak Detection Method | The Pipeline Hydrostatic (PHDleak®) Tightness Test Leak Detection Method is a monthly release detection method for single-walled and double-walled underground bulk product piping, for single-walled and double-walled underground integral piping, and for integrity testing of single-walled and double-walled underground integral piping systems. |

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## UST/ Spill Containment Devices

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-052 | Franklin Fueling Systems | Sandy Adams | 608-838-5668 | 11/21/1991 Updated 11/4/2015 | EBW 705 and EBW 706-500 | UST Spill Containment |
| EQ-118 | CNI Manufacturing | Toby Argandona | 818-962-6646 | 3/12/1993 | CNI Overfill devices | UST Spill Containment |
| EQ-145 | OPW | Gene Pope | 813-969-1900 | 10/20/1993 | OPW, 111, 211, 311, and 511 Series | UST Spill Containment |
| EQ-199 | Universal Valve Company, Inc. | Thomas Nelson | 908-351-0606 | 6/06/1995 | 69RT, 70CD, and 71CD | UST Spill Containment |
| EQ-217 | Petroleum Equipment Manufacturing CO., Inc.(PEMCO) | Adele Azcuy | 305-558-9911 | 9/21/1995 | Model 112 | UST Spill Containment |
| EQ-224 | OPW | Gene Pope | 813-969-1900 | 10/11/1995 | OPW 1 Series Spill Container, OPW 1 SC Series Spill Container, OPW 101 BG Series Spill Container, Pomeco 111 Series Spill Container, Pomeco 211 Series Spill Container | UST Spill Containment |
| EQ-261 | Amoco Corporation | David Killingsworth | 954-938-2735 | 7/31/1996 | Amoco Pour In Place Overfill Containment | UST Spill Containment |
| EQ-298 | Universal valve Company | Bill Tobias | 800-255-4783 | 9/29/1997 | Model 72, 73, and 70C Spill Containment | UST spillContainment |
| EQ-394 | OPW Fueling Containment Systems (Formerly Environ Products, Inc.) | Kevin Webster | 919-464-3640 Ext. 110 | 8/30/1999 | Environ Overspill Device | UST spillContainment |
| EQ-463 | Petroleum Equipment Manufacturing CO., Inc. (PEMCO) | Adele Azcuy | 305-558-9911 | 10/23/2000 | Series 99 | UST Spill Containment |
| EQ-524 | Emco Wheaton Retail Corpo | John Vautier | 407-625-8339 | 4/18/2002 | Emco Wheaton spill containment equipment Models, A1003, A1004, and A1005 | UST Spill Containment |
| EQ-555 | Franklin Fueling Systems (Formerly Phil-Tite Enterprises) | Sandy Adams | 608-838-5668 | 5/23/2003 | Phil-Tite 85000 Series Spill Collector | UST Spill Containment |
| EQ-588 | OPW Fueling Components | Gene Pope | 813-969-1900 | 6/15/2004 | OPW 500 Series Contained Spill Buckets | UST Spill Containment |
| EQ-594 | Emco Wheaton Retail Corporation | John Vautier | 407-625-8339 | 9/27/2004 | Emco Wheaton Secondary Spill Containment Model A1004-210S | UST Spill Containment |

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**UST/ Spill Containment Devices (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-597 | Franklin Fueling Systems | Allan Busch | 608-838-8786 | 10/25/2004 | EBW 702-400 Series Spill Manhole | UST Spill Containment |
| EQ-604 | Franklin Fueling Systems | Gary Saltz | 608-838-8786 | 12/06/2004 | EBW 703-400 Series Spill Manhole | UST Spill Containment must be encased in concrete. |
| EQ-638 | OPW Fueling Components | Gene Pope | 813-969-1900 | 4/20/2006 | OPW-POMECO 6591B Series Dual 20+ Gallon Shallow Bury Multi-Port Secondary Containment Spill Bucket | UST Spill Containment |
| EQ-639 | Fairfield Industries, Inc. | Daniel Clover | 973-483-0100 | 4/20/2006 | SCM-5DF Double-Wall Spill Containment Manhole | UST Spill Containment |
| EQ-640 | OPW | Gene Pope | 813-969-1900 | 6/23/2006 | OPW 700L Series Superbucket Secondary Containment Spill Bucket, UL File No. MH27236 | UST Spill Containment |
| EQ-654 | OPW | Gene Pope | 813-969-1900 | 10/23/2006 | OPW 7111SS DW Series Spill Bucket, UL File No. MH27236 | UST Spill Containment |
| EQ-656 | Franklin Fueling Systems | Allan Busch | 608-838-8786 | 11/06/2006 | Phil-Tite 400 and 500 Series Spill Containment Devices, UL File No. MH21091 | UST Spill Containment |
| EQ-685 | Fairfield Industries, Inc. | Daniel Clover | 973-483-0100 | 9/04/2007 | SCM-DFL, 5DG/16 Double-Wall Spill Containment Manhole | Approved for use for spill containment for underground storage tanks in the State of Florida. The systems must be tested upon installation in accordance with Exhibit A, and Exhibit B. |
| EQ-688 | S. Bravo System, Inc. | Don Mukai | 323-888-4123 | 10/25/2007 | B-375-D Double-Wall Spill Containment Bucket | The systems must be tested upon installation in accordance with Exhibit A. |
| EQ-695 | Emco Wheaton Retail Corporation | John Vautier | 407-625-8339 | 12/20/2007 | Emco Wheaton Secondary Spill Containment Model A1004-215, UL File no. MH21149 | The system is tested in accordance with Exhibit A prior to being placed into service and recorded in accordance with Rule 62-761.710, F.A.C, requirements in Exhibit A attached with this Final Order. |

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**UST/ Spill Containment Devices (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-704 | Franklin Fueling Systems | Allan Busch | 608-838-8786 | 4/17/2008 | Franklin Fueling Systems Phil-Tite Model 40X-FS-XPR-Gray with TS-ULS sensor universal liquid sensor, UL File no. MH21091 | The system is tested in accordance with Exhibit A prior to being placed into service and the sensor is tested annually and recorded in accordance with Rule 62-761.710, F.A.C., requirements in Exhibit A attached with this Final Order. |
| EQ-708 | OPW | Gene Pope | 813-969-1900 | 5/23/2008 | OPW Edge 1-3100 Series Double Wall Spill Container, UL File no. MH27236 | The system is installed and tested in accordance with Exhibit A and Exhibit B prior to being placed into service and recorded in accordance with Rule 62-761.710, F.A.C., requirements in Exhibit A attached with this Final Order. |
| EQ-718 | OPW | Gene Pope | 813-969-1900 | 5/23/2008 | OPW Edge 1 Series Single-Wall Spill Container, UL File no. MH27236 | The system is installed and tested in accordance with Exhibit A prior to being placed into service and recorded in accordance with Rule62-761.710, F.A.C., requirements in Exhibit A attached with this Final Order. |
| EQ-734 | JGD Associates, Inc. | John Dzwonczyk | 440-933-6825 | 7/15/2009 | The Linebacker™ and Linebacker™2 Spill Bucket Liners | The Linebacker™ and Linebacker™2 Spill Bucket Liners must be installed and tested in accordance with Exhibit A and Exhibit B prior to being placed into service and recorded in accordance with Rule 62-761.710, F.A.C., requirements in Exhibit A and Exhibit B attached with this Final Order. |

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**UST/ Spill Containment Devices (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-735 | Petroleum Equipment Manufacturing Co. | Joseph Petix | 305-558-9911 | 7/23/2009 | Pemco Model 112DW5 Double Wall Spill Containment Manhole | The system is installed and tested in accordance with Exhibit A prior to being placed into service and recorded in accordance with Rule 62-761.710, F.A.C, requirements in Exhibit A attached with this Final Order. |
| EQ-741 | Emco Wheaton Retail Corporation | John Vautier | 407-625-8339 | 9/29/2009 | Emco Wheaton Secondary Spill Containment Model A1004-316 / 317 Series | Emco Wheaton Secondary Spill Containment Model A1004-316 / 317 Series, must be installed and tested in accordance with Exhibit A prior to being placed into service and recorded in accordance with Rule 62-761.710, F.A.C., requirements in Exhibit A attached with this Final Order. |
| EQ-753 | Emco Wheaton Retail Corporation | John Vautier | 407-625-8339 | 2/25/2010 | Emco Wheaton A1005-505C Series Spill Containment | The initial testing is done in accordance with Exhibit A. |
| EQ-757 | Franklin Fueling Systems | Sandy Adams | 608-838-5668 | 7/27/2010 | Franklin Fueling Systems 705-540 series, single-walled, 705-550 doubled series with interstitial integrity gauge (I2), and 705-550 double-walled spill containment models with Incon-intelligent controls FFS Model TSP-ULS interstitial sensor, UL File no. MH21091 Intrusion boot on the gravel guard has been changed from 602046001 to FEB-400-R (5/06/2013) | Approved for use as a single or double-walled spill containment system for underground storage tanks with electronic interstitial monitoring or visual interstitial monitoring in the State of Florida, provided that the system is tested in accordance with Exhibit A and Exhibit B prior to being placed into service and the sensor is tested annually in accordance with Rule 62-761.710, F.A.C., requirements in Exhibit A attached with this Final Order, and the I2 monitoring system is tested monthly and annually and recorded monthly in accordance with Rule 62- 761.710, F.A.C., requirements in Exhibit A attached with this Final Order. |

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**UST/ Spill Containment Devices (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-762 | Pryco, Inc. | Amanda Rankins | 217-364-4467 | 1/05/2011 | Pryco, Inc. - Remote Fill Station | Approved in the State of Florida as a remote fill transfer point associated with UST or AST systems. Install per manufacturer's instructions. |
| EQ-764 | JV & Associates, Inc. | John Vautier | 407-625-8339 | 3/16/2011 | Emco Wheaton - Stainless Steel Spill containment insert for the A1005-505 Series | Approved in the State of Florida as a double walled spill containment device for USTs and ASTs in the A1005-505 Series including other Department approved spill containment devices manufactured by Emco Wheaton (Rescinded 3/23/2011). |
| EQ-764R | JV & Associates, Inc. | John Vautier | 407-625-8339 | 3/23/2011 | Emco Wheaton - Stainless Steel Spill containment insert for the A1005-XXXX Series | Approved in the State of Florida as a double walled spill containment device for USTs and ASTs in the A1005-XXXX Series including other Department approved spill containment devices made by other manufacturers. |
| EQ-776 | Mott-Smith Consulting Group, LLC | Marshall Mott-Smith | 850-391-9835 | 8/24/2011 | Fibrelite Composites, Ltd., Fiberglass Sump Systems, Model Numbers:<br>S45-1180;<br>EL-G-E500;<br>EL-G-LEG;<br>S8CRD-390/WT;<br>S8CRD-3100/MP/WSP-16-5;<br>S8CRD-3100-OF/WSP-8-5; S/42-3100/MP16/SR-EXT/7-11; & S/42-3100/OF8/SR-EXT/7-11 | The installation of the sumps shall be made in accordance with the manufacturer's recommendations. A structural integrity test that is in accordance with the manufacturer's recommendations shall be conducted and passed before the sump is placed into operation. |

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**UST/ Spill Containment Devices (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-784 | Preferred Utilities MFG. Corp. | Dexter Bullard | 203-743-6741 | 3/05/2012 | Spill Containment Devices, Horizontal Spill Container Model 2, and Sidewalk Spill Container Model 3 | For use with both ASTs and USTs. Installation and operation shall be made in accordance with the manufacturer's recommendations. |
| EQ-794 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 10/30/2012 | OPW 1-3100 Series 15 Gallon Edge™ Double Wall Spill Container | Installation, maintenance and testing procedures shall be in accordance with the manufacturer's recommendations. |
| EQ-795 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 10/30/2012 | OPW 1-3700 Series Double Wall Edge™ Field Replacement Kits for 500L and 700L Spill Containers | Installation, maintenance and testing procedures shall be in accordance with the manufacturer's recommendations. |
| EQ-829 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 9/19/2014 | OPW 1-2200 Series Replaceable Single-Wall Spill Container | The installation and integrity testing procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-859 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 12/30/2015 | OPW Fibrelite Multiport Spill Containers | The installation and maintenance of the spill containment devices must be in accordance with the manufacturer's recommendations as provided in Exhibit A. |

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**UST/ Overfill Protection** (Vent Restrictors such as ball float valves cannot be installed after January 11, 2017)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-223 | OPW | Gene Pope | 813-969-1900 | 10/09/1995 | OPW 61SO Overfill Protection Valve, OPW 61TNG Overfill Protection Valve, OPW 53 Series Ball Float Valve, OPW 30MW Series Ball Float valve | UST Overfill Protection |
| EQ-300 | Universal Valve Company | Bill Tobias | 800-255-4783 | 9/29/1997 | Model 37 Float Vent Valve and V421 Vent Valve Assembly and Model 38 Float Vent Valve and V420 Vent Valve | UST Overfill Protection |
| EQ-370 | Scully Signal Company | Frank Stemorzewski | 617-692-8600 | 3/12/1999 | ST-15 Series, ST-12, SP-M Series, SP-O Series, SP-TOM Series, SP-BL Series, SP-LD, and SP-H Overfill Protection | UST Overfill Protection |
| EQ-392 | Franklin Fueling Systems | Allan Busch | 608-838-8786 | 8/30/1999 | EBW Model 308 Float Vent Valve | UST Overfill Protection |
| EQ-414 | Emco Wheaton Retail | John Vautier | 407-625-8339 | 12/22/1999 | Guardian A1100 Overfill Protection | UST Overfill Protection |
| EQ-464 | Franklin Fueling Systems | AllanBusch | 608-838-8786 | 10/25/2000 | Auto limiter II | UST Overfill Protection. The Department's previous approval EQ-003, dated April 26, 1991, is hereby revoked due to the fact that the product is not being manufactured, and the company has requested that the order be revoked. |
| EQ-475 | Preferred Utilities MFG. Corp. | Peter Lavelle | 203-743-6741 | 11/29/2000 | TG-EL-D3 Leak Detection System | UST Overfill Protection |
| EQ-577 | Pneumercator Co., Inc. | Jonathan Levy | 800-209-7858 | 2/09/2004 | Pneumercator LS600 Series Liquid Level Float | AST Overfill Protection |
| EQ-579 | Universal Valve Company, Inc. | Pete Mascis | 908-351-0606 | 2/27/2004 | Universal 39-04 Overfill Protection Valve | UST Overfill Protection |
| EQ-606 | OPW Fueling Containment Systems (Formerly Environ Products, Inc.) | Kevin Webster | 919-464-3640 Ext. 110 | 12/21/2004 | Float Vent Valve Part No. FVV-3210 | UST Overfill Protection |

**UST/ Overfill Protection (Continued)** (Vent Restrictors such as ball float valves cannot be installed after January 11, 2017)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-697 | OPW | Gene Pope | 813-969-1900 | 12/21/2007 | OPW UL Listed Vapor Tight Overfill Protection Valve, Model No. 71SO, UL File No. MH 21147 | The systems must be installed and tested upon installation in accordance with Exhibit A, and at least once on an annual basis in accordance with Exhibit A, for Rule 62-762.701, F.A.C., annual operability requirements. |
| EQ-698 | Omntec Mfg., Inc. | Tara Traganas | 631-981-2001 | 1/10/2008 | Omntec L- Series sensors when used with associated controllers LPD, LU and OEL 8000 | Approved in the State of Florida for overfill protection of underground storage tanks and overfill protection of aboveground storage tanks provided the tanks are not filled beyond 95%of nominal capacity. The systems must be tested upon installation, and at least once on annual basis in accordance with Exhibit A, and Exhibit B, for Rule 62-762.701, F.A.C., annual operability requirements. |
| EQ-705 | Pneumercator Co., Inc. | Jonathan Levy | 800-209-7858 | 4/24/2008 | The Pneumercator ModelLS600/LS600A Series and Model LS600/LS600A NCL series Float Sensors for use with Pneumercator LC1000 and LC2000 series Alarm Panels, PC1000 series Pump Controllers and TMS Series Tank Management Systems | A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the State of Florida. |

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**UST/ Overfill Protection (Continued)** (Vent Restrictors such as ball float valves cannot be installed after January 11, 2017)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-780 | Preferred Utilities MFG. Corp. | Dexter Bullard | 203-743-6741 | 2/14/2012 | Tank Fil-A-Larm Switch Model SDI-HLS; Tank Gauge Model SDI-TG-EL-D5; Discriminating Sensor Models SDI-HD-A2-C & SDI-HD-A2-C-8 | All products are approved as either overfill protection or release detection devices associated with ASTs or USTs. Installation and operation shall be made in accordance with the manufacturer's recommendations. |
| EQ-783 | Preferred Utilities MFG. Corp. | Dexter Bullard | 203-743-6741 | 3/05/2012 | Tank Gauge Model SDI-TG-EL-D4A and [Discriminating Sensor Models SDI-HD-A2-C & SDI-HD-A2-C-8 (see EQ-780)] | All products are approved as either overfill protection or release detection devices associated with ASTs or USTs. Installation and operation shall be made in accordance with the manufacturer's recommendations. |
| EQ-815 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 10/8/2013 | OPW 71SO-T Series "Testable" Overfill Prevention Valve (also see EQ-697) | The installation and operation shall be in accordance with the manufacturer's recommendations. |
| EQ-817 | FPI Sensors International | Gary Maas | 800-852-9984 | 1/13/2014 | FPI Sensors International Model Numbers: LD 1001 Generic Leak Detection System – LD FPI BB15; CL 1001 Generic Continuous Level 4-20 mA Sensor – LD FPI SP15; LS 1001 Generic Level Float Switch – LD FPI SP12 | Release detection sensors for monitoring secondary containment systems associated with USTs and ASTs and for an associated float switch associated with the sensors. EQ-817 covers overfill protection devices when connected to an operator alarm. |
| EQ-819 | Preferred Utilities MFG. Corp. | Dexter Bullard | 203-743-6741 | 3/24/2014 | Overfill Protection Devices: Liquid Level Switch, Model PLS and Overfill Models FA-AV and FA-AV-D3 | The installation and operation shall be in accordance with the manufacturer's recommendations. |
| EQ-831 | Component Specialists, Inc. | Marty Hendrickx | 815-623-7326 | 10/17/2014 | Fozmula Limited G/LL65 Liquid Level Contents Gauge, T/LL200 Series Liquid Level Sensor, G/LL64 Liquid Level Contents Gauge, and T/LL130 Liquid Level Sensor | Devices may be used as part of the overfill protection device so long as the product level information is provided to the product transfer operator. Department approval for inventory management purposes is not required. |

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**UST/ Overfill Protection (Continued)** (Vent Restrictors such as ball float valves cannot be installed after January 11, 2017)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-832 | Advanced Control Technology, Inc. | John Tate | 877-800-8820 | 10/17/2014 | Advanced Control Technology, Inc. 10 Series Miniature Fluid Level Switches | Devices may be used as part of the overfill protection device so long as the product level information is provided to the product transfer operator. Department approval for inventory management purposes is not required. |
| EQ-838-R | Franklin Fueling Systems | Sandra Adams | 608-838-5668 | 1/14/2015<br>5/5/2017-Revised | Franklin Fueling Systems Defender Series™ Overfill Prevention Valve - Revised | The installation, operation and maintenance shall be in accordance with the manufacturer's recommendations. |
| EQ-854 | Design By Initiative | Reid McLean | 404-996-1282 | 11/09/2015 | SMD Fluid Controls Fuelogic Model FS and Models FM Float Switches for Overfill Protection and Release | May be used as part of an overfill protection device or a release detection sensor for underground and aboveground storage tank systems. The installation, operation, and maintenance procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-858 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 12/07/2015 | Morrison Brothers Co. Model 9095X Series and Model 9095 SA Series Overfill Protection Valves | May be used as overfill protection devices for underground and aboveground storage tank systems The installation and maintenance of the overfill protection devices must be in accordance with the manufacturer's recommendations. |
| EQ-862 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 2/01/2016 | Morrison Brothers Co. Model 924 & 924S, 924LS, 925 & 925S Series Liquid Sensors | The installation and maintenance shall be made in accordance with the manufacturer's recommendations. |
| EQ-863 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 3/04/2016 | OPW SiteSentinel®Nano® Console Tank Gauge, Probes and Sensors | May be used as an automatic tank gauge, as an approved overfill protection device when equipped with an alarm, and as an interstitial release detection device for secondary containment systems for underground and aboveground storage tank systems. |

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**UST/ Overfill Protection (Continued)** (Vent Restrictors, such as ball float valves, cannot be installed after January 11, 2017)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-867 | Solutions with Innovation, LLC | Thomas Williams | 203-729-6434 | 6/27/2016 | L170-0101-3002 and L007-0402-0203 Series Liquid Level Switches | For overfill protection, the switch will be set at a specified liquid level in the storage tank and an alarm will be provided to the transfer operator. For interstitial release detection, the switch will be placed on the low area of the secondary containment interstice that is being monitored that will alarm when liquid is detected. |
| EQ-868 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 12/16/2016 | Models 918SB, 918DB, and 918QB Series Alarms | May be used as a visible and audible alarm for overfill protection devices or release detection sensors for aboveground and underground storage tank systems, in accordance with the requirements of Chapter 62-761, and Chapter 62-762, F.A.C. |
| EQ-877 | Veeder-Root | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 5/19/2017 | Veeder-Root Overfill Alarm and Acknowledgement Switch | The installation and maintenance shall be in accordance with the manufacturer's recommendation. Registered for UST or AST overfill protection. |

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## AST/ Spill Containment Devices

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-155A | Containment Solutions, Inc. | David Dooley | 410-756-2888 | 2/18/2011 | Spill containment device for UL 142 ASTs manufactured by Containment Solutions, Inc. | Approved in the State of Florida as a spill containment device attached to UL 142 ASTs approved under EQ-155 manufactured by Containment Solutions, Inc. |
| EQ-226 | OPW | Gene Pope | 813-969-1900 | 10/25/1995 | Pomeco 6200 Series AST and Pomeco 6211 RMOT Remote Series (previously listed as Pomeco 211 AST and Pomeco 211 RMOT Remote) | AST Spill Containment |
| EQ-244 | Baker Industries Northwest, Inc. | Robert Burwell | 425-745-6130 | 4/08/1996 | #700 series Ground Level spill containment | AST Spill Containment |
| EQ-256 | Clay & Bailey Mfg. Co. | Brad Holmes | 800-821-6583 | 5/14/1996 | #6100 series Spill containment Boxes | AST Spill Containment |
| EQ-299 | Universal Valve Company | Bill Tobias | 800-255-4783 | 9/29/1997 | Model 76 Aboveground Spill Containment Manhole and the Model 76RF Aboveground Remote Fill Spill Containment Manhole | AST Spill Containment |
| EQ-345 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 11/02/1998 | Morrison 517 & 518 A.S.T. Spill Containers | AST Spill Containment |
| EQ-349 | JCL Enterprises of Central Florida | James Porter | 941-452-0068 | 12/01/1998 | A.S.T. Spill Containers | AST Spill Containment |
| EQ-366 | PWH Equipment and Services Company, Inc. | James Hudson | 813-623-2077 | 3/03/1999 | Free Standing Ground Level Fill Containment Model DUOGFL and DUOGFL2 | |
| EQ-437 | Fairfield Industries, Inc. | Mark Sisco | 973-228-3448 | 5/08/2000 | Fairfield Industry Models RFP, AFRP, and AGSC | AST Spill Containment |
| EQ-463 | Petroleum Equipment Manufacturing CO., Inc. (PEMCO) | Adele Azcuy | 305-558-9911 | 10/23/2000 | Model 113 Above ground Containment Manhole and associated Model 125 Spill Mate | AST Spill Containment |

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## AST/ Spill Containment Devices (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-474A | Containment Solutions, Inc. | David Dooley | 410-756-2888 | 2/18/2011 | Spill containment devices for UL 142 and UL2085 ASTs manufactured by Containment Solutions, Inc. | Approved in the State of Florida as a spill containment device attached to ASTs approved under EQ-474 manufactured by Containment Solutions, Inc. |
| EQ-481 | Simplex, Inc. | David Hurtado | 386-690-6361 | 2/21/2001 | Simplex Fuel Port | AST Spill Containment |
| EQ-535 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 7/03/2002 | Morrison Model 515 Remote fill Spill Containment for AST | AST Spill Containment |
| EQ-629 | Franklin Fueling Systems | Allan Busch | 608-838-8786 | 1/17/2006 | EBW model number 706-420 Aboveground Spill Container | AST Spill Containment |
| EQ-725 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 12/29/2008 | Morrison model number 516 series AST Spill Container UL File number MH21154 | AST Spill Containment |
| EQ-726 | Malo Incorporated | Andrew Carroll | 414-840-7833 | 1/15/2009 | Malo Overspill Bowl Model number AL7.5 and AL5 Series | AST Spill Containment |

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**AST/ Spill Containment Devices (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-740 | Clay & Bailey Mfg. Co. | Brad Holmes | 800-821-6583 | 9/28/2009 | Clay & Bailey Spill Containment 6100Series, UL File No. MH 47031 | The Clay & Bailey Spill Containment 6100Series UL File No. MH 47031 must be installed and tested in accordance with Exhibit A prior to being placed into service and recorded in accordance with Rule 62-762.711, F.A.C, requirements in Exhibit A attached with this Final Order. |
| EQ-746 | Zierke Built Manufacturing, Inc. | LeRoy Larson | 800-269-2222 | 2/12/2010 | Zierke Spill Containment Box | The Zierke Spill Containment Box must be installed and tested in accordance with Exhibit A prior to being placed into service and recorded in accordance with Rule 62-762.711, F.A.C., requirements in Exhibit A attached with this Final Order. |
| EQ-762 | Pryco, Inc. | Amanda Rankins | 217-364-4467 | 1/05/2011 | Pryco, Inc. - Remote Fill Station | Approved in the State of Florida as a remote fill transfer point associated with UST or AST systems. Install per manufacturer's instructions. |
| EQ-763 | Modern Welding of Florida, Inc. | Jeff Herter | 407-843-1270 | 3/09/2011 | Modern Welding Co. - Spill/Fill Box Containment Device, Model 6B1568-37, for UL 142 and UL2085 ASTs manufactured by Modern Welding Co. | Approved in the State of Florida as a spill/fill box containment device attached to Modern Welding Company's UL 142 and UL 2085 AST. |

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**AST/ Spill Containment Devices (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-764 | JV & Associates, Inc. | John Vautier | 407-625-8339 | 3/16/2011 | Emco Wheaton - Stainless Steel Spill containment insert for the A1005-505 Series | Approved in the State of Florida as a double walled spill containment device for USTs and ASTs in the A1005-505 Series including other Department approved spill containment devices manufactured by Emco Wheaton (Rescinded 3/23/2011). |
| EQ-764R | JV & Associates, Inc. | John Vautier | 407-625-8339 | 3/23/2011 | Emco Wheaton - Stainless Steel Spill containment insert for the A1005-XXXX Series | Approved in the State of Florida as a double walled spill containment device for USTs and ASTs in the A1005-XXXX Series including other Department approved spill containment devices made by other manufacturers. |
| EQ-767 | Cab Construction, Inc. | Paul Schley | 507-625-2233 | 5/17/2011 | CAB Construction - Spill Box Model Numbers 52594-R and 52594-S | AST Spill Containment |
| EQ-770 | Petroleum Equipment Manufacturing Company | Joseph Petix | 305-558-9911 | 6/23/2011 | Spill Mate Models 125XFP20 and 125FPV20 | Installation and operation shall be in accordance with the manufacturer's recommendations. |

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**AST/ Spill Containment Devices (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-778 | Fidelity Manufacturing, LLC. | Mark Stromwall | 352-414-4700 | 11/07/2011 | Fidelity Manufacturing, LLC - 7.5 Gallon Spill Bucket for ASTs | The 7.5 Gallon Spill Bucket is approved in the State of FL as a spill containment device associated with aboveground storage tanks, primarily their double-walled sub-base generator aboveground tanks that were approved under EQ-497. Installation shall be in accordance with the manufacturer's recommendations. |
| EQ-784 | Preferred Utilities MFG. Corp. | Dexter Bullard | 203-743-6741 | 3/05/2012 | Spill Containment Devices, Horizontal Spill Container Model 2, and Sidewalk Spill Container Model 3 | For use with both ASTs and USTs. Installation and operation shall be made in accordance with the manufacturer's recommendations. |
| EQ-787 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 5/10/2012 | Morrison Bros. Co. Spill Container, Model Number 715 Series, UL File No. MH17926 | Installation, operation and testing shall be made in accordance with the manufacturer's recommendations |
| EQ-814 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 9/26/2013 | OPW 300 Series Aboveground Spill Containers - Models POMECO/OPW 331AST & 332AST | The installation and operation shall be in accordance with the manufacturer's recommendations. |
| EQ-849 | Fuel Tech, Inc. | Ed Fogle | 800-628-1863 | 7/22/2015 | Fuel Tech Inc.<br>3in Spill Box for Aboveground Storage Tanks | The 3in Spill Box for ASTs shall be tested at installation by filling the spill box with water above the piping penetration fitting and observing the spill box and penetration is liquid tight. |

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## AST/ Spill Containment Devices (Continued)

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-874 | Clay & Bailey Mfg. Co. | Brad Holmes | 800-821-6583 | 4/28/2017 | Clay & Bailey Spill Containment 6100 Series, 5 and 7.5 gallon. UL File No. MH25085 series Aboveground Spill Container for shop-fabricated AST Systems | Must be installed and tested in accordance with Exhibit A prior to being placed into service. |
| EQ-879 | Clay & Bailey Mfg. Co. | Brad Holmes | 800-821-6583 | 7/10/2017 | Clay & Bailey Gen Set Spill Containment Box, 5-gallon Generator Base Tank Spill Container. Model # 6100-09-4600 UL File No. MH25085 | Must be installed and tested in accordance with Exhibit A prior to being placed into service. |

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**AST/ Overfill Protection**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-225 | OPW | Gene Pope | 813-969-1900 | 10/25/1995 | OPW 61F-Stop Overfill Prevention Valve | AST Overfill Protection |
| EQ-227 | Morrison Bros. Co | Jerry Schollemeyer | 800-553-4840 | 10/25/1995 | AST Overfill Alarm | AST Overfill Protection |
| EQ-234 | Vaporless Manufacturing, Inc. | Steve Wilson | 800-367-0185 | 12/11/1995 | OFP-2/1, OFP-2/2, OFP-3/1, and OFP-3/2 Overfill protection Valve | AST Overfill Protection |
| EQ-257 | Clay & Bailey Mfg. Co. | Brad Holmes | 800-821-6583 | 5/09/1996 | Solo Overfill Protection Valve #1228, The Overfill Protection Valve, Model Number, F-30, F-35, F-40 and the Mino Filling Limiter #1228. | AST Overfill Protection |
| EQ-301 | Universal Valve Company | Bill Tobias | 800-255-4783 | 9/29/1997 | Model 49-02, Model 49-04 Aboveground Overfill Protection and Model HL-TA Aboveground Overfill Alarm Tank Monitor | AST Overfill Protection |
| EQ-355 | K-Tek Corporation | Thomas Crnko | 225-673-6100 | 12/17/1998 | SPM 100 and SPM 200 Series | AST Overfill Protection |
| EQ-356 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 12/17/1998 | 9095A Overfill Protection Valve | AST Overfill Protection |
| EQ-370 | Scully Signal Company | Frank Stemorzewski | 617-692-8600 | 3/12/1999 | ST-15Series, ST-12, SP-M Series, SP-O Series, SP-TOM Series, SP-BL Series, SP-LD,And SP-H Overfill Protection Devices | AST Overfill Protection |
| EQ-379 | Enraf, Inc. | Robert Arias | 281-443-4291 | 6/15/1999 | Enraf 873 SmartRadar, and the 854 Servo Level Gauge | AST Overfill Protection |
| EQ-384 | Endress+Hauser Coggins System | Richard Entralgo | 281-480-5273 | 8/24/1999 | Whessoe Varec/ Sakura Endress Proservo NMS Series and Promonitor NRF 560 | AST Overfill Protection |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ- 388 | Magnetrol International | Scott Stewart | 630-969-4000 | 8/30/1999 | Buoyancy Technology<br>• EZ Modulevel<br>• Pnumatic Modulevel<br>• External Cage<br>• Displacer • Side Mount<br>• Top Mount • High Pressure<br>• Tuffy<br><br>Capacitance Technology<br>• Tip Sensitive<br>• 810 • 811 • 80/81 • 82 CE<br>• Sentinel 822 • Sentinel 832<br>• Sentinel 842 • 801 • 804<br><br>Contact Ultrasonic<br>• 910 • 911/921 • 91S/92S<br>• 919 • 915 • 916 • 918 • 91E<br><br>Non-Contact Ultrasonic<br>• 352 • 350/351 • 341 • 344<br>• 300/301 • 3P1<br><br>Magnetostrictive<br>• Microtel<br><br>Thermal Dispersion<br>• Microtel<br><br>Guided Wave Radar<br>• Eclipse | AST Overfill Protection |
| EQ-389 | Trans Data Corp., Division of Fournier Associates, Inc. | John Wehler | 516-223-4840 | 8/30/1999 | Series 6761, Series 6693, and Series 6699 | AST Overfill Protection |
| EQ-393 | Enraf, Inc. | Robert Arias | 281-443-4291 | 8/30/1999 | Enraf Alarm Scout and 744 Alarm Controller/ 748 IR Probe | AST Overfill Protection |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-396 | Drexelbrook Engineering Company | Jack Roushey | 215-674-1234 | 9/02/1999 | Drexelbrook LCT and VeriGap Level Detector | AST Overfill Protection |
| EQ-404 | Omntec Mfg., Inc. (Formerly Innovative Sensor Solution Ltd.) | Tara Traganas | 631-981-2001 | 11/16/1999 | FillCheck® overfill protection devices | AST Overfill Protection, Conditional Approval |
| EQ-406 | Miltronics, Inc. | Doug Duncan | 817-277-3543 | 11/23/1999 | Miltronics Ultrasonic Level Measuring Systems | AST Overfill Protection |
| EQ-408 | L & J Engineering Company | Larry Grygienc | 708-236-6000 | 12/14/1999 | MCG 1090 line of high level alarms and the Omnitrol line of level controls | AST Overfill Protection |
| EQ-411 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 12/22/1999 | Model 1018 Aboveground Storage Tank Gauge | AST Overfill Protection |
| EQ-435 | Delta Controls Corporation | Randy Wyatt | 318-424-8471 | 5/08/2000 | Delta Models 709, and 715 Aboveground Storage Tank Gauge | AST Overfill Protection |
| EQ-456 | Intelligent Controls, Inc. | Kevin Devinney | 207-283-0156 | 10/04/2000 | HIS, HLS, ULS, DIS, EIS, PS, DDS, DTS, and MWS interstitial liquid sensors | AST Overfill and Liquid Leak Detector |
| EQ-464 | Franklin Fueling Systems | Allan Busch | 608-838-8786 | 10/25/2000 | 709 Warden overfill prevention valve | AST Overfill Protection |
| EQ-488 | Meco, Inc. | Kenneth Mroz | 619-466-1469 | 4/18/2001 | MecoAlarm System | AST Overfill Protection |
| EQ-527 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 4/19/2002 | Morrison 918 AST Clock Gauge with an Alarm System | The system is approved for overfill prevention for aboveground storage tanks up to 12 feet in diameter for horizontal tanks, and up to 12 feet in height for vertical tanks. |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-536 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 8/05/2002 | Morrison 918CP AST Alarm System | Approved for overfill prevention for aboveground storage tanks up to 50 feet in height in the State of Florida. |
| EQ-548 | Gauging Systems, Inc. | Ana Figueroa | 800-444-1327 | 12/20/2002 | GSI-HIAS Overfill Alarm System | A copy of this order shall be distributed to any facility that uses this product. A copy of annual operability test shall be given to any tank owner purchasing or using this system In the State of Florida. |
| EQ-570 | Robetshaw Industrial Products | Dave Cahill | 865-981-3113 | 12/22/2003 | Centeron Level Alarm System | AST Overfill Protection |
| EQ-576 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 2/09/2004 | Morrison FMM ASO Valve | AST Overfill Protection |
| EQ-577 | Pneumercator Co., Inc. | Jonathan Levy | 800-209-7858 | 2/09/2004 | Pneumercator LS600 Series Liquid Level Float | AST Overfill Protection |
| EQ-610 | OPW | Gene Pope | 813-969-1900 | 4/11/2005 | OPW 144TA & 444TA High Level Tank Alarm | AST Overfill Protection |
| EQ-637 | Guillotine, Inc. | Don Shackelford | 800-824-1394 | 3/30/2006 | UL Listed Guillotine Flow Restrictor, UL File Number MH18426 | AST Overfill Protection |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-576 Amendment | Samson Company | Jerry Schollmeyer | 800-553-4840 | 1/26/2007 | ASO Valve # OA-1 | AST Overfill Protection Samson Company's product Valve # OA- that is identical to Morrison FMM ASO Valve which was approved in the original Order. The Samson Valve OA-1 has been manufactured since February 9, 2004 is approved to be installed after the effective date of this amended Order. The valve must have the marking or labeling states: Model Samson # OA-1, ULC Listed, and MANUFACTURED BY MORRISON BROS. |
| EQ-669 | Clay & Bailey Mfg. Co. | Brad Holmes | 800-821-6583 | 4/18/2007 | UL Listed Clay & Bailey Overfill Prevention Valves Model Numbers 1228-03-2200 2", and 1228-03-2400 4", UL File Number MH25085 | The use of the UL Listed Clay & Bailey Overfill Prevention Valves Model Numbers 1228-03-2200 2", and 1228-03-2400 4", UL File Number MH25085, is approved for overfill prevention for aboveground storage tanks in the State of Florida, provided the tank is equipped with tight fill connections and is not filled beyond 95% of nominal capacity. |
| EQ-669 | Clay & Bailey Mfg. Co. | Brad Holmes | 800-821-6583 | 4/18/2007 | UL Listed Clay & Bailey Overfill Prevention Valves Model Numbers 1228-03-2200 2", and 1228-03-2400 4", UL File Number MH25085 | The use of the UL Listed Clay & Bailey Overfill Prevention Valves Model Numbers 1228-03-2200 2", and 1228-03-2400 4", UL File Number MH25085, is approved for overfill prevention for aboveground storage tanks in the State of Florida, provided the tank is equipped with tight fill connections and is not filled beyond 95% of nominal capacity. |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-682 | Madison Company | Steven Hilaire | 203-488-4477 Ext. 101 | 9/16/2007 | M7000 Vertical Mount, Single Point Level Switch, PBT Stem & Buna N Float, SPST 30VA Switch, M7700Horizontal Mount, Single Point Level Switch, PBT Stem & Float, SPST 30VA Switch, M8700 Horizontal Mount, Single Point Level Switch, Polypropylene Stem and Float, SPST 30VA Switch | Conditional Approval |
| EQ-696 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 12/27/2007 | UL Listed Morrison Bros. Overfill Prevention Valve Model Number 9095S, UL File Number MH21138 | The tank is equipped with tight fill connections and is not filled beyond 95% of nominal capacity. The systems must be installed and tested upon installation in accordance with Exhibit A, and at least once on annual basis in accordance with Exhibit A, for Rule 62-762.701, F.A.C., annual operability requirements. |
| EQ-698 | Omntec Mfg., Inc. | Tara Traganas | 631-981-2001 | 1/10/2008 | Omntec L- Series sensors when used with associated controllers LPD, LU and OEL 8000 | Approved in the State of Florida for overfill protection of underground storage tanks and overfill protection of aboveground storage tanks provided the tanks are not filled beyond 95% of nominal capacity. The systems must be tested upon installation, and at least once on annual basis in accordance with Exhibit A, and Exhibit B, for Rule 62-762.701, F.A.C., annual operability requirements. |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-705 | Pneumercator Co., Inc. | Jonathan Levy | 800-209-7858 | 4/24/2008 | The Pneumercator Model LS600/LS600A Series and Model LS600/LS600A NCL series Float Sensors for use with Pneumercator LC1000 and LC2000 series Alarm Panels, PC1000 series Pump Controllers and TMS Series Tank Management Systems | A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the State of Florida. |
| EQ-706 | Simplex, Inc. | David Hurtado | 386-690-6361 | 5/08/2008 | TC 9 Tank Commander, TC-9 Tank Commander with Automatic Fuel Port Series Model CAFP-x, and AFP-x, and multi-versions, TC-9 Tank Commander with Smart Pump Series Model SP-x, multi versions, and TC-9 Tank Commander with Mini-Smart Pump Series Model MSP-x | This product is equipped with the FuelPort Spill Containment that was approved under the Department File EQ-481. The used of the Pneumercator LS 600, LS 601, and RSU 800 approved under EQ-240 is acceptable to be used with this product. A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the State of Florida. |
| EQ-713 | Greenleaf Gauge | Brad Holton | 888-884-2843 | 8/18/2008 | Greenleaf Gauge Model EFG-8000 Overfill Protection | A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the State of Florida. |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-730 | Krueger Sentry Gauge | Lee Geurts | 920-434-8897 | 3/26/2009 | Krueger Therma Gauge and Overfill Alert Gauge | A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the State of Florida. The annual operability test shall be done in accordance of Exhibit A attached to the Final Order. |
| EQ-732 | Simplex, Inc. | David Hurtado | 386-690-6361 | 5/11/2009 | Simplex SST Controller | The use of the Pneumercator LS 600, LS 601, and RSU 800 approved under EQ-240 is acceptable to be used with this product. A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the State of Florida. |
| EQ-743 | Fozmula Limited | Chris Hands | UK +44(0)1926 466700 | 11/10/2009 | T/LL70 Float Switch and the T/LL 140 series sensor | A copy of this Order shall be distributed to any facility that uses this product. A copy of the annual operability test shall be given to any tank owner purchasing or using this system in the State of Florida. |
| EQ-780 | Preferred Utilities MFG. Corp. | Dexter Bullard | 203-743-6741 | 2/14/2012 | Tank Fil-A-Larm Switch Model SDI-HLS; Tank Gauge Model SDI-TG-EL-D5; Discriminating Sensor Models SDI-HD-A2-C & SDI-HD-A2-C-8 | Products are approved as either overfill protection or release detection devices associated with ASTs or USTs. Installation and operation shall be made in accordance with the manufacturer's recommendations. |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-783 | Preferred Utilities MFG. Corp. | Dexter Bullard | 203-743-6741 | 3/05/2012 | Tank Gauge Model SDI-TG-EL-D4A and [Discriminating Sensor Models SDI-HD-A2-C & SDI-HD-A2-C-8 (see EQ-780)] | All products are approved as either overfill protection or release detection devices associated with ASTs or USTs. Installation and operation shall be made in accordance with the manufacturer's recommendations. |
| EQ-805 | Fozmula Limited | Marty Hendrickx | 815-623-7326 or UK +44(0)1926 466700 | 4/03/2013 | Fozmula Limited T/LL350 Float Switch Fuel Level Sensor for ASTs | Installation and operation of the liquid level sensor shall be made in accordance with the manufacturer's procedures. Does not require recalibration to stored fuel type like EQ-743 - T/LL 140 series. |
| EQ-807 | Mott-Smith Consulting Group, LLC | Marshall Mott-Smith | 850-391-9835 | 4/18/2013 | Husky Corporation 007 product line; Jarhead product line; Leak Guard product line; Black Knight product line; Red Fox product line and Sentry product line for Aboveground Storage Tank Systems | Approved in the State of Florida as product level sensors that could provide high level information for overfill protection and for product inventory information for AST systems. Intended to be used with medium and heavy distillates and not intended for use with light distillates such as diesel fuel. The installation and operation shall be in accordance with the manufacturer's recommendations. |
| EQ-817 | FPI Sensors International | Gary Maas | 800-852-9984 | 1/13/2014 | FPI Sensors International Model Numbers: LD 1001 Generic Leak Detection System – LD FPI BB15; CL 1001 Generic Continuous Level 4-20 mA Sensor – LD FPI SP15; LS 1001 Generic Level Float Switch – LD FPI SP12 | Release detection sensors for monitoring secondary containment systems associated with USTs and ASTs and for an associated float switch associated with the sensors. EQ-817 covers overfill protection devices when connected to an operator alarm. |
| EQ-819 | Preferred Utilities MFG. Corp. | Dexter Bullard | 203-743-6741 | 3/24/2014 | Overfill Protection Devices: Liquid Level Switch, Model PLS and Overfill Models FA-AV and FA-AV-D3 | The installation and operation shall be in accordance with the manufacturer's recommendations. |
| EQ-831 | Component Specialists, Inc. | Marty Hendrickx | 815-623-7326 | 10/17/2014 | Fozmula Limited G/LL65 Liquid Level Contents Gauge, T/LL200 Series Liquid Level Sensor, G/LL64 Liquid Level Contents Gauge, and T/LL130 Liquid Level Sensor | Devices may be used as part of the overfill protection device so long as the product level information is provided to the product transfer operator. Department approval for inventory management purposes is not required. |

**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-832 | Advanced Control Technology, Inc. | John Tate | 877-800-8820 | 10/17/2014 | Advanced Control Technology, Inc. 10 Series Miniature Fluid Level Switches | Devices may be used as part of the overfill protection device so long as the product level information is provided to the product transfer operator. Department approval for inventory management purposes is not required. |
| EQ-840 | Emerson Process Management-Rosemount Tank Gauging Division | Carl-Johan Roos | +46-31-3370144 | 2/02/2015 | Emerson Process Management-Rosemount Tank Gauging System | The installation, operation, and maintenance procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-851 | Morrison Bros. Co. | Jerry Schollmeyer | 800-553-4840 | 10/23/2015 | Morrison Bros. Co. 2 inc and 3 inch Model 9095AA Series of Overfill Prevention Valves | The installation, operation, and maintenance procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-854 | Design By Initiative | Reid McLean | 404-996-1282 | 11/09/2015 | SMD Fluid Controls Fuelogic Model FS and Models FM Float Switches for Overfill Protection and Release | May be used as part of an overfill protection device or a release detection sensor for underground and aboveground storage tank systems. The installation, operation, and maintenance procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-858 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 12/07/2015 | Morrison Brothers Co. Model 9095X Series and Model 9095 SA Series Overfill Protection Valves | May be used as overfill protection devices for underground and aboveground storage tank systems The installation and maintenance of the overfill protection devices must be in accordance with the manufacturer's recommendations. |
| EQ-861 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 2/01/2016 | Morrison Brothers Co. Model 918DP Clock Gauge | The installation and maintenance of the clock gauge shall be made in accordance with the manufacturer's recommendations. |
| EQ-862 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 2/01/2016 | Morrison Brothers Co. Model 924 & 924S, 924LS, 925 & 925S Series Liquid Sensors | The installation and maintenance shall be made in accordance with the manufacturer's recommendations. |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-863 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 3/04/2016 | OPW SiteSentinel®Nano® Console Tank Gauge, Probes and Sensors | May be used as an automatic tank gauge, as an approved overfill protection device when equipped with an alarm, and as an interstitial release detection device for secondary containment systems for underground and aboveground storage tank systems. |
| EQ-867 | Solutions with Innovation, LLC | Thomas Williams | 203-729-6434 | 6/27/2016 | L170-0101-3002 and L007-0402-0203 Series Liquid Level Switches | For overfill protection, the switch will be set at a specified liquid level in the storage tank and an alarm will be provided to the transfer operator. For interstitial release detection, the switch will be placed on the low area of the secondary containment interstice that is being monitored that will alarm when liquid is detected. |
| EQ-868 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 12/16/2016 | Models 918SB, 918DB, and 918QB Series Alarms | May be used as a visible and audible alarm for overfill protection devices or release detection sensors for aboveground and underground storage tank systems, in accordance with the requirements of Chapter 62-761, and Chapter 62-762, F.A.C. |
| EQ-872 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 3/06/2017 | Models 1218C Console & 1218S Sensor | Follow manufacturer's instructions. |
| EQ-873 | Morrison Brothers Co. | Jerry Schollmeyer | 800-553-4840 | 4/26/2017 | Model 818 Series Clock Gauges | To be used for overfill protection, the Model 818 Series gauges must be visible and facing the product transfer operator, it must be clearly marked at 90% capacity and cannot be filled over that amount. All overfill protection devices require annual operability test. Follow manufacturer's instructions. |
| EQ-877 | Veeder-Root | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 5/19/2017 | Veeder-Root Overfill Alarm and Acknowledgement Switch | The installation and maintenance shall be in accordance with the manufacturer's recommendation. Registered for UST or AST overfill protection. |

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**AST/ Overfill Protection (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-878 | Endress+Hauser | Gene Henry | 888-363-7377 | 8/01/2017 | Endress+Hauser Overfill Prevention System - Models SOPX00. | The installation and maintenance shall be in accordance with the manufacturer's recommendation. Registered for AST overfill protection. Meets API 2350 requirements. |

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**Dispenser Sumps (Liners)/ Installed as a part of Integral Piping, Upgrade, or Repair**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-001 | Pope & Associates | Gene Pope | 813-969-1900 | 4/21/1991 | Formex | |
| EQ-012 | ECC & Associates | Mark Stommel | 407-328-8719 | 5/21/1991 | ULC-2000 | |
| EQ-032 | Eastern Piping Containment | Mark Stommel | 407-328-8719 | 6/19/1991 | MPD Dispenser | |
| EQ-038 | Environmental Protection Products | Frank Marchica | 516-756-7267 | 9/05/1991 | EPP Dispenser | |
| EQ-045 | S. Bravo Systems, Inc. | Don Mukai | 323-888-4123 | 9/17/1991 | B-200 | |
| EQ-102 | Amoco Oil Company | T. Tompkins | 305-938-2735 | 12/08/1992 | Dispenser Liner | |
| EQ-108 | Western Fiberglass, Inc. | Rick Lewis | 800-688-3375 | 12/22/1992 | Dispenser Liner and Sump System | |
| EQ-115 | Unit Liner Company | Alan Buck | 405-275-4600 | 3/10/1993 | Unit Liner | |
| EQ-120 | Riverside Steel, Inc. | George Badu | 216-856-5299 | 4/13/1993 | Dispenser Sump | |
| EQ-122 | Total Containment, Inc. | Tony Adamson | 610-666-2170 | 3/26/1993 | TCI Dispenser Sump | |
| EQ-132 | Smith Fiberglass, Inc. | Bill Pierpont | 813-784-9607 | 6/10/1993 | Smith Dispenser Sump | |
| EQ-133 | Containment Technology, Inc. | Gene Pope | 813-969-1900 | 6/09/1993 | Containment Technology Dispenser Liner | |
| EQ-184 | Promax, Inc. | Doug Mills | 302-324-9812 | 12/22/1994 | Promax Dispenser Liner Sump | |
| EQ-203 | Petroleum Containment, Inc. | R.W. Arn | 904-786-1800 | 5/12/1995 | Containment Dispenser Sump, and Containment Sump | |
| EQ-209 | Pipeline Energy (Formerly C.T. Petroleum Contractors, Inc.) | Chuck Strickland | 386-292-2306 | 6/26/1995 | Retro-Liner Dispenser System | |

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**Dispenser Sumps (Liners)/ Installed as a part of Integral Piping, Upgrade, or Repair (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-210 | MPC Containment System, Ltd. | Dean Fleasas | 800-621-0146 | 7/03/1995 | Spillgard Dispenser | |
| EQ-260 | Amoco Corporation | David Killingsworth | 954-938-2735 | 7/18/1996 | Amoco Pour In Place Dispenser Liner System | |
| EQ-283 | Royal Petroleum, Inc. | James Page | 407-723-8424 | 5/07/1997 | Flamemaster Pour In Place Dispenser Liner system | Used on existing system **only** |
| EQ-296 | Petro Fiberglass, Inc. | Bill Tobias | 800-255-4783 | 9/23/1997 | Sump and Dispenser Liners | |
| EQ-308 | S. Bravo Systems, Inc. | Don Mukai | 323-888-4133 | 1/12/1998 | B-8000 Dispenser Liner | |
| EQ-318 | OPW | Gene Pope | 813-969-1900 | 2/17/1998 | OPW Flexworks TSS, TSM, TSD, PST, and PSL Sumps, and DS Series Dispenser Liners | |
| EQ-326 | Larry's Pump Service | Larry Jackson | 850-575-6775 | 8/05/1998 | Red-Kote Dispenser Liner | Used on existing system **only** |
| EQ-331 | Monte petroleum contractors, Inc. | Gasper Monte | 813-223-6938 | 8/20/1998 | Grouted Sumps Dispenser Liner | |
| EQ-353 | J & J Equipment Company | Joe Mattingly | 850-584-6555 | 12/17/1998 | Custom Liners | |
| EQ-364 | S. Bravo Systems, Inc. | Don Makai | 323-888-4123 | 3/02/1999 | B8600 Aboveground Dispenser Containment | Dispenser Liner For Shop-Fabricated AST |
| EQ-368 | OPW | Gene Pope | 813-969-1900 | 3/10/1999 | OPW Flexworks Fiberglass Dispenser Sump | |
| EQ-423 | Advanced Polymer Technology | Gary Saltz | 608-838-8786 | 1/21/2000 | PT Dispenser Liner | |
| EQ-436 | PWH Equipment and Services Co., Inc. | Josh Pryor | 813-621-2077 | 5/08/2000 | Aboveground dispenser Containment | Dispenser Liner For Shop-Fabricated AST |
| EQ-437 | Fairfield Industries, Inc. | Mark Sisco | 973-228-3448 | 5/08/2000 | Fairfield Industry Model DP | Dispenser Liner For Shop-Fabricated AST |

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**Dispenser Sumps (Liners)/ Installed as a part of Integral Piping, Upgrade, or Repair (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-439 | OPW (Formerly Environ Products, Inc.) | Gene Pope | 813-969-1900 | 6/06/2000 | Dispenser Sump Liner<br>FDS Models FDS-1512, 2014, 2414, 2417, 2717, 2816, 2922, 3210, 3215, 3621, 4021, 4422, 4319, 4614, 4714, 4715, 4721, 5922, BPF-7424-W, BPF-7424-T | |
| EQ-440 | Fab-Seal Industrial Liners, Inc. | Michael Nichols | 800-874-0166 | 6/06/2000 | Fab-Seal Sump Liner | Approved as a piping sump, a dispenser liner, or for repairs to existing piping sumps or dispenser liners for USTs |
| EQ-444 | S. Bravo Systems, Inc. | Don Makai | 323-888-4133 | 3/02/1999 | B-4000 Fiberglass Dispenser Liner | |
| EQ-578 | Fiberlite Composites Ltd. | Joanne Westwood | United Kingdom 44(0)1755-779773 | 2/17/2004 | FRP turbine tank sump systems with manhole cover Part #s S8CR-336, S8CR-390, S8CR/390/SEAL (seal between corbel & skirt), S8SB-336, S8SB-390, S8SB-390/SEAL (seal between corbel & skirt), FRP fill tank sump systems with manhole cover and structural platform Part no.'s S8CR-336/SS8CR-390/S, S8CR-390/SEAL/S (seal between corbel & skirt), S8SB-336/S, S8SB-390/SS8SB-390/SEAL/S (seal between corbel & skirt), and FRP Under Pump Sump Part no. EL46-26 | |

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**Dispenser Sumps (Liners)/ Installed as a part of Integral Piping, Upgrade, or Repair (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-580 | Petro Technick, Inc. | Ira Sands | 201-871-7300 | 3/08/2004 | DC4830SB Petro Tite PE Tank Sump, DS2111 Petro Tite PE Sump, DS2416 Petro Tite PE Sump, DS3017 Petro Tite PE Sump, DS3617 Petro Tite PE Sump, DS4111 Petro Tite PE Sump, and DS4417 Petro Tite PE Sump | |
| EQ-612 | Franklin Fueling Systems (Formerly Phil –Tite Enterprises) | Gary Saltz | 608-838-8786 | 6/17/2005 | Phil-Tite Under Dispenser Sumps | |
| EQ-615 | S. Bravo Systems, Inc. | Don Mukai | 323-888-4133 | 9/12/2005 | B9000 Series Single Wall Under Dispenser Containment Sumps, B4000 Series Double Wall Under Dispenser Containment Sumps, B8000 Series Double Wall Under Dispenser Containment Sumps, B8500 Series Double UDC Sumps, B9000 Double Wall Under Dispenser Containment Sumps | |
| EQ-627 | Painted Rhino (Formerly National Environmental Fiberglass LLC) | Ryan Franklin | 951-656-5524 | 1/10/2006 Updated 4/28/2017 | NEF Single Wall and Double Wall Sumps and Dispenser Sumps, UL File Number MH30126 | The initial testing is done in accordance with Exhibit A. |
| EQ-631 | Advanced Containment, L.L.C. | Gary DiMaggio II | 661-637-2117 | 1/30/2006 | Advanced Containment Single Wall and Double Wall Sumps and Dispenser Sumps, UL File Numbers MH45027, and MH45028 | The initial testing is done in accordance with Exhibit A. |

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**Dispenser Sumps (Liners)/ Installed as a part of Integral Piping, Upgrade, or Repair (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-580 | Petro Technick, Inc. | Ira Sands | 201-871-7300 | 3/08/2004 | DC4830SB Petro Tite PE Tank Sump, DS2111 Petro Tite PE Sump, DS2416 Petro Tite PE Sump, DS3017 Petro Tite PE Sump, DS3617 Petro Tite PE Sump, DS4111 Petro Tite PE Sump, and DS4417 Petro Tite PE Sump | |
| EQ-612 | Franklin Fueling Systems (Formerly Phil –Tite Enterprises) | Gary Saltz | 608-838-8786 | 6/17/2005 | Phil-Tite Under Dispenser Sumps | |
| EQ-615 | S. Bravo Systems, Inc. | Don Mukai | 323-888-4133 | 9/12/2005 | B9000 Series Single Wall Under Dispenser Containment Sumps, B4000 Series Double Wall Under Dispenser Containment Sumps, B8000 Series Double Wall Under Dispenser Containment Sumps, B8500 Series Double UDC Sumps, B9000 Double Wall Under Dispenser Containment Sumps | |
| EQ-627 | National Environmental Fiberglass, L.L.C. | Marty Roelle | 760-246-0648 | 1/10/2006 | NEF Single Wall and Double Wall Sumps and Dispenser Sumps, UL File Number MH30126 | The initial testing is done in accordance with Exhibit A. |
| EQ-631 | Advanced Containment, L.L.C. | Gary DiMaggio II | 661-637-2117 | 1/30/2006 | Advanced Containment Single Wall and Double Wall Sumps and Dispenser Sumps, UL File Numbers MH45027, and MH45028 | The initial testing is done in accordance with Exhibit A. |
| EQ-653 | Western Fiberglass, Inc. | Michael Lewis | 707-523-2050 | 10/25/2006 | Western Fiberglass Double Wall Sumps and Dispenser Sumps, UL File Numbers MH19409 | |
| EQ-727 | S. Bravo Systems, Inc. | Don Mukai | 323-888-4133 | 1/22/2009 | Bravo Deep Dispenser Containment B 7000 Revolution Series, UL File No. MH 29867 | Approved in the State of Florida provided that the initial testing is done in accordance with Exhibit A. |

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**Dispenser Sumps (Liners)/ Installed as a part of Integral Piping, Upgrade, or Repair (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-742 | Diversified Products Manufacturing, Inc. | John Rowe | 530-534-3966 | 10/14/2009 | Diversified Super sumps Model Numbers, SU RSP55, SU RSP35, and SU RSF | Approved in the State of Florida provided that the initial testing is done in accordance with Exhibit A. (See EQ-801 for approval of smaller sump). |
| EQ-776 | Mott-Smith Consulting Group, LLC | Marshall Mott-Smith | 850-391-9835 | 8/24/2011 | Fibrelite Composites, Ltd., Fiberglass Sump Systems, Model Numbers: S45-1180; EL-G-E500; EL-G-LEG; S8CRD-390/WT; S8CRD-3100/MP/WSP-16-5; S8CRD-3100-OF/WSP-8-5; S/42-3100/MP16/SR-EXT/7-11; & S/42-3100/OF8/SR-EXT/7-11 | The installation of the sumps shall be made in accordance with the manufacturer's recommendations. A structural integrity test that is in accordance with the manufacturer's recommendations shall be conducted and passed before the sump is placed into operation. |
| EQ-786 | Franklin Fueling Systems | Sandra Adams | 608-838-5668 | 5/03/2012 | Two Piece Containment Sump, Model Number DHW-786 | May be installed and used as piping sumps or dispenser liners associated with USTs and ASTs. |
| EQ-797 | Franklin Fueling Systems | Sandra Adams | 608-838-5668 | 11/28/2012 | Franklin Fueling Systems Dispenser Sumps Model Numbers DS3915-2 and DS3617 | The installation shall be in accordance with the manufacturer's recommendations. |
| EQ-801 | Diversified Products Manufacturing, Inc. | John Rowe | 530-534-3966 | 2/7/2013 | Diversified Products Manufacturing, Inc. Resin Transfer Molded Fiberglass Transition Sump (24 x 24 inches) | Previously approved under EQ-742 in a larger size. |

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**Dispenser Sumps (Liners)/ Installed as a part of Integral Piping, Upgrade, or Repair (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-806 | Icon Containment Solutions, LLC | Paul Reber | 855-379-7867 | 4/10/2013 | ForTex & RigidFlex sump entry fittings, Sikaflex-1a sealant, FastFill (169olyuria) sealant and PetroSeal sealant | Approved in the State of Florida as entry fittings and sealants for the integral piping penetrations of the sump walls associated with USTs and ASTs. The installation and repair shall be made in accordance with the manufacturer's recommendations. |
| EQ-823 | Morrison Bros. Co. | Kelly Briant | 800-553-4840 | 4/04/2014 | Model 434 Dispenser Pedestal for Aboveground Storage Tank Systems | The surface installation and testing procedures for the dispenser pedestal shall be made in accordance with the manufacturer's recommendations. |
| EQ-827 | Diamond Z Engineering | Jason Stapp | 800-282-7286 | 8/15/2014 | S. Bravo Systems Model B-1000 / B-1000-E Series Fiberglass Containment Sump | Installation and integrity testing procedures shall be made by a Bravo certified installer in accordance with the manufacturer's recommendations. |
| EQ-828 | Franklin Fueling Systems | Sandra Adams | 608-838-5668 | 9/19/2014 | Franklin Fueling Systems APT Sump Model AST-2922 | Installed as a dispenser sump or a transition sump associated with aboveground storage tank systems. Installation and integrity testing procedures for the Franklin Fueling Systems APT Sump Model AST-2922 shall be made in accordance with the manufacturer's recommendations. |
| EQ-870 | Emco Wheaton | Wayne Boyd | 252-243-8261 ewb@emcoretail.com | 1/24/2017 | Emco Wheaton A0718 Aboveground Dispenser Sump | The Emco A0718 dispenser sumps are used for above ground and marina applications where mounting and secondary containment are required for a fuel dispenser. The sump should only be used with the designated dispenser to insure proper fit and mounting security. |

**Sump Liners/ Installed as a part of Integral Piping, Upgrade, or Repair**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-108 | Western Fiberglass, Inc. | Rick Lewis | 800-688-3375 | 12/22/1992 | Dispense Liner and Sump System | |
| EQ-203 | Petroleum Containment, Inc. | R.W. Arn | 904-786-1800 | 5/12/1995 | Containment Dispenser Sump, and Containment Sump | |
| EQ-295 | Total Containment, Inc. | Tony Adamson | 610-666-2170 | 9/22/1997 | Super sump Liner | Used on existing system **only** |
| EQ-296 | Petro Fiberglass, Inc. | Bill Tobias | 800-255-4783 | 9/23/1997 | Sump and Dispenser Liners | |
| EQ-318 | OPW Fueling Management Systems | Gene Pope | 813-969-1900 | 2/17/1998 | TSS, TSD, and PSL Sumps, and DS Series Dispenser Liners | |
| EQ-334 | Pope & Associates, Inc. | Gene Pope | 813-969-1900 | 9/08/1998 | Xerxes Corporation sump liner for retrofitting piping sumps | |
| EQ-340 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 11/02/1998 | Red Jacket Unisump | |
| EQ-368 | OPW | Gene Pope | 813-969-1900 | 3/10/1999 | OPW Flexworks Fiberglass Tank Sump | |
| EQ-395 | Containment Solution, Inc. | Kevin Soeder | 936-756-7731 | 8/31/1999 | Containment Solution Turbine Enclosures, Models WTE and STE | |
| EQ-397 | Xerxes Corporation | Gene Pope | 813-969-1900 | 9/07/1999 | Xerxes Attached Collar Model AC, and Watertight Riser Assembly Sump Model ACR-WT | |
| EQ-423 | Franklin Fueling Systems (Formerly, Advanced Polymer Technology) | Sandra Adams | 608-838-5668 | 1/21/2000 | APT Sump Liner; TSD-W-4736 and TSM-4736 APT Sumps | |
| EQ-440 | Fab-Seal Industrial Liners, Inc. | Michael Nichols | 800-874-0166 | 6/06/2000 | Fab-Seal Sump Liner | Approved as a piping sump, a dispenser liner, or for repairs to existing piping sumps or dispenser liners for USTs |

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**Sump Liners/ Installed as a part of Integral Piping, Upgrade, or Repair (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-459 | OPW (Formerly Environ Products, Inc.) | Gene Pope | 813-969-1900 | 10/12/2000 | OPW Flexworks Collar Mount Tank Sumps Models DBS-3642F, DBS-4242F,, FSC-4200, and Flat Bottom Tank Sumps Models DBS-3642FB, DBS-4242FB | |
| EQ-540 | OPW (Formerly Environ Products, Inc.) | Gene Pope | 813-969-1900 | 8/29/2002 | OPW Flexworks Tank Sumps Model Numbers SBS-3642H & 4242H, MBS-3645H & 4245H, DBS-3645H, 4245H & 4248H, EBS-3042H, 3645H, 4245H, 4248H and Dispenser Sumps Model Numbers SDS, DDS, EDS, SDP, DDP -1512, 2014, 2414, 2417, 2717, 2816, 2922, 3210, 3215, 3621, 4021, 4422, 4319, 4614, 4714, 4715, 4721, 5922, BPS-7424-W, BPS-7424-T | The Department's previous approval EQ-029, dated June 20, 1991, is no longer in effect. |
| EQ-578 | Fiberlite Composites Ltd. | Joanne Westwood | United Kingdom 44(0)1755-779773 | 2/17/2004 | FRP turbine tank sump systems with manhole cover part #s S8CR-336, S8CR-390, S8CR/390/SEAL (seal between corbel & skirt), S8SB-336, S8SB-390, S8SB-390/SEAL (seal between corbel & skirt), FRP fill tank sump systems with manhole cover and structural platform Part no.'s S8CR-336/SS8CR-390/S, S8CR-390/SEAL/S (seal between corbel & skirt), S8SB-336/S, S8SB-390/SS8SB-390/SEAL/S (seal between corbel & skirt), and FRP Under Pump Sump Part no. EL46-26 | |

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**Sump Liners/ Installed as a part of Integral Piping, Upgrade, or Repair (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-580 | Petro Technick, Inc. | Ira Sands | 201-871-7300 | 3/08/2004 | DC4830SB Petro Tite PE Tank Sump, DS2111 Petro Tite PE Sump, DS2416 Petro Tite PE Sump, DS3017 Petro Tite PE Sump, DS3617 Petro Tite PE Sump, DS4111 Petro Tite PE Sump, and DS4417 Petro Tite PE Sump | |
| EQ-605 | OPW (Formerly Environ Products, Inc.) | Gene Pope | 813-969-1900 | 12/21/2004 | OPW Flexworks JBS-2422, IPS-3838, PTS-3848, PTS-2922, and PTS4021 Sump | |
| EQ-612 | Franklin Fueling Systems (Formerly Phil –Tite Enterprises) | Gary Saltz | 608-838-8786 | 6/17/2005 | Phil-Tite UST Sumps | |
| EQ-615 | S. Bravo Systems, Inc. | Don Mukai | 323-888-41330 | 9/12/2005 | B400 Series Single Wall Sumps, B500 Series Single Wall Transition Sumps, B600 Series Single Wall Vent Transition Sumps, B400 Series Double Wall Tank Sumps, B500 Series Double Wall Vent Transition Sumps, B600 Series Double Wall Vent Transition Sumps, B4000 Series Double Wall Under Dispenser Containment Sumps, B8500 Series Double Vent Transition Combination Sumps | |
| EQ-627 | National Environmental Fiberglass, L.L.C. | Marty Roelle | 760-246-0648 | 1/10/2006 | NEF Single Wall and Double Wall Sumps and Dispenser Sumps, UL File Number MH30126 | The initial testing is done in accordance with Exhibit A. |
| EQ-631 | Advanced Containment, L.L.C. | Gary DiMaggio II | 661-637-2117 | 1/30/2006 | Advanced Containment Single Wall and Double Wall Sumps and Dispenser Sumps, UL File Numbers MH45027, and MH45028 | The initial testing is done in accordance with Exhibit A. |
| EQ-653 | Western Fiberglass, Inc. | Michael Lewis | 707-523-2050 | 10/25/2006 | Western Fiberglass Double Wall Sumps and Dispenser Sumps, UL File Numbers MH19409 | |
| EQ-664 | Franklin Fueling Systems (Beaudreau Electric, Inc.) | Sandy Adams | 608-838-5668 | 3/16/2007 | BEI OneSump System | |

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**Sump Liners/ Installed as a part of Integral Piping, Upgrade, or Repair (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-680 | Containment Solutions | Kevin Soeder | 936-756-7731 | 7/19/2007 | Containment Solutions Double Wall Sumps Models DW-PTS and DW-RTS Series, UL File Number MH29555 | Containment Solutions Double Wall Sumps Models DW-PTS and DW-RTS Series, UL File Number MH29555as piping sumps for underground storage tanks is approved in the State of Florida provided that the initial testing is done in accordance with Exhibit A. |
| EQ-687 | Xerxes Corporation | Gene Pope | 813-969-1900 | 10/23/2007 | Xerxes Single & Double Wall Sumps Series, UL File Number MH9061 | Approved in the State of Florida provided that the initial testing is done in accordance with Exhibit A. |
| EQ-727 | S. Bravo Systems, Inc. | Don Mukai | 323-888-4123 | 1/22/2009 | Bravo Deep Dispenser Containment B 7000 Revolution Series, UL File No. MH 29867 | Approved in the State of Florida provided that the initial testing is done in accordance with Exhibit A. |
| EQ-759 | S. Bravo Systems, Inc. | Don Mukai | 323-888-4123 | 11/17/2010 | Bravo Systems B-700 Series Fiberglass Transition Sumps, Model #s: B-700-FS, B-700-FL, B-700-PS, B-710-FS, B-710-FL, B-710-PS, B-710-PL, B-750-FS, B-750-FL, B-760-FS, and B-760-FL; UL File no. MH26018 | Approved in the State of Florida provided that the initial testing is done in accordance with Exhibit A. |
| EQ-774 | Double Wall Retrofit Systems, Inc. (DSRI) | Scott Sharp | 513-684-0040 | 8/10/2011 | Double Wall Retrofit Systems, Inc. Sump Repair System | Conditional Approval |

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**Sump Liners/ Installed as a part of Integral Piping, Upgrade, or Repair (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-776 | Mott-Smith Consulting Group, LLC | Marshall Mott-Smith | 850-391-9835 | 8/24/2011 | Fibrelite Composites, Ltd., Fiberglass Sump Systems, Model Numbers: S45-1180; EL-G-E500; EL-G-LEG; S8CRD-390/WT; S8CRD-3100/MP/WSP-16-5; S8CRD-3100-OF/WSP-8-5; S/42-3100/MP16/SR-EXT/7-11; & S/42-3100/OF8/SR-EXT/7-11 | The installation of the sumps shall be made in accordance with the manufacturer's recommendations. A structural integrity test that is in accordance with the manufacturer's recommendations shall be conducted and passed before the sump is placed into operation. |
| EQ-786 | Franklin Fueling Systems | Sandra Adams | 608-838-5668 | 5/03/2012 | Two Piece Containment Sump, Model Number DHW-786 | May be installed and used as piping sumps or dispenser liners associated with USTs and ASTs. |
| EQ-806 | Icon Containment Solutions, LLC | Paul Reber | 855-379-7867 | 4/10/2013 | ForTex & RigidFlex sump entry fittings, Sikaflex-1a sealant, FastFill (polyurea) sealant and PetroSeal sealant | Approved in the State of Florida as entry fittings and sealants for the integral piping penetrations of the sump walls associated with USTs and ASTs. The installation and repair shall be made in accordance with the manufacturer's recommendations. |
| EQ-836 | Mott-Smith Consulting Group | Marshall Mott-Smith | 850-391-9835 | 1/05/2015 | Diversified Products Manufacturing, Inc. Watertight Tank Sump Retrofit Lid Kit (Model SU TSLF and SU TSAR) and Associated Pump Penetration and Repair Fittings | The repair procedures shall be made in accordance with the manufacturer's recommendations. |

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**Sump Liners/ Installed as a part of Integral Piping, Upgrade, or Repair (Continued)**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-839 | Franklin Fueling Systems | Sandra Adams | 608-838-5668 | 2/2/2015 | APT Sump Models TSD-W-4736 and TSM 4736 | The installation, operation, and maintenance procedures shall be made in accordance with the manufacturer's recommendations. |
| EQ-844 | Franklin Fueling Systems | Sandra Adams | 608-838-5668 | 5/27/2015 | Fiberglass Turbine Sump Models TM4236-0/0-XX-X, TM4836-0/0-XX-X, TMA4236-0/0-XX-X, TMA4836-0/0-XX-X, TS4236-0/0-XX-X, TD4236-0/0-XX-X, TD4836-0/0-XX-X, TDA4236-0/0-XX-X, and TDA-4836-0/0-XX-X | The X's indicate model variables for each of the main type sump and an explanation of the model code is found in Attachment 2 "EQ844 Model Number Reference Chart". The Models are underground single-walled or double-walled turbine sumps that are associated with underground storage tank systems. |
| EQ-820 | S. Bravo Systems, Inc. | Micah Nelson | 800-282-7286<br>323-888-4133 | 3/24/2014 | S. Bravo Systems Entry Fittings and Entry Fitting Retrofits for Fiberglass Sumps: F Series Retrofit-S Fittings | The fittings may be used to provide piping access through piping sumps and dispenser liners associated with underground and aboveground storage tanks. |
| EQ-864 | S. Bravo Systems, Inc. | Jonathan Smith | 800-282-7286<br>323-888-4133 | 5/10/2016 | S. Bravo Systems, Inc. Direct Replacement – Bolted Fittings and Direct Replacement – Thread on Penetration Fittings | The fittings may be used to provide piping access through piping sumps and dispenser liners associated with underground and aboveground storage tanks. |

**Hydrant Pits**

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-545 | Dabico, Inc. | Dan Foster | 714-545-7900 | 11/21/2002 | Dabico Hydrant Fueling System Pits | Approved as secondary containment for airport and seaport hydrant piping. |

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## Miscellaneous

### A. Foam

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Conditions |
|---|---|---|---|---|---|---|
| EQ-293 | Petro Fill, Inc. | Mike Dugger | 803-871-6124 | 9/23/1997 | Petro-Fill | Conditional Approval |
| EQ-328 | PolyMasters, Inc. | Steve Sayers | 423-966-3005 | 7/31/1998 | PolyMaster | Conditional Approval |
| EQ-445 | Thermal Corporation of America | Jim Brau | 888-385-3626 | 8/16/2000 | Thermco insulation Foam | Conditional Approval |
| EQ-505 | The Perma Fill Corporation | Scott Sanders | 800-755-2097 | 9/28/2001 | Perma-Fill Foam | Conditional Approval |
| EQ-591 | C.P. Chemical, Inc. | Walter Hasselman | 914-428-2517 | 7/16/2004 | Tripolymer® 105-TM Tank Media Foam | Conditional Approval |
| EQ-672 | cfiFoam, inc. | Richard Porter | 865-588-4464 | 5/02/2007 | Tank Foam | Conditional Approval |

### B. Inventory

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-152 | Miami Software Corporation | Annelie Piccioni | 305-242-6264 | 12/16/1993 | Miami Software | Inventory Reconciliation for gas station |

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## C. Pump & Accessories

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-288 | Amoco Corporation | David Killingsworth | 954-938-2735 | 7/01/1997 | Amoco Submercible Pump Containment | |

## D. Flex Connector Cover Material

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-330 | Jack Pittman & Associates | Bill Tobias | 800-255-4783 | 7/31/1998 | Austin Engineering Zip Boot | |
| EQ-340 | Red Jacket Pumps | Chad Oberman | 800-262-7539 | 11/02/1998 | Red Jacket Unisump | |
| EQ-346 | 3M | Sales Department | 407-855-7100 | 11/02/1998 | FP-301 and EPS-300 flexible polyolefin heat shrink tubing, and the 8440 Series silicone rubber Cold Shrink Tubes | The heat source for shrinking the FP-301 and EPS-300 flexible polyefin heat shrink tubing shall not be used in situ, and the heat shrinking process for the FP-301 and EPS-300 products shall only be applied when the flex connectors are away from flammable and combustible products or vapor conditions. |
| EQ-369 | OPW (Formerly Environ Products, Inc.) | Gene Pope | 813-969-1900 | 3/10/1999 | Environ Isolation Tube | |

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## E. Monitoring Well Accessories

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-204 | Dickey Manufacturing Company | James Hawkins | 708-584-2918 | 5/12/1995 | The Dickey Globe Seals and The Dickey Premier Car Seals(MW Seals) | |
| EQ-230 | Enviro Design Products, Inc. | Bill Watts | 800-422-9355 | 11/15/1995 | EX-CAP | Monitoring Well Cap |

## F. Aboveground Valve Cover

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-402 | Environmental Protection Services | Robert Haddox | 281-362-0022 | 11/05/1999 | EPS Valve Shield | |
| EQ-405 | CMS Engineering, Inc. | David Schultz | 813-247-6112 | 11/17/1999 | CMS Valve Containment | |

## G. Internal Inspection

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-418 | Tank Tech, Inc. | Bud Mattox | 800-871-4008 | 1/14/2000 | Tank Tech Scope™ Inspection Method | Approved as an equivalent method to internal inspection of internally lined underground storage tanks in accordance NLPA 631, Chapter B. |

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## H. Overfill Retention

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-517 | Eco-Tank Systems, LLC | Greg Ludwig | 610-495-9583 | 2/26/2002 | Tank Shell Monitoring System GTÜ-TABS | The System is approved for aboveground storage tank overfill retention and tank shell monitoring in the State of Florida provided the tank is equipped with an approved overfill detection device. |
| EQ-659 | Industrial Maintenance Group, Inc. | Peter Van Fossem | 813-659-3512 | 2/07/2007 | TRAPS System | Conditional Approval |
| EQ-699 | Eco-Tank Systems, LLC | Greg Ludwig | 610-495-9583 | 1/29/2008 | Eco-Tank Systems TABS 02 | Conditional Approval |
| EQ-738 | Eco-Tank Systems, LLC | Greg Ludwig | 610-495-9583 | 8/11/2009 | Eco-Tank TABS-C, TABS-CF & TABS-F Systems | Conditional Approval |
| EQ-739 | Chevron Corporation | Rick Garrett | 813-805-941 | 9/15/2009 | Concrete Alternative Dike-field Containment System | Conditional Approval |

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## I. Hydrostatic Testing

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-600 | Enhanced Leak Detection, Inc. | Dan McGill | 714-523-0194 | 11/17/2004 | Hydro-Tite Test | Approved as a Hydrostatic test for underground dispenser and piping sump. |
| EQ-628 | Veeder-Root Company | Tech Support<br>Customer Svc | 800-323-1799<br>888-561-7942 | 1/17/2006 | Veeder Root Mag Sensor Hydrostatic Test, and Secondary Containment Vacuum Sensing System | Conditional Approval |
| EQ-670 | Praxair Services, Inc. | Randy Golding | 520-888-9400 | 4/30/2007 | Praxair Pressure/Vacuum Decay Containment Testing Method | Approved as a containment integrity test for single-walled underground dispenser and piping sumps in the State of Florida. |

## J. Double-Walled UST System Tightness Testing

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-635 | Praxair Services, Inc. | Randy Golding | 520-888-9400 | 3/28/2006 | Tracer Tight© Method for tightness testing of double-walled underground tanks and integral small diameter double-walled piping | Approved as a tightness test for double-walled underground tanks and double-walled underground small diameter piping (excluding piping sumps and dispenser liners) before the tank system is placed into service in the State of Florida. |

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## K. AST Cathodic Protection Systems

| File No. | Company Name | Contact | Telephone | Approval Date | Product's Name | Condition(s) |
|---|---|---|---|---|---|---|
| EQ-813 | Northern Technologies International Corporation | Customer Service techsupport@zerust.com | 763-404-8701 763-404-8702 | 9/13/2013 | Northern Technologies International Corporation Zerust® Oil & Gas - ReCAST-SSB System | Approved as a corrosion inhibitor system. The application system shall be designed by a corrosion professional. The installation, testing and operation shall be made in accordance with manufacturer's recommendations. |

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# ITEM 23 10 00 FUEL PIPING AND PUMPS

## SCOPE OF SERVICES OVERVIEW

The work to be performed under this Section consists of fabrication and installation of all piping, valves, pumps and motors, and related appurtenances as part of the Fuel Farm Project. The material and equipment shall be fully compatible for outdoor use with an exterior aviation services, self-serve Fuel Farm, and with Industry Standards for AVGAS and Jet-A fuel systems.

Replacement of the fuel farm piping and pump shall be performed in conjunction with the replacement of the single 10K gallon AVGAS tank and dispenser system, (Section FF-101), Jet A Filter Tank, Jet A Static Relaxation Tank and other related equipment. The Design/Build Delivery Team shall submit a comprehensive phasing plan detailing the sequence and duration of all work. Refer to Section FF-101, and other technical specifications of this Project Manual.

All references to “Contractor,” “Bidder,“ or “Proposer” within the Bidding Documents shall refer to the responsible party submitting a Bid for this project.

## SITE INFORMATION

This project is sited within an existing General Aviation Airport Fuel Farm area located on the Wauchula Municipal airport. The Contractor shall demolish and legally dispose of the existing tank and equipment in accordance with local, State, and Federal laws. Coordinate any necessary operational interruptions with the Airport at least 72 hours in advance, detailing anticipated duration in order for the airport to issue NOTAMs.

## FUEL FARM

### A. SCOPE OF WORK

1. Demolish existing 10K gallon Avgas tank, maintenance catwalks, ladders, platforms, dispenser piping, valves, pump and motor, and all related appurtenances.

2. Design and Construct new electronic self-service pay station and dispenser system to serve the proposed new tanks.

3. Design and Construction one (1) each new double wall 12,000 gallon AVGAS fuel farm tank with all equipment and appurtenances necessary as a turnkey operation.

4. Design and Construction one (1) each new double wall 12,000 gallon Jet-A fuel farm tank with all equipment and appurtenances necessary as a turnkey operation.

### B. QUALITY ASSURANCE - MATERIALS AND EQUIPMENT

1. All materials, equipment, and assemblies shall be manufactured, fabricated, installed, and assembled by entities specializing in the manufacture, fabrication, and assembly of aviation fueling systems, with a minimum of ten (10) years of documented experience.

2. Detailed shop drawings, certifications, and other manufacturer's information shall be submitted to the Engineer for review. The submittal shall include a certification by the design/build fabricator/installer that the submitted items conform to the requirements of these specifications. Submit only enough information to clearly describe the item to be furnished, generally not more than one or two pages for each item.

## C. QUALIFICATIONS OF CONTRACTOR, FUELING EQUIPMENT INSTALLER, AND PERSONNEL

1. The Contractor shall be a qualified Aviation Fueling Contractor and/or Aviation Fueling Equipment Fabricator, having not less than five (5) years' experience in aviation fueling fabrication and/or installations. Aviation fueling systems are defined as Avgas and Jet-A fuel storage and dispensing tanks and equipment. During bidding, the Contractor shall provide a list of five (5) previous aviation fuel system customers along with the associated airport location, contact names and telephone numbers. Additionally, the Contractor shall be a Pollutant Storage System Contractor licensed/registered with the Florida Department of Business and Professional Regulation.

## D. GOVERNING STANDARDS

1. Unless otherwise noted, equipment and installation necessary to accomplish the work specified herein shall be consistent with the latest editions of applicable federal, state, and local codes, rules, and regulations regarding fuel storage, transfer, and dispensing systems, including but not limited to the following:

   a. 40 CFR Part 112 Oil Pollution Prevention (SPCC rule)

   b. Florida Administrative Code, Chapter 62-762, Aboveground Storage Tank Systems

   c. National Fire Protection Association (NFPA)

      1) NFPA 30, Flammable and Combustible Liquids Code
      2) NFPA 70, National Electric Code (NEC)
      3) NFPA 407, Standard for Aircraft Fuel Servicing
      4) NFPA 780, Standard for the installation of lightning Protection Systems.

   d. Air Transport Association (ATA) Specification No. 103 - Standards for Jet Fuel Quality Control at Airports.

   e. Energy Institute Standard 1541, Requirements for Internal Protective Coating Systems Used in Aviation Fuel Handling Systems

   f. All work specified herein shall conform to or exceed the requirements of the above-referenced codes, rules, and regulations; provided that whenever the provisions of said publications are in conflict with the requirements specified herein, the more stringent requirement shall apply.

2. Where governing standards listed above reference industry standards, the following standards shall be followed as applicable:

   a. Petroleum Equipment Installation Institute (PEI).

      1) Publication RP 200 (Recommended Practices for Installation of Aboveground Storage Systems for Motor Vehicle Fueling).
      2) Publication RP 300 (Recommended Practices for Installation and Testing of Vapor Recovery Systems at Vehicle Fueling Sites).

   b. American Petroleum Institute (API).

      1) API Publication 1500, Storage and Handling of Aviation Fuels at Airports.
      2) API Bulletin 1529, Aviation Fueling Hose.
      3) API Bulletin 1542, Airport Equipment Marking for Fuel Identification.
      4) API 1581, Specifications and Qualification Procedures for Aviation Jet Fuel Filter/Separators.
      5) API Standard No. 2000, Venting Atmospheric and Low-Pressure Storage Tanks.
      6) Manual of Petroleum Measurement Standards Chapter 6 - Metering, Section 4 - Metering Systems for Aviation Fueling Facilities.

   c. Underwriters Laboratories, Inc. (UL).

      1) UL - 142, Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids.

## E. START UP AND TRAINING

1. Training shall meet Federal Aviation Administration, AC 150/5230-4C, Aircraft Fuel Storage, Handling, and Dispensing on Airports, most current edition.

## F. SPECIFIC REQUIREMENTS

1. Piping, Valves, and Fittings

   a. All piping and fittings shall be of stainless-steel suitable for AVGAS and Jet A aviation fuel service, designed for the working pressure, and mechanically & thermally produced structural stresses to which they could be subjected. and shall comply with ANSI B31.3. Valves and similar appurtenances shall be stainless steel, or carbon steel with protective inner lining suitable for Jet A aviation fuel service.

   b. Piping on the discharge side of the pump shall be 3-inch diameter. Piping on the suction side of the pump shall be 4-inch diameter. Suction piping shall be laid out to avoid high points that can trap air. Where changes in diameter occur, reducer/increaser fittings shall be provided. Changes in pipe direction shall be accomplished with long radius fittings. Do not use wrinkle bends or mitered bends for changes in direction.

c. Provide minimum pipe clearances of at least 3” for adjacent flanges, or a minimum of 12” to the outer pipe walls.

d. Pipe Joints shall be welded stainless steel. Connections to flanged fittings, equipment, and tanks shall be with stainless steel flanges welded to the stainless steel pipe. Flanged connectors to be stainless steel bolts, studs, and nuts based on seizing and elongation with adequate strength and force to compress the flange gasket.

e. Provide pipe supports where necessary to prevent undue stress in pipes and equipment.

f. Provide high point air vents with check valves for piping systems and equipment where necessary.

G. Pressure test new piping system in accordance with ANSI/ASME B31.3. Disconnect system components as tanks and equipment not designed for the piping test pressure. Test the system to 1.5 times the maximum rated pressure of new pump and motor.

H. Mark and identify all piping as to fuel product type and flow direction in accordance with industry standards using durable materials suitable for exterior piping exposed to the elements. Clean and prepare surfaces in accordance with manufacturer’s instructions prior to application.

I. Isolation valves shall be stainless steel body, wafer-style Butterfly Valves with 10-position lock-in-place handles, designed for use with standard ANSI Class 150 Flanges. All materials shall be suitable for use with Jet-A aviation fuel.

J. Work is to include reconnecting Jet-A Recover System, and similar items, to new piping.

K. Work includes replacing the Jet-A Fuel Meter Veeder Root Meter Register with a new Meter Register with Pulser Inventory Controller with connection to a new Jet-A QTpod M4000 Pedestal Inventory System, similar to that installed with the new 30,000 gallon Jet-A tank installed by others.

2. Pump and Motor

a. Jet-A Fuel Pump and Motor shall be Blackmer Model GNX3A Complete Cast iron Sliding Vane Positive Displacement Pump Package Assembly rated for 250 gallons per minute flow with a maximum 100 psi differential pressure. New Standard Materials of Construction. 90-degree ported 3” ANSI Blackmer Flanged Inlet and Outlet Connections, Gear Reducer C-Face 15 HP/1750/230/460 Volt/3 Phase/60 Hz Hazardous Duty Motor and Composite Polymer Concrete Baseplate. Mount pump and motor baseplate to the existing concrete equipment pad with epoxy bolts in accordance with manufacturer recommendations.

3. Filter/Static Relaxation Tank

   a. Jet-A Aviation Fuel Filter/Separators shall meet API 1581, Group II, Class B, and shall be Parker Velcon V Series Vertical Filter/Separator Vessel # V2233 rated at 300 gallons per minute for Kerosene, (390 gpm for Gasoline). The Filter shall have 3" flanged inlet and outlet connections, a minimum capacity of 72 gallons, with an epoxy-coated interior specifically suited for jet fuel service, and a primed exterior. The Contractor shall field apply a compatible industrial epoxy finish with a urethane topcoat, (color White). Items not to be finish-coated such as brass, stainless steel, nameplates, etc. shall be masked prior to painting.

   b. Standard features shall include:
      - Threaded Base Coalescer Cartridges
      - Pleated Paper Separator Cartridges
      - 150 psi ASME Code Construction
      - RF Flanged Connections
      - Swing Bolt Closure with O-ring Seal

   c. Additional features for safe, effective operation shall include:
      - Automatic Air (Eliminator) Vent with Check Valve
      - Water Slug Valve
      - Pressure/Thermal Relief Valve (hard pipe to Jet-A Waste Fuel Tank with ¾" stainless steel pipe)
      - Water Interface Control
      - Differential Pressure Gauge
      - Sampling Probes
      - Manual Drain Valve

   d. Vertical Static Charge Dissipation Tank shall be an ASME Code Rated Vessel to 150 psi minimum. The tank shall have 3" flanged inlet and outlet connections, an automatic air (eliminator) vent with check valve, pressure/thermal relief valve, and a manual water drain. Hard pipe the pressure/thermal relief valve to the Jet A Waste Fuel Tank with ¾" Stainless Steel Pipe. The tank shall be sized to provide a minimum 30-second relaxation period to dissipate static charge of the fuel at maximum rated flow of 300 gpm, or a total volume of 150 gallons. Tank flow shall be from near the top of the tank to near the bottom of the tank. Mount tank to the existing concrete equipment pad with epoxy bolts in accordance with manufacturer recommendations. The tank shall be shipped with protective prime coat applied at the fabrication facility The Contractor shall field apply a compatible industrial epoxy finish with a urethane topcoat, (color White). Items not to be finished-coated such as brass, stainless steel, nameplates, etc. shall be masked prior to painting.

4. Replace Avgas pump motor and connect to existing pump equipment. Replace pump seals and pump servicing. Avgas pump motor shall be Baldor 15 HP/1750 RPM/230/460 Volt/3 Phase/60 HZ Hazardous Duty, Frame Size 254T, Model # XM251542T.

5. Prepare for disposal, remove remaining product as applicable, and dispose offsite the existing 10,000 gallon AVGAS tank located at the GA Self-Serve Fueling Area, (see Photo Drawing C002). Does not include demolition of foundations or bollards except as necessary to remove any connections or tie-downs.

6. Electrical Items Integral with the Fueling Equipment: All electrical equipment, wiring, and grounding that is a part of the fueling equipment assembly shall conform to and be installed in accordance with the National Electrical Code (NFPA 70.) All fuel facility control boxes, wiring components, motors, starters, and electrical equipment located in the hazardous area shall be of explosion proof design. All electrical components (cabinets, etc.) shall be rated NEMA 4X. Refer to the Electrical Drawings and Technical Specifications shown elsewhere in these criteria documents.

## G. MATERIAL SUBMITTALS

1. Submit manufacturer's information for pipes, pumps, equipment, tanks, and all other appurtenances. including structural hardware items. Submit electronically except where physical copies or samples are required. Submit only enough information to clearly describe the items to be furnished; do not include unnecessary back-up information. Indicate all manufacturer selections and options, do not leave it to the reviewer to mark options. Do not order any items until the submittals have been returned accepted.

## H. PERMITTING, EQUIPMENT DELIVERY, AND INSTALLATION

1. Contractor shall be responsible for obtaining all applicable permits. Permit fees will be paid by the Contractor.

2. Contractor shall be responsible for all coordination and logistics required to deliver the material, tanks, and equipment assemblies to the site via public roads, set the assemblies in place and secure them to the foundation.

3. **IMPORTANT - FAA CRANE COORDINATION**: See Spec Section FF-101.

4. Off-load and install material, tanks, and equipment in accordance with manufacturer's written instructions and approved submittals.

5. Safeguard all manuals, parts lists, and other manufacturer's information that is packed with the equipment for later inclusion in the Owner's Manuals (see Section K below).

6. Repair damage to coatings with suitable repair materials to a condition equal or better than original.

## I. FIELD QUALITY CONTROL, COMPLETION AND CLOSE-OUT

1. Contractor shall arrange for a qualified service representative to supervise the installation, start-up, functional test, and training. The combined period of onsite service shall not be less than one 8-hour day, or as necessary to complete testing and training.

2. Details pertaining to operation and maintenance of the pump and motor, tanks, and related components, shall be thoroughly explained to Airport fueling operations personnel. Any special tools required for adjusting and maintaining the system, or training materials, shall be provided by the service representative, to the Airport operations personnel.

3. Any leaks, malfunctions, and punch list items shall be corrected to the satisfaction of the Owner prior to final acceptance.

4. Contractor shall furnish to the Owner two copies of the Owner's Operations and Maintenance Manual, each including as a minimum, operating instructions, copies of approved submittals, manufacturer's instructions and parts lists that were shipped with the equipment, and warranties (at least one copy of each warranty shall be the original). These documents shall be neatly organized, tabbed, and bound in 3-ring binders. In addition, a digital copy of the Owner’s Manual shall be submitted to the Owner.

5. Contractor shall coordinate with all permitting agencies having jurisdiction (AHJs) to assure that all final inspections and system registrations have been performed and all permit requirements have been satisfied.

6. The effective date of the warranties shall be the date on which the items, have been completed and the operation of the facility has been turned over to the Owner.

**ELECTRICAL WORK**

A. Electrical Work is specified elsewhere in this Project Manual, and on the Drawings.

**PERMITS, FEES AND INSPECTIONS**

The successful proposer is responsible for all permit applications and coordination of all inspections associated with the fuel tank project. Payment of any permit fees shall be the responsibility of the Contractor, to be applied against the Allowance established for Permitting. Submit receipts with Pay Application.

A. For installation of the new tanks, registration updated within 7 days of the completion of the work, unless otherwise specified in writing by the applicable AHJ.

B. Any other registration activities as requested by the Owner.

The Contractor shall coordinate all inspections with the City building department and FDEP, and make sure the final inspection and approval is obtained.

**MEASUREMENT AND PAYMENT**

No separate measurement and payment shall be made for fuel piping and pumping equipment. Payment shall be made as listed below and shall be full compensation for furnishing all permits, material, labor, equipment, incidentals, supplies, start-up, testing, adjustment, factory representation, etc., required to complete the work under this contract as a complete and

functional unit. In the event that an item is partially complete on a monthly pay request cut-off date, payment will be allowed based on the percentage complete.
Payment will be made under:

***Design Build FF-101 Specification pay items.***

**END OF ITEM 23 10 00**

# SECTION 26 05 01 - BASIC ELECTRICAL REQUIREMENTS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and other Division 01 Specification sections apply to this section.

### 1.2 SUMMARY

A. This section includes Basic Electrical Requirements specifically applicable to Division 26 Sections.

### 1.3 DESCRIPTION

A. Provide and install all equipment, labor, material and accessories, and mounting hardware for a complete and operating system as described within these Division 26 Specification Sections.

B. Furnish, perform, or provide all labor including planning, purchasing, transporting, storing, installing, testing, cutting and patching, trenching, excavating, backfilling, coordination, field verification, equipment (installation and safety), supplies, and materials necessary for the installation of complete electrical systems (as described or implied by these specifications and the applicable drawings) in strict accordance with applicable codes, which may not be repeated in these specifications, but are expected to be common knowledge of qualified Bidders.

C. All work shall comply with all applicable codes as a minimum and with the additional requirements called for in these Contract Documents.

D. Only trained and licensed personnel shall perform work. No Work shall be performed which violates applicable Codes, even if called for in the Contract Documents.

E. Make connections of all items in the Work using electric power including wire, conduit, circuit protection, disconnects and accessories. Securing of roughing-in drawings and connection information for equipment involved shall also be included under this division. See other divisions for specifications for electrically operated equipment.

### 1.4 QUALITY ASSURANCE

A. Install Work in locations shown or described in the Contract Documents, unless prevented by Project conditions.

B. Install all equipment so that all Code and Manufacturer recommended working and servicing clearances are maintained. Properly arrange and install all equipment within designated spaces. If a departure from the Contract Documents is necessary, submit to the engineer for approval, detailed drawings of the proposed changes with written reasons for the changes. No change shall be implemented without the issuance of a change order or other directive permitted by the General Conditions.

C. The Contractor shall verify finish dimensions at the project site in preference to using dimensions noted on Contract Documents.

## 1.5 CONTRACT DOCUMENTS

A. The drawings are diagrammatic and are not intended to include every detail of construction, materials, methods, and equipment. They indicate the result to be achieved by an assemblage of various systems. Coordinate equipment locations with Architectural and Structural drawings. Layout equipment before installation so that all trades may install equipment in spaces available. Coordinate installation in a neat and workmanlike manner. Provide 1/4” scale coordination drawings per specifications prior to start of work.

B. Wiring arrangements for equipment shown in the drawings are intended to be diagrammatic and do not show all required conductors and functional connections. All such items incidental to a complete and operating system shall be provided.

C. Submit specific shop drawings which indicate the fabrication, assembly, installation, and erection of particular systems’ components. Drawings that are part of the Contract Documents shall not be considered a substitute for required shop drawings, field installation drawings, code requirements, or applicable standards.

D. Locations indicated for outlets, switches, and equipment are approximate and shall be coordinated with the Contract Documents. Where instructions or notes are insufficient to locate the item, notify the engineer.

## 1.6 MATERIALS AND EQUIPMENT

A. Unless otherwise noted, all materials shall be new and UL listed or labeled. In lieu of UL listing or labeling, a statement or data demonstrating compliance with contract documents from a nationally recognized testing agency shall be submitted to the ENGINEER.

B. Where Contract Documents list design selection, manufacturer or type, this model shall set the standard of quality and performance required. Where no brand name is specified, the source and quality shall be subject to Designers/ENGINEER review and approval. Where Contract Documents list approved substitutions, these items shall comply with Division 01 requirements for substitutions.

C. When a product is specified to be in accordance with a trade association or government standard and at the request of Designers/ENGINEER the Contractor shall furnish a certificate that the product complies with the referenced standard and supporting test data to substantiate compliance.

D. Where multiple items of the same equipment or materials are required, they shall be the product of the same Manufacturer.

E. Prior to placing equipment orders, verify the physical size of specified equipment to fit spaces allotted on the drawings and with NEC working clearances. Internal access for proposed equipment substitutions shall be provided. Provide 1/4" scale drawings showing that this coordination has taken place.

F. Electrical equipment shall be protected from the weather, during shipment, storage, and construction per manufacturer's recommendations. Should any apparatus be subjected to possible damage by water, it shall be thoroughly dried and put through a dielectric test, at the expense of the Contractor, to ascertain the suitability of the apparatus, or it shall be replaced without additional cost to the Owner.

G. Inspect all electrical equipment and materials prior to installation. Damaged equipment and materials shall not be installed or placed in service. Replace or repair and test damaged equipment in compliance with industry standards at no additional cost to the Owner. Equipment required for the test shall be provided by the Contractor.

H. Material and equipment shall be provided complete and shall function up to the specified capacity/function. Should any material or equipment as a part or as a whole fail to meet performance requirements, replacements shall be made to bring performance up to specified requirements. Damages to finish by such replacements, alterations, or repairs shall be restored to prior conditions, at no additional cost to the Owner.

## 1.7 COORDINATION

A. Provide all required coordination and supervision where work connects to or is affected by work of others and comply with all requirements affecting this Division. Work required under other divisions, specifications or drawings to be performed by this Division shall be coordinated with the Contractor and such work performed at no additional cost to Owner.

B. Provide electrical subcontractor a set of Contract Documents for all areas of Electrical Work.

C. Installation studies shall be made to coordinate the electrical work with other trades. Work shall be preplanned. Unresolved conflicts shall be referred to the ENGINEER prior to installation of the equipment.

D. Coordination drawings shall be prepared prior to the start of work. Drawings shall show the actual physical dimension required for the installation to assure proper integration of equipment with building systems and NEC required clearances. Location of conduit racking, etc., shall be provided. Coordination drawings shall be provided for all areas. Comply with the requirements of Division 01.

E. Secure approved shop drawings from all required disciplines and verify final electrical characteristics before roughing power feeds to any equipment. When electrical data on approved shop drawings differs from that shown or called for in Construction Documents, make adjustments to the wiring, disconnects, and branch circuit protection to match that required for the equipment installed. Adjustments to contract value will not be considered due to lack of coordination.

F. Damage from interference caused by inadequate coordination shall be corrected at no additional cost to the Owner.

G. Coordinate the exact location of floor outlets, floor ducts, floor stub-ups, etc. with ENGINEER and Designer (and receive their approval) prior to rough-in. Locations indicated in Contract Documents are only approximate locations.

H. The Contract Documents describe specific sizes of switches, breakers, fuses, conduits, conductors, motor starters and other items of wiring equipment. These sizes are based on specific items of power consuming equipment (heaters, lights, motors for fans, compressors, pumps, etc.). Coordinate the requirements of each load with each load's respective circuitry shown and with each load's requirements as noted on its nameplate data and manufacturer's published electrical criteria. Adjust circuit breaker, fuse, conduit, and conductor sizes to meet the actual requirements of the equipment being provided and installed and change from single point to multiple points of connection (or vice versa) to meet equipment requirements. Changes shall be made at no additional cost to the Owner.

## 1.8 PROVISION FOR OPENINGS

A. Locate openings required for work. Provide sleeves, guards or other approved methods to allow passage of items installed.

B. Coordinate with roofing Contractor on installation of electrical items which penetrate the roof. Roof penetrations shall be installed so as to not void roof warranty.

C. Where work pierces waterproofing, it shall maintain the integrity of the waterproofing. Coordinate roofing materials which pierce roof for compatibility with membrane or other roof types with Contractor.

## 1.9 CONCRETE PADS

A. Furnish and install reinforced concrete pads for transformers, switchgear, generators, motor control centers, and other free-standing equipment. Unless otherwise noted, pads shall be four (4) inches high and shall exceed dimensions of equipment being set on them, including future sections, by six (6) inches each side, except when equipment is flush against a wall where the side against the wall shall be flush with the equipment. Pads shall be reinforced with W1.4 x 1.4 6 x 6 welded wire mesh. Chamfer top edges 1/2". Trowel all surfaces smooth. Provide 3000 psi concrete.

## 1.10 SURFACE MOUNTED EQUIPMENT

A. Surface mounted fixtures, outlets, cabinets, conduit, panels, etc. shall have finish or shall be painted as directed by designer. Paint shall be in accordance with applicable sections and/or divisions of these specifications.

## 1.11 CUTTING AND PATCHING

A. Reference Division 01 - General Requirements.

B. New Construction:

1. Cutting of work in place shall be cut, drilled, patched and refinished by trade responsible for initial installation.

2. Backfill new grades to match adjacent undisturbed surface.

## 1.12 INSTALLATION

A. Erect equipment to minimize interference and delays with the execution of the Work.

B. Take care in erection and installation of equipment and materials to avoid marring finishes or surfaces. Any damage shall be repaired or replaced as determined by the designer/ENGINEER at no additional cost to the Owner.

C. Equipment requiring electrical service shall not be energized or placed in service until ENGINEER is notified and is present or have waived their right to be present. Where equipment to be placed in service involves service or connection from another Contractor or the ENGINEER, notify the ENGINEER in writing as appropriate when the equipment will be ready.

D. Equipment supports shall be secured and supported from structural members unless written approval is granted by ENGINEER.

E. Plywood material shall not be used as a backboard for mounting panel boards, disconnects, motor starters, and dry type transformers. Provide "cast in place" type inserts or install expansion type anchor bolts. Electrical equipment shall not be mounted directly to dry wall for support without additional channels as

anchors. Channels shall be anchored to the floor and structure above. Panelboards and terminal cabinets shall be provided with structural framing located within drywall partitions.

F. Inserts, pipe sleeves, supports, and anchorage of electrical equipment shall be provided. Where items are to be set or embedded in concrete or masonry, the items shall be furnished and layout made for setting or embedment thereof so as to cause no delay.

G. Conduit or piping systems that contain water or liquid of any kind shall not be installed over the top of any electrical equipment, transformers, racks, cabinets, or enclosures without prior written approval from the ENGINEER.

## 1.13 AS-BUILT DOCUMENTS

A. As-Built Documents: As-built Documents include Drawings, Shop Drawings, Specifications, Addenda, Change Orders, and other modifications permitted by the General Conditions.

B. Comply with all requirements of Division 01

C. Verify aspects of redlined as-builts for accuracy. As-Built Documents shall show all components including but not limited to:

1. All raceways 1-1/4" and above, cable tray systems, and grouped raceway racking as installed, including dimensions from fixed building lines such as column lines.
2. All site underground raceways and duct banks indicating burial depths and distances from fixed building lines or global tracking coordinates.
3. Underground pull boxes and manholes including elevations. Detail manhole and pull boxes, conduit terminations (butterfly layout) including conduit sizes, designated systems and cabling description.
4. General conduit routing from receptacle to receptacle, fixture to fixture, device to device. (Exact routing is not required for raceways 1” and smaller.)
5. Lighting: Diagrammatically show junction boxes that are located above accessible ceiling with flexible conduit connections to luminaries.
6. Junction box splices shall be shown in exact location and clearly noted referring to the written authorization by the ENGINEER.
7. The first junction box within each homerun, regardless of size shall be shown in the installed location.
8. All junction boxes and pull boxes located above non-accessible ceilings shall be shown in exact location. All junction boxes 6”X6” and larger shall be shown in exact location.
9. Any combining of circuits (which is only allowed by specific permission) or change in homerun outlet box shall be indicated.
10. Any circuit number changes.
11. All conductors and cables, conductors and cable sizes, raceway sizes, etc not shown on contract documents and any changes from the documents.

12. Any switchboard, panelboard, motor control center, relay panel, or dimming control panel schedule changes, including load changes.
13. All access panels.
14. All existing conditions.
15. Location of lighting control devices such as photocell controls, space occupancy sensors, etc.
16. Exact quantity of conductors and cables shall be shown for all raceway systems.
17. All devices, wall outlet boxes, and control components.
18. All wireway and cable tray systems.
19. Exact location of all driven grounding electrodes including burial depths and dimensions from fixed building lines. Location of all grounding system busbars.
20. All building automation system (BAS) control panels and associated electrical devices, connections, power supplies, and dampers.
21. Riser diagrams exactly as installed.
22. Motor control devices, terminal cabinets, equipment racks, disconnects and switches and surge protection devices.
23. Change the equipment schedules (i.e. symbol legends, light fixture schedule, etc) to agree with items actually furnished.
24. Change plan notes to agree with items actually furnished, actual installation methods, etc. respectfully.
25. Cross-out all items, circuitry, devices, etc. not applicable.

D. As-Built red line information shall not compromise the clarity of the Contract Documents and Shop Drawings. Major components such as grouped raceway assemblies, cable tray systems, larger conduits, duct banks, racking, elevations, dimensions, etc. shall be shown on a clean architectural base plan(s) separate from the Contract Electrical Documents, as required to clearly delineate work. Obtain electronic base plan file from ENGINEER.

## 1.14 SYSTEMS WARRANTY

A. Reference the General Conditions.

B. Warranty shall be by the Contractor to the Owner and shall cover for a period of one year from the date of the Substantial Completion. Warranty shall not include light bulbs lamps in service after one month from date of substantial completion of the System.

1. Explain the provisions of warranty to the Owner at the "Demonstration of Completed System" meeting to be scheduled with the ENGINEER upon project completion.

C. Where items of equipment or materials carry a manufacturer's warranty for any period in excess of twelve (12) months, then the manufacturer's warranty shall apply for that particular piece of equipment or material.

D. Where extended Guarantees are called for herein, furnish three copies to be inserted in Operation and Maintenance Manuals.

E. All preventative maintenance and normal service will be performed by the Owner's maintenance personnel after final acceptance of the work which shall not alter the Contractor's warranty.

## 1.15 WASTE MATERIALS DISPOSAL

A. Include in base bid the transport and disposal or recycling of all waste materials generated by this project in accordance with all rules, regulations and guidelines applicable. Comply fully with Florida Statute 403.7186 regarding mercury containing devices and lamps. Lamps, ballasts and other materials shall be transported and disposed of in accordance with all DEP and EPA guidelines applicable at time of disposal. Provide ENGINEER with written certification of approved disposal.

## PART 2 - PRODUCTS (Not Applicable)

## PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 26 05 01**

# SECTION 26 05 19 – LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and Division 01 Specification sections apply to this section.

### 1.2 SUMMARY

A. This section includes the requirements for provision and installation of Building Wire and Cable.

### 1.3 DESCRIPTION

A. Provide all equipment, labor, material, accessories, and mounting hardware to properly install all conductors and cables rated 600 volts and less for a complete and operating system for the following:

1. Building wire and cable.
2. Wiring connectors and connections.

B. No aluminum conductors shall be permitted.

C. All sizes shall be given in American Wire Gauge (AWG) or in thousand circular mils (MCM/KCMIL).

### 1.4 SUBMITTALS

A. Product Data: Submit catalog cut sheet showing, type and UL listing of each type of conductor, connector and termination.

### 1.5 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five years experience.

### 1.6 REFERENCES AND REGULATORY REQUIREMENTS

A. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

B. Conform to the requirements of ANSI/NFPA 70.

## 1.7 PROJECT CONDITIONS

A. Verify that field measurements are as shown on Drawings.

B. Conductor sizes are based on copper.

C. Wire and cable routing shown on Drawings is approximate unless dimensioned. Route wire and cable as required to meet Project Conditions.

D. Where wire and cable routing is not shown, and destination only is indicated, determine exact routing and lengths required. Record actual routing on red lined as-builts.

E. Conductors with different voltages (i.e. 120 volt and 277 volt) shall not be combined in the same conduit without prior written approval from OWNER and Engineer.

F. Conductors for each branch of power (Normal, Life safety, Critical, Security, and Equipment) shall be installed in its own dedicated raceway system.

## 1.8 COORDINATION

A. Determine required separation between cable and other work.

B. Coordinate cable routing to avoid interference with other work disciplines.

# PART 2 - PRODUCTS

## 2.1 BUILDING WIRE AND CABLE

A. Description: Single conductor insulated wire.

B. Conductor: Copper.

C. Insulation Voltage Rating: 600 volts.

D. Insulation: ANSI/NFPA 70, Type THHN/THWN and XHHW.

E. Cable supports shall be O Z/Gedney Type “S” or approved substitution.

# PART 3 - EXECUTION

## 3.1 GENERAL

A. Install products in accordance with manufacturer’s instructions.

B. Neatly train and lace wiring inside boxes, equipment, and panelboards.

C. Before installing raceways and pulling wire to any mechanical equipment, verify electrical characteristics with final submittal on equipment to assure proper number and AWG of conductors. (As for multiple speed motors, different motor starter arrangements, etc.).

D. Conductors #12 AWG shall be 600-volt type THHN/THWN, solid unless specifically noted otherwise, rated 90 degrees C. dry.

E. Use conductor not smaller than 12 AWG for power and lighting circuits.

F. Provide dedicated neutral conductor for each branch phase conductor for 120V and 277V circuits (power and lighting). Multi-pole breakers to comply with NEC 210.4 are not permitted.

G. Use 10 AWG conductors for 20 ampere, 120-volt branch circuits longer than 75 feet (23 m).

H. Use 10 AWG conductors for 20 ampere, 277-volt branch circuits longer than 200 feet (61 m).

I. All conductors shall be installed in raceway.

J. Conductor sizes indicated on circuit homeruns or in schedules shall be installed over the entire length of the circuit unless noted otherwise on the drawings or in these specifications.

K. Coordinate all wire sizes with lug sizes on equipment, devices, etc. Provide/install lugs as required to match wire size.

L. Where oversized conductors are called for due to voltage drop, etc., provide/install lugs as required to match conductors, or provide/install splice box, and splice to reduce conductor size to match lug size.

## 3.2 EXAMINATION

A. Verify that interior of building has been protected from weather.

B. Verify that mechanical work likely to damage wire has been completed.

## 3.3 PREPARATION

A. Completely and thoroughly swab raceway before installing wire.

## 3.4 WIRING METHODS

A. Use only building wire, Type THHN/THWN insulation, in raceway unless noted otherwise.

B. Wiring in vicinity of heat producing equipment: Use only XHHW insulation, in raceway.

C. Conductors installed within fluorescent fixture channels shall be Type THHN or XHHW, rated 90 degrees C dry. Conductors for all other light fixtures shall have temperature ratings as required to meet the UL listing of the fixture; however, in no case shall the temperature rating be less than 90 degrees Centigrade. Remove incorrect insulation types in new work.

## 3.5 INTERFACE WITH OTHER PRODUCTS

A. Identify wire and cable under provisions of Section 26 05 53 Identification for Electrical Systems.

B. Identify each conductor with its circuit number or other designation indicated on Drawings.

C. Identify neutrals with its associated circuit number(s) per NEC Article 210.4(D).

## 3.6 FIELD QUALITY CONTROL

A. Perform field inspection and testing under provisions of the General Requirements of the Contract Documents and Section 26 08 10 Tests and Performance Verification.

B. Inspect wire for physical damage and proper connection.

C. Measure tightness of bolted connections and compare torque measurements with manufacturer's recommended values.

D. Verify continuity of each branch circuit conductor.

E. Submit “Conductor Insulation Resistance Test” form as required in Section 26 08 10.

## 3.7 VERTICAL RISERS

A. Provide vertical cable riser supports per Article 300-19 in NFPA 70. These shall be located in accessible pullboxes of adequate size. Provide for adequate structural connection of cable supports to pullbox, which will transfer cable weight to building.

## 3.8 PULLING

A. No wire shall be pulled until the conduit system is complete from pull point to pull point and major equipment terminating conduits have been fixed in position.

B. Mechanical pulling devices shall not be used on conductors sized #8 and smaller. Pulling means which might damage the raceway shall not be used.

C. Use only powdered soapstone or other pulling lubricant acceptable to the Designer/OWNER. Compound or lubricant shall not cause the conductor or insulation to deteriorate.

D. All conductors to be installed in a common raceway shall be pulled together. The manufacturer's recommended pulling tensions shall not be exceeded.

E. Bending radius of insulated wire or cable shall not be less than the minimum recommended by the manufacturer.

F. Where coaxial type conductors are installed, special requirements shall apply as outlined under that specific system detail specifications.

G. Where control or signal circuits with a lower insulation rating enter an enclosure with conductors having a 600 volt or higher insulation rating, a separate wire way will be installed or proper clearance distance will be maintained per NEC.

H. All conductors shall be pulled in conduits by industry approved cable pulling “tuggers” equipment. The use of construction equipment such as forklifts, tractors and other vehicles will not be allowed. All conductors will be routed and protected by using the proper pulleys and sheaves.

## 3.9 CONTROL AND SIGNAL CIRCUITS

A. For control and signal circuits above 50 VAC, conductors shall be #14 AWG minimum size, Type XHHW or THHN/THWN as permitted by NFPA 70, within voltage drop limits, increased to #12 AWG as necessary for proper operation.

B. For control and signal circuits 50 VAC and below, conductors, at the Contractor's option, may be #16 AWG, 300 volt rated, PVC insulated, except where specifically noted otherwise in the contract documents.

C. Conductor insulation for fire alarm systems shall be as approved by Code Inspection Authority only. Wire approvals by the Designer/OWNER shall not supersede this final approval for conditions of this specific project.

D. Install circuit conductors in conduit.

E. Circuit conductors #10AWG and larger to be stranded.

## 3.10 COLOR CODING

A. All power feeders and branch circuits No. 6 and smaller shall be wired with color-coded wire with the same color used for a system throughout the building. Power feeders above No. 6 shall either be fully color-coded or shall have black insulation and be similarly color-coded with tape in all junction boxes and panels.

Tape shall completely cover the full length of conductor insulation within the box or panel.

B. Unless otherwise approved or required by DESIGNER to match existing, color-code shall be as follows: Neutrals to be white for 120/208V system, natural grey for 277/480V system; ground wire green, bare or green, insulated ground conductor green with yellow tracer. 120/208V, Phase A - black; Phase B - red; Phase C - blue. 480/277V, Phase A brown; Phase B - orange; Phase C - yellow. All switch legs, other voltage system wiring, control and interlock wiring shall be color-coded other than those above.

## 3.11 TAPS/SPLICES/CONNECTORS/TERMINATIONS

A. Taps and splices are not acceptable unless specifically noted otherwise on drawings or special written approval is granted by Designer/OWNER. (See 3.1K) Submit locations, sizes, etc., where taps will be necessary to coordinate with lug sizes/quantities for review and approval prior to installation.

B. Clean conductor surfaces before installing lugs and connectors.

C. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.

D. Power and lighting conductors shall be continuous and unspliced where located within conduit. Splices shall occur within troughs, wireways, outlet boxes, or equipment enclosures where sufficient additional room is provided for all splices. No splices shall be made in in-ground pull boxes (without special written approval of OWNER).

E. Splices in lighting and power outlet boxes, wireway, and troughs shall be kept to a minimum, pull conductors through to equipment, terminal cabinets, and devices.

F. No splices shall be made in junction box, and outlet boxes (wire No. 8 and larger) without written approval of OWNER.

G. No splices shall be made in communications outlet boxes, pull boxes or wireways (i.e., fire alarm, computer, telephone, intercom, sound system, etc.) without written approval of OWNER. Pull cables through to equipment cabinets, terminal cabinets and devices.

H. No splices shall be made in circuits of #8 AWG conductors or larger of 1000 feet or less without written approval of the OWNER.

I. Allow adequate conductor lengths in all junction boxes, pull boxes and terminal cabinets. All termination of conductors in which conductor is in tension will be rejected and shall be replaced with conductors of adequate length. This requirement shall include the providing by the Contractor of sleeve type vertical cable supports in vertical raceway installations provided in pullboxes at proper vertical spacings.

J. A calibrated torque wrench shall be used for all bolt tightening. A torque mark should be used after torqueing is performed. Torque mark should consist of a permanent mark over the mechanical lug, bolt, nut, etc.

K. Interior Locations:

1. All (non-electronic systems) copper taps and splices in No. 8 or smaller shall be fastened together by means of "Screw-on spring type (wire nut)" connectors. All “Push-in” or “Stab-in” type connectors are prohibited. All taps and splices in wire larger than No. 8 shall be made with compression type connectors approved by OWNER and taped to provide insulation equal to wire.

L. Exterior Locations:

1. Make splices, taps and terminations above grade in splice or termination cabinets. Do not splice any cable in ground or below finished grade.

2. All taps and splices shall be made with compression type connectors approved by OWNER and covered with insulation material equivalent to conductor insulation or be terminated/connected to terminal strips in above grade terminal boxes suitable for use.

3. Provide and install above grade termination cabinets sized to meet applicable codes and standards, where required for splicing.

**END OF SECTION 26 05 19**

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# SECTION 26 05 26 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and Division 01 Specification sections apply to this section.

### 1.2 SUMMARY

A. This section includes the requirements for provision and installation of grounding and bonding.

### 1.3 DESCRIPTION

A. Provide all labor, materials, and equipment necessary to properly install a grounding system conductor in all new branch wiring and feeder installations that shall be in full compliance with all applicable Codes as approved by the authorities having jurisdiction. The secondary distribution system shall include a grounding conductor in all raceways in addition to the return path of the metallic conduit.

B. In general, all electrical equipment (metallic conduit, motor frames, panelboards, etc.) shall be bonded together with a green insulated or bare copper system grounding conductor in accordance with specific rules of Article 250 of the N.E.C. and State codes. Bonding conductor through the raceway system shall be continuous from main switch ground bus to panel ground bar of each panelboard, and from panel grounding bar of each panelboard to branch circuit equipment and devices.

C. All raceways shall have an insulated copper system ground conductor throughout the entire length of circuit installed with-in conduit in strict accordance with NEC. Grounding conductor shall be included in total conduit fill determining conduit sizes, even though not included or shown on drawings. Grounding conductors run with feeders in PVC conduit outside of building(s) shall be bare only.

D. Section Includes

1. Grounding electrodes and conductors.
2. Equipment grounding conductors.
3. Bonding.
4. Ground Ring.

## 1.4 SUBMITTALS

A. Submit catalog cut sheet showing brand and selection for all conductors, test wells, components, etc., as specified herein showing that all materials are UL listed and labeled as applicable and manufactured in the United States.

B. Product data shall prove compliance with Contract Documents, National Electric Code, Underwriters Laboratories, manufacturer's specifications, manufacturer's written installation data and compliance with all performance criteria.

C. Include instructions for storage, handling, protection, examination, preparation, operation and installation of product.

D. Indicate application conditions and limitations of use stipulated by product testing agency specified under regulatory requirements.

E. Show all dimensions, colors, configurations, covers and applicable labeling/stamping.

F. Record actual locations of grounding electrodes on red lined as-built documents.

G. Submit test results of each ground rod.

## 1.5 REFERENCES AND REGULATORY REQUIREMENTS

A. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

B. Conform to requirements of ANSI/NFPA 70 - National Electrical Code.

# PART 2 - PRODUCTS

## 2.1 ROD ELECTRODE

A. Material: Copper-clad steel.

B. Diameter: 5/8 inch.

C. Length: 20 feet minimum. Increase lengths as required to achieve specified resistance.

## 2.2 MECHANICAL CONNECTORS

A. All grounding connectors shall be in accordance with UL 467 and UL listed for use with rods, conductors, reinforcing bars, etc., as appropriate.

B. Connectors and devices used in the grounding systems shall be fabricated of copper or bronze materials, and properly applied for their intended use. Specified items of designated manufacturers indicate required criteria and equal products may be provided if approved. All connectors and devices shall be compatible with the surfaces being bonded and shall not cause galvanic corrosion by dissimilar metals. Materials in items not listed herein shall be of equal quality to the following specified items:

1. Lugs: substantial construction, of cast copper or cast bronze, with "ground" (micro-flat) surfaces equal to Burndy QQA-B Series, two hole, T&B, or approved substitution. Light weight and "competitive" devices shall be rejected.
2. Grounding and Bonding Bushings: Malleable iron, Thomas and Betts (T&B), or approved substitution.
3. Piping Clamps: Burndy "GAR-TC series" with two hole compression lug under U-Bolt nut, or T&B, or approved substitution.
4. Grounding Screw and Pigtail: Raco No. 983 or approved substitution.
5. Fastening hardware: Grade 5 silicone bronze with beveled washers. Copperplate is not acceptable

C. Mechanical lugs or wire terminals shall be used to bond ground wires together or to junction boxes and panel cabinets and shall be manufactured by Anderson, Buchanan, Thomas and Betts Co., or Burndy.

## 2.3 WIRE

A. Material: Stranded copper.

B. Size: Size to meet NFPA 70 requirements as a minimum, increase size if called for on drawings, in these specifications, or as required for voltage drop.

C. Insulated THWN (or bare as noted elsewhere).

## 2.4 GROUNDING WELL COMPONENTS

A. Grass Non-Traffic Areas:

1. Well: Minimum 12 inch long by 12 inch wide by 18 inches deep with open.
2. Well Cover: High density plastic, composolite, or cast iron with legend "GROUND" embossed on cover.
3. Material: Structural Plastic, composolite, or concrete.
4. Manufacturer: Brooks Products 70 Series or equal by Quazite or approved substitution.
5. Increase depth, diameter or size as required to provide proper access at installed location.

B. Paving and Low Traffic Areas:

1. Well: Minimum 12 inch long by 12 inch wide by 18 inches deep with open bottom.
2. Well Cover: Traffic rated for use with "GROUND" embossed on cover.
3. Material: Composolite.
4. Manufacturer: Quazite or approved substitution.
5. Increase depth, diameter or size as required to provide proper access at installed location.

## PART 3- EXECUTION

### 3.1 GENERAL

A. Install products in accordance with manufacturer's instructions.

B. Install grounding electrodes conductor, bonding conductors, ground rods, etc. with all required accessories.

C. Grounding shall meet (or exceed as required to meet these specifications) all the requirements of the N.E.C., the NFPA, and applicable standards of IEEE.

D. Where there is a conflict between these specifications and the above applicable codes or standards, or between this section and other specifications sections then the most stringent or excessive requirement shall govern. Where there is an omission of a code/standard requirement in these specifications then the code/standard requirements shall be complied with.

E. Requirement in these specifications to comply with a specific code/standard article, etc. is not to be construed as deleting of requirements of other applicable codes/standards and their articles, etc.

F. Verify that final backfill and compaction has been completed before driving rod electrodes.

### 3.2 GROUNDING ELECTRODES

A. All connections shall be exothermic welded unless otherwise noted herein. All connections above grade and in accessible locations may be by exothermic welding or by brasing or clamping with devices UL listed as suitable for use except in locations where exothermic welding is specifically specified in these specifications or called for on drawings.

B. Each rod shall be die stamped with identification of manufacturer and rod length.

C. Install rod electrodes at locations indicated and/or as called for in these specifications.

D. Ground Resistance:

1. Other Locations:

a. Resistance to ground of all non-current carrying metal parts shall not exceed 25 ohms measured at motors, panels, busses, cabinets, equipment racks, light poles, transformers, and other equipment.

2. Resistance called for above shall be maximum resistance of each ground electrode prior to connection to grounding electrode conductor. Where ground electrode system being measured consists of two (2) or more ground rod electrodes at each location, then the resistance specified above shall be the maximum resistance with two (2) or more rods connected together but not connected to the grounding electrode conductor.

E. Install additional rod electrodes as required to achieve specified resistance to ground (specified ground resistance is for each ground rod location prior to connection to ground electrode conductor).

F. Provide grounding well with cover at each rod location, with the only exception being a site distribution counterpoise ground rod. Install grounding well top flush with finished grade.

G. Install ground rods not less than 1 foot below grade level and not less than 2 feet from structure foundation.

## 3.3 GROUND RESISTANCE AT LOCATION OTHER THAN LOCATION OF GROUNDING ELECTRODES.

A. Resistance to ground of all non-current carrying metal parts shall not exceed 25 ohms measured at motors, panels, busses, cabinets, equipment racks, light poles, transformers, and other equipment.

## 3.4 GROUNDING ELECTRODE CONDUCTOR

A. Conductor shall be sized to meet (or exceed requirements of Contract Documents) the requirements of NEC 250.66.

## 3.5 EQUIPMENT GROUNDING CONDUCTOR

A. Grounding conductors shall be provided with every circuit to meet (or exceed requirements of Contract Documents) the requirements of NEC 250.122.

B. At every voltage level, new portions of the electrical power distribution system shall be grounded with a dedicated copper conductor which extends from termination back to power source in supply panelboard.

C. Provide separate, insulated (bare if with feeder in PVC conduit ) conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.

D. Except as otherwise indicated, each feeder raceway on the load side of the service entrance shall contain a ground conductor sized as indicated and where not shown shall be sized to meet (or exceed requirements of Contract Documents) the requirements of NEC 250.122. Conductor shall be connected to the equipment grounding bus in switchboards and panelboards, to the Grounding Bus in all motor control centers, and as specified, to lighting fixtures, motors and other types of equipment and outlets. The ground shall be in addition to the metallic raceway and shall be connected, using a lug device located within each item enclosure at the point of electric power connections to permit convenient inspection.

E. Provide green insulated ground wire for all grounding type receptacles and for equipment of all voltages. In addition to grounding strap connection to metallic outlet boxes, a supplemental grounding wire and screw equal to Raco No. 983 shall be provided to connect receptacle ground terminal to the box.

F. All plugstrips and metallic surface raceway shall contain a green insulation ground conductor from supply panel ground bus connected to grounding screw on each receptacle in strip and to strip channel. Conductor shall be continuous.

G. Where integral grounding conductor is specified elsewhere in bus duct construction, provide equivalent capacity conductor from supply switchboard or panelboard grounding bus to the bus duct grounding conductor. Bond integral conductor to bus duct enclosure at each tap and each termination.

H. All motors, all heating coil assemblies, and all building equipment requiring flexible connections shall have a green grounding conductor properly connected to the frames and extending continuously inside conduit with circuit conductors to the supply source bus with approved connectors regardless of conduit size or type. This shall include "Equipment By Owner" to which an electric conduit is provided under this Division.

## 3.6 MAIN ELECTRICAL SERVICE

A. Complete installation shall meet or exceed the requirements of the NEC 250.

B. Artificial electrodes shall be provided for the main service in sufficient number and configuration to secure resistance specified.

C. Provide and bond to all of the following:

1. Ground rods.
2. Metal water pipe.
3. Building metal frame, structural steel or reinforced structural concrete.

4. Encased Electrodes.
5. Ground ring.
6. Site distribution counterpoise ground system.
7. Lightning protection system.

D. A main ground, bare copper conductor, sized per NEC Table 250.66, but in no case less than #2/0, shall be run in conduit from the main switchgear of each building to the building steel in respective building. This ground conductor shall also be run individually from the main switchgear and be bonded to the main water service ahead of any union in pipe and must be metal pipe of length and location as acceptable by authorities having jurisdiction. Provide properly sized bonding shunt around water meter and/or dielectric unions in the water pipe. Also required is the same size ground wire to ground rod electrode as called for below:

1. Three 30 ft. ground rods in a delta configuration at no less than 30 ft. spacing driven to a minimum depth of 30 feet, one foot below grade.
2. Bond ground rod electrodes together with a bare copper ground conductor that matches size required by NEC Table 250.66, but in no case less than #2/0.
3. Provide additional rod electrodes as required to achieve specified ground resistance.

E. Ground/bond neutral per NEC 250.

F. A main ground, bare copper conductor, sized per applicable Table in NEC 250, but in no case less than #2/0, shall be run in conduit from the main switchgear of each building to a concrete encased electrode per NEC 250.52(3).

G. Bond grounding electrodes to site counterpoise grounding system and lightning protection system where provided.

H. Provide and install ground bus bar on wall near main service disconnect/switchboard. Connect to ground bar in disconnect/switchboard bonded to switchboard/disconnect enclosure/neutral with copper grounding conductor sized per NEC Table 250.66.

## 3.7 EXTERIOR GRADE (OR FREE STANDING ABOVE GROUND) MOUNTED EQUIPMENT

A. General:

1. All equipment mounted exterior to building shall have their enclosures grounded directly to a grounding electrode at the equipment location in addition to the building equipment ground connection.

2. Bond each equipment enclosure, metal rack support, mounting channels, etc. to ground electrode system at each rack with an insulated copper ground conductor sized to match the grounding electrode conductor required by NEC Table 250.66 based on equipment feeder size, but in no case shall conductor be smaller than #6 copper or larger than #2 copper. This connection is in addition to grounding electrode connections required for services.

B. Main electrical service rack mounted equipment.

1. Ground per "MAIN ELECTRICAL SERVICE".
2. Bond all metal parts as noted in this section.

C. Electrical sub service rack mounted equipment.

1. Ground per "MAIN ELECTRICAL SERVICE", except do not bond neutral to ground.
2. Bond all metal parts as noted in this section.

D. Electrical equipment connection rack mounted equipment.

1. Bond all metal parts as noted in this section.

E. Grounding electrodes (ground electrodes system) shall be:

1. Located at each rack location.
2. For service equipment: Ground electrode required per "MAIN ELECTRICAL SERVICE".
3. For equipment connection: Two or more 30 ft. ground rods at no less than 30 ft. spacing, driven vertical to a minimum depth of 30 ft. plus 1 ft. below grade. Bond ground rods together with a size to meet NEC Table 250.66, but no less than a #2 copper ground conductor. Provide additional rod electrodes as required to achieve specified ground resistance.

F. Complete installation shall meet or exceed the minimum requirements of NEC 250 and, when applicable, NFPA 78.

## 3.8 PULLBOX, MANHOLE, HANDHOLE GROUNDING.

A. One 30 ft. ground rod electrode shall be driven vertically to a minimum depth of 30 ft. plus 1 ft. below grade in each manhole, handhole or pullbox (in ground).

B. The complete installation shall exceed the minimum requirements of the NEC.

C. Provide additional ground rod electrodes as required to provide resistance called for herein.

D. Bond grounding electrode to all exposed metal parts of manhole, handhole, pullbox (including metal cover) with #6 copper ground conductor. Connect to ground rod electrode with exothermic weld. Connect to metal cover with exothermic weld. Connect to other metal parts with exothermic weld or UL approved grounding clamp. Provide minimum 3 ft. slack ground cable on cover connection to facilitate removal of cover.

## 3.9 HAZARDOUS LOCATIONS

A. Grounding in hazardous locations shall be done in accordance with applicable portions of Articles 500, 501, 502, 503, 511 and 514 of the National Electrical Code.

## 3.10 GROUND RING

A. Provide complete underground building perimeter ground ring system, completely encircling building.

B. Install minimum 2-1/2 feet depth into earth.

C. Install ground rods (minimum 30 ft. long) every 150 feet section of ground ring conductor.

D. Bond ground ring to building steel every 150 feet of building perimeter, bond to any and all electrical and piping systems that cross the ground ring system, bond to lightning protection down conductors and to any lightning or other earth grounding electrodes that may be present on the premises.

E. Bond to building service.

## 3.11 MISCELLANEOUS GROUNDING CONNECTIONS

A. Provide bonding to meet regulatory requirements.

B. Required connections to building steel shall be with UL approved non-reversible crimp type ground lugs exothermically welded to bus bar that is either exothermically welded to steel or bolted to steel in locations where weld will affect the structural properties of the steel.

C. Install grounding conductors to permit shortest and most direct path from equipment to ground; install in conduit; bond to conduit at both ends when conduit is metal; have connections accessible for inspection; and made with approved solderless connectors brazed (or bolted) to the equipment ground; in NO case be a current carrying conductor; have a green jacket unless it is bare copper; be run in conduit with power and branch circuit conductors. The main grounding electrodes conductor shall be exothermically welded to ground rods, water pipe, and building steel.

D. All surfaces to which grounding connections are made shall be thoroughly cleaned to maximum conductive condition immediately before connections are made thereto. Metal rustproofing shall be removed at grounding contact surfaces, for 0 ohms by digital Vm. Exposed bare metal at the termination point shall be painted.

E. All ground connections that are buried or in otherwise inaccessible locations, shall be welded exothermically. The weld shall provide a connection which shall not corrode or loosen, and which shall be equal or larger in size than the conductors joined together. The connection shall have the same current carrying capacity as the largest conductor.

F. Install ground bushings on all metal conduits entering enclosures where the continuity of grounding is broken between the conduit and enclosure (i.e. metal conduit stub-up into a motor control center enclosure or at ground bus bar). Provide an appropriately sized bond jumper from the ground bushing to the respective equipment ground bus or ground bus bar.

G. Each feeder metallic conduit shall be bonded at all discontinuities, including at switchboards and all sub distribution and branch circuit panels with conductors in accordance with Table 250.122 of NEC for parallel return with respective interior grounding conductor.

H. Grounding provisions shall include double locknuts on all heavywall conduits.

I. Install grounding bus in all existing panelboards of remodeled areas, for connection of new grounding conductors, connected to an approved ground point.

J. Bond together reinforcing steel and metal accessories in pool and fountain structures and bond to electrical system per NEC.

K. Where reinforced concrete is utilized for building grounding system, proper reinforced bonding shall be provided to secure low resistance to earth with "thermite" type devices, and #10AWG wire ties shall be provided to not less than ten (10) full length rebars which contact the connected rebar. Provide size and length of rod to meet NEC requirements.

## 3.12 INTERFACE WITH OTHER PRODUCTS

A. Interface with site grounding system.

B. Interface with lightning protection system.

## 3.13 FIELD QUALITY CONTROL

A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.

B. Use suitable test instruments to measure resistance to ground of system. Perform testing in accordance with test instrument manufacturer's recommendations using the fall- of-potential method.

**END OF SECTION 26 05 26**

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# SECTION 26 05 33 – CONDUIT FOR ELECTRCIAL SYSTEMS

## PART 1- GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and Division 01 Specification sections apply to this section.

### 1.2 SUMMARY

A. This section includes the requirements for provision and installation of conduit for electrical systems.

### 1.3 DESCRIPTION

A. Provide and install all equipment, labor, material, accessories, and mounting hardware for a complete and operating system for the following:

1. Rigid Metallic Conduit (RMC)
2. PVC coated Metal Conduit.
3. Flexible metal conduit (FMC)
4. Liquidtight flexible metal conduit (LFMC)
5. Electrical metallic tubing (EMT)
6. Rigid non-metallic conduit (PVC) (RNC)
7. Fittings and conduit bodies.

B. Raceways and conduits shall begin at an acceptable enclosure and terminate only in another such enclosure except conduit/raceway stub-outs.

C. A raceway shall be provided for all electrical power, lighting and electrical systems.

D. Where the Contract Documents refer to the terms "raceway," or "conduit" the materials shall be as listed above in conjunction with NEC article 100, definition of "raceway". MC and HCF flexible metal cables shall not be considered a substitute for raceway or conduit.

### 1.4 SUBMITTALS

A. Submit catalog cut sheet showing brand of conduit to be used and showing that conduit is UL listed and labeled and manufactured in the United States.

B. Submit catalog cut sheet on all types of conduit bodies, and fittings.

C. Submit product data on:

1. Conduits.

2. Conduit straps, hangers and fittings.
3. PVC solvent(s) and bending box.
4. Fitting entering and leaving the ground or pavement.
5. Cables
6. Expansion/deflection fittings.

D. Submit UL listed fire and smoke stopping assemblies for each applicable application. Provide details from UL Fire Directory and manufacturers' corresponding product data and details.

E. Product data shall prove compliance with Specifications, National Electrical Code, National Board of Fire Underwriters, manufacturer's specifications and written installation data.

## 1.5 PROJECT AS-BUILT DOCUMENTS

A. As-built documents shall accurately record actual routing of conduits.

## 1.6 REFERENCE AND REGULATORY REQUIREMENTS

A. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

B. Conform to the following:

1. NFPA 70 - National Electrical Code (NEC).
2. ANSI C80.1 - Electrical Rigid Steel Conduit (ERSC).
3. ANSI C80.3 - Electrical Metallic Tubing (EMT).
4. ANSI/UL 651 - Rigid Non Metallic Conduit (PVC)
5. ANSI/NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing (EMT) and Cable.
6. NECA "Standard of Installation."
7. NEMA RN 1 - Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit (IMC).
8. NEMA TC 3 – Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing.
9. ANSI/Fed. Spec. J-C-30B - Flexible Metal Cables, Galvanized steel jacket.

## 1.7 DELIVERY, STORAGE, AND HANDLING

A. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.

B. Protect PVC conduit from sunlight.

## 1.8 PROJECT CONDITIONS

A. Verify that field measurements are as shown on Drawings.

B. Verify routing and termination locations of conduit prior to rough-in.

C. Conduit routing is shown on Drawings in approximate locations unless dimensioned. Route as required to complete wiring system.

## PART 2 - PRODUCTS

### 2.1 GENERAL

A. All conduits shall bear UL label (or other nationally recognized testing agency).

B. Conduit systems and all related fittings, boxes, supports, and hangers must meet all the requirements of national, state, requirements and all related FAA codes and other Federal codes where applicable.

### 2.2 MINIMUM TRADE SIZE

A. Power/Lighting Homeruns 3/4”

B. Power/Lighting Branch Circuits Between Devices 1/2”

C. Systems Conduit 1”

D. Flexible and Seal-tite metallic conduit – 1/2”C (maximum 6 ft. long).

### 2.3 RIGID METAL CONDUIT

A. Comply with:

1. ANSI C80.1
2. UL 6
3. NEC
4. Fed. Specification WW-C-581e.

B. Conduit material:

1. Hot-dipped galvanized steel.

C. Fittings:

1. Threaded.
2. Insulated bushings shall be used on all rigid metal conduits terminating in panels, boxes, wire gutters, or cabinets, and shall be impact resistant plastic molded in an irregular shape at the top to provide smooth insulating surface at top and inner edge. Material in these bushings must not melt or support flame.
3. Hot-dipped galvanized malleable iron or steel manufactured in accord with ANSI C80.4.

D. Conduit Bodies:

1. Comply with ANSI/NEMA FB 1.
2. Threaded hubs.
3. Hot-dipped galvanized malleable iron.

## 2.4 PVC COATED METAL CONDUIT

A. Comply with:

1. UL6
2. ANSI C80.1
3. NEC
4. NEMA RN1
5. Fed. Specification WW-C-581E.

B. Conduit material: Hot-dipped galvanized rigid steel with external PVC coating, 20 mil. thick.

C. Fittings:

1. Threaded.
2. Insulated bushings on terminations.
3. Hot-dipped galvanized malleable iron or steel with external PVC coating, 20 mil. thick.

D. Conduit bodies:

1. Comply with:

a) ANSI/NEMA FB 1
b) Threaded hubs
c) Hot-dipped galvanized malleable iron.

## 2.5 FLEXIBLE METAL CONDUIT

A. Comply with:

1. NEC
2. ANSI/UL 1
3. Fed. Specification WW-C-566

B. Conduit material: Hot-dip galvanized Steel, interlocked.

C. Fittings:

1. ANSI/NEMA FB 1
2. ANSI/UL 514B
3. Malleable iron, zinc plated.
4. Direct flexible conduit bearing set screw type not acceptable.

5. Insulated throat on terminations.
6. Compression EMT to flexible conduit coupling is not acceptable unless special written permission is grated by OWNER.
7. Comply also with Fed. Specification W-F-406

## 2.6 LIQUID-TIGHT FLEXIBLE METAL CONDUIT

A. Comply with:

1. NEC
2. ANSI/UL 360

B. Conduit material:

1. Flexible hot-dipped galvanized steel core, interlocked.
2. Continuous copper ground, built into core up to 1-1/4" size.
3. Extruded polyvinyl gray jacket.

C. Fittings:

1. Threaded for IMC/rigid conduit connections.
2. Approved for hazardous locations where so installed.
3. Provide sealing washer in wet/damp locations.
4. Compression type.
5. ANSI/NEMA FB 1.
6. ANSI/UL 5148.
7. Hot-dipped galvanized malleable iron or steel.
8. Insulated throat on terminations.
9. Comply with Fed. Specification W-F-406.
10. Connections to vibrating equipment and transformers.

a) Connectors to have wire mesh conduit grip.

## 2.7 ELECTRICAL METAL CONDUIT

A. Comply with:

1. U.L 797
2. ANSI C80.3
3. NEC
4. ANSI/UL797
5. Fed. Specification WWC-563

B. Conduit material: Hot-dip Galvanized steel tubing (Electrogalvanized zinc is not acceptable).

C. Fittings:

1. ANSI/NEMA FB 1
2. Compression type.

3. Insulated throat on terminations.
4. Hot-dipped galvanized malleable iron or steel.
5. Fed. Specification W-F-408.

## 2.8 RIGID NON-METALLIC CONDUIT (PVC)

A. Comply with:

1. NEMA TC-2
2. UL 651
3. NEC
4. Fed. Specification WC1094A.

B. Conduit material:

1. Shall be high impact P.V.C. - tensile strength 55 PSI, flexural strength 11000 PSI.

C. Fittings:

1. Comply with: NEMA TC-3 and UL 514.

D. General:

1. Shall be UL listed.
2. Fittings and elbows shall be by the same manufacture as conduit.

## 2.9 EXPANSION FITTINGS

A. Expansion/deflection fittings shall be:

1. Listed, hot dipped galvanized inside and outside providing a 4" expansion chamber and deflection (where applicable) when used with rigid conduit, intermediate metal conduit and electrical metallic conduit, or:
2. U.L. Listed, polyvinyl chloride providing a minimum 6” expansion chamber when used with non-metallic conduit (PVC), and shall meet the requirements of and as specified elsewhere for non-metallic conduit. Provide fittings as specified above for expansion/deflection conditions.
3. Hot dipped galvanized expansion and deflection (where applicable) fitting shall be provided with an external braided grounding and bonding jumper with approved clamps, UL Listed for the application.
4. Expansion fitting, UL Listed for the application and in compliance with the National Electrical Code without the necessity of an external bonding jumper may be considered. Submit fitting with manufacturer's data and UL Listing for approval prior to installation.

## PART 3 - EXECUTION

### 3.1 LOCATION REQUIREMENTS

A. Underground Installations:

1. Use Schedule 40 thickwall nonmetallic conduit only unless local authority having jurisdiction or applicable codes/utility requirements, etc. require rigid steel conduit.
2. Encase conduit in a concrete envelope of not less than 3” thickness on all sides and not less than 1-1/2” between conduits (where more than one conduit is installed together) for:

    a) All conduits installed under roads, taxiways, and runways.
    b) All conduits installed for primary electric circuits, main feeders, and data/communications systems (i.e. Telephone, data, parking revenue, radio, flight information, air traffic control systems, security, fiber optic).

3. All conduits or elbows entering or leaving any slab or the ground shall be rigid steel conduit coated with asphalt paint.
4. Where rigid metallic conduit is installed underground as noted above it shall be coated with waterproofing black mastic before installation, and all joints shall be re-coated after installation.
5. All PVC runs over 100 ft. in length shall utilize rigid steel 90° elbows at each horizontal change in direction. All PVC risers shall utilize rigid steel 90° elbows. Elbows shall be coated with black mastic or PVC coating. Bond all metal elbows per NEC.
6. Underground raceway systems shall conform to all national, state, local and FAA regulations, in general and Article 300, Section 300.5 of the National Electrical Code specifically.

    a) Depth of conduits shall be not less than 18" with the following exceptions:

        1) Conduits installed in concrete floors of buildings to have a minimum concrete cover not less than 2".
        2) Conduits passing under taxiways, runways, ramps, holding areas, and docking areas, must be installed below the concrete pour, in the sub base, and shall be encased in not less than 3" of concrete, the specifications of which shall meet the same standards required for runways and taxiways except that slump shall be 3 to 4 inches.

7. Verify finished lines in areas where raceways will be installed underground before the grading is complete.

B. In Slab, Above or On Grade:

1. Use coated rigid steel conduit, coated intermediate metal conduit (if approved) or thickwall nonmetallic conduit.
2. In slab conduit is permitted only where written consent is granted by Architect and Structural Engineer, regardless of that shown or noted by drawings. Install as directed by Architect/Structural Engineer.

C. Penetration of Slab:

1. Exposed Location:

a) Where penetrating a floor in an exposed location from underground or in slab, a black coated galvanized rigid steel conduit shall be used.

2. Concealed Location:

a) Where penetrating a floor in a location concealed in block wall and acceptable by applicable codes, non-metallic conduit may be used up to first outlet box, provided outlet box is at a maximum height of 40" above finished floor.
b) Where penetrating a floor from underground or in slab, a coated galvanized rigid steel conduit shall be used.

D. Outdoor Location:

1. Above Grade:

a) Where penetrating the finished grade, a coated galvanized rigid steel conduit shall be used.
b) All exterior conduit runs shall be rigid conduit and threaded connectors as specified elsewhere.
c) All areas subject to exterior conditions such as overhangs, galvanized rigid steel conduit shall be used.

2. Roofs:

a) Conduit is not to be installed on roofs, without written authorization by OWNER for specific conditions.
b) When approved by written authorization conduit shall comply with the following:

1) Be PVC coated rigid galvanized metal conduit.
2) All fittings, etc. are to be PVC coated.
3) Conduit shall be supported above roof at least 6 inches using approved conduit supporting devices. Refer to applicable roofing specifications.
4) Fasten supports to roof per roofing manufacturer’s recommendations.

3. Cooling Towers:

a) Conduit installed at cooling towers shall be PVC coated rigid galvanized conduit.

E. Interior Dry Locations:

1. Concealed:

a) Use rigid galvanized steel and electrical metallic tubing. Thickwall non-metallic conduit (PVC) may be used inside block walls up to first outlet to a maximum of 40" A.F.F. except where prohibited by the NEC.

2. Exposed:

a) Use rigid galvanized steel and electrical metallic tubing. EMT may only be used where not subject to damage which is interpreted by this specification to be above 96" AFF and exiting the top of panelboards, terminal cabinets, and control panels.

3. Concealed or exposed flexible conduit:

a) Concealed: Flexible steel conduit or seal tight flexible steel conduit shall be in lengths not longer than six (6) feet in length with a ground conductor firmly attached to the terminating fitting at the extreme end of the flex. Direct change over from conduit to flexible conduit is not acceptable unless written permission is granted by OWNER or specifically noted on drawings.

b) Exposed: Liquid tight flexible steel conduit shall be used for connections to motors, movable equipment, or vibration equipment (transformers, pumps, AHU’s, loading bridges, etc.) as specified herein. Lengths shall not exceed four (4) feet in length unless written authorization by OWNER for specific conduits is granted. Connections to vibration equipment, motors, etc shall be made with wire mesh grip fittings as specified herein. Flexible steel conduit is not acceptable in exposed locations. All exposed flexible metal conduit shall be liquid tight.

F. Interior Wet and Damp Locations:

1. Use rigid galvanized steel in interior wet and damp locations. Areas which are subject to direct exterior conditions such as parking garages and open ramp overhangs shall be classified “WET/EXTERIOR LOCATION.”

G. Concrete Columns or Poured in-place Concrete Wall Locations:

1. Use thickwall non-metallic conduit. Penetration shall be by approved metal raceway (i.e. metal conduit as required elsewhere in these specifications).

H. Corrosive Locations:

1. Comply with all codes and standards.

## 3.2 ADDITIONAL REQUIREMENTS FOR RIGID METAL STEEL CONDUIT

A. Rigid metal conduit shall be cut and threaded with tools approved for the purpose and by qualified personnel.

1. Approved pipe vise.
2. Roller/bade type cutter or band saw.
3. Reamer capable of completely removing al ridges or burrs left by the cutter. Reaming with pliers is not acceptable.

B. Hangers shall be installed 8 ft. apart.

C. Conduits stubbed through floor slabs, above grade and not contained inside walls, shall be rigid galvanized metallic conduit.

D. One hole pipe straps shall be malleable iron. Wet location applications shall include malleable iron back clamp spacers.

E. Use of two-piece threaded union fittings and rigid set screw fittings are not permitted. Threaded unions may be acceptable where required for special field conditions only when special written permission is granted by OWNER.

## 3.3 ADDITIONAL REQUIREMENTS FOR INTERMEDIATE METAL CONDUIT (IMC)

A. May be installed only by special written permission.

B. If written approval is received then IMC may be used in locations acceptable by NEC and elsewhere in these specifications, whichever is most stringent.

## 3.4 ADDITIONAL REQUIREMENTS FOR FLEXIBLE STEEL CONDUIT AND LIQUID-TITE FLEXIBLE METAL CONDUIT

A. Shall be properly grounded.

B. Shall be installed with approved fittings.

C. Shall be used for final connections to vibrating equipment such as motors, pumps, transformers, etc.

D. Liquid-tight conduit termination connectors at vibration equipment (i.e. pumps, AHU’s, motors, moveable equipment, etc) shall be provided with wire mesh grips.

## 3.5 ADDITIONAL REQUIREMENTS FOR NON-METALLIC CONDUIT (PVC)

A. PVC conduit is not allowed anywhere inside building(s) except underground, in slab, in poured in place concrete, and in block wall up to first outlet box (if not over 40" AFF) if allowed by codes. In elevated slabs, conduit is permitted only where written consent is granted by Structural Engineer, regardless of that shown or noted by drawings. Install as directed by Architect/Structural Engineer.

B. Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area inserted in fitting. Allow joints to cure for 20 minutes, minimum.

C. Threads will not be permitted on PVC conduit and fittings, except for rigid steel to PVC couplings.

D. Installation of PVC conduit shall be in accordance with manufacturer's recommendations.

E. PVC conduit shall not be used to support fixture or equipment.

F. Field bends or direction changes shall be by manufactured bends only. Heating with flame and handheld dryers are prohibited.

G. PVC fittings and elbows shall be by same manufacture as conduit.

## 3.6 ADDITIONAL REQUIREMENTS FOR PVC COATED CONDUIT

A. All cuts, pinholes and ends shall be sealed using liquid PVC patch. PVC coated conduit shall be thoroughly inspected after installation to assure all voids, cuts, pinholes or other violations of the integrity of the PVC coating are sealed.

## 3.7 GROUNDING

A. All raceways shall have a copper system ground conductor throughout the entire length of circuit installed within conduit in strict accordance with NEC codes.

B. Grounding conductor shall be included in total conduit fill determining conduit sizes, even though not included or shown on drawings.

C. Grounding conductors run with exterior/ underground feeders shall be bare only.

D. Grounding conductors run with feeders shall be bonded to portions of conduit that are metal by approved ground bushings.

E. See other sections of these specifications for additional requirements.

F. Grounding conductors (including lightning protection down conductors) run in metal conduit shall be bonded to metal conduit at both ends.

## 3.8 GENERAL

A. Install conduit in accordance with NECA "Standard of Installation." Contractor shall layout all work prior to rough-in.

B. Install nonmetallic conduit in accordance with manufacturer's instructions.

C. Arrange conduit to maintain headroom and present neat appearance.

D. Route conduit installed above accessible ceilings or exposed to view parallel or perpendicular to walls. Do not run from point to point.

E. Route conduit in and under slab from point-to-point.

F. Do not cross conduits in slab.

G. Maintain adequate clearance between conduit and piping.

H. Maintain 12-inch (300-mm) clearance between conduit and surfaces with temperatures exceeding 104 degrees F (40 degrees C).

I. Maintain minimum of 3” inch separation between power and communications raceways. Increase separation if so required to comply with EIA/TIA referenced standards.

J. Systems raceways shall be installed in accordance with ANSI/EIA/TIA Communications Standards.

1. Maintain proper separation between PDS system cables and all power and unshielded cables, as required to prevent noise or crosstalk interference.
2. Raceway bends shall have minimum inside radius of 6 times the internal diameter. Increase bend radius to 10 times for raceway larger than 2-inch size. Provide proper bend for all changes of direction. Pull and splice boxes shall not be used in lieu of a bend.
3. Install raceways so no more than two 90o bends are in any raceway section without a pullbox. Install additional pull boxes as required to maintain maximum of two 90o bends between pull boxes and termination points.
4. Install boxes in straight sections of raceway.

K. Cut conduit square using saw or pipe cutter; de-burr cut ends.

L. Bring conduit to shoulder of fittings; fasten securely.

M. Use conduit hubs or sealing locknuts to fasten conduit to sheet metal boxes in damp locations and to cast boxes. Use threaded conduit hubs to fasten conduit to sheet metal boxes, disconnect switches and equipment control panels in wet and exterior locations.

N. Install no more than equivalent of three 90-degree bends between boxes for power and lighting systems. Use conduit bodies to make sharp changes in direction, as around beams, Use appropriate boxes and conduit bodies for fire alarm, voice/data and sound/paging systems. Use factory elbows for bends in metal conduit larger than 2- inch size.

O. Avoid moisture traps; provide junction box with drain fitting at low points in conduit system.

P. Provide pull boxes, junction boxes and fire barrier at fire rated walls as required by NEC Article 300, whether shown on drawings or not.

Q. Provide continuous fiber poly line 1000 lb. minimum tensile strength pull string in each empty conduit except sleeves and nipples. This includes all raceways which do not have furnished conductors. Pull cords must be fastened to prevent accidental removal. A phenolic or brass nameplate shall be attached to each end indicating the location of both ends of conduit as follows: THIS END = "LOCATION," OTHER END = "LOCATION."

R. Use suitable seals to protect installed conduit against entrance of dirt and moisture and insects.

S. Ground and bond conduit under provisions of Section 26 05 26.

T. Identify conduit under provisions of Section 26 05 53.

U. Install all conduit concealed from view unless specifically shown otherwise on drawings

V. Rigid steel box connections shall be made with double locknuts and bushings.

W. All wire raceways shall be kept clear of plumbing fixtures to facilitate future repair or replacement of said plumbing fixtures without disturbing wire raceways. Except where it is necessary for control purposes, all raceways shall be kept away from items producing heat.

X. All raceway runs in masonry shall be installed at the same time as the masonry so that no face cutting is required, except to accommodate boxes.

Y. All raceways shall be run from outlet to outlet as shown in the drawings, unless permission is granted, to alter arrangement shown. If permission is granted arrangement shall be marked on red-lined As-Built drawings as previously specified.

Z. Spare conduit stubs shall be capped and location and use marked with concrete marker set flush with finish grade. Marker shall be 6" round x 6" deep with appropriate symbol embedded into top to indicate use. Also, tag conduits in panels where originating.

AA. All conduit stubbed above floor shall be strapped to a metal channel supported by conduit driven into ground or tied to steel. Spare conduit stubs shall be capped with a UL listed and approved cap or plug for the specific intended use and identified with ink markers as to source and labeled "Spare".

BB. All connections to motors or other vibrating equipment including transformers or at other locations where required shall be made with not less than 12" nor more than 24" of flexible liquid-tight steel conduit, with nylon insulated throat connectors and wire mesh grip fittings at both terminations of conduit. Use angle connectors wherever necessary to relieve angle strain on flex conduit.

CC. Provide a conduit sealing fitting or pliable compound wherever conduit system is exposed to wide temperature changes which may cause condensation within the raceway; as from the inside to the outside of coolers or freezers.

DD. Route conduit through roof openings for piping and ductwork or through suitable roof jack with pitch pocket. Coordinate location with roofing installation specified under other Sections of these specifications.

EE. All raceways shall be run in neat and workmanlike manner and shall be properly in accordance with latest edition of NEC with approved conduit clamps, hanger rods and structural fasteners.

FF. All raceway runs, whether terminated in boxes or not, shall be capped during the course of construction and until wires are pulled in, and covers are in place. No conductors shall be pulled into raceways until construction work which might damage the raceways has been completed.

GG. Electrical raceways shall be supported independently of all other systems and supports and shall in every case avoid proximity to other systems which might cause confusion with such systems or might provide a chance of electrolytic actions, contact with live parts or excessive induced heat.

HH. Raceways, boxes, etc., shall not be attached to an acoustic grid ceiling system or support wire per NEC Article 300.11. Support all components directly from building structure.

**END OF SECTION 26 05 33**

# SECTION 26 05 43 – UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS

## PART 1- GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and Division 01 Specification sections apply to this section.

### 1.2 SUMMARY

A. This section includes the requirements for provision and installation of underground ducts and raceways for electrical systems.

### 1.3 DESCRIPTION

A. Provide and install all equipment, labor, material, accessories and mounting hardware for a complete and operating duct bank system including, but not limited to:

1. Plastic conduit.
2. Metal conduit.
3. Rigid Metal.
4. Duct.
5. Manholes

B. System to include PVC conduit with black mastic coated rigid galvanized sweeping elbows for all changes in direction, all encased in 3-inch red concrete envelope.

C. Manholes are to be size, and type as required for use. Manholes for primary power must comply with requirements of local utility company (OUC).

D. Provide and install duct bank/car plaza manhole systems for all electrical for airfield primary electric, electrical feeders, communications and fiber optics.

### 1.4 SUBMITTALS

A. Shop Drawings: Indicate dimensions, reinforcement, size and locations of openings and accessory locations for manholes.

B. Product Data: Provide for nonmetallic conduit and manhole accessories

C. Manufacturer's Instructions: Include instructions for storage, handling, protection, examination, preparation, and installation.

## 1.5 PROJECT AS-BUILT DOCUMENTS

A. Record actual locations of exact routing of duct bank, dimension from known landmarks (Survey Points).

B. Record actual locations of each manhole, dimension from known landmarks (Survey Points).

## 1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified with minimum three years experience.

## 1.7 REFERENCES AND REGULATORY REQUIREMENTS

A. Furnish products listed and classified by Underwriters Laboratories, Inc. and testing firm acceptable to authority having jurisdiction as suitable for purpose specified and shown.

B. Conform to the requirements of the following:

1. AASHTO - Standard Specification for Highway Bridges.
2. ANSI C80.1 - Rigid Steel Conduit, Zinc-Coated.
3. ANSI/ASTM A153 - Zinc Coating (Hot Dip) on Iron and Steel Hardware.
4. ANSI/ASTM A569 - Steel, Sheet and Strip, Carbon (0.15 Maximum Percent), Hot-Rolled, Commercial Quality.
5. ANSI/IEEE C2 - National Electrical Safety Code.
6. ANSI/NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies.
7. ANSI/NFPA 70 - National Electrical Code.
8. ASTM A48 - Gray Iron Castings.
9. ASTM A123 - Zinc (Hot-Galvanized) Coatings on Products Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates, Bars, and Strips.
10. NEMA TC 2 - Electrical Plastic Tubing (EPT) and Conduit (EPC-40 and EPC-80).
11. NEMA TC 3 - PVC Fittings for Use with Rigid PVC Conduit and Tubing.
12. NEMA TC 6 - PVC and ABS Plastic Utilities Duct for Underground Installation.
13. NEMA TC 8 - Extra-Strength PVC Plastic Utilities Duct for Underground Installation.
14. NEMA TC 9 - Fittings for ABS and PVC Plastic Utilities Duct for Underground Installation.
15. NEMA TC 10 - PVC and ABS Plastic Communications Duct and Fittings for Underground Installation.
16. NEMA TC 14 - Filament-Wound Reinforced Thermosetting Resin Conduit and Fittings.

## 1.8 PROJECT CONDITIONS

A. Verify that field measurements are as shown on Drawings.

B. Verify routing and termination locations of duct bank prior to excavation for rough-in.

C. Duct bank routing is shown in approximate locations unless dimensions are indicated. Route as required to complete duct system.

D. Manhole and can plaza locations are shown in approximate locations unless dimensions are indicated. Locate as required to complete duct bank system.

## PART 2 - PRODUCTS

### 2.1 CONDUIT

A. Comply with Division 26 Section Conduits

### 2.2 ACCESSORIES

A. Underground Warning Tape: 4 inch wide plastic tape, detectable type, colored yellow with suitable warning legend describing buried electrical lines.

### 2.3 CONCRETE

A. Concrete shall be as required by other divisions of these specifications, but in no case shall concrete be less then 3000 psi.

B. Reinforced precast concrete, as specified in Division 03.

C. Construction: Modular sections with tongue-and-groove joints.

D. Reinforcing: AASHTO Classification H-20.

### 2.4 CAST-IN-PLACE MANHOLE ACCESSORIES

A. Frames and Covers: ASTM A48; Class 30B gray cast iron, 30 inch size, machine finished with flat bearing surfaces. Provide cover marked ELECTRIC to indicate utility.

B. Cable Pulling Irons: Use galvanized rod and hardware.

C. Cable Rack Inserts: Minimum load rating of 800 pounds (365 kg).

D. Cable Rack Mounting: All cables in manholes shall be properly supported on cable supports a minimum of every 36”. Provide new cable supports in existing manholes as required for proper support of both the new and existing cables. Supports shall be fastened to manhole wall with approved concrete anchors.

E. Cable Racks: Shall be nonmetallic saddle type that is nonconductive and will never rust or corrode. Cable saddle rack shall be at least 32“ long, 3” wide, incorporate three cable saddles that are 5” deep with a 3” throat opening and four elongated mounting holes. At least one spare hook shall be available at each cable rack position for future use.

F. Manhole Steps: Ladder: Aluminum rung with top hook to engage manhole step. Provide one ladder for each manhole.

G. Sump Covers: ASTM A48; Class 30B gray cast iron with hinged lift assist.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Verify that excavation, base material installation, and compaction is completed.

### 3.2 PREPARATION

A. Prepare excavation in accordance with manhole manufacturer's instructions.

### 3.3 DUCT BANK INSTALLATION

A. Install duct in accordance with manufacturer's instructions.

B. Install duct to locate top of duct bank at depths as indicated on drawings.

C. Install ducts with minimum slope of 4 inches per 100 feet. Slope away from building entrances.

D. Cut duct square using saw or pipe cutter; de-burr cut ends.

E. Insert duct to shoulder of fittings; fasten securely.

F. Join nonmetallic duct using adhesive as recommended by manufacturer.

G. Wipe nonmetallic duct dry and clean before joining. Apply full even coat of adhesive to entire area inserted in fitting. Allow joint to cure for 20 minutes, minimum.

H. Install no more than equivalent of three 90-degree bends between pull points.

I. Provide suitable fittings to accommodate expansion and deflection where required.

J. Stagger duct joints vertically in concrete encasement 6 inches minimum.

K. Use suitable separators and chairs installed not greater than 4 feet on centers.

L. Band ducts together before placing concrete.

M. Securely anchor duct to prevent movement during concrete placement.

N. Place concrete under provisions of Division 03. Use mineral pigment to color concrete red.

O. Provide minimum 3 inch concrete cover at bottom, top, and sides of duct bank.

P. Provide suitable pull string in each empty duct except sleeves and nipples.

Q. Swab duct. Use suitable caps to protect installed duct against entrance of dirt and moisture.

R. Backfill trenches under provisions of Division 02.

S. Interface installation of underground warning tape with backfilling. Install tape 6 inches below finished surface.

T. All excavation for underground feeders shall be performed in accordance with all State of Florida standards and regulations for trench safety.

U. Maintain a minimum of 7.5 inches center-to-center spacing between all raceways.

V. Fill medium shall be compacted to eliminate air pockets and to assure uniform heat dissipation. Concrete shall be carefully spaded to eliminate voids. All trenches shall be free of cans, bottles, scrap lumber, trash and obstructions prior to back filling.

## 3.4 PRECAST MANHOLE INSTALLATION

A. Install and seal precast sections in accordance with manufacturer’s instructions.

B. Install manholes plumb.

C. Use precast neck and shaft sections to bring manhole cover to finished elevation.

D. Attach cable racks to inserts after manhole installation is complete.

E. Install drains in manholes and connect to site drainage system 4-inch pipe terminating in 1/3 cu. yd. crushed gravel bed under provisions of Division 22.

F. Damp proof exterior surfaces, joints, and interruptions of manholes after concrete has cured 28 days, under provisions of Division 07.

## 3.5 COORDINATION

A. Coordinate duct bank routing (and manhole locations) with all underground utilities and building structure. Modify location/routing shown on drawings as required to facilitate installation.

## 3.6 CONDUIT

A. Install plastic conduit in concrete envelope with rigid steel sweeping elbows with largest possible factory radius for all changes in direction.

B. Minimum bend in conduits 2" and larger shall be equal to or greater than then ten (10) times the internal diameter of the conduit. Provide larger radius as necessary to achieve acceptable pulling tension or as required by cable installers.

## 3.7 CONDUCTORS

A. All duct bank and manhole systems shall completely isolate Normal Utility Power and Emergency Power Systems into two separate systems.

B. Attach cables to nonmetallic cable racks on manhole walls in a neat and orderly way.

C. Wire other than current carrying conductors such as control or signal wiring shall be run in a separate conduit within the duct bank. Secure wires separately at the maximum distance within the manhole from all current carrying conductors.

D. Slack cable shall be provided in manholes by routing the cables by the longest path possible through the manholes.

E. All cables will be secured to cable racks with nylon cable ties, no tie wire, tape or substitutes will be allowed.

F. No metal objects such as unistrut, tie wire or angle iron that can rust and become sharp objects will be allowed in manhole.

G. Cable splicing in manholes will not be allowed with out prior written permission from owner. Submittals for all cable splicing products will be required before permission is given.

H. All conductors shall be pulled in conduits by industry approved cable pulling “tuggers” equipment. The use of construction equipment such as fork lifts, tractors and other vehicles will not be allowed. All conductors will be routed and protected by using the proper pulleys and sheaves.

**END OF SECTION 26 05 43**

# SECTION 26 05 53 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

## PART 1- GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and Division 01 Specification sections apply to this section.

### 1.2 SUMMARY

A. This section includes the requirements for provision and installation of identification for electrical equipment.

### 1.3 DESCRIPTION

A. Provide and install all equipment, labor and material for a complete identification system, including but not limited to:

1. Nameplates and labels.
2. Wire and cable markers.
3. Conduit markers.
4. Identify all new and existing conduits, boxes, equipment, etc. as specified herein.

### 1.4 REFERENCES AND REGULATORY REQUIREMENTS

A. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

B. Conform to the requirements of the following:

1. ANSI/NFPA 70 - National Electrical Code.
2. Americans with Disabilities Act - 1990.

## PART 2 - PRODUCTS

### 2.1 NAMEPLATES

A. Nameplates for Emergency Branch Power shall be laminated red phenolic plastic with chamfered edges and white engraved lettering. Orange phenolic plastic border to be added around nameplate to denote branch.

B. Letter Size:

1. 1/8 inch for identifying individual equipment and loads.

2. 1/4 inch for identifying grouped equipment and loads.

C. Nameplates shall adequately describe the function of the particular equipment involved. Where nameplates are detailed on the drawings, inscription and size of letters shall be as shown and shop drawing submitted for approval. Nameplates for panelboards and switchboards shall include the panel designation, voltage and phase of the supply. For example, "Panel A, 120/208V, 3-phase, 4-wire". In addition, provide phenolic label in panel to describe where the panel is fed from. For example, "Fed From MDP-1:3:5". The name of the machine on the nameplates for a particular machine shall be the same as the one used on all motor starters, disconnect and P.B. station nameplates for that machine.

D. The following items shall be equipped with nameplates: All motors, motor starters, motor-control centers, push-button stations, control panels, time switches, disconnect switches, transformers, panelboards, circuit breakers (i.e., all 2 pole, 3 pole C.B.'s), contactors or relays in separate enclosures, power receptacles where the nominal voltage between any pair of contacts is greater than 150V, wall switches controlling outlets that are not located within sight of the controlling switch, high voltage boxes and cabinets, large electrical, and electrical systems junction and pull boxes (larger than 4 11/16"), terminal cabinets, terminal boards, and equipment racks. Nameplates shall also describe the associated panel and circuit number (if applicable).

E. All receptacles shall be clearly labeled with panel/circuit designation.

F. All junction/pull boxes shall receive phenolic labels clearly labeling circuitry/cabling/etc., within.

## 2.2 WIRE MARKERS

A. Description: Cloth, tape, split sleeve, or tubing type wire markers.

B. Locations: Each conductor at panelboard gutters, pull boxes, outlet and junction boxes, and each load connection.

C. Legend:

1. Power and Lighting Circuits: Branch circuit or feeder number indicated on drawings including neutral conductor.
2. Low voltage circuits (circuits under 120V):

D. Control wire number indicated on schematic and interconnection diagrams on shop drawings.

### 2.3 CONDUIT/JUNCTION BOX MARKER

A. All new and existing junction boxes/cover plates for power, lighting and systems (except those installed in public areas) shall adequately identify its associated systems panel and circuit number. Identification shall be by means of black permanent marker. (Paint one-half cover plate with appropriate color above, and one-half with associated panel/circuit or system as described above.)

### 2.4 DEVICE COVER PLATE IDENTIFICATION

A. Description: Self-adhesive clear printed labels with Black typed letters (pre-printed, dot matrix, or laser).

B. Locations:

1. Each new receptacle cover plate.
2. Each existing receptacle cover plate in areas of remodel/renovation.

C. Legend:

1. Receptacle plates shall adequately describe its associated panelboard and circuit reference.
2. System plates shall adequately describe its terminal board, or terminal cabinet, termination cable identifier and assigned user code number.

### 2.5 UNDERGROUND WARNING TAPE

A. Description: 6 inch wide plastic tape, detectable type, colored red with suitable warning legend describing buried electrical lines, one strip per 24” of duct.

## PART 3 - EXECUTION

### 3.1 PREPARATION

A. Degrease and clean surfaces to receive nameplates and labels.

### 3.2 APPLICATION

A. Install nameplate parallel to equipment lines.

B. Secure nameplate to equipment front using stainless steel pop rivets.

C. Secure nameplate to inside surface of door on panelboard that is recessed in finished locations.

D. Nameplates installed inside on dead front cover shall be self adhesive tape. (Do not drill or install screws in dead front.)

E. Identify new and existing conduit, junction boxes, and outlet boxes using field painting.

F. Identify new underground conduits using underground warning tape. Install one tape per 24 inches of trench at 3 inches below finished grade.

G. Install wire markers at all new and existing connections and terminations.

**END OF SECTION 26 05 53**

# SECTION 26 08 10 - TESTS AND PERFORMANCE VERIFICATION

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and Division 01 Specification sections apply to this section.

### 1.2 SUMMARY

A. This section includes the requirements for the furnishing of all labor, materials, equipment and services necessary to test and prove performance of the electrical system.

### 1.3 DESCRIPTION

A. Operate system for a 3-day period. Do performance verification work as required to show that the system is operating correctly in accordance with design. Supply instruments required to read data. Adjust system to operate at the required performance levels.

## PART 2 - PRODUCTS – (not applicable)

## PART 3 – EXECUTION

### 3.1 TESTS

A. System:

1. General: After installation of all conductors, and before final acceptance, make required tests to determine proper function of all circuits. Furnish all necessary instruments required to make tests, and correct any deficiencies found. Prior to energizing, circuits shall be tested to verify opens, intentional and non-intentional grounds, and continuity and detect short circuits by approved constant "megger".
2. Procedure:

    a. Insulation resistance of all circuit conductors shall be tested. This is to include all new conductors and all existing conductors that are connected or extended. Each conductor shall have its insulation resistance tested after the installation is completed and all splices, taps, and connections are made except connection to source and point of final termination at distribution or utilization equipment.

b. Insulation resistance of conductors that are to operate at 600 volts or less shall be tested by using a megohmmeter at not less than 1000 volts DC. Resistance shall be measured from each conductor to all other conductors and from each conductor to conduit (ground).Test duration shall be one minute. Investigate any values which deviate from similar connections by more than 50 percent of the lowest value. Testing methodology shall conform to National Electrical Testing Association (NETA). Acceptable insulation resistance of conductors rated at 600 volts shall not be less than the recommended wire manufactures accepted values and test equipment manufacture, or 50 megohms, which ever is greater.
c. Conductors that do not satisfy test requirements (b. above) shall be removed, replaced, and testing repeated on new cable, at no additional costs to the Owner. All tests shall be performed by a licensed electrician trained in the use of the test instrument.
d. Test reports shall identify each feeder conductor tested, date, time, and result of test, weather conditions, and range, test voltage, and serial number of the megger instrument used. Any conductor or splice that is found defective shall be promptly removed and replaced, and additional test shall be performed.
e. Observe all safety instructions set by testing equipment manufacturer to minimize risk of electric shock and sparking.

3. Take readings of voltage and amperage at building main disconnect switch and at main for each panel (panelboard, distribution panel, switchboard), at primary and secondary side of each transformer, at each major item of equipment, and at the end of the longest branch circuit at each panel. The above readings shall be taken (1) "no load" conditions and (2) "full load" conditions with all equipment using electricity.

B. Motors:

1. Test run each motor via motor's control unit in both manual mode and automatic mode. Verify proper operation and voltage.
2. Test run each motor furnished in the Work and all existing motors specifically noted in the Contract Documents to be tested:

a. With the system energized, line-to-line voltage and line current measurements shall be made at the motors under full load conditions. Should measured values deviate +/- 5% from the nameplate ratings, the condition shall be corrected. Notify the designer immediately should deviations occur.
b. Record results of existing motors tested and submit values to OAR in writing.
c. Tabulate readings, complete "Motor Test Information" form included in Division 01 of the General Requirements. Final approved data is to be submitted in O & M manual.

C. Grounds:

1. Test each raceway for raceway continuity as called for in Section 26 05 26.

2. Test each grounding system used in the project as called for in Section 26 05 26
3. Requirements for each and every grounding system in the project including but not limited to: each ground rod installation; each water pipe and ground installation (test water pipe to ground and test water pipe to building service equipment); and each building steel ground connection (test building steel to ground and test building steel to building service equipment). Final approved data is to be submitted in O & M manual.
4. Grounding resistance shall be as called for in Section 26 05 26.
5. Testing shall be three (3) point method in accordance with IEEE recommended practice.

D. Equipment:

1. Equipment items requiring check-out memos are all major items of equipment such as (but not limited to):

   a. Panelboards, switchboards.
   b. Low-Voltage Switchgear.
   c. Transformers.
   d. UPS equipment.
   e. Generator equipment.

2. At completion of construction after all performance verification and testing information has been gathered, submitted, and approved, provide one copy of this information to the authorized manufacturer's representative of the equipment.

   a. Manufacturer's authorized representative must be trained by the manufacturer and authorized to inspect, adjust, test, and repair equipment.

3. Manufacturer’s authorized representative shall examine the performance verification information, check the equipment in the field while it is operating, and sign a check-out memo for a record.

   a. Check out of equipment is to include examining performance and certifying equipment has been installed per manufacturer's recommendations, that all necessary adjustments have been performed and that equipment is operating properly.

## 3.2 DATA PROCESSING

A. Tabulate data for submission.

B. Submit data with date and name of checker with one copy for each.

C. Where specific performance verification information is called for in the specifications, use copies of the sheets provided for recording readings.

D. Data shall be submitted and approved before Check Out memos are signed or a request for final inspection is made.

**END OF SECTION 26 08 10**

# SECTION 26 24 16 - PANELBOARDS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and Division 01 Specification sections apply to this section.

### 1.2 SUMMARY

A. This section includes the requirements for provision and installation of panelboards.

### 1.3 DESCRIPTION

A. Provide all labor, materials, and equipment necessary to properly and completely install panelboards as scheduled on the drawings and as required by this section.

### 1.4 SUBMITTALS

A. Submit product data on each basic panelboard construction type, showing manufacturer’s standard construction data including:

1. Cabinet construction/dimensions.
2. Bus construction.
3. UL labeling.
4. Each overcurrent device.

B. Shop drawings shall be submitted for each panel and clearly indicate the following information:

1. Label.
2. Each circuit breaker amperage rating, circuit number and position/location in panel.
3. Electrical characteristics of panel.
4. Mains rating.
5. Main device rating.
6. Mounting.
7. Dimension, width, depth, height.
8. Bus material.
9. Interrupting capacity of minimum rated breaker.
10. Panel type.

## 1.5 PROJECT AS-BUILT DOCUMENTS

A. Record actual locations of Panelboards on red lined as-built documents and indicate actual branch circuit arrangement.

## 1.6 OPERATION AND MAINTENANCE DATA

A. Provide spare parts data listing; source and current prices of replacement parts and supplies; and recommended maintenance procedures and intervals.

## 1.7 QUALITY ASSURANCE

A. Manufacturer: Existing panels are Square D.

## 1.8 REFERENCES AND REGULATORY REQUIREMENTS

A. Furnish products listed and classified by UL as suitable for purpose specified and indicated.

B. Conform to the requirements of the following:

1. ANSI/NFPA 70 - National Electrical Code.
2. NECA (National Electrical Contractors Association) - "Standard of Installation."
3. NEMA AB 1 - Molded Case Circuit Breakers.
4. NEMA PB 1 - Panelboards.
5. NEMA PB 1.1 - Instructions for Safe Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less.
6. UL 67 - Panelboards
7. UL 50 - Cabinets and Boxes
8. Fed. Spec. W-P-115C

## 1.9 FIELD MEASUREMENTS

A. Verify that field measurements are as instructed by manufacturer.

## 1.10 MAINTENANCE MATERIALS

A. Provide two keys per panelboard.

## 1.11 DELIVERY, STORAGE AND HANDLING

A. Handle panelboards and enclosures carefully to prevent damage.

B. Store equipment indoors and protect from weather.

C. Deliver tubs and internal assemblies sufficiently in advance of installation period as necessary to prevent delay of work.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

A. Square D, or approved substitutions.

### 2.2 GENERAL

A. Lighting and Appliance Branch Circuit Panelboards: NEMA PB1, circuit breaker type, dead front, UL 67.

B. Panelboard Bus: Copper ratings as indicated. Provide copper ground bus in each panelboard. Provide isolated full size neutral bus where neutral is applicable. Provide non-linear load panelboards as specified on drawings. Non-linear panelboards shall have 200 percent rated neutral busbar.

C. Short-Circuit Rating:

1. Minimum short circuit interrupting capacity: 10,000 amperes rms symmetrical for 240 volt panelboards; 14,000 amperes rms symmetrical for 480 volt panelboards. Bus shall be braced for minimum capacity equal to or greater than the lowest breaker symmetrical interrupting capacity. Minimum short circuit rating shall be increased to meet the following requirements:

    a. Individual C.B. AIC Rating shown on panel schedules indicate lowest AIC rating allowed for individual circuit breaker in panel.
    b. Circuit breakers shall be based on a fully rated system.
    c. Circuit breaker types are not specified. Provide breakers to comply with the required AIC specified.

D. Enclosure:

1. Enclosures shall be at least 20 inches wide made from galvanized steel. Provide minimum gutter space in accordance with the National Electrical Code. Where feeder cables supplying the mains of a panel are carried through its box to supply other electrical equipment, the box shall be sized to include the additional required wiring space. At least four interior mounting studs with adjustable nuts shall be provided.
2. Enclosures shall be provided with blank ends.
3. Where indicated on the drawings, branch circuit panelboards shall be column width type.
4. Regulatory Requirements:

    a. NEMA PB 1, Type 1, Interior dry locations.
    b. NEMA PB 1, Type 3R, Interior damp locations.
    c. NEMA PB 1, Type 4X stainless steel watertight, Exterior locations including those noted on drawings to be NEMA 3R.

d. NEMA PB 1, Type 4X stainless steel watertight, interior wet locations, and wash-down areas, regardless of that noted on drawings.
e. UL 50

E. Cabinet box:

1. 6 inches (153 mm) deep; width: 20 inches (508 mm), minimum.
2. Interior dry and damp locations shall be constructed of galvanized code gauge steel, to prevent rust.
3. Exterior, wash-down areas, and Interior wet locations shall be constructed of type 4X stainless steel, watertight.

F. Cabinet Front:

1. Flush or surface with concealed trim clamps, concealed hinge, and flush lock all keyed alike.
2. Shall be door-in-door construction.
3. Finish in manufacturer's standard baked enamel finish for interior dry locations. Interior damp location panels to be painted with rust inhibit primer epoxy paint top coat system.
4. Exterior, wash-down areas, and Interior wet locations shall be constructed of type 4X stainless steel, watertight.

G. Panels and breakers shall be rated for voltage and class of service to which applied.

H. Spaces:

1. Space provisions or spaces for future breakers shall be located at the bottom of the panel and be fully bussed complete with all necessary mounting hardware less the breaker.

## 2.3 MAINS

A. Provide main lug only (MLO) or main circuit breaker (MCB) as noted on drawings either by riser diagram or by schedule. Where conflict exists, provide MCB.

B. Regardless of what is shown on drawings provide the following minimum requirements.

1. Main circuit breaker on each panel serving building main if required by applicable codes.
2. Main circuit breaker on each panel fed directly from a transformer (unless disconnect with overcurrent devices is installed in feeder between transformer and panel).

C. Provide lugs as required for conductors being connected to panelboard lugs, circuit breakers, etc.

D. Main circuit breaker is not to be mounted as branch breaker or subfeed breaker.

## 2.4 CIRCUIT BREAKERS

A. General

1. Molded Case Circuit Breakers: NEMA AB 1, plug-on type for 250V or less, bolt-on type for over 250V, thermal magnetic trip circuit breakers, with common trip handle for all poles. Provide circuit breakers UL listed as Type SWD for lighting circuits. Provide UL Class A ground fault interrupter circuit breakers where scheduled. Do not use tandem circuit breakers.
2. Current Limiting Molded Case Circuit Breakers: NEMA AB 1. Provide circuit breakers with integral thermal and instantaneous magnetic trip in each pole, coordinated with automatically resetting current limiting elements in each pole.

B. Main Breakers:

1. Main breakers shall be individually mounted separate from branch breakers.
2. Covered by a metal plate, except for operating handle.
3. Connection from the load's side to the panel bus shall be bus bar. Insulated wire not permitted.

C. Branch Breakers:

1. Thermal-magnetic, molded case, with inverse time-current overload and instantaneous magnetic tripping, unless otherwise shown. Breakers shall be calibrated for 40 degrees C or shall be ambient compensating.
2. Quick-make, quick-break, with tripped indication clearly shown by breaker handle taking a position between ON and OFF.
3. Multi-pole breakers shall have common internal trip. No handle ties between single pole breakers are acceptable for this Project.
4. Single pole 15 and 20 ampere circuit breakers shall be rated for switching duty and shall be labeled as "SWD".
5. Rating shall be as called for under "2.2 GENERAL".
6. Ground Fault Circuit Interrupters (GFI):

    a. Provide UL Class (5 milliamp sensitivity) ground fault circuit protection on 120 VAC branch circuits for exterior location receptacles and for interior locations where required by NEC. (These may not be indicated on Panel Schedule.) This protection shall be an integral part of the branch circuit breaker which also provides overload and short circuit protection for branch circuit wiring. Tripping of a branch circuit breaker containing ground fault circuit interruption shall not disturb the feeder circuit to the panelboard. Provide separate neutral for circuits on GFI breakers whether indicated on drawings or otherwise.

7. Breakers feeding heating and air conditioning equipment shall be rated HACR type breaker.

## 2.5 SERVICE ENTRANCE EQUIPMENT

A. Panelboards used as service entrance equipment shall be listed and labeled by UL for use as service equipment.

## PART 3 - EXECUTION

## 3.1 PREPARATION/INSPECTION/EXAMINATION

A. Verify that surface is suitable for panelboard installation. Do not install NEMA 1 equipment until building has reached the “dried-in” stage.

B. Examine area to receive panelboard to assure adequate clearance for panelboard installation.

C. Verify prior to installation that National Electrical Code clearances will be maintained after installation. Rework equipment locations as required to provide electrical code clearances.

D. Start Work only after unsatisfactory conditions are corrected.

E. Submit coordination drawings of all electrical rooms, showing all equipment. Comply with Section 26 05 01 Basic Electrical Requirements.

## 3.2 INSTALLATION

A. Install panelboards in accordance with NEMA PB 1.1. Install all panelboards and panelboard enclosures in accordance with the manufacturer's written instructions, NECA's "Standard of Installation", the applicable requirements of the National Electrical Code, and recognized industry practices.

B. Panelboards shall be provided with structural framing located within gypsum board partitions. All enclosures shall be firmly anchored to walls and supporting structures (where used) using appropriate hardware. Provide supporting channels on walls constructed of gypsum board or where otherwise necessary to provide a mechanically secure and permanent installation. Attach channels to framing provided within gypsum board partitions.

C. Enclosures shall be installed so that the top is 6'-6" above finished floor.

1. Where the size of the enclosure is such that the top cannot be installed at 6'-6", the top of the enclosure shall be kept as low as possible.

D. Panelboard backboxes/trim covers mounted adjacent to each other (i.e. multi-section panels, etc) installed in finished areas be of same size.

E. Provide filler plates for unused spaces in panelboards.

F. Provide typed circuit directory from panelboard manufacturers' original card stock, for each branch circuit panelboard. Mount a typewritten directory showing the actual circuit numbers, type of load and room names on inside of door. Room names shall be actual names or numbers used, not necessarily shown on the drawings. Progress Drawings shall show same arrangements as the Directory. Revise directory to reflect circuiting changes required to balance phase loads.

G. Provide four each 1 inch spare conduits out of each recessed panelboard to an accessible location above ceiling. Identify each as SPARE.

H. Clean the interior of each panelboard before installing conductors. At all times, keep the interior trim and exterior surfaces of the panelboard free of rust and debris. Repaint finishes if necessary.

I. Coordinate all raceways and conductors with their respective panelboards so that all connections and conductors routing present an orderly appearance. Conductors in the panelboards shall be neatly laced and arranged in orderly manner.

J. Collect all keys upon delivery of panelboard. Store keys on one ring to be kept by project superintendent. Forward key ring with keys to engineer at substantial completion.

K. Provide a separate neutral conductor for each GFI breaker. These shall not be combined to serve more than 1 circuit, even where on different phases. Increase plan indications of conductors for neutral wires required, as necessary.

L. Conduit or piping systems that contain water or liquid of any kind shall not be installed over the top of any electrical equipment, transformers, racks, cabinets, or enclosures without prior written approval from the Owner.

## 3.3 IDENTIFICATION

A. Refer to Section 26 05 53 Electrical Identification for products and content.

B. Provide engraved plastic nameplates under the provisions of 26 05 53.

C. Nameplate shall show panel name, voltage and name of panel that feeds this respective panel, and UL short circuit rating.

## 3.4 FIELD QUALITY CONTROL

A. Measure steady state load currents at each panelboard feeder; rearrange circuits in the panelboard to balance the phase loads to within 20 percent of each other. Maintain proper phasing for multi-wire branch circuits.

B. Visual and Mechanical Inspection: Inspect for physical damage, proper alignment, anchorage, and grounding. Check proper installation and tightness of connections for circuit breakers, fusible switches, and fuses.

C. All circuits shall be operated to establish a good working order and checked for shorts.

D. All panel directory circuit numbers shall be checked to verify accuracy of the number.

E. Tests:

1. Test Panelboards and panelboard feeders per requirements of Section 26 08 10 Tests and Performance Verification.
2. Feeder conductors shall be checked by approved means to establish the absence of shorts to ground; insulation value, etc. and the result recorded and submitted to the Designer.
3. Submit Conductor Insulation Resistance Test per requirements of Section 26 08 10.
4. Submit Tabulation Data Voltage and Amperage Readings per requirements of Section 26 08 10.

F. Equipment Checkout:

1. Where and when requested by Designer/ENGINEER provide (during construction):

a. Inspection of equipment by authorized equipment manufacturer technician complete with submittal of statement of findings by technician, and providing any adjustments deemed necessary for a complete and operating system.
b. Submit Equipment Checkout Memo.

## 3.5 ADJUSTMENT AND CLEANING

A. Adjust operating mechanisms for free mechanical movement.

B. Tighten bus connections and mechanical fasteners.

C. Touch up scratched and marred surfaces to match original finish.

**END OF SECTION 26 24 16**

# SECTION 26 28 16 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS

## PART 1- GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and Division 01 Specification sections apply to this section.

### 1.2 SUMMARY

A. This section includes the requirements for provision and installation of enclosed switches and circuit breakers.

### 1.3 DESCRIPTION

A. Provide all labor, materials, and equipment necessary to properly install switches as shown on the drawings and as required by codes.

### 1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver switches in factory wrapped packaging. Handle switches carefully to prevent damage. Store in a clean, dry space protected from dirt, water, and physical damage. Reject damaged switches.

### 1.5 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing Products specified in this Section with minimum 10 years experience.

### 1.6 SUBMITTALS

A. Submit catalog cut sheet on each type of disconnect switch to be used on this project.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

A. Eaton/Cutler Hammer, or approved substitutions.

### 2.2 CONSTRUCTION

A. Provide ground bus and where required, a solid neutral bus.

B. Switches shall be fusible or non-fusible as noted on the drawings or as required by the equipment served from the switch. Fusible switches shall have rejection type fuse holders.

C. Terminal lugs shall be rated for 75 degrees Centigrade.

D. Enclosures, unless otherwise noted, shall be:

1. Interior dry locations shall be NEMA 1.
2. Wash-down areas, interior wet locations or similar shall be NEMA 4X stainless steel watertight, corrosion resistant.
3. Exterior locations shall be NEMA 4X stainless steel watertight, corrosion resistant, including those noted on drawings to be NEMA 3, minimum.

E. The enclosure shall be interlocked with the switch handle such that the enclosure door or cover cannot be opened with the switch in the "ON" position. The switch handle shall be capable of being padlocked in the "OFF" position but not in the "ON" position.

F. Finish for NEMA I units shall be standard baked gray enamel finish over a rust inhibiting phosphate primer.

## 2.3 RATING

A. The size, number of poles, and fusing for each switch shall be as noted on the drawings. As a minimum, no less than one pole for each ungrounded conductor shall be provided. Switches shall be rated 250 VAC or 600 VAC as required by the circuit to which it is connected.

B. Switches serving motors with more than one set of windings shall have the number of poles necessary to disconnect all conductors to all windings in a single switch.

C. Switches serving motor loads shall be horsepower rated to match motor and of sufficient size to handle the load regardless if rating noted on drawings is provided in ampere.

## 2.4 FUSES

A. General:

1. All fuses shall be of the same manufacture to retain selectability as designed. No fuse shall be installed until equipment is ready to be energized and after tightening of all electrical connections, inspection of all ground and grounding conductors and a megger test of adequate insulation to ground of all circuits.
2. All fuses shall be current limiting with 200,000 amperes interrupting capacity.
3. Fuses rated 601 amperes and larger shall be UL Class L and have a minimum time-delay of 45 seconds at 300% rating and have O-ring gas seals at the end bells.
4. Fuses rated 600 amperes or less, installed ahead of circuit breakers or circuit breaker panels, shall be UL Class K-1.

5. Fuses rated 600 amperes or less for all general power circuits shall be dual-element, UL Class RK-5 time-delay type. They shall be self protecting from extraneous heat.
6. Fuses installed in individual motor circuits shall be dual element time-delay type, UL Class RK-5. Provide fuse reducers when necessary.
7. Fuses called for to be rejection type are to have rejection fuse holders.
8. Fused disconnect switches for elevators and escalators shall have rejection fuse holders.

B. Fuse Requirements:

1. Dimensions and Performance: NEMA FU 1, Class as indicated.
2. Voltage: Rating suitable for circuit phase-to-phase voltage.
3. Power Load Feeder Switches Larger than 600 amperes: Class L (time delay).
4. Power Load Feeder Switches: Class RK1 (time delay) or RK5 (based on load).
5. Motor Load Feeder Switches: Class RK5.
6. Lighting Load Feeder Switches Larger than 600 amperes: Class L time delay.
7. Lighting Load Feeder Switches: Class RK1 (time delay).
8. Other Feeder Switches Larger than 600 amperes: Class L time delay.
9. Other Feeder Switches: Class RK1 (time delay) or RK5 (based on load).
10. Power Branch Circuits: Class RK1 (time delay) or RK5 (based on load).
11. Motor Branch Circuits: Class RK5.
12. Lighting Branch Circuits: Class G.

C. Identification Label:

1. Provide a fuse identification label inside each fused switch, showing type and size of each fuse specified or as recommended by the manufacture of the equipment served.
2. Labeling for rejection type fused switches shall read "Warning-Use Only Current Limiting Fuses Class ___, Type ___, MFR ___".

## PART 3 - EXECUTION

### 3.1 INSTALLATION

A. Install all switches in accordance with the manufacturer's written instructions, NECA's "Standard of Installation", the applicable requirements of the National Electrical Code, and recognized industry practice.

B. All switches shall be firmly anchored to walls and supporting structures (where used). Switches shall be installed with the turning axis of their handles approximately 5'-0" above finished floor unless otherwise indicated. Provide rigid steel (galvanized for exterior use) mounting stands, brackets, plates, hardware, and accessories for a complete installation.

C. Switches shall be mounted in accessible locations. Where a switch serves as the disconnecting means for a load, the switch shall be located as close as practical to the load with the switch handle within sight of the load.

D. Provide lugs on disconnect switch as required to accept conductors called for on drawings.

E. Disconnect switches shall not be mounted on equipment, unless specifically noted or required and meet all applicable codes. If switches are noted or required to be mounted on equipment they shall have vibrator clips on fuses and be connected to conduit system with liquid tight flexible conduit.

F. Coordinate all requirements for controls between variable speed drive units and its respective motor with drive specification, manufacturer, provider and installer. Provide auxiliary contacts, relays, etc. as required.

G. Install fuses in accordance with manufacturer's instructions, the NEC, and NEMA Standards.

H. Install fuse with label oriented such that manufacturer, type, and size are easily read.

I. Label each fuse.

J. Conduit or piping systems that contain water or liquid of any kind shall not be installed over the top of any electrical equipment, transformers, racks, cabinets, or enclosures without prior written approval from the Owner.

**END OF SECTION 26 28 16**

**SECTION 26 32 13.06 - OUTDOOR ENGINE GENERATOR, SUB-BASE TANK**

**PART 1- GENERAL**

**1.1 GENERAL PROVISIONS**

A. It is the intent of these specifications to secure, for the Owner, a new outdoor diesel engine driven generator set of the latest commercial type and design as specified herein. All material and equipment shall be new and undamaged. Systems with all components must meet or exceed requirements of NFPA 110 for Level 1 loads, UL 2200 Stationary Engine Generator Assemblies and UL 1004 Electric Motors.

B. It is essential that the engine-generator supplier maintains a local parts and service facility within 25 miles. The engine-generator supplier shall furnish all installation and test supervision necessary for final acceptance in accordance with test procedures outlined in NFPA 110 for a level 1 generator. The generator set supplier shall furnish and install all equipment including sub-base fuel tank and enclosure.

C. The generator power feeder and service entrance conductors and conduit shall be furnished and completely installed by electrical contractor. All generator control alarm and interlock wiring, including conduit, shall be completely furnished and installed by electrical contractor.

D. One (1) diesel engine driven standby power generator, skid mounted, complete with all accessories as required for complete automatic operation. A generator set mounted control assembly complete with circuit breakers and control devices for operation and control of the engine generator set. The diesel engine driven, skid mounted, standby power generator shall be enclosed in a self-contained weatherproof enclosure. The unit shall be provided with a skid mounted fuel tank.

E. 600 amp, 120/240 VAC 1-phase, Type 1 enclosure Distribution Panel shall be used to provide power to the generator subpanel for power to the generator auxiliary systems including but not limited to battery chargers, battery heaters, and block heaters. Wiring from the existing panel to the generator mounted sub-panel, equipment and branch loads shall be the Contractors responsibility. Provide one 120 volt, 20 amp, GFCI, 5-20R weather resistant duplex receptacle (convenience outlet) with in-use weatherproof covers powered from generator sub panel. Install convenience outlets inside generator enclosure at mid-point of each long side.

F. The generator shall be connected to new automatic transfer switch and manual transfer switch as detailed in the Contract Documents.

G. Warranty - Equipment furnished under this section shall be guaranteed against defective parts or workmanship under terms of the manufacturer's and dealer's standard warranties, but in no event shall it be for a period of less than two (2) years from date of

initial acceptance of the system.

H. Generators to be rated as Tier 4.

## 1.2 EXPERIENCE

A. The unit must be manufactured in the USA and shall be the product of a firm regularly engaged in the manufacture of engine sets and shall meet the requirements of specifications set forth herein. Units must be a standard model in regular production at the manufacturer's place of business. Engine, generator and control panels are to be serviced by the same supplier so that there shall be one source and one responsibility.

## 1.3 SHOP DRAWINGS AND PRODUCT DATA

A. Submit shop drawings and product data on the following showing compliance with the specifications:

1. Generator/Engine
2. Exhaust muffler
3. Flexible exhaust piping
4. Base and spring vibration isolators
5. Control panel
6. Annunciator panel
7. Main line circuit breaker
8. Copy of service contract
9. Lead-acid and fiberglass battery boxes
10. Automatic tank gauge
11. Battery charger
12. Complete load data sheet showing compliance with specified ratings.
13. Exhaust pipe rain cap.
14. Outdoor weatherproof generator enclosure
15. Base tank and isolators
16. Provide 4-foot-wide structural aluminum framing with molded fiberglass decking/grate (or equivalent weather resistant surface) working surface for entire length on both sides and both ends of generator enclosure. Level of working surface shall match floor level in enclosure. Access stair/handrail/landing to provide for access to entire working surface at each generator enclosure door. Top of control panel shall not exceed 6 feet above the working surface or interior floor of generator enclosure. Working space inside, outside and around enclosure shall comply with NFPA 70, National Electrical Code, Article 110. Working surface stairs, etc. shall be rated at 300 pounds/ft2 loading. Working surface and stairs shall comply with OSHA requirements. Basis of design by Fidelity Manufacturing, Ocala, Florida or accepted equivalent.
17. Surge Protective Devices, (SPD)

B. Submittals shall clearly indicate:

1. Dimensions of unit complete with outdoor enclosure, sub-base fuel tank and pad requirements, locations of control panel, batteries, battery charger, access stair/landing assembly.
2. All pertinent data/ratings as required to show equipment meets specifications.
3. Coordination with existing power, control and communication raceway or alternate raceway plan.
4. Furnish with main circuit breaker:
   a) 600-ampere, 100% rated, generator mounted circuit breaker to feed vault switchgear. 65 kA interrupting capacity. Circuit breaker shall have an electronic trip unit with LSI adjustability and ground fault indication. The circuit breaker shall be equipped with an arc flash reduction maintenance feature, that when selected the breaker shall trip prior to the incident energy reaching 1.2 cal/cm$^2$.
      1 – Shunt trip, 24 VDC, unwired.
      3 - Current transformers, 5 ampere secondaries.
      1 – ground connection point

5. The secondary side of the generator mounted circuit breaker shall be equipped with a surge protective device (SPD) installed in accordance with NEC Article 285 and manufacturer's recommendations. The SPD shall be mounted within the generator enclosure. SPD shall be Surge Suppression, Inc. Model SDLB or accepted equivalent.

C. Close-Out Submittals

1. Operation and Maintenance Data: For packaged engine-generator sets to include emergency, operation, and maintenance manuals.

2. List of tools and replacement items recommended to be stored at the Project for ready access. Including part and drawing numbers, current prices, and source of supply.

## PART 2- MATERIALS/PRODUCTS/INSTALLATION

### 2.1 GENERATING SYSTEM

A. The electric set rating shall be based on operating at 1800 RPM when equipped with all necessary operating accessories. Electric set shall be capable of producing 180 kW/225 kVA, 240/120 Volt, single phase, 3 wire plus ground, 60 Hz for standby electric set applications for duration of any normal power failure under the conditions specified.

B. Generator shall be capable of accepting a single-phase block load of 180 kW/225 kVA and maintain output voltage between 95 to 110 percent of its nominal value with a 600 amp load.

C. The alternator shall be rated as follows for 100% SCR loading by constant current airfield lighting regulators with a maximum instantaneous voltage dip not to exceed 5%. Alternator shall be rated at 0.8 PF, 240/120 volts, single phase, 3-wire, plus ground, 60 Hz, 1800 RPM, twelve lead reconnectable. Winding pitch can be 2/3 or optimum pitch based on manufacturers recommendations for high third and fifth harmonic load content.

D. The integrity of the generator remote start circuit shall be monitored for broken, disconnected, or shorted wires. Loss of integrity shall start the generator(s).

E. The effective site rating of the electric power generating system shall be:

1. As noted on drawings.
2. 80% power factor minimum.
3. 480 volts, 3 phase, 4 wire.
4. 60 hertz.

F. The above ratings shall be based on site conditions as follows:

1. Generator shall be used for standby emergency standby power (ESP) service as defined by ISO-8528-1, to provide uninterrupted electrical service during loss of normal power.
2. Generator installation as shown on plans.
3. Altitude of less than 200 ft. above sea level.
4. Maximum ambient temperature of 110° F.
5. Minimum ambient temperature of 20° F.

G. Ratings of the diesel electric set shall be based on operation of the unit at rated generator RPM, when supplied with all necessary operating accessories such as radiator, the air cleaners, lubricating oil pump, fuel transfer pump, fuel injection pumps, jacket water pump, alternating current generator, exciter, and other accessories necessary to the unit.

H. Diesel engines shall be able to deliver rated power when operating on No. 2 diesel fuel having 35 degree API (16°C or 60°F) specific gravity.

I. Fuel consumption rates shall be based on fuel having a low heating value (LHV) of 42,780 kJ/kg (18,390 Btu/lb) when used at 29° (85°F) and weighing 838.9 g/l (7.001 lbs/US). The maximum fuel consumption shall be based on generator size. Refer to plans.

| | | | |
|---|---|---|---|
| Percent load | 100% | 75% | 50% |
| Fuel consumption (GPH) 1800KW | 13.5 gal/hr | 10.7 gal/hr | 7.3 gal/hr |

J. Sound Level - Mechanical sound level where all generator sets are fully loaded shall be not greater than 89 dBA at 7 m (23 ft.).

K. Start Time and Load Acceptance - Engines shall start, achieve rated voltage and frequency, and be capable of accepting load within ten seconds when properly equipped and maintained.

L. Block Load Acceptance - Transient response shall conform to ISO 8528 requirements.

M. The complete unit shall be equipped with a PMG (permanent magnet generator).

## 2.2 ENGINE

A. The diesel engine shall be water-cooled 4-cycle compression ignition diesel turbo-charged for maximum efficiency. Engine speed shall not exceed 1800 RPM. No dual speed or multi-speed engines will be considered.

B. The engine shall be equipped with air filters, fuel filters and fuel pressure gauge, lubricating oil cooler, filters, and oil pressure gauge, water pump and temperature gauge, service hour meter, flywheel, and flywheel housing.

C. Air-Intake Filter: Engine-mounted air cleaner with replaceable dry-filter element and “blocked filter” indicator.

## 2.3 DUTY CYCLE

A. The engine shall be capable of operation at light loads for extended periods of time and shall provide for pre-combustion of fuel or a similar means for the prevention of carbonization.

B. Emergency standby power (ESP); 500 hour run time recommended annual limit.

C. The unit shall be certified to be capable of providing average power output during 24 hours of operation at 85% in accordance with ISO 8528.

## 2.4 GOVERNOR

A. The engine governor shall be an Electronic Speed Control. Speed droop shall be 0 (isochronous) from no load to full rated load. Steady state frequency regulation shall be +\- 0.25%. Speed shall be sensed by a magnetic pickup off the engine flywheel ring gear. A provision for remote speed adjustment shall be included.

## 2.5 COOLING SYSTEM - RADIATOR

A. The engine jacket water cooling system shall be a closed circuit design with provision for filling, expansion, and deration. The cooling pump shall be driven by the engine. Coolant temperature shall be internally regulated to disconnect cooling systems until operating temperature is achieved.

B. Heat rejected to the engine jacket water shall be discharged to the atmosphere through a close coupled engine mounted radiator. The radiator shall be sized to cool the engine continuously while operating at full rated load and at site conditions.

C. The fan, fan drive, and fan belts shall be covered with 14 gauge punched steel mesh guarding for personnel protection. The guarding shall conform to IEC 34-5, ISO and OSHA standards.

D. The radiator shall include a fuel cooler to lower the temperature of the return fuel to the belly tank. The fuel shall be cooled to the belly tank and engine manufacturer's requirements.

## 2.6 HEATER AND ANTIFREEZE

A. The engines shall be provided with antifreeze (a solution of 50% ethylene glycol) and suitable unit mounted thermal circulation type water heaters incorporating a thermostatic switch to maintain engine jacket water to 90°F in an ambient temperature of 30°F. The heaters shall be sized as recommended by manufacturer, single phase, 60 hertz, voltage to match that shown on drawings. Heaters shall be Kim-Hotstart, Chromalox or accepted substitution.

## 2.7 LUBRICATION SYSTEM

A. The lubrication oil pump shall be a positive displacement type that is integral with the engine and gear driven from the engine gear train. The system shall incorporate full flow filtration with bypass valve to continue lubrication in the event of filter clogging.

B. The bypass valve must be integral with the engine filter base or receptacle. Systems where bypass valves are located in the replaceable oil filter are not acceptable.

## 2.8 FUEL SYSTEM

A. Provide electronically controlled fuel injection system for efficiency and emissions.

B. Injection pumps and injection valves shall not require adjustment in service. The engine shall have an individual mechanical injection pump and injection valve for each cylinder, any one of which may be removed and replaced from parts stock.

C. Fuel injection pumps shall be positive action, constant-stroke pumps, actuated by a cam driven by gears from the engine crankshaft. Fuel lines between injection pumps and valves shall be heavy seamless tubing, and to eliminate irregularity of fuel injections shall be of the same length for all cylinders.

D. Fuel system shall be equipped with replaceable fuel filter elements which may be easily removed without breaking any fuel line connections or disturbing the fuel pumps or any other parts of the engine.

E. All fuel filters shall be conveniently located in one accessible housing, ahead of injection pumps so that fuel will have been thoroughly filtered before it reaches the pumps. No screens or filters requiring cleaning or replacement shall be used in injection pump or injection valve assemblies.

F. Engine shall be equipped with a fuel transfer pump, capable of lifting fuel against a head of twelve (12) feet, for supplying fuel through the filters to the injection pump at constant pressure.

G. In addition to the standard filter, the fuel system shall include a primary fuel filter between the fuel tank and transfer system to screen large contaminants.

H. A fuel/water separator shall protect the fuel system from water damage.

I. Annunciation. Provide annunciation as required by NFPA 110 on unit and remote annunciator for installation in the Airfield Lighting Vault Building.

J. Provide and install complete electric solenoid fuel shut-off valve with connections, etc., with control switch. Locate switch near building shunt-trip switches, and label "Gen. Fuel Shut-Off". See Part 2.16 for additional information. Install fuel shut off 12” to the left and same height as shut trip button.

K. Neoprene pad - ¼ inch thick elastomeric pad in square shape to be placed under the base frame at each of the pre-drilled isolator mounting holes.

## 2.9 STARTING

A. Starting Motor - A DC electric starting system with positive engagement drive shall be furnished. The motor voltage shall be as recommended by the engine manufacturer.

B. Automatic Control - Fully automatic generator set start stop controls in the generator control panel shall be provided. Controls shall provide shutdown for low oil pressure, high water temperature, overspeed, overcrank, and two auxiliary contacts for activating accessory items. Controls shall include a 30 second single cranking cycle limit with lockout.

C. Batteries - A lead-acid storage battery to be used in conjunction with the electric starting system shall be provided. The battery shall be rated by the battery manufacturer in accordance with requirements set forth by the engine manufacturer. A fiberglass battery box with battery disconnects and necessary cables and clamps shall be provided. Batteries shall be mounted as shown. Wiring shall be sized as required by manufacturer for distance involved.

D. Battery Charger - Current limiting battery charger shall be furnished to automatically recharge batteries. Charger shall float at 1.4 volts per cell and equalize at 1.6 volts per cell. It shall include overload protection, silicon diode full wave rectifiers, voltage surge suppressor, DC ammeter, DC Voltmeter and fused AC input. AC input voltage shall be 120 volts, single phase. Amperage output shall be no less than 6 amperes. Charger shall be Lamarche A46 or equal. Charger shall have an auxiliary contact to close on charger failure. Provide and install input to remote annunciator.

## 2.10 OUTDOOR ENCLOSURE

A. The generator shall be enclosed in a level 2 (89dbA @ 7 meters max) listed aluminum enclosure. The enclosure shall be white or grey.

B. The enclosure shall be wind rated for an ultimate design wind speed of 181 MPH (nominal wind speed of 140 MPH) per ASCE 7-16 exposure C, risk category IV.

C. The exhaust silencer shall be fully enclosed within the enclosure.

D. Lockable doors shall provide for easy access to all major generator and engine components.

E. The generator within the enclosure shall be shipped as a pre-assembled and pre-integrated system. With integral louvers.

F. Rodent barriers shall be integrated into the enclosure.

G. Enclosure shall be mounted to a lifting base.

H. Provide aluminum stair/handrail frame with molded fiber glass deck assembly for maintenance access to enclosure doors to access control panels, load centers, etc. Concrete sidewalk shall extend four feet outboard of all stair/handrail. Also see 1.3.a.17. Provide load center in enclosure for loads where indicated on plan drawings.

I. Air within an outdoor enclosure shall be maintained above 32 degrees C (90 degrees F), or battery heaters shall be provided to maintain battery temperature above 10 degrees C (50 degrees F) and automatically shut off when battery temperature attains 32 degrees C (90 degrees F). The generator enclosure shall be constructed in accordance with IP-22 and shall have, lockable doors, be vandal resistant, have a radiator grill and fixed louvers to provide adequate ventilation. Hinges and locks shall be stainless steel and doors shall be fully gasketed. The enclosure shall be per the manufacturer's recommendations. This enclosure shall also house all generator accessories included in this specification or separate enclosures equivalent to the specified generator enclosure shall be provided.

J. Working space inside, outside and around enclosure shall comply with NFPA 70, National Electrical Code, Article 110.

K. Install new UL or LPI listed and inspected lightning protection system on enclosure in accordance with Item SP-109S-26 41 00 Lightning Protection System (LPS). LPS shall receive UL or LPI endorsement/accreditation. See Item SP-109S-26 41 00.

## 2.11 SUB-BASE FUEL TANK

A. Tank: Above ground skid mounted fuel storage shall be provided under this section. All fuel oil piping, remote fuel level gauges, lube oil sump tank lube oil piping, vent stack, and all necessary valves and fittings shall be provided and installed complete as required. The tank shall be a double wall above-ground base mounted with a minimum 72 hour capacity at 100% rated load. The Contractor shall be responsible for a complete fuel system installation. Storage tank shall be U.L. 142 listed.

B. Fuel storage tank shall have a low level alarm set at 48 hours full load consumption with minimum tank size of 150 percent of the low level alarm.

C. Fuel storage tank shall include an internal leak detection monitor device in the inner cavity.

D. Coordination: It shall be the responsibility of the generator set supplier to coordinate all materials and all materials and work of other trades so that the total installation is complete and fully operational and meets all engine manufacturer’s requirements. Any materials or installation required for proper interfacing of all trades shall be provided and installed by the generator set supplier.

E. Fuel Filter: Fuel system shall be equipped with replaceable fuel filter elements which may be easily removed without breaking any fuel line connection or disturbing the fuel pump or any other parts of the engine.

## 2.12 EXHAUST AND MUFFLER

A. A critical exhaust silencer shall be provided in accordance to the engine manufacturer's recommendations for silencing. The silencer shall provide extreme noise attenuation for environments with low background noise and slight noise emissions would be objectionable.

B. The engine-generator shall comply with U.S. Environmental Protection Agency (EPA) Tier 3 emissions standards for non-road diesel engines.

## 2.13 BASE AND ISOLATORS

A. The engine-generator shall be mounted on rubber pad type isolators. A concrete base shall be provided as specified by the manufacturer.

B. Compact soil under base pad to 95% maximum dry density per ASTM D-1557.

C. The existing concrete base shall be demolished and replaced. Resilient pads shall be installed. Protect existing raceways. The Contractor shall be responsible to coordinate the conduit entry points on the new generator.

D. The new concrete generator base pad shall be designed by a Florida licensed structural engineer to support the load of the proposed generator with a full fuel tank. Foundation shall be at least 6 feet wider and longer than the proposed generator, fuel tank and platform in all directions. Base pad shall have thickened edges all around perimeter.

E. Within the footprint of the generator/tank the slab shall be flat to within 1/8” in 10’. Beyond the generator/tank foot print the pad shall slope 0.5%.

F. Tie downs or bolting enclosure/tank to prevent movement from wind load.

## 2.14 GENERATOR CONTROL PANEL (AND CONTROLS)

A. A generator mounted NEMA 1 type vibration isolated 14 gauge steel control panel shall be provided to meet requirements of NFPA 110 for Level 1 systems.

B. Equipment - Panel shall contain, but not be limited to the following equipment:

1. Voltmeter, +/- 0.5% accuracy (digital type)
2. Ammeter, +/- 0.5% accuracy (digital type)
3. Ammeter-Voltmeter phase selector switch
4. (Remote) Automatic starting controls as specified (with remote control)
5. Voltage level adjustment rheostat (+/- 5% voltage adjustment)
6. Frequency meter +/- 0.5%accuracy (digital type)

7. Dry contacts for remote alarms wire to terminal strips
8. Three position function switch marked "run" "off" "auto"
9. Equipment for shutdown required by NFPA 110:

    a. Overcrank
    b. High engine temperature
    c. Low lube oil pressure
    d. Overspeed
    e. Remote emergency stop

10. Equipment for Alarms required by NFPA 110:

    a. Control Panel Mounted Visual Indication:

        1) overcrank
        2) low water temperature less then 70°F (21°C)
        3) high engine temperature prealarm
        4) high engine temperature
        5) low lube oil pressure prealarm
        6) low lube oil pressure
        7) overspeed
        8) low fuel main tank
        9) generator supplying load
        10) control switch not in “AUTO” position
        11) battery charger malfunctioning
        12) low voltage in battery
        13) lamp test
        14) contacts for local and remote common alarm
        15) low starting air pressure
        16) low starting hydraulic pressure
        17) air shutdown damper when used

    b. Remote Audible:

        1) overcrank
        2) low water temperature less then 70°F (21°C)
        3) high engine temperature prealarm
        4) high engine temperature:
        5) low lube oil pressure prealarm
        6) low lube oil pressure
        7) overspeed
        8) low fuel main tank
        9) control switch not in “AUTO” position
        10) contacts for local and remote switch
        11) air shutdown damper when used

11. Equipment for Controls required by NFPA 110

    a. Manual Emergency shutdown.

C. Any additional safeties as recommended by the manufacturer or as required by applicable codes shall be provided. A mechanical overspeed system shall back up to the electric overspeed. Auxiliary relays and or contacts shall be provided to operate a remote annunciator panel as shown on drawings.

D. Provide all lock-out functions required by NFPA 110.

E. Contractor shall install a PT300E Stationary Generator Monitoring System or acceptable equivalent.

## 2.15 ANNUNCIATION PANEL

A. A panel shall be provided for remote mounting as shown to give audible and visual warning of fault or alarm conditions in the generator set, battery charger and levelmeter. The panel shall conform to the requirements of the National Electrical Code, Section 700.12 and the National Fire Protection Association publication, NFPA 110. Provide contacts for future interconnection of annunciator circuits to building automation system or power monitoring system.

B. Annunciator shall be powered by generator battery and:

1. Have individual visual signals for:

    a. When the emergency generator set is operating to supply power to load.
    b. When the battery charger is malfunctioning.

2. Have individual visual signals plus common audible signal for:

    a. Low lubricating oil pressure.
    b. Low water temperature.
    c. Excessive water temperature.
    d. Low main tank fuel level (less then three-hour supply).
    e. Overcrank.
    f. Overspeed.

C. Provide and install all wiring and conduit to generator control panel, battery charger, and levelometer as required to perform the above annunciation.

## 2.16 REMOTE MANUAL STOP STATION

A. Provide, install, and connect generator control wiring to the new shunt trip and fuel solenoid shut-off adjacent to the exterior left side of door to the airfield lighting vault building. Furnish and install all equipment to provide the shunt trip and solenoid shut-off connections, including a new switch assemblies.

B. Provide, install, and connect utility circuit breaker wiring to the new shunt trip.

C. The shunt trip once connected shall open the generator mounted generator circuit breaker, open the load bank docking station circuit breaker, open the utility circuit breaker, shut down the generator if running and will prevent the generator from starting if the generator is not running.

## 2.17 SYSTEM SERVICE CONTRACT

A. The supplier of the standby power system must provide a copy of and make available to the Owner his standard service contract which, at the Owner's option may be accepted or refused. This contract will accompany any documents, drawings, catalog cuts, specifications sheet, wiring or outline drawings, etc. submitted for acceptance to the designing engineer.

## 2.18 ACCEPTABLE MANUFACTURERS

A. Basis of Design: Florida Detroit Diesel/MTU Onsite Energy, or accepted equivalent.

## 2.19 GENERATOR RUN LIGHT

A. Install amber LED strobe generator run light on generator enclosure. The location shall be accepted by the RPR and shall be visible from the parking lot and/or ramp areas. Reuse of existing light is not acceptable.

# PART 3 - EXECUTION

## 3.1 INSTALLATION

A. The standby power generator shall be installed as shown on the plans, in accordance with the manufacturer's recommendations and all applicable codes. Provide all associated control wiring to generator, panels, distribution equipment, transfer switches, circuit breakers, annunciator, shunt trip, etc. as required.

B. Furnish and install all materials and for all preparation, assembly, and supervision, engineering, and for all labor, equipment, tools, and incidentals necessary to complete

this item in conformance with the Contract Documents.

## 3.2 SITE TEST

A. An installation check and building load test shall be performed by the manufacturer's local representative. The RPR, designer, regular operators and the maintenance staff shall be notified of the time and date of the site test. The tests shall include all tests specified by NFPA 110 Level 1. Additional tests shall be performed for automatic start-up by means of simulated power outage to test remote-automatic starting, transfer of the load and automatic shutdown. Prior to this test, all timers shall be adjusted for proper system coordination.

## 3.3 LOAD BANK TEST

A. After the building load test, a load bank test will be performed. This test shall be done with resistive dry load banks, in the presence of the Engineer and Owner. Test shall be at a time mutually convenient with the Owner and in the presence of the RPR.

1. 1 hour 50%
2. 1 hour 75%
3. 3 hours 100%
4. 1 hour 75%
5. 10 minutes cool down

B. During test, a written log shall be maintained at 15-minute intervals with the following:

1. Ambient Air Temperature
2. Amperes
3. Hertz
4. Oil Pressure
5. Water Temperature
6. Battery Charging
7. Exhaust stack temperature

Cost of fuel for load test and all construction activities or testing to be included in bid. Contractor shall fill tank to 75% level once all testing is completed and unit is accepted by the Owner. Diesel fuel shall be provided in strict accordance with the manufacturer's recommendation. Fuel preservative/biocide/additive shall be installed in accordance with the manufacturer's and fuel supplier's recommendations. Delivery tickets shall be submitted for all fuel and fuel preservative/biocide/additives purchased to verify the fuel and preservative/biocide/additive type being delivered. Load bank testing shall be performed prior to acceptance of the generator and associated equipment.

### 3.4 ANNUNCIATION

A. Install remote annunciator complete with all wiring/conduit in location as noted herein and as required per NFPA 110 and local Authority Having Jurisdiction.

### 3.5 CONDUCT TRAINING FOR OWNER PERSONNEL AFTER JOB SITE ACCEPTANCE.

A. This shall include operation and maintenance of the system. In addition, the selling distributor shall offer to the Owner, at no charge, factory training on the complete system. This training shall include operation and maintenance and troubleshooting of all system components. The duration of this training shall not be less than 2 days and shall be available within 8 months of the Owner's acceptance of each job and for up to 4 personnel from each installation.

## PART 4 - METHOD OF MEASUREMENT

### 4.1 METHOD OF MEASUREMENT

A. The items described in this item are incidental to other items and shall not be measured for payment.

## PART 5 - BASIS OF PAYMENT

### 5.1 BASIS OF PAYMENT

A. No direct payment shall be made for the work described in Item 26 32 13.06. The work described in Item 26 32 13.06 is incidental to the respective L-109 pay item and shall be paid for in the respective bid item of which it is a component part.

**END OF SECTION 26 32 13.06**

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# SECTION 26 43 13 - SURGE PROTECTIVE DEVICES FOR LOW-VOLTAGE ELECTRICAL POWER CIRCUITS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and Division 01 Specification sections apply to this section.

### 1.2 SUMMARY

A. This section includes the requirements for provision and installation of surge suppression equipment for 120 volt AC to 480 volt AC circuits.

### 1.3 DESCRIPTION

A. Provide all materials, labor and auxiliaries required to furnish and install complete surge suppression for the protection of building electrical and electronics systems from the effects of line induced transient voltage surge and lightning discharge as specified for systems with voltages between 120VAC and 480VAC.

B. Provide surge suppression equipment for the following equipment:

1. Distribution and branch panels as called for on drawings.

C. All surge protection to be connected via a 30A 3 pole circuit breaker (whether shown on Plans/Schedules or not.)

### 1.4 SUBMITTALS

A. Submit the following Product Data for each type of suppressor:

1. Dimensions
2. Means of mounting
3. Compliance with UL Standards referenced
4. Compliance with IEEE Standards referenced
5. Design type (Hybrid, MOV)
6. Internal fusing/Thermal Protection
7. Recommended overcurrent protection
8. Size of wire leads
9. Visual failure indicator
10. Warrantee
11. Performance data showing compliance with performance as specified herein
12. Non-Potted construction

## 1.5 PROJECT AS-BUILT DOCUMENTS

A. Record locations of surge protection units; indicate actual units used on red lined as-built documents.

## 1.6 OPERATION AND MAINTENANCE DATA

A. All approved shop drawings, product data, and cutsheets.

B. Installation, connection, and maintenance information on each type of surge suppression.

C. Procedure and time table for recommended periodic inspection of devices to determine usefulness and life expectancy.

## 1.7 QUALITY ASSURANCE

A. All surge suppression devices shall be manufactured by a company normally engaged in the design, development, and manufacture of such devices for electrical and electronics systems equipment.

B. The surge suppressor manufacturer shall offer technical assistance through support by a factory representative and local stocking distributor. Factory representatives are to approve installation prior to Substantial Completion.

## 1.8 REFERENCES AND REGULATORY REQUIREMENTS

A. Equipment Certification: Surge suppression equipment shall be UL listed and labeled for intended use.

B. Surge suppression devices shall be selected, installed and located in accordance with requirements of the following:

1. ANSI/NFPA 780 - Lightning Protection Code, latest edition.
2. ANSI/NFPA 70 - National Electrical Code, current adopted year.
3. U.L. 1449 – 3rd Edition, Standard for Safety for Surge Protective Devices.
4. 1363-1986 - Standard for Temporary Power Taps.
5. ANSI/IEEE C62.41-1991 (IEEE 587) - Guide for Surge Voltages in Low-Voltage AC Power Circuits.
6. ANSI/IEEE C62.33-1982 - Standard Test Specifications for Varistor Surge Protection Devices.
7. ANSI/IEEE C62.45-1987 - IEEE Guide for Surge Testing for Equipment Connected to Low-Voltage AC Power Circuits.

## 1.9 COORDINATION/PROJECT CONDITIONS

A. Verify proper grounding is in place.

B. Verify if space and proper clearance for the surge suppressor installation is available.

C. Coordinate so that proper overcurrent device, as recommended by manufacturer, is installed to feed each surge suppression device.

## 1.10 WARRANTY

A. All surge suppression devices shall be warranted to be free from defects in materials and workmanship for a period of five (5) years.

B. Any suppressor which shows evidence of failure or incorrect operation during the warranty period shall be repaired or replaced at no cost to the owner.

# PART 2 - PRODUCTS

## 2.1 GENERAL

A. Suppressors shall be designed for the specific type and voltage of electrical service and shall provide clamping action for both normal (L-N) and common (L-N-G) mode protection.

B. Suppressors shall be of a hybrid design, and include circuitry with tight, wave-tracking clamping characteristics.

C. Suppressors shall be designed to withstand a maximum continuous operating voltage of not less than 115% of nominal RMS line voltage.

D. Suppressors shall contain internal safety fusing to disconnect the suppressor from the electrical source if the suppressor fails, in order to prevent catastrophic failure modes.

E. Suppressors shall be fail safe, shall allow no follow-thru current, shall have repeated surge capability, shall be solid state, shall be self-restoring, and shall be fully automatic.

F. Suppressors shall be UL 1449 listed and shall be approved for the location in which they are installed.

## 2.2 SUPPRESSOR CRITERIA

A. Branch Distribution and/or Sub Panels suppressors shall meet or exceed the following:

1. General.

   a. Type 2 Style
   b. Integral or Nipple mounted to panel.
   c. Suppressors shall be tested as per IEEE C62.41-1991 to determine clamping voltage using Cat. B3 test criteria.

d. Suppressors shall be sequential surge tested as per IEEE C62.45-1987, and shall withstand 1000 test cycles at 3kA, Cat. B3 test criteria.
e. Internal fusing for each phase connected.
f. Fail-safe with no hold over current.
g. Enclosure:

1) listed.
2) Fire retardant.
3) NEMA 3R.

2. Electrical Requirements:

a. Maximum Surge Capacity: 150,000 Amps. per phase.
b. Clamping voltage:

1) Category B, UL 1449, Line to Neutral impulse (6KV - 1.2 x 50µs, 3kA - 8 x 20µs):

a) 120/208V, 3Ø, 4W: 530
b) 277/480V, 3Ø, 4W: 920

c. Basis of Design:

1) Square D XDSE. Internally or externally mounted
2) Approved Equal

## PART 3- EXECUTION

### 3.1 GENERAL

A. Provide suppressor at each branch panel as noted on drawings.

### 3.2 INSTALLATION OF SUPPRESSORS

A. Suppressors shall be installed as close as practical to the electric panel or electronic equipment to be protected, consistent with available space.

B. Suppressors shall be close nippled to the device being protected in a position near the neutral bus which will minimize lead length between suppressor and the buses or control breaker to which the suppressor connects. Suppressor leads shall not extend beyond the suppressor manufacturer's recommended maximum lead length without specific approval of the Designer.

C. Location shown on drawings is diagrammatic only.

D. Suppressors shall be installed in a neat, workmanlike manner. Lead dress shall be as short and as straight as possible and be consistent with recommended industry practices for the system on which these devices are installed.

E. Supplementary grounding and bonding connections required between the bonding bus or ground plane for each equipment cluster and other locations as indicated herein shall be accomplished using #6 AWG core copper conductor and approved connections unless otherwise noted. Referenced to a common earth ground.

F. Suppressors shall be installed in a manner that allows simple replacement within short periods of downtime.

G. Suppressors other then point of use type shall be installed with a means of disconnecting the suppressor at the panel. At the main service entrance location, provide a dedicated 30 amp, 3P-CB, 65,000 A.I.C. for the TVSS device. At the distribution secondary and subpanel locations, provide dedicated 20 amp or 30 amp, 3P-CB's, for the TVSS device. Label disconnect or CB "Surge Protector". Change rating of CB's noted above as required to properly provide system as recommended by manufacturer.

H. Suppressors at main switchgear are to be mounted integral to switchgear. Comply with all codes and UL labeling. Provide UL label for complete system. All status indicators are to be mounted to switchgear door, visible from exterior of switchgear without requiring operation of door, lid, etc.

**END OF SECTION 26 43 13**

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# SECTION 27 50 00 – FUEL MANAGEMENT SYSTEM

## PART 1 - GENERAL

### 1.1 STIPULATIONS

A. Project drawings and general provisions of the Contract, including but not limited to all; General and Supplementary Conditions, Division 01 and all related Specification Sections shall apply to this Section. Contractor shall review all Divisions, Sections, and Drawings to ensure proper interface as required for a fully functional system.

B. Reference Symbols:

1. All device symbols are defined by the appropriate symbol schedules. Because of the scale of the drawings, symbols are shown on drawings as close as possible to the mounting location.
2. Contractor shall coordinate exact locations of all equipment with all site plan and architectural floor plan drawings as well as related Specification Sections for all affected systems and prior to submittal of any shop drawings.

### 1.2 SUMMARY

A. Provide new self-serve fueling station to replace existing.

B. Contractor to provide a Three-year prepaid software subscription as part of there bid. Software subscription to include the Fuel Management Software, cloud based hosting, and technical support

C. Provide with Cellular communcation option for verification of credit cards.

D. Provide with new concrete pad for mounting and associated conduits for power and controls to above ground fuel tank.

## PART 2 - PRODUCTS

### 2.1 FUEL MANAGEMENT SYSTEM

A. Provide a fuel management system to allow 24-hour self-service fueling of the Jet-A fuel and Avgas systems. The fuel management system shall include one credit card terminal to be located as shown on the Contract Drawings, and software that is web based and accessible from any computer or device with an internet or cellular connection. The system shall include the following features:

B. Fuel Terminal (i.e., credit card reader):

1. Operation: Configure the system as follows:

a. Prompt the operator to confirm that appropriate bonding is complete between the fueling system and the aircraft.
b. Prompt the operator to enter the aircraft tail number.

2. Operating instructions: Provide clearly visible operating instructions. Instructions must have the ability to indicate the locations of the emergency shut-off devices.
3. Processor: Intel Atom Processor with 4GB RAM and 120 GB Memory via SSD. Communications to Card networks and to fuel management software via either wired ethernet, Wi-Fi or cellular connectivity.
4. Display – 7” full color display with 1000 nit brightness, anti-glare, anti-reflective coating and light sensor for dimming functionality in lower light conditions.
5. Card reader: Insert style fully encrypting card reader that creates a unique encryption key for each card swipe.

a. Thermal receipt printer (60 mm) with option for low paper warning.
b. Construction: Stainless Steel with powder coat finish.
c. Keypad: Backlit, capacitive touch keypads.
d. Dimensions: Terminal Width: 20 “, Depth: 9.5”, Height: 67”
e. Power requirements: 110 VAC, 60 Hz, 200 watts.
f. Operating temperatures: Negative 40 to 130 degrees F.
g. Hose controls: Up to 8 hose control points with the ability to expand to 64.
h. Pulser compatibility: 1:1 to 1000:1.
i. Pump control relays: Include as required.
j. Encryption of card data: The system shall fully encrypt bank card track data upon swipe utilizing 3DES and DUKPT encryption. This card data shall not be stored on the self-serve device during normal operation in order to prevent against any breach or compromise of card holder data.
k. In the event that communications are lost, transaction data may be temporarily stored until connection is restored, at which point all transactions will push to the cloud based application and then to the card processor.
l. Manufacturer: QT Petroleum on Demand (QT POD), model M4000 Pro

6. High Visibility Display:

a. Construction: Aluminum case with powder coated finish.
b. Dimensions: 20” high x 16” wide x 4” deep.
c. Operating temperatures: Negative 30 to 130 degrees F.
d. Display: Solid state 2.3” bright red bar segment LED digits.
e. Mounting location: Top of dispensing cabinet.
f. Manufacturer: QT Petroleum on Demand (QT POD), model MultiDisplay.

7. Fuel Management Software:

a. Provide a subscription based, fuel management web application that is accessible from any computer or device with an internet or cellular connection to set prices, manage private accounts, perform unit configuration, monitor inventory and view transaction data.
b. At a minimum, the software shall be capable of the following tasks:

1) Account management
2) Invoicing
3) Basic discounting
4) Fuel type blocking
5) Access schedules
6) Remote retrieve sales
7) Purchases
8) Sales activity
9) Sales summary
10) Transaction detail log

8. Manufacturer: QT Petroleum on Demand (QT POD), model SiteMinder.

## PART 3 - EXECUTION

### 3.1 EQUIPMENT INSTALLATION

A. Contractor shall provide equipment, components, devices, hardware, patch panels and all appurtenances necessary to provide a fully operational system. Coordinate all system cabling with system provider prior to shop drawing submission.

B. In addition to all power requirements stipulated in Div. 26 Specification, all electrical power for remote system components shall be obtained from dedicated power supplies. All 120-Volt electrical power for any fuel system components and\or devices shall be provided from the nearest appropriate electrical distribution panels.

C. Provide all required concrete pads and anchors for mounting the new equipment.

### 3.2 TRAINING

A. Contractor shall fully instruct airport staff in operation, adjustments, and maintenance of all products installed for the new fuel management system.

B. All training to be provide minimum 2 weeks before system cutover. Coordinate with airport staff for training schedule.

C. Training shall be conducted by experienced and factory authorized personnel. Adequate training material shall be provided by the contractor, at a minimum provide the following:

**END OF SECTION 27 50 00**

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