

# **GENERAL REQUIREMENTS**

**RW 36 RSA GRADING PROJECT AT  
OCALA INTERNATIONAL AIRPORT**

## Section 01010

### Summary of Work

#### PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS: Contract Drawings, General Provisions, Supplementary Conditions, General *Requirements*, and other Special Provisions and Specifications apply to work of this section.
- 1.2 CONTRACT DOCUMENTS: Indicate the work of the Contract and related requirements and conditions that have an impact on the project. Related requirements and conditions that are indicated on the Contract Documents include, but are not necessarily limited to the following:
- A. Existing site conditions and restrictions on use of the site.
  - B. Mandatory staging/sequencing.
  - C. Requirements for partial utilization of various elements prior to substantial completion of the work.
  - D. Work to be performed concurrently by the Owner.
- 1.3 SUMMARY BY REFERENCES: Work of the Contract can be summarized by references to the Contract, General Provisions, Supplementary Conditions, Specifications, Drawings, and Addenda and Modifications to the contract documents issued subsequent to the initial printing of this Project Manual, including but not necessarily limited to printed material referenced by any of these. It is recognized that work of the Contract is also unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions, and other forces outside the contract documents.
- 1.4 CONSTRUCTION PHASING: To minimize the impact to aircraft operations and airfield tenants, and to avoid construction during adverse weather seasons, the Contract shall be completed in phases as specified hereinafter as described on the plans. Each phase of the Contract shall be completed within the contract time as specified herein.
- 1.5 CONSTRUCTION TIME:
- A. Time Schedule: The work as described by the contract specifications and as shown on the plans shall be completed and ready for use by the Owner within **the timeframe as specified on the engineering plans** after the date of Notice-to-Proceed. The time schedule for completion of this project is critical and liquidated damages as prescribed in the Contract will be enforced.
  - B. Material Delivery: Upon approval of the bid and securing the necessary funding by Owner, FDOT and FAA, the Engineer will issue a Notice-of-Award. The Contractor shall use this time for submittals of items of long lead times, i.e., lights, REIL's, regulator, etc. No materials shall be ordered without an approved submittal. The Contractor shall furnish documentations confirming order date and material delivery date.

## 1.6 LIQUIDATED DAMAGES:

- A. Owner and Contractor recognize that time is of the essence and that Owner will suffer financial loss if the work is not substantially complete in accordance with the time(s) specified herein. They also recognize the delays, expenses and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner the daily rate stipulated in the Front-End Documents section of the Project Manual for each phase shown in the Liquidated Damages Schedule below.
- B. Contractor further understands and hereby expressly agrees that in addition to liquidated damages specified hereinafter, to pay the Owner the actual costs to Owner for any inspector or inspectors necessarily employed by Owner on the work and the actual costs to Owner for the Engineer's observation of construction and project representative services including all travel and subsistence expenses after the date specified for Project completion until the work is completed and ready for final payment. Further, the Contractor agrees that the sums to be paid the Owner may be deducted from the sum due the Contractor for work performed as provided in Section 90 of the General Provisions.

## 1. LIQUIDATED DAMAGES SCHEDULE – Refer to the phasing plans

- C. The Contractor shall complete all inspection punch list items and final pavement markings determined by the Owner and the Engineer within 30 consecutive calendar days from the date of the Substantial Completion inspection. Failure to do so will result in liquidated damage equal to the daily rate.

## 1.7 CONCURRENT WORK BY OWNER:

- A. Overlapping Work: The work to be performed may overlap work by others to be performed concurrently. Each Contractor shall coordinate and schedule his work with the knowledge that each may be working the same area simultaneously. Each Contractor will be expected to cooperate with the Engineer, Owner, and other Contractors in the completion of the work.
- B. Disputes: The Engineer, whose decision will be final, will decide any disputes arising between the Contractors.
- C. Coordination: Contractors shall coordinate their schedules and work activities very closely, including holding weekly meetings in the presence of the Engineer's onsite representative. Contractors must cooperate with each other, including working around each other's work activities. Potential delays as a result of lack of coordination will not be considered grounds for claim for additional time extensions and/or additional compensations.

## 1.8 CONTRACTOR USE OF PREMISES:

- A. Use of the Site: The Contractor shall confine his operations at the site to the areas permitted under the Contract. Portions of the site beyond areas on which work is indicated are not to be disturbed. Conform to site rules and regulations affecting the work while engaged in project construction.

- B. Open Passage: Keep existing drives, entrances, and air operations areas designated to remain open, clear, and available to the Owner, his employees and the public at all times. Do not use these areas for parking or storage of materials.
- C. Storage: Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials and location of storage sheds to the areas indicated. If additional storage is necessary, obtain Engineer's approval.
- D. Vehicle/Equipment Security: Lock automotive type vehicles, such as passenger cars and trucks, and other mechanized or motorized construction equipment, when parked and unattended, so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running or the ignition key in place.

#### 1.9 WORK RESTRICTION:

- A. NAVAID Areas: During the time of construction, the Contractor may be restricted from working in or around certain essential electronic navigational aids necessary to the safe operation of the airport. The Contractor is hereby notified that the Engineer may restrict construction operations in those areas closest to the active runway and taxiways.
- B. Radio Communication: Contractor shall maintain two-way radio communication with the Airport air operations personnel, on their frequency, at all times during construction. Contractor shall have a working radio on site at all times during construction and shall assign responsible personnel, including flagmen, to continuously monitor the radio. All radios shall be as specified in Section 01510.
- C. Notice to Airmen (NOTAMS): The Contractor shall provide the necessary information on construction conditions so that the Owner can advise the Flight Service Station to issue a NOTAM in accordance with established criteria. All requests for NOTAMS for taxiway closures shall be made at least 48 hours in advance (not including weekends) by the Contractor to the Engineer. All requests for closure of a runway or for moving into a phase that requires the closure of a Navaid shall be made at least 7 days in advance (not including weekends) by the Contractor to the Engineer.
- D. Turf Restoration: All non-paved areas that are disturbed by the Contractor's work, staging area, haul roads, etc. shall be reseeded and restored to original condition by the Contractor. Except where otherwise specified, there will be no separate pay item for this work; it will be considered incidental to and included in the price bid for Item C-105, Mobilization.
- E. Security: Contractor shall provide security within his construction area and shall keep all unauthorized personnel out.
- F. Haul Route on Airfield Pavement: Contractor will not be allowed to use any of the existing runways, taxiways, or aprons as part of the haul road unless authorized in writing by the Engineer.
- G. Access Points: All construction traffic shall enter and exit the project area only through the project access point(s) shown on the plans or approved by the Engineer. Contractor will be responsible for security of entrance gates under use by him/her.

- H. **Construction Stakeout:** The Contractor shall perform construction stakeout in accordance with Article 50-06 of the General Provisions and item 02000 construction layout.
- I. **Haul Route:** The Contractor shall be responsible for establishing haul routes suitable for supporting all necessary transportation and construction equipment for the duration of the project. Any existing roads or other areas that are used as part of the haul route shall be restored to their original condition after completion of the project. The Contractor will be responsible for all clean-up operations of debris that may be on the haul route and for watering and/or other dust preventive measures to preclude fugitive dust from affecting buildings, occupants, or airfield operations. No separate payment will be made for seeding or mulching, or pavement restoration; such costs will be incidental to and included in the price bid for Item C-105, Mobilization.
- J. **Airfield Safety Devices:** Contractor shall maintain all airfield safety devices such as staked limit lines for the duration of the project as required. Damaged stakes or flagging shall be replaced immediately.
- K. **Vehicle Markings and Lighting:** All vehicles and equipment used on the airfield shall meet airport requirements for marking and lighting.
- L. **Contacts During Non-Working Hours:** For the duration of the project, the Contractor shall designate a list of authorized individuals in a prioritized order, to be on 24 hour call, and these individuals shall be equipped with a beeper and cellular phone. These individuals shall be able to respond to any situation arising out of the performance of the work on this project, particularly during nighttime hours, and shall respond and be on the project site within one hour after the phone call or beep.
- M. **Airfield Pavement Cleanup:** The Contractor shall promptly clean any and all debris arising from the project work that is left on operational airfield pavement. The Owner may remove any debris attributable to the Contractor found to be a hazard to aircraft. A fee of \$250/hour will be assessed to the Contractor for all such cleaning and will be deducted on the next Contractor pay request.
- 1.10 **COORDINATION:** The work of this Contract includes coordination by the Contractor of the entire work of the project, including preparation of general coordination drawings, diagrams and schedules, and control of site utilization, from beginning of construction activity through project close-out and warranty periods.
- 1.11 **PARTIAL OWNER OCCUPANCY OR USE:** The Owner reserves the right to use completed and accepted work provided such use does not interfere with completion of other work. Such use will not affect warranty stipulations addressed elsewhere in the contract documents.

PART 2 - PRODUCTS (Not Used.)

PART 3 - EXECUTION

- 3.1 **MEASUREMENT AND PAYMENT:** Except as otherwise specified, no separate measurement or payment will be made for work set forth in this section; such costs will be considered as incidental to and included in the price for Section C-105, Mobilization, or other items as appropriate.

**END OF SECTION 01010.**

## Section 01030

### Airport Project Procedures

#### PART 1 - GENERAL

- 1.1 INTRODUCTION: This project will include Contractor operations within or near active Air Operations Areas (AOA). The Airport will conduct normal aircraft operations during the course of this project, subject to certain restrictions called out in this section or elsewhere in the specifications. Therefore, to provide for the security and safety of Airport users and the Contractor's forces, as well as to minimize interruptions to aircraft operations, the Contractor shall limit his work within the areas designated and conduct his operations as specified.
- 1.2 Any fines or assessments levied against the Sponsor as a result of unauthorized intrusions in the AOA or other violations by the Contractor's personnel or those of his subcontractors will be passed on to the Contractor. In addition, the Contractor will be subject to a fine of \$1,000.00 per incident, assessed by the Sponsor.
- 1.3 AIR OPERATION AREA (AOA) SAFETY REQUIREMENTS:
- A. Barricades: Existing runways, taxiways and aprons outside the limits of construction shall be separated from construction areas with barricades as shown on the plans and described in Section 01530.
  - B. Radio Communication: The Contractor shall monitor the Airport 2-way CTAF radio frequency (119.25 MHZ) at all times during construction, and shall remain clear of the runway approach and obstacle free zones during aircraft operations. Contractor shall have a working radio as specified in Section "1.3.C" on site at all times during construction and shall assign responsible personnel to continuously monitor the radio. The contractor shall monitor incoming flights and clear men and equipment from the taxilane object free area (TOFA) before an incoming flight reaches the terminal area.
  - C. The contractor shall furnish his construction personnel with sufficient truck and hand-held radios to allow all construction locations to be in radio contact with the CTAF. All radios shall be capable of two-way communications with CTAF and shall be Communication Specialists, TR-720 Handheld AM Transceivers or approved equal. When working within active runway or taxiway safety areas, project superintendents shall be in constant radio contact with CTAF and shall be responsible for controlling the movement of project equipment, vehicles and personnel.
  - D. The Contractor will not be directly compensated for providing two-way radios as this work is considered incidental to the work covered by the various contract items.
  - E. Runway and Taxiway/Taxilane Closures: Only the Owner will make Closures of runways and taxiways/taxilanes. The Owner shall contact the appropriate FAA Flight Service Station prior to issuing the Notice-to-Proceed so that a Notice-to-Airmen (NOTAM) for runway or taxiway closure can be issued in accordance with established criteria. Notams are not required for a

taxilane closure Construction operations within the runway or taxiway safety zone shall not begin until the Contractor receives clearance from the Owner and Engineer assuring that the adjoining runway or taxiway has been closed.

#### 1.4 CONSTRUCTION SAFETY REQUIREMENTS:

##### A. General:

1. **Safety Officer:** The Contractor is required to employ a Safety Officer who will be the liaison between the Contractor, the Engineer and the Owner in all safety related matters for the duration of the project. The Safety Officer shall be on call 24 hours per day for emergency maintenance of airport hazard lighting, barricades, and other safety features.
2. **Protection of Utilities:** The Contractor shall be responsible for field marking and protecting all utilities within the construction limits.
3. **Storage of Equipment, Vehicles, and Materials:** All equipment, vehicles, and materials must be stored in the designated storage or staging area or in areas acceptable to the Engineer.
4. **Vehicular Markings:** Contractor vehicles and equipment shall be marked with checkered flags and lighted with flashing beacons to comply with requirements of FAA AC 150/5210-5D. All vehicles and equipment shall display 3' x 3' flags, orange and white "checkerboard" pattern, with the squares being 1' x 1' each. All vehicles and construction equipment working during the night or during periods of low visibility shall be equipped with an amber colored rotating beacon light.
5. **Construction Methods Limitation:**
  - a. No open flames or burning will be allowed on Airport property except as specifically authorized by the Engineer in writing.
  - b. Stockpiled material shall be constrained in a manner to prevent displacement by jet blast, prop blast, or wind, and shall be kept to a height that will not penetrate FAR Part 77 imaginary air space and shall be located outside the runway and taxiway object free areas and runway protection zone (RPZ).
6. **Safety and Accident Protection:**
  - a. The Contractor shall comply with all applicable federal, state, and local laws, ordinances, and regulations governing safety, health, and sanitation; shall provide barricades; and shall take any other needed actions, on his own responsibility, that are reasonably necessary to protect the life and health of employees on the job, the safety of airport users, the safety of moving and parked aircraft, and other property during the performance of the work.
  - b. The Safety Officer's duties shall include accident prevention.
7. **Navigational Aids:** Airport navigational aid critical areas are shown on the drawings or will be indicated by the Engineer. The Contractor shall not enter these areas without the Engineer's approval.

8. FAA Advisory Circular: Except as otherwise specified, FAA AC 150/5370-2G and all its references shall be used in maintaining airport operational safety during construction. A copy of this Advisory Circular is attached.

B. Runway and Taxiway Safety Zones:

1. Limitations: Work on this project is not in proximity to a runway or runway approach area. When necessary to accomplish construction in areas adjacent to taxiways and apron taxilanes, the construction equipment, vehicles, and men are authorized to operate without interruption within the project limits.
2. Request for Facility Closures: Construction activities on runways or taxiways or within the above-restricted areas shall only be performed at times when the runway or taxiways are closed to aircraft. The Contractor through the Engineer thereof must request closure of a runway or taxiway or any portion in writing. This request must indicate the areas needed and a schedule of operations and time(s) required for operations within the area. The Owner reserves the right, however, to shift any approved closure periods to alleviate aircraft congestion or when inclement weather conditions dictate.
3. Equipment Operation Restrictions: Contractor is not permitted to operate equipment within a Taxiway/Taxilane Object Free Area (TOFA) and Runway Obstacle Free Zone (ROFZ) except when the runway or taxiway has been closed to traffic and a NOTAM issued. Before re-opening a closed runway or taxiway all excavated trenches and holes within the ROFZ or TOFA shall be backfilled, tamped and leveled to match existing grades and all equipment and personnel removed from the ROFZ or TOFA. Construction equipment must be removed from the runway and taxiway OFA at the end of each work shift. The Contractor may operate equipment within the apron Taxilane Object Free Area up to the edge of the taxilane on a pull back basis with all personnel and above ground equipment removed from the TOFA prior to aircraft operating on the taxilane. Barricades must also be provided along the edge of the taxilane as prescribed in the plans when any excavation work is in progress within the TOFA.
4. Stockpiles: Stockpiled materials shall not be permitted within the runway or taxiway safety zones.
5. Grading Requirements: **All construction within a restricted area shall be performed in such a manner that, at the end of the closure period, it will leave the safety area with no abrupt grade changes or grades in excess of 5 percent, and with no trenches with depth or width greater than 3 inches.**

C. Obstructions to Navigation:

1. Violation of Safety Zone Surfaces: Penetration of equipment, vehicles, materials, or men into the safety zones and approach surfaces requires the preparation and distribution of Notices to Airmen (NOTAM) in advance to the actual penetration.
2. Scheduling: When part of the work in this project is in violation of FAR Part 77, the clearance distance requirements from runway and taxiway edges shall be incorporated into the construction sequence schedule. At no time shall the construction limits of the area under construction violate the safety zones without prior notification to and approval by the Engineer.

3. Coordination and Communication: Work within and adjacent to active AOA's shall be coordinated with the Engineer prior to commencement of the activity. The construction superintendent and the resident inspector, both of which shall be in constant radio contact with ATC, shall accompany work crews in these areas.
  
- 1.5 SAFETY PLANNING: The Contractor shall integrate and maintain requirements of airport operational safety into each planning and work schedule. The Contractor's Safety Officer shall continuously monitor all planning schedules and work underway for compliance to AC 150/5370-2 (Latest Edition); and shall maintain vigilance to detect areas needing attention due to oversight or altered construction activities. Airport operational safety during construction will be on the agenda at the preconstruction conference and each coordination and progress meeting.
  
- 1.6 SECURITY REQUIREMENTS: The Contractor has the responsibility for maintaining control of the access gates or any other entrance to the AOA. The Contractor may utilize a gate guard or install an automatic operated gate controller with limited access with numeric keypad. The Contractor may be required to erect temporary fencing to protect the AOA during construction. The Contractor's method of maintaining security shall be set forth in his Security Plan and shall comply with the airport's rules and regulations concerning work in the airport restricted areas. There will be no separate measurement or payment for gate guards or temporary fencing required maintaining the integrity of the AOA.
  
- 1.7 BARRICADES: Contractor shall provide barricades along active taxiway pavement areas, closed sections of the runway, and elsewhere as shown on the plans or directed by the Engineer while work is proceeding in the runway, taxiway, and apron areas. Barricades shall be sited and relocated during the course of the work to clearly identify areas closed to aircraft operations.
  
- 1.8 APRON, TAXILANE AND TAXIWAY CLOSURES:
  - A. When any area of the apron or apron taxilane is required to be closed during any phase of the work the Contractor shall schedule his work to provide continuous access to terminal building and tenant facilities that remain open as shown in the phasing plans. Taxiways A, B, C, D & F are to remain open at all times unless otherwise shown on plans. Barricades and/or closed taxiway markers shall be placed as directed by the Engineer.
  - B. The Contractor shall coordinate and schedule apron and taxilane closures and temporary relocation of any runway threshold with Owner through Engineer before closure is required so that Owner can issue appropriate NOTAMS.
  - C. Taxilane and taxiway closures shall be scheduled in advance. Contractor shall identify taxiway closures with barricades and by covering taxiway lights within the closure limits. Remove barricades and covers when no longer needed or as directed by Engineer.

PART 2 - PRODUCTS

- 2.1 BARRICADES: Barricades, when required, shall be constructed as specified in Section 01530.

PART 3 - EXECUTION

- 3.1 LIMITATION OF CLOSURES: Only the Owner will make Airfield pavement closures. The Contractor shall request the closure through the Engineer from the Owner.
- 3.2 BARRICADE INSTALLATION: Install barricades at locations shown on the drawings and where directed by Engineer. Anchor barricades as specified in Section 01530. Maintain barricades until removal is directed by Engineer. Barricade batteries shall be checked daily to insure adequate operation of the flashers during the night. Replace batteries as required. Upon removal of barricades, repair any damage to pavement or surrounding area caused by barricades.
- 3.3 MEASUREMENT AND PAYMENT: Except as otherwise specified in Section 01530, no measurement or payment will be made for work in this section; it will be considered as incidental cost to Mobilization and other items of work.

**END OF SECTION 01030**

## Section 01040

### Project Coordination

#### PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS: All contract documents and drawings apply to work of this section.
- 1.2 DESCRIPTION OF WORK: Administrative and supervisory requirements necessary for coordination of work on the project include but are not necessarily limited to the following:
1. Coordination and meetings.
  2. Surveys and records or reports.
  3. Limitations on use of site.
  4. Special reports.
  5. General installation provisions.
  6. Cleaning and protection.
  7. Conservation and salvage.

#### PART 2 - PRODUCTS (Not applicable)

#### PART 3 - EXECUTIONS

- 3.1 COORDINATION AND MEETINGS:
- A. General: The Contractor shall prepare a written memorandum on required coordination activities and include such items as required notices, reports and attendance at meetings. Distribute this memorandum to each entity performing work at the Project site. Prepare similar memorandum for separate Contractors where interfacing of their work is required.
- B. Preconstruction Conference: A Preconstruction Conference will be scheduled after award of Contract and prior to issuance of a Notice to Proceed. Key Project personnel representing the Prime Contractor and all major Subcontractors will be required to attend this Conference. All other parties involved with this Project, such as the Owner, Engineer, and FAA, will also be represented. All affected parties at the Preconstruction Conference will review the entire Construction Schedule carefully. The Contractor shall prepare a detailed Construction Schedule for review prior to and at the Preconstruction Conference.
- C. Coordination Meetings: The Contractor shall hold General Project Coordination Meetings at regularly scheduled times convenient for all parties involved. These meetings may be as often as weekly if required. These meetings are in addition to specified meetings held for other purposes, such as regular Project meetings and special Pre-installation Meetings. Request representation at each meeting by every party currently involved in coordination or planning for the work of the entire Project. Conduct meetings in a manner, which will resolve coordination problems. Record results of the meeting and distribute copies to everyone in attendance and to others affected by decision or actions resulting from each meeting.

1. The Contractor shall also conduct daily coordination meetings with the Engineer's representative, FAA and designated Owner's representative to coordinate construction and airport operations.
  
- D. Progress Meetings: Conduct progress meetings by teleconference weekly and at the project site monthly. Notify the Owner and Engineer of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request.
  
- E. Attendees: In addition to representatives of the Owner and Engineer, each subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by persons familiar with the project and authorized to conclude matters relating to progress.
  
- F. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the project, and to airport operational safety during construction.
  1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be expedited; secure commitments from parties involved doing so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
  2. Other: Review the present and future needs of each entity present, including such items as:
    - a) Interface requirements.
    - b) Time.
    - c) Sequences.
    - d) Deliveries.
    - e) Off-site fabrication problems.
    - f) Access.
    - g) Site utilization.
    - h) Temporary facilities and services.
    - i) Hours of work.
    - j) Hazards and risks.
    - k) Housekeeping.
    - l) Quality and work standards.
    - m) Change orders.
    - n) Documentation of information for payment requests.
  
- G. Reporting: No later than 3 days after each progress meeting date, distribute copies of minutes of the meeting to each party present and to other parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.
  
- H. Schedule Updating: Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

## 3.2 SURVEYS AND RECORDS/REPORTS:

- A. Construction Staking: The Engineer has established survey base lines for the Contractor. The Contractor shall take all necessary precautions to prevent the loss or damage of primary control points. The Contractor will be responsible for staking required for construction. Working from lines and levels established by the design survey, establish and maintain benchmarks and other dependable markers required for construction. Establish bench marks and markers to set lines and levels for work at each stage of construction and elsewhere as needed to properly locate each element of the project. Calculate and measure required dimensions as shown within recognized tolerances. Drawings shall not be scaled to determine dimensions. Advise entities performing work of marked lines and levels provided for their use.
- B. Survey Procedures: Before proceeding with the layout of actual work, verify the layout information shown on the drawings, in relation to the property survey and existing benchmarks. As work proceeds, check every major element for line, level and plumb. Maintain a surveyor's log or record book of such checks; make this log or record book available for the Engineer's reference. Record deviations from required lines and levels, and advise the Engineer promptly upon detection of deviations that exceed indicated or recognized tolerances. Record deviations, which are accepted, and not corrected, on record drawings. Survey work shall be performed by and under supervision of a professional (registered) land surveyor in the State where the project is located.
- C. Quality of Work: The elevations of permanent and temporary benchmarks shall be determined and recorded to the nearest 0.01 foot. Differential leveling and transit traverses shall be of such precision that the error of vertical closure in feet shall not exceed plus or minus 0.1 foot in 5000 feet. The angular error of closure for transit traverses shall not exceed 1.0-minute times the square root of the number of angles turned.
1. Slope stakes shall be placed, as a minimum, at 100-foot stations, breaks in the original ground surface, and at any other intermediate stations necessary to insure accurate location for construction layout and measurement. Slope stakes and cross sections shall be perpendicular to the centerline. Significant breaks in grade shall be determined for cross sections. Distances shall be measured horizontally and recorded to the nearest 0.1 foot. Side shots for interim construction stakes may be taken with a hand level.
- D. Records: All survey data shall be recorded in fully identified, standard hardbound engineering survey field notebooks with consecutively numbered pages. All field notes and printed data shall include the purpose or description of the work, the date the work was performed, weather data, sketches and the personnel who performed and checked the work. Electronically generated survey data and computations shall be bound, page numbered and cross-referenced in a bound field notebook containing the index for all survey data.
1. The construction survey records shall be available at all times during the progress of the work for examination and use by the Engineer and copies shall be made available to the Engineer upon request. The original field notebooks and other records shall be turned over to and become the property of the Owner prior to final acceptance of the work.
- E. Quality Assurance Survey Services: Contractor shall furnish surveying services required to establish horizontal and vertical location of soil density tests by Owner's QA testing laboratory.
- F. Engineer Services: Engineer will furnish available benchmark and coordinate information at no cost to Contractor.

3.3 LIMITATIONS ON USE OF THE SITE:

- A. General: Limitations on site usage as well as specific requirements that impact site utilization are indicated on the drawings and by other contract documents. Schedule deliveries so as to minimize space and time requirements for storage of materials and equipment on site.
- B. Waste Disposal: Waste materials shall be disposed of off airport property except as specified otherwise in Contract Documents.

3.4 MEASUREMENT AND PAYMENT: No measurement or payment will be made for work in this section; it will be considered as incidental cost to Mobilization and other items of work.

**END OF SECTION 01040**

## Section 01070

### Abbreviations and Symbols

#### PART 1 - GENERAL

##### DESCRIPTION:

1. Abbreviations that may be used in the Contract Documents including the drawings are listed in this section and have the identifications and meanings shown herein except where otherwise indicated.
2. Symbols are identified on the drawings.
3. Related requirements in other parts of the Contract Documents.
  - a. Drawing symbols: Contract drawings
  - b. Drawing abbreviations: Contract drawings.

##### ABBREVIATIONS:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AF	Air Force
AGCA	Associated General Contractors of America
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANG	Air National Guard
ANSI	American National Standard Institute
API	American Petroleum Institute
AREA	American Railway Engineering Association
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWG	American Wire Gage
AWS	American Welding Society
AWWA	American Water Works Association
COE	Corps of Engineers
CRSI	Concrete Reinforcing Steel Institute
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FS	Federal Specifications
MUTCD	Manual on Uniform Traffic Control Devices For Streets and Highways
NEMA	National Electrical Manufacturers Association
NEC	National Electrical Code
NWS	National Weather Service
OSHA	Occupational Safety and Health Act
PCA	Portland Cement Association
UL	Underwriter's Laboratories, Inc.
DHPT	Department of Highways and Public Transportation
DOT	Department of Transportation
HD	Highway Department

##### Drawing Abbreviations:

4. The following list is not necessarily all-inclusive; additional abbreviations may be used and defined on the drawings.
5. Some abbreviations used on the drawings may not have the same meaning as that identified in the following list; the non-conforming meanings are identified on the drawings when not self-evident.
6. Some variation in use of periods and capitalization may be found on the drawings.

<u>ABBRV</u>	<u>MEANING</u>	<u>ABBRV</u>	<u>MEANING</u>
AB	Anchor Bolt	ALIGN	Alignment
ABT	About	ALP	Airport layout plan
ABV	Above	ALS	Approach lighting system
AC	Advisory Circular (FAA)	ALT	Alternate
AC	Alternating current	ANT	Antenna
AC	Asphaltic concrete	AOA	Air operational area
ACFT	Aircraft	AP	Airport
ADDN	Addition	APPROX	Approximate
AF	Air Force	ARCH	Architecture
AGG	Aggregate	ARP	Airport reference point
AIP	Airport Improvement	ASPH	Asphalt Program
ATC	Air traffic control	CPP	Corrugated polyethylene pipe
ATCT	Air traffic control tower	CPS	Cycles per second
AVE	Avenue	CTB	Cement treated base course
AVG	Average	AWG	American wire gage
CULV	Culvert	CY	Cubic yard
AWOS	Automatic weather observing systems	B TO B	Back to back
D	Depth	BCN	Beacon
DAT	Datum	BDY	Boundary
DBL	Double	BET	Between
BF	Both faces	BIT	Bituminous
BLDG	Building	DBST	Double bituminous surface treatment
BL	Base line	DC	Direct current
BM	Bench mark	BOT	Bottom
DEF.ANG.	Deflection angle	BRL	Building restriction line
DEG	Degree	DEMO	Demolish
BRK	Brick	DI	Drop inlet
BS	Both sides	DIA	Diameter
BTW	Between	BW	Both ways
DIP	Ductile iron pipe	DIM.	Dimension
DIR	Direction	DIST	Distant
C	Centigrade	DIV	Division
C TO C	Center to center	DO	Ditto
CA	Cable	DSGN	Design
CB	Catch basin	DTD	Dated
DWG	Drawing	CBM	Construction benchmark
CD	Check dam	CEM	Cement
EA	Each	CFM	Cubic feet per minute
EF	Each face	EG	For example
EJ	Expansion joint	EL	Elevation
CFS	Cubic feet per second	CHAM	Chamfer
ENGR	Engineer	CHG	Change
CHK	Check	CI	Cast iron
CIP	Cast iron pipe	CJ	Construction joint
CL	Clear	C/L	Center line
CLR	Clearance	CMP	Corrugated metal pipe
CO	Cleanout	CONC	Concrete
CONST	Construction	CONT	Continue
CORR	Corrugate	EOP	Edge of pavement
EQ	Equal	EQUIP	Equipment
EQUIV	Equivalent	EST	Estimate
EW	Each way	EXC	Excavate
EXIST	Existing	EXT	Exterior
ILS	Instrument landing system	F	Fahrenheit
F TO F	Face to face	FAB	Fabricate
FAR	Federal Aviation Regulation	FBO	Fixed base operator
FDN	Foundation	FF	Finish floor
FG	Finish grade	FH	Fire hydrant
FIG	Figure	FIN	Finish
FLD	Field	FOD	Foreign object damage

<u>ABBRV</u>	<u>MEANING</u>	<u>ABBRV</u>	<u>MEANING</u>
FPM	Feet per minute	FPS	Feet per second
FS	Federal Specification	FT	Foot or feet
FTG	Footing	FW	Fresh water
FWD	Forward	GA	Gage or Gauge
GAL	Gallon	GALV	Galvanize
GEN	General	GFE	Government-furnished equipment
GOVT	Government	GPM	Gallons per minute
GPS	Gallons per second	GRD	Ground or grade
GV	Gate valve	GVGI	Generic visual glide slope indicator
HP	High point	HGR	Hangar
HGT	Height	HH	Hand hole
HIRL	High intensity runway lights	HMAC	Hot mix asphaltic concrete
HOR	Horizontal	HWY	Highway
ID	Inside diameter	IDENT	Identification
IFR	Instrument flight rule	IN.	Inch
INCL	Include	INT	Intersect
INV	Invert	IP	Inlet protection
IP	Iron pipe	JB	Junction Box
JFR	Jet fuel resistant	JMF	Job mix formula
JT	Joint	K	Kip (1,000 lb)
KWY	Keyway	L	Left
LAT	Latitude	LB	Pound
LC	Length of curve	LF	Linear feet
LG	Length or long	LIN	Linear
LIRL	Low intensity runway lights	LITL	Low intensity taxiway lights
LOA	Length over-all	LOC	Localizer
LONG	Longitudinal	LP	Low point
LS	Lump sum	LT	Light
LVC	Length of vertical curve	MAINT	Maintenance
MALS	Medium intensity approach lighting system	MATL	Material
MAX	Maximum	MH	Manhole
MHW	Mean high water	MIN	Minimum
PVI	Point of vertical intersection	MIRL	Medium intensity runway lights
MITL	Medium intensity taxiway lights	MISC	Miscellaneous
MLS	Microwave landing system	MLW	Mean low water
MON	Monument	MSL	Mean sea level
MTL	Metal	NATL	National
NAVAID	Navigational aid	NIC	Not in contract
NO	Number	NOM	Nominal
NOTAM	Notice to airmen	NTS	Not to scale
OA	Over-all	OC	On center
OD	Outside diameter	OFZ	Obstacle free zone
OPS	Operations	ORIG	Original
PAPI	Precision approach path indicator	PAR	Precision approach radar
PAV'T	Pavement	PC	Point of curve
PCC	Portland cement concrete	PFC	Porous friction course
PI	Point of intersection	PIV	Post indicator valve
PJF	Premolded joint filler	POL	Petroleum fuel, oil, and/or lubricants
PL	Plate	PREP	Prepare
PROJ	Project	PROP	Proposed
PSI	Pounds per square inch	PT	Point
PT	Point of tangency	PVC	Polyvinyl chloride
PVC	Point of vertical curve	PVT	Point of vertical tangency
PVMT	Pavement	QA	Quality assurance
QC	Quality control	R	Right
R	Radius	RAIL	Runway alignment indicator lights
RW	Runway	RC	Reinforced concrete
RCP	Reinforced concrete pipe	RD	Road
REF	Reference	REIL	Runway end identifier lights
REINF	Reinforce	RELOC	Relocated

<u>ABBRV</u>	<u>MEANING</u>	<u>ABBRV</u>	<u>MEANING</u>
REP	Repair	REQD	Required
RET	Return	REV	Revise
ROC	Run of crusher	ROW	Right of way
RPM	Revolutions per minute	RPZ	Runway protection zone
RR	Railroad	S	Slope
SABC	Stabilized aggregate base course	SALV	Salvage
SAN	Sanitary	SB	Straw bale
SBST	Single bituminous surface treatment	SCHED	Schedule
SEC	Second	SEC Cor	Section corner
SECT	Section	SEP	Separate
SF	Silt fence	SF	Square feet
SHT	Sheet	SHLD	Shoulder
SIM	Similar	SK	Sketch
SP	Space(s)	SPEC	Specification
SQ	Square	SS	Stainless steel
STA	Station	STD	Standard
STL	Steel	STR	Structural
SUPP	Supplement	SWG	Swing
SYM	Symbol	SYM	Symmetrical
SY	Square yards	SYS	System
T	Thick	T	Ton
T&B	Top and bottom	TBM	Temporary bench mark
TECH	Technical	TEL	Telephone
TEMP	Temperature	THK	Thick
THRU	Through	TL	Taxilane
TOC	Top of curb	TOG	Top of grate
TOL	Tolerance	TOP	Top of pavement
TRANS	Transformer	TSD	Temporary slope drain
TW	Taxiway	TYP	Typical
UD	Underdrain	UG	Underground
UGT	Underground telephone line	USGS	United States Geodetic Survey
VASI	Visual approach slope indicator	VB	Valve box
VC	Vertical curve	VCP	Vitrified clay pipe
VERT	Vertical	VFR	Visual flight rules
VS	Versus	W	Water
W/	With	WGT	Weight
W/O	Without	WL	Water line
WWF	Welded wire fabric	WP	Working point
X	By (used between dimensions)	XSECT	Cross section
YD	Yard		

## SYMBOLS:

- As outlined on drawings.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 01070**

## Section 01090

### Regulations and Definitions

#### PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS: Drawings, General Provisions, Supplementary Conditions, Specifications, and other contract documents apply to work of this section. See Section 10 of General Provisions for additional definitions.
- 1.2 DESCRIPTION OF REQUIREMENTS:
- A. General: This section specifies procedural and administrative requirements for compliance with governing regulations, codes and standards imposed upon the work. These requirements include obtaining permits, licenses, inspections, releases and similar documentation, as well as payments, statements and similar requirements associated with regulations, codes and standards.
  - B. The term "Regulations" is defined to include laws, statutes, ordinances and lawful orders issued by governing authorities, as well as those rules, conventions and agreements within the construction industry which effectively control the performance of the work regardless of whether they are lawfully imposed by governing authority or not.
  - C. Governing\_Regulations: Refer to General Provisions, Supplementary Conditions, and General Requirements for requirements related to compliance with governing regulations.
- 1.3 DEFINITIONS:
- A. General\_Explanation: Certain terms used in contract documents are defined in this article. Definitions and explanations contained in this section are not necessarily complete, but are general for the work to the extent that they are not stated more explicitly in another element of the contract documents.
  - B. General\_Requirements: Provisions and requirements of Division 1 sections apply to the entire work of the contract and, where so indicated, to other elements which are included in the project.
  - C. Indicated: The term "indicated" is a cross-reference to graphic representations, notes or schedules on the drawings, to other paragraphs or schedules in the specifications, and to similar means of recording requirements in contract documents. Where terms such as "shown", "noted", "scheduled", and "specified" are in lieu of "indicated", it is for the purpose of helping the reader locate the cross-reference, and no limitation of locations is intended except as specifically noted.
  - D. Directed, Requested, etc.: Terms such as "directed", "requested", "authorized", "selected", "approved", "required", "accepted", and "permitted" mean "directed by the Engineer", "requested by the Engineer", and similar phrases. However, no such implied meaning will be interpreted to extend the Engineer's responsibility into the Contractor's area of construction supervision.

- E. **Approved:** Where used in conjunction with the Engineer's response to submittals, requests, applications, inquiries, reports and claims by the Contractor, the term "approved" will be held to limitations of the Engineer's responsibilities and duties as specified in General Provisions and Supplementary Conditions. In no case will the Engineer's approval be interpreted as a release of the Contractor from responsibilities to fulfill requirements of contract documents or acceptance of the work, unless otherwise provided by requirements of the contract documents.
  - F. **Project Site:** The term "project site" means the space available to the Contractor for performance of the work, either exclusively or in conjunction with others performing other construction as part of the project. The extent of the project site is shown on the drawings.
  - G. **Furnish:** The term "furnish" is used to mean "supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, and similar operations."
  - H. **Install:** The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations."
  - I. **Provide:** The term "provides" means "to furnish and install, complete and ready for the intended use."
  - J. **Installer:** The "installer" is the "the entity" (person or firm) engaged by the Contractor, its subcontractor or sub-subcontractor for performance of a particular element of construction at the project site, including installation, erection, application and similar required operations. It is a requirement that installers are experienced in the operations they are engaged to perform.
- 1.4 **SUBMITTALS:** For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 1090**

## Section 01095

### NPDES Permit Conformance

#### PART 1 - General Information:

- A. The NPDES program is established under 40CFR122.2
- B. The United States Environmental Protection Agency (EPA) issued a National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Construction Activities that are classified as “Associated with Industrial Activity.” This Construction General Permit covers all areas administered by EPA Region 4, which includes Florida. The Construction General Permit was published in Federal Register/Vol. 63, No. 61/Tuesday, March 31, 1998 and is available on EPA's web site or from the Owner.
- C. The NPDES permit program requires a Construction General Permit if the construction activity will disturb five acres or greater, or will disturb less than five acres but is part of a larger common plan of development or sale whose total land disturbing activities total five acres or greater (or is designated by the NPDES permitting authority); and will discharge storm water runoff from the construction site into a municipal separate storm water sewer system (MS4) or waters of the United States.
- D. For this contract, the Engineer has determined that a Construction General Permit is not required. However, it is required that the Contractor complete and submit a Notice of Intent (NOI), and complete and submit a Notice of Termination (NOT).
- E. Detailed guidance on the development of the SWPPP is contained in EPA Publication EPA 832-R-92-005 dated September 1992, titled Storm Water Management for Construction Activities – Developing Pollution Prevention Plans and Best Management Practices.

#### PART 2 - Specific Requirements:

- A. The Contractor shall develop, implement and comply with a plan specifically designed for this construction site and including Best Management Practices (BMPs) and controls which prevent the pollution of storm water discharges.
- B. The Contractor shall incorporate into the SWPPP all applicable requirements specified in state or local sediment and erosion control plans or permits or storm water management plans or permits. The Contractor shall submit a certification that the SWPPP reflects these requirements and that these requirements will be complied with during the term of the contract.
- C. Prior to commencement of construction, the SWPPP must be prepared and certified by the Contractor. Notice of Intent (NOI) must be forwarded to the Environmental Protection Agency (with an information copy to the Owner) at least 48 hours prior to any land clearing.
- D. Recordkeeping: The Contractor shall maintain the Plan and the associated records and reports, including documentation of the required inspections. These documents shall be maintained at the job site until the site is finally stabilized. Thereafter, the Contractor (Permittee) shall keep the SWPPP and all reports for at least three years.

- E. Report Submittal: The Contractor shall include with each payment request two (2) sets of information copies of all required inspection reports, certifications and notifications. Inspection reports to be submitted shall include both weekly reports and special reports required after rainfall events in excess of 0.5". The regulations specifically require an onsite rain gauge. It is recommended that the Contractor record rainfall amount daily. Payment requests will not be processed in the absence of these submittals.
  
- F. When the construction activity has ceased and all areas affected by the work are stabilized, the Contractor shall prepare, certify and submit the required Notice of Termination to the Environmental Protection Agency and the Owner. Final payment application will not be processed in the absence of these submissions.

PART 3 - PRODUCTS (Not Applicable)

PART 4 - EXECUTION (Not Applicable)

**END OF SECTION 1095**

## Section 01150

### Measurement and Payment

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION:

- A. Method of Measurement and Payment: This section supplements Section 90 of the General Provisions and establishes the method of measurement and payment for work performed under this contract.
- B. Unit Price: Except where lump sum is indicated, payment for work performed shall be made on a unit price basis in accordance with the accepted bid and the method of payment provided in the General Provisions.
- C. Related Requirements in Other Parts of the Specifications:
  - 1. Bid (Proposal)
  - 2. Agreement.
  - 3. Conditions of the Contract.
- D. Related Requirements Specified in Other Sections:
  - 1. Summary of Work - Section 01010.
  - 2. Submittals - Section 01300.
  - 3. Contract Closeout - Section 01700.
- E. Work With No Identified Payment Items: No additional payment will be made for items of work for which a separate payment item is not specified or contained in the Bid Schedule; such work shall be deemed incidental to the project and payment for said work shall be considered as included in the various unit bid prices.

##### 1.2 APPLICATIONS FOR PAYMENT:

- A. Submittal Schedule: Submit Applications for Payment to the Engineer in accordance with the schedule established by Conditions of the Contract and Agreement between Owner and Contractor.
- B. Format and Data Required:
  - 1. Submit Applications for Partial Payment on the form required by Owner with itemized data typed on 8 1/2 x 11 inch white paper continuation sheets.
  - 2. Provide itemized data on continuation sheet: Format, schedules, line items and values: Those of the Schedule of Values accepted by the Engineer.
- C. Preparation of Application for Each Progress Payment:
  - 1. Application Form:
    - a. Fill in required information, including that for Change Orders executed prior to the date of submittal of application.
    - b. Fill in summary of dollar values to agree with the respective totals indicated on the continuation sheets.

- c. Execute certification with the signature of a responsible officer of the contract firm.
- 2. Continuation Sheets:
  - a. Fill in total list of all scheduled component items of work, with item number and the scheduled dollar value for each item.
  - b. Fill in the dollar value in each column for each scheduled line item when work has been performed or products stored. Round off values to the nearest dollar, or as provided in the bid.
- 3. List each Change Order executed prior to the date of submission, at the end of the continuation sheets.
  - a. List by Change Order and description, as for an original component item of work.
    - 1) Submit Applications for Payment to Owner at the times stipulated in the Agreement.
  - b. Number: Four copies of each Application.

D. Substantiating Data:

- 1. When the Owner or Engineer require substantiating data, Contractor shall submit suitable information with cover letter identifying:
  - a. Project.
  - b. Application number and date.
  - c. Detailed list of enclosures.
  - d. For stored products: Item number and identification as shown on application.
  - e. Description of specific material.
- 2. Submit one copy of data and cover letter for each copy of application.

E. Preparation of Application for Final Payment:

- 1. Fill in application form as specified for progress payments.
- 2. Use continuation sheet for presenting the final statement of accounting as specified in Section 01700 - Contract Closeout.

1.3 CHANGE ORDER PROCEDURES:

A. Format and Data Required:

- 1. Change Orders shall be prepared and submitted and will be processed in accordance with requirements of General Provisions and Funding Agency Requirements.
- 2. Engineer will transmit Certificate for Change to Owner and Agency for approval.
- 3. When Owner and Agency approval is received, Change Order will be included under next partial Application for Payment.

1.4 MEASURES AND WEIGHTS:

- A. Contractor Assistance: To aid the Owner in determining all quantities, the Contractor shall, whenever so requested, provide scales, equipment and assistance for weighing or for measuring any of the materials at no cost to the Owner.
- B. Weights and Measures: Quantities for payment will be the actual weight or actual measure, and no special or trade or so-termed customary allowances will be made, nor will any material, which is lost or misplaced, be included for payment.

- C. Use of Plan Meter: For estimating quantities in which computation of areas by geometric methods would be comparatively laborious, it is agreed that the plan meter shall be considered an instrument of precision to the measurement of such areas.
- D. Precedence of Dimensions: Figured dimensions on drawings shall take precedence over measurement by scale, and detailed working drawings are to take precedence over general drawings and shall be considered as explanatory of them and not as indicating extra work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 01150**

**Section 01300****Submittals**

## PART 1 - GENERAL

## 1.1 SUBMITTALS BY CONTRACTOR:

- A. Construction Progress Schedule.
- B. Certifications as specified in the various sections.
- C. Shop Drawings and Project Data as specified in the various sections.
- D. Miscellaneous:
  - 1. Certified Payroll.
  - 2. EEO Reports.
  - 3. DBE Participation Report.
  - 4. Safety Plan.
  - 5. Security Plan.
  - 6. CSPP Letter of Compliance
  - 7. Warranties and Bonds.
  - 8. CQC Plan- (P-401/ P-403)
  - 9. Equipment Manuals
  - 10. Other(s) as required.

## 1.2 PROGRESS SCHEDULE:

- A. Bar-Chart Schedule: Submit a CPM or linear type bar-chart schedule seven (7) calendar days prior to the preconstruction conference date established for the work. On the schedule, indicate a time bar for each major category or unit of work to be performed at the site, properly sequenced and coordinated with other elements of work. Show completion of the work sufficiently in advance of the date established for substantial completion of work.
  - 1. Superimpose an S-curve on the schedule to show the "estimated" total dollar-volume of work performed at any date during the contract time, with a column of cost figures in the left hand margin ranging from zero to the contract sum.
  - 2. Submittal Tabulation: With the bar-chart submittal, submit tabulation, by date, of the submittals, which are required during the first 30 days of construction time. At the Contractor's option, submittal dates may be shown on the bar-chart schedule, in lieu of being tabulated.
- B. Phasing: Arrange schedule with notations to show how sequence of work is affected by requirements for phased completion, limitations of continued utilization, non-interruptible services, use prior to substantial completion, site restrictions, runway and/or taxiway closures, provisions for future work, seasonal variations, environmental control, and similar provisions of total project. Phase I schedule is required at the preconstruction meeting. Each subsequent phasing schedule is required at least two weeks before the phase is to begin. Refer to other sections of the General Requirements and other contract documents for requirements.

- C. Distribution: Following the initial submittal to and response by the Engineer, print and distribute progress schedules to the Engineer (3 copies), Owner, separate contractors, principal subcontractors and suppliers or fabricators, and others with a need-to-know schedule-compliance requirement. Post copies in the project meeting room and temporary field office. When revisions are made, distribute updated issues to the same entities and post updated issues in the same locations. Delete entities from distribution when they have completed their assigned work and are no longer involved in the performance of scheduled work.
- D. Update: Contractor shall update the schedule monthly for duration of construction.

### 1.3 SHOP DRAWINGS AND PRODUCT DATA:

- A. Scope: Submit shop drawings, certifications, and product data for all products to be incorporated in the work.
- B. Shop Drawings Shall:
  1. Be original drawings, prepared by the Contractor, subcontractor, supplier, or distributor, which illustrate some portion of the work; showing fabrication, layout, setting, or erection details.
  2. Be prepared by a qualified detailer.
  3. Identify details by reference to sheet and detail numbers shown on Contract Drawings.
- C. Product Data Shall:
  1. Include manufacturer's standard schematic drawings. The Contractor shall:
    - a. Modify drawings to delete information, which is not applicable to project.
    - b. Supplement standard information to provide additional information applicable to project.
  2. Include manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data. The Contractor shall:
    - a. Clearly mark each copy to identify pertinent materials or products.
    - b. Show dimensions and clearances required.
    - c. Show performance characteristics and capacities.
- D. The Contractor Shall:
  1. Be responsible for all submittals.
  2. Review shop drawings and product data prior to submission
  3. Verify:
    - a. Field measurements.
    - b. Field construction criteria.
    - c. Catalog numbers and similar data.
  4. Coordinate each submittal with the requirements of the work and of the Contract Documents.
  5. Notify the Engineer, in writing at time of submission, of deviations in submittals from requirements of the Contract Documents.
  6. Begin no work, which requires submittals until the return of submittals with the Engineer's stamp and initials or signature indicating review.
  7. After the Engineer's review, distribute copies.
- E. Contractor's Responsibilities:
  1. Contractor's responsibility for errors and omissions in submittals is not relieved by the Engineer's review of submittals.

2. Contractor's responsibility for deviations in submittals from requirements of the Contract Documents is not relieved by the Engineer's review of submittal, unless the Engineer gives written acceptance of specific deviations.
- F. Submission Requirements Include:
1. The shop drawings shall be submitted in sufficient time to allow discussion and correction prior to beginning the work. Work shall not be performed nor materials ordered prior to the review of the drawings except at the Contractor's risk.
  2. Submit **6** copies of all shop drawings after which **4** copies will be returned for correction or marked reviewed as noted. Any drawings returned for correction must be resubmitted with same number of copies as required above. As an alternative, submittals/shop drawings may be submitted electronically in pdf format.
  3. All submittals must be accompanied by a transmittal letter, in duplicate, containing:
    - a. Date.
    - b. Project title and number.
    - c. Contractor's name and address.
    - d. The number of each shop drawing and product data submitted.
    - e. Notification of deviations from Contract Documents.
    - f. Other pertinent data.
  4. Submittals shall include the following, as applicable:
    - a. Date and revision dates.
    - b. Project title and number.
    - c. The names of:
      - 1) Engineer.
      - 2) Contractor.
      - 3) Subcontractor.
      - 4) Supplier.
      - 5) Manufacturer.
      - 6) Separate detailer when pertinent.
    - d. Identification of product or material.
    - e. Relation to adjacent structure or materials.
    - f. Field dimensions, clearly identified as such.
    - g. Specification item or section number.
    - h. Applicable standards, such as ASTM number or Federal Specification.
    - i. A blank space, 5 in. x 5 in., for the Engineer's stamp.
    - j. Identification of deviations from the Contract Documents.
    - k. Contractor's stamp, initialed or signed, certifying Contractor's review of submittal, verification of field measurements, and compliance with Contract Documents.
- G. Resubmission Requirements Include:
1. Revision of initial drawings as required and resubmittal as specified for initial submittal.
  2. An indication on the drawings of any changes, which have been made, other than those requested by the Engineer.
  3. On product data resubmittals, include new data as required for initial submittal.
- H. Distribution to Others: After review and approval, the Contractor shall distribute copies of shop drawings and product data which carry the Engineer's stamp to others as may be required.
- I. Shop Drawings and Product Data:
1. Submit notarized certifications cosigned by manufacturer/supplier and Contractor for:
    - a. Pavement surfacing, leveling and related materials.

- b. Grass seed and sod.
  - c. Structural and nonstructural concrete materials.
  - d. Reinforcing steel.
  - e. Pavement marking paint.
  - f. Electrical wire and fixtures.
  - g. Lighting components.
  - h. All other products as required by the drawings, specifications, and Engineer.
2. Submit shop drawings, product data and steel placement plans for:
- a. All cast-in-place or precast structures.
  - b. Catch basin and manhole grate cover and frame castings.
  - c. Airport lighting equipment and materials.
  - d. Concrete and asphalt mix designs.
  - e. All other products as required by the drawings, specifications, and Engineer.

#### 1.4 MISCELLANEOUS:

- A. Equipment Manual: Prepare an Installation, Operation, and Maintenance Manual for all airport lighting and other installed as a part of this contract. This manual shall be a vinyl notebook with ring bound compilation of manufacturers' instructions and maintenance manuals. Prepare this manual, marking out sections, which do not apply, and present four (4) copies to the Owner through the Engineer after the final inspection is complete. Final payment will not be processed until the Owner has received and accepted the Manual.
- B. Weekly Payrolls:
- 1. In accordance with Section 120 of the General Provisions submit certified weekly payrolls for prime contractor and all subcontractors working at project site.
  - 2. Submit payrolls no later than 7 calendar days after pay period. Payrolls will be considered current if received within 10 calendar days after last workday of payroll workweek. A workweek is the seven day period between midnight Sunday and midnight the following Sunday.
  - 3. The Contractor is responsible for submission of payrolls by his subcontractors.
  - 4. Submit a typed summary sheet with each payroll submission listing by week when contractor and each subcontractor worked at site.
  - 5. A payroll submission is only required for weeks when Contractor or subcontractor is actually working at the site.
- C. EEO Reports:
- 1. Contractor shall submit Monthly Employment Utilization Report and Annual EEO-1 Report to the appropriate Federal Labor Area Office in accordance with Section 120 of the General Provisions. Submit copy of submittal to Owner for his records.
  - 2. Prime Contractor shall insure that all his first tier subcontractors submit these reports and shall submit a sworn statement to Owner monthly certifying that all subcontractor reports have been submitted as required.
- D. DBE Expenditure Reports: With each application for payment, the Contractor shall submit his DBE expenditure report indicating the name, date and amount disbursed to his DBE subcontractors for the period as well as for the project to date expenditure.
- E. Security Plan: At preconstruction conference, submit for approval proposed security plan describing specifically how security will be maintained at each access point and work area by Contractor's forces.

F. Warranties and Bonds: Submit as specified in Section 01740.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 01300**

## Section 01400

### Quality Control Services

#### PART 1 - GENERAL

- 1.1 RELATED DOCUMENTS: Drawings, General Provisions, Supplementary Conditions, Specifications, and other Contract Documents apply to work of this section.
- 1.2 DESCRIPTION OF REQUIREMENTS:
- A. General: Required inspection and testing services are intended to assist in the determination of probable compliance of the work with requirements specified or indicated. These required services do not relieve the Contractor of responsibility for compliance with these requirements or for compliance with requirements of the Contract Documents.
  - B. Specified Inspection and Tests: Inspection, tests and related actions specified in this section and elsewhere in the Contract Documents are not intended to limit the Contractor's own quality control procedures which facilitate overall compliance with requirements of the Contract Documents.
  - C. Contractor Quality Control: Requirements for the Contractor to provide quality control services as required by the Engineer, the Owner, and the provisions of this section do not limit governing authorities or other authorized entities.
  - D. Contractor's Quality Control Personnel and Laboratory: Contractor shall conform to the requirements of General Requirements section C-100 and all technical specifications as listed in this manual.
- 1.3 RESPONSIBILITIES:
- A. Contractor Responsibilities: Contractor is responsible for his own quality control testing and inspection to insure the quality of his means and methods of construction will produce the specified quality of work, and for any tests and inspections required by regulatory agencies. Costs for these services shall be included in the contract sum. The Contractor may employ and pay an independent agency, testing laboratory or other qualified firm to perform quality control services specified, or qualified contractor personnel may perform these services.
  - B. The Contractor shall submit for Engineer's approval a Quality Control (QC) Plan delineating his methods for each item requiring inspections, tests, and similar services.
  - C. Quality Assurance: The Owner will engage and pay for the services of an independent agency to perform inspections and tests of materials for Quality Assurance. The Owner's quality assurance testing shall in no way relieve the Contractor of the responsibility for providing the quality materials, workmanship and testing required to comply with these specifications.
  - D. Retest Responsibility: Where results of required inspections, tests, or similar services prove unsatisfactory and do not indicate compliance with the requirements of the Contract

Documents, then retests are the responsibility of the Contractor, and shall be deducted from monies due the Contractor on his monthly pay request, regardless of whether the original test was the Contractor's responsibility. Retesting of work revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original work.

E. Responsibility for Associated Services: The Contractor is required to cooperate with the independent agencies performing required inspections, tests, and similar services. Provide such auxiliary services as are reasonably requested. Notify the testing agency sufficiently in advance of operations to permit assignment of personnel. These auxiliary services include but are not necessarily limited to the following:

1. Providing access to the work.
2. Taking samples or providing assistance with taking samples.
3. Delivery of samples to test laboratories.
4. Security and protection of samples and test equipment at the project site.
5. Surveying services required establishing horizontal and vertical location of tests by Engineer's quality assurance testing laboratory.

1.4 SCHEDULE OF SERVICES: Each specification section identifies principal inspections, tests and similar services required by the Contractor Documents.

## PART 2 - PRODUCTS (Not Applicable)

## PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION: Upon completion of inspection, testing, sample-taking, and similar services performed on the work, repair damaged work and test sites to eliminate deficiencies. Protect work exposed by or for quality control service activities, and protect repaired work. Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

3.2 MEASUREMENT AND PAYMENT: No measurement or payment will be made for work in this section; it will be considered as incidental cost to Mobilization and other items of work.

**END OF SECTION 01400**

## Section 01530

### Airfield Temporary Markings and Barricades

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION:

- A. Provide temporary barricades and as required for safety of aircraft and contractor's work forces, and to maintain use of the various portions of the air operations area during construction.
- B. Comply with referenced FAA Advisory Circulars and the safety and staging plan.
- C. Related work specified elsewhere:
  - 1. Construction safety: General Provisions and General Requirements.
  - 2. Staging and safety plan: Contract Drawings and General Requirements.

#### PART 2 - PRODUCTS

##### 2.1 BARRICADES:

- A. Low Profile Barricades: Plastic, with alternating diagonal 4" wide reflective white and orange stripes and one battery powered flashing or steady burning red light as shown in the drawings with lights spaced at no more than 10 ft. Low profile barricades shall be no more than 18 inches high and water filled or anchored with sand bags. An alternate type II barricade that meets the requirements in FAA A/C 150/5370-2G may be used when approved by the Engineer.

*RUNWAY CLOSURE MARKERS: Lighted "X" runway closure markers shall be provided, installed, operated, and maintained by the Contractor when required for runway closure in accordance with the Construction Safety and Phasing Plan (CSPP) and applicable FAA guidance.*

- B. The closure markers shall be of sufficient size and illumination to be clearly visible to approaching aircraft during both daytime and nighttime conditions. Lighted markers shall be illuminated during periods of darkness and low visibility.
- C. Closure markers shall be placed at each end of the closed runway in accordance with the Contract Drawings and as directed by the Engineer and Airport Operations.
- D. Yodock Water Filled Barriers.

##### 2.2 PAVEMENT PAINT MARKINGS: ~~As specified in Item P-620.~~

#### PART 3 - EXECUTION

##### 3.1 GENERAL:

- A. Install at locations shown on the drawings and where directed by Engineer. Generally, place barricades a maximum of 25 feet on centers or as indicated on the drawings. Anchor barricades and markers with sandbags or other methods approved by Engineer.
  - B. Maintain barricades until removal is directed by Engineer. The barricade flasher batteries shall be checked daily to insure that flashers are operational. Replace batteries as required.
  - C. Remove barricades and markers as directed by Engineer. Repair any damage to pavement or surrounding area caused by markers or barricades.
  - D.** *RUNWAY CLOSURE MARKER INSTALLATION: The Contractor shall install lighted "X" runway closure markers prior to the commencement of any construction activities requiring runway closure. Markers shall remain in place and operational for the duration of the closure period. The Contractor shall be responsible for the daily installation, operation, maintenance, and removal of the closure markers, as required to accommodate construction activities and reopening of the runway. Prior to reopening the runway, the Contractor shall remove all closure markers and verify that the runway is clear of equipment, materials, and Foreign Object Debris (FOD). All work shall be coordinated with Airport Operations.*
- 3.2 MEASUREMENT AND PAYMENT: Work in this section will not be measured. All work and materials covered by this section will be paid for in the lump sum price for *MOT, Barricades and Lighted Runway Closure Markers, 1530-1.*

**END OF SECTION 01530**

## Section 01600

### Materials and Equipment

#### PART 1 - GENERAL

##### 1.1 REQUIREMENTS:

- A. Material, Equipment, and Products Incorporated into the Work shall conform to applicable specifications and standards; shall comply with size, make, type and quality specified, or as specifically approved in writing by the Engineer; and shall not be used for any purpose other than that for which it is designed or is specified.
- B. Manufactured and Fabricated Products shall be designed, fabricated and assembled in accordance with the best engineering and shop practices. Like parts of duplicate units shall be manufactured to standard sizes and gages, to be interchangeable. Products shall be suitable for service conditions. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless Engineer specifically approves variations in writing.
- C. Related Requirements in Other Parts of the Project Manual: Conditions of the Contract.
- D. Standardization: Unless otherwise approved by the Engineer, items and equipment of a similar type and function shall be furnished by one manufacturer to standardize on replacement parts, service calls, operation and maintenance matters, and to avoid a division of responsibility among several manufacturers.
- E. A single supplier shall be used on principal items of equipment and systems where one or more components are not manufactured by the principal supplier; this is required to place performance and service responsibilities for the entire unit or system with only one supplier or manufacturer.

##### 1.2 PRODUCTS SUBSTITUTIONS AND OPTIONS:

- A. Products List: Contractor shall submit a complete list of products to be incorporated into the work (with the name of the installing contractor) at the Preconstruction Conference required by these specifications.
- B. Contractor's Options:
  - 1. For products specified only by reference standard, select any product meeting that standard.
  - 2. For products specified by naming several products or manufacturers, select any one of the products or manufacturers named, which complies with the specifications.
  - 3. Airport lighting equipment covered by FAA specifications require certification under the Airport Lighting Equipment Certification Program described in Advisory Circular 150/5345-53, latest edition. Select equipment from the Certified Airport Lighting Equipment list appended to the Advisory Circular. An updated list is published biannually.

- C. Product Substitutions: Contractor shall submit, at the Preconstruction Conference, all requests for product substitutions. No requests for substitutions will be accepted from manufacturers or suppliers.

Submit a separate written request for each product, supported with complete data, with drawings and samples as appropriate, including:

1. Comparison of the qualities of the proposed substitution with the product specified.
2. Changes required in other elements of the work because of the substitution.
3. Effect on the construction schedule.
4. Cost data comparing the proposed substitution with the product specified.
5. Any required license fees or royalties.
6. Availability of maintenance service, and source of replacement materials.

Engineer shall be the judge of the equality and acceptability of the proposed substitution. If Engineer determines the proposed substitute product is not "equal" to the specified product, the Contractor must provide the specified product, subject to Engineer's shop drawing review and approval.

No further requests for substitutions will be considered after Preconstruction Conference.

- D. Contractor's Representation: A request for a substitution constitutes a representation that Contractor:
1. Has investigated the proposed product and determined that it is equal to or superior in all respects to that specified.
  2. Will provide the same warranties or bonds for the substitution as for the product specified.
  3. Will coordinate the installation of an accepted substitution into the work, and make such other changes as may be required to make the work complete in all respects.
  4. Waives all claims for additional costs, under his responsibility, which may subsequently arise.
- E. Engineer's Review: Engineer will review requests for substitutions with reasonable promptness and notify Contractor, in writing, of the decision to accept or reject the requested substitution.

### 1.3 MANUFACTURER'S INSTRUCTIONS:

- A. Printed Instructions: When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, Contractor shall obtain and distribute copies of such instructions to parties involved in the installation, including copies to Engineer. Maintain one set of complete instructions at the job site during installation and until completion and acceptance.
- B. Strict Compliance: Handle, install, connect, clean, condition, and adjust products in strict accord with such instructions and in conformity with specified requirements. Should job conditions or specified requirements conflict with manufacturer's instruction, consult with Engineer for further instructions. Do not proceed with work without clear instructions.
- C. Complete Compliance: Perform work in accord with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.4 TRANSPORTATION AND HANDLING:

- A. Deliveries: Contractor shall arrange deliveries of products in accord with construction schedules; coordinate to avoid conflict with work and conditions at the site. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible. Immediately on delivery, inspect shipments to assure compliance with requirements of contract documents and approved submittals, and that products are properly protected and undamaged.
- B. Handling: Provide equipment and personnel to handle products by methods to prevent soiling or damage of products or packaging.

1.5 STORAGE AND PROTECTION:

- A. Storage: Store products in accord with manufacturer's instructions, with seals and labels intact and legible. Store products subject to damage by the elements in weather tight enclosures. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
- B. Exterior Storage: Store fabricated products above the ground, on blocking or skids; prevent soiling or staining. Cover products, which are subject to deterioration with impervious sheet coverings; provide adequate ventilation to avoid condensation.

Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.

- C. Storage Inspection: Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.
- D. Protection after Installations: Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove when no longer needed.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 01600**

## Section 01700

### Contract Closeout

#### PART 1 - GENERAL

##### REQUIREMENTS:

Comply with requirements stated in conditions of the contract and in specifications for administrative procedures in closing out the work.

Related requirements in other parts of the Project Manual including fiscal provisions, legal submittals and additional administrative requirements: Conditions of the contract.

Related requirements specified in other sections:

1. Closeout submittals required of trades: The respective sections of specifications.
2. Project Record Documents: Section 01720.
3. Warranties and Bonds: Section 01740.

**SUBSTANTIAL COMPLETION:** The conditions and procedures for inspection and Contractor's, Engineer's and Owner's responsibilities pertaining to substantial completion are as specified in the General Provisions and in the Supplementary Conditions.

#### PART 2 - PRODUCTS (Not Used)

#### PART 3 - EXECUTION

**FINAL INSPECTION:** Shall be in accordance with conditions and procedures outlined in the Contract Documents. When Engineer finds that the work is acceptable under the Contract Documents, he will request required Contractor's Closeout Submittals.

**REINSPECTION FEES:** Should Engineer perform re-inspections due to failure of the work to comply with the claims of status of completion made by the Contractor, the Owner will compensate Engineer for such additional services. The Owner will deduct the amount of such compensation from the final payment due the Contractor.

##### CONTRACTOR'S CLOSEOUT SUBMITTALS TO ENGINEER:

1. Evidence of compliance with requirements of governing authorities: Certificates of Inspection.
2. Project Record Documents: Conform to requirements of Section 01720.
3. Warranties and Bonds: Conform to requirements of Section 01740.
4. Evidence of payment and release of liens: To requirements of General Provisions and Supplementary Conditions.
5. Certificates of Insurance for products and completed operations.

Once the Engineer has determined the work is acceptable under the Contract Documents, he will furnish the Contractor appropriate number of copies of the following forms, copies of which are attached:

1. Contractor Warranty Form
2. Affidavit of Payment
3. Affidavit of Release of Liens
4. Final Waiver of Lien
5. Consent of Surety for Final Payment
6. Final DBE Participation Report

PAYMENT: No separate payment will be made under this section for work described or specified herein.

**END OF SECTION 01700**

**AFFIDAVIT OF PAYMENT**

To All Whom It May Concern:

WHEREAS, the undersigned has been employed by \_\_\_\_\_ to furnish labor and materials for \_\_\_\_\_ work, under a contract for the improvement of property described as \_\_\_\_\_ in the \_\_\_\_\_ County of \_\_\_\_\_, State of **Florida** of which \_\_\_\_\_ is the Owner,

NOW, THEREFORE, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,

The undersigned, as the Contractor for the above-named Contract pursuant to the Conditions of the Contract hereby certifies that to the best of his knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services, who have or may have liens against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS: (If none, write "None". If required by the Owner, the Contractor shall furnish bond satisfactory to the Owner for each exception.)

ATTACHMENTS:

1. Consent of Surety to Final Payment. (Whenever Surety is involved, Consent of Surety is required.)
2. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
3. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers.
4. Contractor's Affidavit of Release of Liens.

\_\_\_\_\_  
CONTRACTOR (Name of sole ownership, corporation or partnership)

\_\_\_\_\_  
(Signature of Authorized Representative)

(Affix corporate seal here)

\_\_\_\_\_  
TITLE

**AFFIDAVIT OF RELEASE OF LIEN**

To All Whom It May Concern:

WHEREAS, the undersigned has been employed by \_\_\_\_\_ to furnish labor and materials for \_\_\_\_\_ work, under a contract for the improvement of property described as \_\_\_\_\_ in the \_\_\_\_\_ County of \_\_\_\_\_, State of **Florida** of which \_\_\_\_\_ is the Owner,

NOW, THEREFORE, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,

The undersigned, as the Contractor for the above-named Contract pursuant to the Conditions of the Contract hereby certifies that to the best of his knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services, who have or may have liens against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS: (If none, write "None". If required by the Owner, the Contractor shall furnish bond satisfactory to the Owner for each exception.)

ATTACHMENTS:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers.

\_\_\_\_\_  
SUBCONTRACTOR (Name of sole ownership, corporation or partnership)

\_\_\_\_\_  
(Signature of Authorized Representative)

(Affix corporate seal here)

\_\_\_\_\_  
TITLE

**FINAL WAIVER OF LIEN**

To All Whom It May Concern:

WHEREAS, the undersigned has been employed by \_\_\_\_\_ to furnish labor and materials for \_\_\_\_\_ work, under a contract for the improvement of property described as \_\_\_\_\_ in the \_\_\_\_\_ County of \_\_\_\_\_, State of **Florida** of which \_\_\_\_\_ is the Owner,

NOW, THEREFORE, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

for and in consideration of the sum of \_\_\_\_\_ Dollars paid simultaneously herewith, the receipt whereof is hereby acknowledged by the undersigned, the undersigned does hereby waive and release any lien rights to, or claim of lien with respect to and on said above-described premises, and the improvements thereon, and on the monies or other considerations due to become due from the owner, on account of labor, services, material, fixtures, apparatus of machinery heretofore or which may hereafter be furnished by the undersigned to or for the above-described premises by virtue of said contract.

\_\_\_\_\_  
CONTRACTOR (Name of sole ownership, corporation or partnership)

\_\_\_\_\_  
(Signature of Authorized Representative)

(Affix corporate seal here)

\_\_\_\_\_  
TITLE

**CONTRACTOR WARRANTY FORM**

Project Name \_\_\_\_\_

Location \_\_\_\_\_

Owner \_\_\_\_\_

We, **CONTRACTOR**, Contractor for the above referenced project, do hereby warrant that all labor and materials furnished and work performed are in accordance with the Contract Documents and authorized modifications thereto, and will be free from defect due to defective materials or workmanship for a period of one year from Date of Substantial Completion. This warranty commences on

\_\_\_\_\_  
(Date of Substantial Completion Affixed by Engineer)

and expires on :

\_\_\_\_\_  
(One Year From Commencement Date)

This warranty covers that portion of the project described below:

Should any defect develop during the warranty period due to improper materials, workmanship or arrangement, the defect shall, upon written notice by the Owner, be made good by the Undersigned at no expense to the Owner.

Nothing in the above shall be deemed to apply to work which has been abused or neglected by the Owner.

\_\_\_\_\_  
Date

\_\_\_\_\_  
CONTRACTOR (Name of sole ownership, corporation or partnership)

\_\_\_\_\_  
(Signature of Authorized Representative)

(Affix corporate seal here)

\_\_\_\_\_  
TITLE

**CONSENT OF SURETY FOR FINAL PAYMENT**

Project Name \_\_\_\_\_

Location \_\_\_\_\_

Owner \_\_\_\_\_

Type of Contract **Construction** \_\_\_\_\_

Amount of Contract \$ \_\_\_\_\_

In accordance with the provisions of the above-named contact between the Owner and the Contractor, the following named surety:

**SURETY**

on the Payment Bond of the following named Contractor:

**CONTRACTOR**

hereby approves of final payment to the Contractor, and further agrees that said final payment to the Contractor shall not relieve the Surety Company named herein of any of its obligations to the following named Owner: as set forth in said Surety company's bond:

**OWNER**

IN WITNESS WHEREOF, the Surety Company has hereunto set its hand and seal this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

\_\_\_\_\_  
SURETY

\_\_\_\_\_  
(Signature of Authorized Representative)

(Affix corporate seal here)

\_\_\_\_\_  
TITLE

IF SIGNED BY ATTORNEY-IN-FACT, POWER OF ATTORNEY MUST BE ATTACHED.

**DBE PARTICIPATION REPORT**

REPORT NO.: \_\_\_\_\_ DATE: \_\_\_\_\_

CONTRACT NO.: \_\_\_\_\_ OWNER: \_\_\_\_\_

PROJECT: \_\_\_\_\_ CONTRACTOR: \_\_\_\_\_

CONTRACT AMOUNT: \_\_\_\_\_ % DBE IN BID: \_\_\_\_\_ TOTAL DBE AMOUNT IN BID: \_\_\_\_\_  
 % WBE IN BID: \_\_\_\_\_ TOTAL WBE AMOUNT IN BID: \_\_\_\_\_

CURRENT PERIOD FROM: \_\_\_\_\_ TO: \_\_\_\_\_

DBE/WBE SUBCONTRACTOR	DESCRIPTION OF WORK	DBE	WBE	SUPP- LIER	OWNER/ OPER.	SUB- CONTR.	OTHER	SUBCONTR. OR AGREE. AMNT.	EARNINGS FOR THIS PERIOD	EARNINGS TO DATE
		<input type="checkbox"/>	<input type="checkbox"/>							
		<input type="checkbox"/>	<input type="checkbox"/>							
		<input type="checkbox"/>	<input type="checkbox"/>							
		<input type="checkbox"/>	<input type="checkbox"/>							
		<input type="checkbox"/>	<input type="checkbox"/>							

TOTAL VALUE OF WORK PERFORMED  
BY PRIME CONTRACTOR TO DATE: \_\_\_\_\_

I HEREBY CERTIFY THAT THE ABOVE  
STATEMENT IS TRUE AND CORRECT AND  
SUPPORTING DOCUMENTATION IS ON FILE  
AND IS AVAILABLE FOR INSPECTION  
AT ANY TIME.  
  
\_\_\_\_\_  
SIGNATURE & TITLE

TOTAL DBE EARNINGS TO DATE: \_\_\_\_\_  
 TOTAL WBE EARNINGS TO DATE: \_\_\_\_\_  
 DBE % OF WORK PERFORMED TO DATE: \_\_\_\_\_  
 WBE % OF WORK PERFORMED TO DATE: \_\_\_\_\_

::

## Section 01710

### Cleaning and Disposal

#### PART 1 - GENERAL

1.1 DESCRIPTION: Contractor shall execute cleaning during progress of the work and at completion of the work as required by the General Provisions and other specification documents.

1.2 DISPOSAL REQUIREMENTS:

Conduct cleaning and disposal operations to comply with all local, state and federal codes, ordinances, regulations, and anti-pollution laws; and with airport and construction safety requirements.

All disposals of waste materials shall be off airport property at locations approved by the Engineer.

Contractor shall be responsible for arranging for and obtaining off-site disposal areas, including payment for all costs associated with such disposal.

1.2 SUBMITTALS: Prior to beginning work, submit a Disposal Plan for the satisfactory disposal of all waste materials and debris.

Submit two (2) copies of the disposal site owner's written permission for such disposal with Disposal Plan.

#### PART 2 - PRODUCTS

2.2 MATERIALS:

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

#### PART 3 - EXECUTION

3.3 CLEANING: Execute periodic cleaning to keep the work, site and adjacent properties free from accumulations of waste materials, rubbish, windblown debris, and dust resulting from construction operations. Provide on-site containers for the collection of waste materials, debris and rubbish. Remove waste materials, debris and rubbish from the site periodically and dispose of at approved locations.

3.4 BARRIERS AND PROTECTION: Protect existing structures and vegetation from cleaning and disposal operations as required.

3.5 DUST CONTROL: Schedule cleaning and other operations so that dust and other contaminants resulting there from will not fall on wet or newly coated surfaces, will not damage or contaminate aircraft, and will not unduly affect the work of other airport tenants.

3.6 DISPOSAL OF DEBRIS AND WASTE MATERIALS:

- A. If permitted by Owner and local, state and federal regulations, Contractor may dispose of combustible materials on-site by burning. Unguarded fires will not be permitted. Burning will be restricted as follows:
  - a. Burning of poison oak, poison ivy or other plants of similar nature will be prohibited.
  - b. Tires or other combustible waste material shall not be used to augment burning.
  - c. Burning operations that may in any way be hazardous to air operations will not be allowed.
- B. Non-combustible and waste materials and ashes shall be removed from the site and disposed of in accordance with the Disposal Plan.

3.7 PAYMENT: No separate payment will be made under this section for work described or specified herein.

**END OF SECTION 01710**

## Section 01720

### Project Record Document

#### PART 1 - GENERAL

##### 1.1 GENERAL REQUIREMENTS:

- A. Contractor shall maintain at the site as specified herein for the Owner one record copy of:
  - 1. Drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change orders and other modifications.
  - 5. Engineer field orders or written instructions.
  - 6. Approved shop drawings, product data and samples.
  - 7. Field test records.
  - 8. Laboratory test records.
- B. Related requirements in other parts of the Project Manual: Conditions of the Contract.

#### PART 2 - PRODUCTS (Not Used)

#### PART 3 - EXECUTION

##### 3.1 MAINTENANCE OF DOCUMENTS AND SAMPLES:

- A. Store record documents and samples in Contractor's field office apart from documents used for construction.
- B. File documents and samples in accordance with data filing format of the Construction Specifications Institute - MASTERFORMAT.
- C. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by Engineer.

##### 3.2 RECORDING:

- A. Stamp or label each document "PROJECT RECORDS" in 3/4-inch letters.
- B. During daily progress of the work, the job superintendent for the Contractor shall record information concurrently with construction progress.
- C. Do not conceal any work until required information is recorded.
- D. Drawings: Legibly mark to record actual construction in color codes designated by the Engineer.
- E. All field data for record information shall be obtained by a surveyor who is a Registered Land Surveyor (RLS) in the state of Florida.
- F. Record Information includes but is not limited to the following:
  - 1. Depths of various elements of foundation in relation to finish reference datum.
  - 2. Horizontal and vertical locations of pavements and underground utilities and appurtenances, referenced to permanent surface improvements or finish reference datum.
  - 3. Field changes of dimension and detail.
  - 4. Changes made by field order or by change order.
  - 5. Details not on original contract drawings.
  - 6. Extent and dimensions of pavement removal.
  - 7. Any other changes in the plans.
  - 8. Storm drainage system construction:

- a. Exact distance between all catch basins, manholes, points of intersection, and line terminals or headwalls.
  - b. The invert elevation of the end of all pipes, stub outs, and headwalls.
  - c. The rim (top of frame) or top of grate and invert elevations of all manholes, catch basins, and other structures.
9. Electrical construction identification:
- a. Exact distance between all manholes and points of intersection.
  - b. Exact size and location of duct bank or cable run and what circuits it feeds.
  - c. Exact location of any lines abandoned in place.
  - d. Exact location, type, and size of runway and taxiway edge lights, centerline lights, and/or touchdown zone lights.
  - e. Rim and invert elevation of all manholes and duct banks.
  - f. Depth of cover on direct burial lines.
  - g. Locations of cable splices.
  - h. Location and description of signs.
- G. Specifications and addenda: Legibly mark each section to record:
1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
  2. Changes made by field order or by change order.
- H. All horizontal control dimensions shall be to the nearest tenth of a foot. Elevations shall be to the nearest one-hundredth of a foot.
- I. Set one (1) Concrete Benchmark and document location and elevation data.

### 3.3 SUBMITTAL:

A. Upon completion of the work as described in Section 01010 "Scope of Work", the Contractor shall submit on hard copy and electronic media (AutoCAD 2020 or later from Autodesk), record drawings of all work completed to the Engineer. Record drawings shall include all elevation data points which shall be submitted in 3-d format and shall include, as a minimum the northing, easting, elevation (all in feet) and descriptor for each data point. The Engineer will provide Contractor with AutoCAD drawings of all original construction drawings. Any design information in the drawings that has been changed shall be marked with a strike thru and as-built information shall be added such that the drawings contain the original design and the as-built configuration.

B. At the close of the job and prior to receipt of final payment, the Contractor shall deliver to the Engineer for the Owner two complete hard copy sets of Record Documents meeting the requirements of 3.3(A) plus the number of sets required by all regulatory agencies. The final Pay Request will not be processed until receipt and acceptance by the owner and all regulatory agencies of the record drawings for the project. **All hard copy submittals shall be signed and sealed by a Professional Land Surveyor licensed in the State of Florida.**

- C. Accompany submittal with transmittal letter containing:
1. Date.
  2. Project title and number.
  3. Contractor's name and address.
  4. Title and number of each record document.
  5. Signature of Contractor or his authorized representative.

3.4 PAYMENT: Payment shall be made at the contract lump sum price for "Project Record Documents."

Payment will be made under:

**Item 01720      Project Record Documents -- per lump sum**

**END OF SECTION 01720**

## Section 01740

### Warranties and Bonds

#### PART 1 - GENERAL

##### 1.1 GENERAL REQUIREMENTS:

- A. Contractor shall:
  - 1. Compile specified warranties and bonds.
  - 2. Compile specified service and maintenance contracts.
  - 3. Co-execute submittals to verify compliance with Contract Documents.
  - 4. Review submittals to verify compliance with Contract Documents.
  - 5. Submit to Engineer for review and transmittal to Owner.
  
- B. Related requirements in other parts of the Project Manual:
  - 1. Bid Bonds: Instructions to bidders.
  - 2. Performance Bond and Payment Bond: Conditions of the contract.
  - 3. General warranty of construction: Conditions of the contract.
  
- C. Related requirements specified in other sections:
  - 1. Warranties and Bonds required for specific products: Each respective section of specifications.
  - 2. Provisions and duration of Warranties and Bonds: The respective section of specifications, which specifies the product.
  - 3. Contract closeout: Section 01700
  - 4. Equipment Manuals: Section 01300

#### PART 2 - PRODUCTS (Not Used)

#### PART 3 - EXECUTION

##### 3.1 SUBMITTAL REQUIREMENTS:

- A. Assemble warranties, bonds, and service and maintenance contracts, executed by each of the respective manufacturers, suppliers, and subcontractors.
  
- B. Number of original signed copies required: Two (2) each.
  
- C. Table of Contents: Neatly typed, in orderly sequence. Provide complete information for each item.
  - 1. Product or work item.
  - 2. Firm, with name of principal, address and telephone number.
  - 3. Scope.
  - 4. Date of beginning of warranty, bond, or service and maintenance contract.
  - 5. Duration of warranty, bond, or service and maintenance contract.
  - 6. Provide information for Owner's personnel:

- a. Proper procedure in case of failure.
  - b. Instances, which might affect the validity of warranty or bond.
7. Contractor, name of responsible principal, address and telephone number.

3.2 FORM OF SUBMITTALS:

- A. Prepare in duplicate packets.
- B. Format:
  1. Size 8 1/2 inches x 11 inches. Punch sheets for 3-ring binder. Fold larger sheets to fit into binders.
  2. Cover: Identify each packet with typed or printed title "WARRANTIES AND BONDS".  
List:
    - a. Project title and number.
    - b. Owner's name.
    - c. Contractor's name and address.
- C. Binders: Commercial quality, 3-ring, with durable and cleanable plastic covers.

3.3 TIME OF SUBMITTALS:

- A. Submit within ten (10) days after date of substantial completion, and prior to final request for payment.
- B. For items of work where acceptance is delayed materially beyond the date of substantial completion, provide updated submittal within ten (10) days after acceptance, listing the date of acceptance as the start of the warranty period.

3.4 SUBMITTALS REQUIRED: Submit warranties, bonds, and service and maintenance contracts as specified in the respective sections of specifications.

3.5 PAYMENT: No separate payment will be made under this section for work described or specified herein.

**END OF SECTION 01740**

## SECTION 02000 CONSTRUCTION LAYOUT AND TOPOGRAPHIC AS-BUILT SURVEY

### PART 1 - GENERAL

#### 1.1 DESCRIPTION

The work covered by this section includes:

- A. **Verification Survey:** Surveying engineer provided benchmarks and control points and performing spot checks on pavements and grades (cut or fill). Surveyor has the responsibility of reporting any known problems or discrepancies in field data. The Engineer has established control points for the Contractor. The Contractor shall take all necessary precautions to prevent the loss or damage of primary control points.
  
- B. **Construction Staking:** Involves the establishment of horizontal alignment and vertical alignments, proposed grades on all pipes, foundations, pavement markings, and slopes. If identified in the plan sheet notes or scope of work, the surveyor may be required to verify milled surface elevations for contractor or engineer to develop a pavement overlay plan or establish areas of pavement leveling. Surveyor may also be required to perform approach surveys or obstruction surveys for the installation of new airfield navigational aids.

Contractor shall establish a sufficient number of benchmarks and cut/fill stakes for the engineer's instrument and/or visual checking.

As-built topographic survey shall be provided to the engineer with closeout documents. Limits of As-Built shall be the project limits or the construction limits as identified on the plans. When no projects are indicated on the drawings, the contractor shall assume the limits to include all disturbed areas.

### PART 2 - PRODUCTS (Not Used)

### PART 3 - EXECUTION

- 3.1 Topographic survey for controlling milling depths, leveling and asphalt overlay thicknesses shall be on a grid spacing that can be easily followed either by electronic grade control measures or establishing stringlines for the contractors machines to follow. If the engineer deems proper control is not being maintained, he has the authority to instruct the contractor to decrease the topographic grid spacing and provide tighter controls on the vertical work without additional compensation to the contractor.
  
- 3.2 Since accurate topographic as-built information is required for closing out all stormwater permits, for the owners Airport Layout Plan, and for engineers general verification of finished grades, the contractor shall be required to provide as-built topographic surveys signed and sealed by a registered surveyor in the State of Florida. When the project is substantially complete, the contractor shall begin the field survey work for as-built drawings. As-built topographic survey shall include all above ground features within the project area with special focus on the following:

1. Horizontal and vertical locations of underground utilities (water, sewer, power, etc.), conduits, handholes, pull boxes, hydrants and other various appurtenances, referenced to established project datum and coordinate system (state plane most likely). Sewer lines must have all inverts and pipe slopes labeled. Label all pipe and conduit sizes.
2. All pavements at an acceptable grid to verify pavement cross slopes and longitudinal grades.
3. All ponds at an acceptable grid to accurately calculated pond volumes for permit as built certifications to be submitted by the engineer.
4. Ground elevations at an acceptable grid to verify earthwork volumes.
5. Painted centerlines and edges. Label radii.
6. Storm drainage system construction:
  - a. Exact distance between all catch basins, manholes, points of intersection, and line terminals or headwalls.
  - b. The invert elevation of the end of all pipes, stubouts, and headwalls.
  - c. The rim (top of frame) or top of grate and invert elevations of all manholes, catch basins, and other structures.
  - d. Elevation and size of all weirs, orifices, and skimmers.
7. Finished floor elevations.
8. Sign sizes and text.
9. Electrical construction identification:
  - a. Exact distance between all manholes and points of intersection.
  - b. Exact size and location of duct bank or cable run and what circuits it feeds.
  - c. Exact location of any lines abandoned in place.
  - d. Exact location, type, and size of runway and taxiway edge lights, centerline lights, and/or touchdown zone lights.
  - e. Rim and invert elevation of all manholes and duct banks.
  - f. Depth of cover on direct burial lines.
  - g. Locations of cable splices.
10. Finished floor elevations.
11. Street sign and airfield guide signs and text descriptions.
12. Water and Sewer in accordance with notes on utility plans.
13. All horizontal control shall be in accordance with state statutes but no greater than tenth of a foot for horizontal data and one-hundredth of a foot for vertical.
14. Set one (1) Concrete Benchmark and document location and elevation data.

All documents provided to the engineer must be submitted by a licensed professional survey in the **State of Florida**. Sealed drawings and original signatures shall be provided when requested. Electronic files in AutoCAD format shall also be sent to the engineer at his request.

**3.3 PAYMENT:**

- A. The contractor shall be eligible for partial payments of the **lump sum** item, Construction Layout and Topographic As-Built Survey. Payment will be made based on the percent complete of the dollar amount of the contract.

**END OF SECTION 02000**

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