

BIDDING DOCUMENTS

for

ACCESS CONTROL SYSTEM REPLACEMENT

at

NORTHWEST FLORIDA REGIONAL AIRPORT

Prepared for:



**Okaloosa County Board
of County Commissioners**

Prepared by:



AVCON, INC.
320 Bayshore Dr, Ste A
Niceville, Florida 32578
Phone: 850.678.0050

AVCON Project Number: 2014.050.01

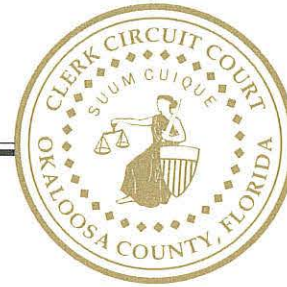
Okaloosa County Number: AP 75-14

BIDDING DOCUMENTS

July 2014

DON W. HOWARD

CLERK OF THE CIRCUIT COURT, OKALOOSA COUNTY, FLORIDA



NOTICE TO BIDDERS AP 75-14

The purpose of this project is to replace the existing UTCFS Diamond II Access Control System with the new IP-based access control system (ACS) at the Northwest Florida Regional Airport. This ACS is deployed in the airport terminal, cargo building, fuel farm, intrusion alarm, and four airport gates. This work requires the procurement, installation, configuration, testing, and commissioning of the new software Unified Security Platform (USP), ACS solution, and all required hardware upgrades to support the new ACS.

Notice is hereby given that the Board of County Commissioners of Okaloosa County, FL, will accept sealed bids until **3:00 PM (Central), September 17, 2014**, for the "Access Control System Replacement" at the Northwest Florida Regional Airport, located in Okaloosa County, Florida.

At **3:00 PM (Central), September 17, 2014**, the bids will be opened and read aloud. All bids must be in sealed envelopes reflecting on the outside thereof the Bidder's name and "Access Control System Replacement" to be opened at **3:00 P.M. (Central), Wednesday September 17, 2014**. The Board of County Commissioners will consider all bids properly submitted at its scheduled bid opening in the Conference & Training Room #305 – (old First National Bank Bldg.) located at 302 N. Wilson St, Crestview, FL 32536. Bids may be submitted in the Conference & Training Room #305 prior to bid opening or delivered to the Clerk of Circuit Court, 302 N. Wilson St., #203, Crestview, FL 32536.

Interested firms desiring consideration should provide an original and two (2) copies of their Request for Bid (RFB). Guidelines detailing form and content requirements for the bid are available by contacting Okaloosa County Purchasing Department, 602-C North Pearl St., Crestview, FL 32536, 850-689-5960, or downloading them from our website at http://www.co.okaloosa.fl.us/dept_purchasing.html. RFBs must be delivered to the Okaloosa County Purchasing Department at the address below no later than **3:00 p.m., September 17, 2014** in order to be considered. All submittals received after the stated time and date will be returned unopened and will not be considered. **NOTE: Crestview, FL is not a next day guaranteed delivery location by most delivery services.** Proposers using mail or delivery services assume all risks of late or non-delivery.

The County reserves the right to award the bid to the lowest responsive Bidder submitting a bid with a resulting negotiated agreement which is most advantageous and in the best interest of Okaloosa County, and to waive any irregularity or technicality in bids received. Okaloosa County shall be the sole judge of the bid and the resulting negotiating agreement that is in its best interest and its decision shall be final.

Any Bidder failing to mark outside of envelope as set forth herein may not be entitled to have their bid considered.

All bids should be addressed as follows:

Access Control System Replacement

Clerk of Circuit Court
Attn: Gary Stanford
Newman C. Brackin Bldg.
302 N. Wilson St. #203
Crestview FL 32536


Zan Fedorak
Purchasing Manager

8/13/14
Date


Deputy Clerk
Clerk of Circuit Court

8-13-14
Date

OKALOOSA COUNTY
BOARD OF COUNTY COMMISSIONERS

Charles K. Windes, Jr.
Chairman



101 E. JAMES LEE BLVD. • CRESTVIEW, FLORIDA 32536 • (850) 689-5000

REPLY TO:

SHALIMAR ANNEX • 1250 N. EGLIN PKWY • SHALIMAR, FLORIDA 32579 • (850) 651-7200

ANNEX EXTENSION • 1940 LEWIS TURNER BLVD., SUITE 1-300 • FT WALTON BEACH, FLORIDA 32547 • (850) 651-7200

BRACKIN BUILDING • 302 NORTH WILSON ST., SUITE 203 • CRESTVIEW, FLORIDA 32536 • (850) 689-5000

SPECIAL BID CONDITIONS

1. **PROJECT DESCRIPTION** – Work included under this contract shall include all labor, permits, and materials required to construct a new built-up roof for the Okaloosa County Department of Corrections

2. **PRE-BID ACTIVITY**
 - A. All technical questions and comments prior to the bid opening must be submitted in writing or email to the Okaloosa County Purchasing Office, (850) 689-5960, these responses will be distributed to all plan holders within four (4) days of receipt.

 - B. **Bid Information** – Questions concerning bid requirements or specifications should be directed to the Okaloosa County Purchasing Department, 602-C North Pearl St., Crestview FL 32536; 850-689-5960. Any changes by the County to specifications shall be in writing in the form of an addendum and furnished to all bidders. Verbal information obtained otherwise will not be considered in awarding of bids.

 - C. The deadline for submittal of questions and comments on the plans and bid documents will be **XXXXXXXXXXXXXXXXXX** (CST). No additional information will be provided after such time.

3. **PREPARATION OF BID** – The bid form is included with the bidding documents. Additional copies may be obtained from the County. The bidder shall submit an original and three (3) copies of the bid form.

All blanks on the bid form shall be completed by printing in ink or by typewriter in both words and numbers with the amounts extended, totaled and the bid signed. A bid price shall be indicated for each section, bid item, alternative, adjustment unit price item, and unit price item listed therein, or the words “No Bid”, “No Change”, or “Not Applicable” entered. No changes shall be made to the phraseology of the form or in the items mentioned therein. In case of any discrepancy between the written amount and the figures, the written amount shall govern. Any bid may be rejected which contains any omissions, erasures, alterations, additions, irregularities of any kind, or items not called for which shall in any manner fail to conform to the conditions of public notice inviting bids. All original signatures shall be in blue ink.

A bid by corporation shall be executed in the corporate name by the president or a vice president or other corporate officer who has legal authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary.

A bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature). The official address of the partnership shall be shown below the signature.

A bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown below the signature.

A bid by an individual shall show the bidder's name and official address.

A bid by a joint venture shall be executed by each joint venture in the manner indicated on the bid form. The official address of the joint venture must be shown below the signature.

All names shall be typed or printed in ink below the signature.

The bid shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the form. The address and telephone # for communications regarding the bid shall be shown.

If the bidder is an out-of-state corporation, the bid shall contain evidence of bidder's authority and qualification to do business as an out-of-state corporation in the State of Florida in accordance with Article 3. Bidder shall state contractor license # for the State of Florida shall also be shown on the bid form. Contractor shall be licensed in accordance with the requirements of Chapter 489 of the Florida Statutes.

4. **SUBMITTAL OF BID** – A bid shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in an opaque sealed envelope plainly marked with the project title (and, if applicable, the designated portion of the project for which the bid is submitted), the name and address of the bidder, and shall be accompanied by the bid security and other required documents. If a bid is sent by mail or other delivery system, the sealed envelope containing the bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "Bid Enclosed." A mailed bid shall be addressed to:

Access Control System Replacement For Northwest Florida Regional Airport
Clerk of Circuit Court
Attn: Gary Stanford
Newman C. Brackin Bldg.
302 N. Wilson St., #203
Crestview FL 32536

5. **MODIFICATION & WITHDRAWAL OF BID** - A bid may be notified or withdrawn by an appropriate document duly executed in the manner that a bid must be executed and delivered to the place where bids are to be submitted prior to the date and time for the opening of bids.

If within 24 hours after bids are opened any bidder files a duly signed written notice with the County and promptly thereafter demonstrates to the reasonable satisfaction of the

County that there was a material substantial mistake in the preparation of its bid, that bidder may withdraw its bid, and the bid security will be returned. Thereafter, if the work is rebid, that bidder will be disqualified from 1) further bidding on the work, and 2) doing any work on the contract, either as a subcontractor or in any other capacity.

6. **OPENING OF BIDS** - Bids will be opened at the time and place indicated in the advertisement or invitation to bid and unless obviously non-responsive, read aloud publicly. A tabulation of the amounts of bids will be made available to bidders after the opening of bids.
7. **BID OPENING INFORMATION** – Bid Opening shall be public, on the date and time specified on the bid form. It is the bidder’s responsibility to assure that his bid is delivered at the proper time and place. Offers by telegram, facsimile, or telephone are **NOT** acceptable.

Note: Crestview, Florida is “not a next day guaranteed delivery location” by delivery services.

8. **BID TABULATION SHEET** – Any bidder interested in receiving a copy of the bid tabulation sheet **must** enclose a stamped self-addressed envelope with their bid.
9. **BIDS TO REMAIN SUBJECT TO ACCEPTANCE** – All bids will remain subject to acceptance or rejection for thirty (30) calendar days after the day of the bid opening.
10. **AWARD OF CONTRACT**
 - A. **Okaloosa County Review** - All bidders should be advised that Okaloosa County designated Staff will review all bids and will participate in the Recommendation to Award.
 - B. **Right to Waive & Reject** – Okaloosa County, in its absolute discretion, may reject any proposal of a proposer that has failed, in the opinion of the County, to complete or perform an Okaloosa County contracted project in a timely fashion or has failed in any other way, in the opinion of the County, to perform a prior contract in a satisfactory manner, and has directed the County to emphasize this condition to potential proposers.
 - C. The County will award the bid to the lowest bidder, and the County reserves the right to award the bid to the bidder submitting a responsive bid with a resulting negotiated agreement which is most advantageous and in the best interest of the County, and to reject any and all bids or to waive any irregularity or technicality in bids received. Okaloosa County shall be the sole judge of the bid and the resulting negotiated agreement that is in its best interest and its decision shall be final.

- D. Okaloosa County reserves the right to waive any informalities or reject any and all bids, in whole or part, to utilize any applicable state contracts in lieu of or in addition to this bid and to accept the bid that in its judgment will best serve the interest of the County.
- E. Okaloosa County specifically reserves the right to reject any conditional bids and will normally reject those which made it impossible to determine the true amount of the bid. Each item must be bid separately and no attempt is to be made to tie any item or items to any other item or items.

11. DISQUALIFICATION OF BIDDERS - Any of the following reasons may be considered as sufficient for the disqualification of a proposer and the rejection of his proposal or proposals:

- A. More than one proposal for the same work from an individual, firm or corporation under the same or different name.
- B. Evidence that the proposer has a financial interest in the firm of another proposer for the same work.
- C. Evidence of collusion among proposers. Participants in such collusion will receive no recognition as proposers for any future work of the County until such participant shall have been reinstated as a qualified proposer.
- D. Uncompleted work which in the judgment of the County might hinder or prevent the prompt completion of additional work if awarded.
- E. Failure to pay or satisfactorily settle all bills due for labor and material on former contracts in force at the time of advertisement of proposals.
- F. Default under previous contract.
- G. The Board, in its absolute discretion, may reject any proposal of a proposer that has failed, in the opinion of the Board, to complete or perform an Okaloosa County contracted project in a timely fashion or has failed in any other way, in the opinion of the Board, to perform a prior contract in a satisfactory manner, and has directed the Okaloosa County Purchasing Director to emphasize this condition to potential proposers.
- H. Listing of the bidder by the Federal Government on its barred/suspended vendor list.

12. APPLICABLE LAWS & REGULATIONS – The bidder’s attention is directed to the fact that all applicable Federal state laws, County and municipal ordinances, orders, rules and regulations of all authorities having jurisdiction over the project shall apply to the bid

throughout, and they will be deemed to be included in the contract the same as though they were written in full therein.

13. **DISCRIMINATION** - An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid on a contract to provide goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not award or perform work as a contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity.
14. **CONFLICT OF INTEREST** - The award hereunder is subject to the provisions of Chapter 112, Florida Statutes. All respondents must disclose with their proposals the name of any officer, director, or agent who is also a public officer or an employee of the Okaloosa Board of County Commissioners, or any of its agencies.

Furthermore, all respondents must disclose the name of any County officer or employee who owns, directly or indirectly, an interest of five percent (5%) or more in the firm or any of its branches.

Furthermore, the official, prior to or at the time of submission of the proposal, must file a statement with the Clerk of Circuit Court of Okaloosa County, if he is an officer or employee of the County, disclosing his or spouse's or child's interest and the nature of the intended business.

Note: For bidder's convenience, this certification form is enclosed and is made a part of the bid package.

15. **IDENTICAL TIE BIDS** - Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids which are equal with respect to price, quality and service are received by the County for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process (see attached certification form).

Established procedures for processing tie bids will be followed if none of the tied vendors have a drug-free workplace program.

Note: For bidder's convenience, this certification form is enclosed and is made a part of the bid package.

16. **PUBLIC ENTITY CRIME INFORMATION** - A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity,

may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

- 17. RECYCLED CONTENT INFORMATION** - In support of the Florida Waste Management Law, bidders are encouraged to supply with their bid any information available regarding recycled material content in the products bid. The County is particularly interested in the type of recycled material used (such as paper, plastic, glass, metal, etc.) and the percentage of recycled material contained in the product. The County also requests information regarding any known or potential material content in the product that may be extracted and recycled after the product has served its intended purpose.

Note: For bidder's convenience, this certification form is enclosed and is made a part of the bid package.

- 18. INVESTIGATION OF BIDDER** – The County may make such investigations, as it deems necessary to determine the stability of the bidder to perform the work and that there is no conflict of interest as it relates to the project. The bidder shall furnish to the Owner any additional information and financial data for this purpose as the County may request.

19. BONDING REQUIREMENTS

- A. **Bid Bond** – A bid bond, in the form prescribed, Cashier's or Certified check, is required in an amount not less than five percent (5%) of the total contract amount. The Bid Bond must be attached to the bid.

- 20. BID PRICE** – The bid price shall include all equipment, labor, materials, permit(s), freight, taxes, required insurance, Public Liability, Property Damage and Workers' Compensation, etc. to cover the finished work called for.

21. WARRANTY – (The warranty will be in the name of Okaloosa County)

- A. Warranty work specified herein is for a minimum of one (1) year from delivery against defects in materials and in labor and workmanship. **State the manufacturer's warranty with your bid.**

- 22. CONDITIONAL & INCOMPLETE BIDS** - Okaloosa County specifically reserves the right to reject any conditional bid and will normally reject those bids which make it impossible to determine the true amount of the bid.

- 23. FINAL ACCEPTANCE** – Payment will not be made until the Owner determines that the roof delivered meets all specifications.

A. Delivery of equipment to Okaloosa County Board of County Commissioners does not constitute acceptance for the purpose of payment. Final acceptance and authorization of payment shall be given only after a thorough inspection indicates that the equipment meets contract specifications and conditions as listed. Should the delivered equipment differ in any respect from specifications, payment will be withheld until such time as the supplier takes necessary corrective action. The Purchasing Department shall be notified of the deviation in writing within 10 days and the provisions of the delivery paragraph shall prevail. If the proposed corrective action is not acceptable to Okaloosa County, the final acceptance of the equipment, in which case the equipment remains the property of the supplier and the County shall not be liable for payment for any portion thereof.

24. SPECIFICATION EXCEPTIONS – Specifications are based on the most current literature available. Bidder shall clearly list any change in the manufacturer’s specifications which conflict with the bid specifications. Bidder must also explain any deviation from the bid specification in writing, as a foot note on the applicable bid page and enclose a copy of the manufacturer’s specifications data detailing the changed item(s) with their bid. Failure of the bidder to comply with these provisions will result in bidders being held responsible for all costs required to bring the equipment in compliance with contract specifications.

25. ADDITION/DELETION OF ITEM – The County reserves the right to add or delete any item from this bid or resulting contract when deemed to be in the County’s best interest.

26. LOCAL PREFERENCE - Okaloosa County reserves the right to grant a preference to in-county bidders only when bids are received from firms located in states, counties, municipalities or other political subdivisions which offer preference to bidders located in such political subdivisions. The amount of preference given to local bidders will be the same as that given by the state, county, municipality or other political subdivisions in which a bidder is located. If the political subdivision in which a bidder is located offers a preference to its local firms, that bidder must plainly state the extent of such preference to include the amount and type preference offers. Any bidder failing to indicate such preference will be removed from the County bid list and any and all bids from that firm will be rejected.

Note: For bidder’s convenience, this certification form is enclosed and is made a part of the bid package.

27. REORGANIZATION OR BANKRUPTCY PROCEEDINGS – Bids will not be considered from vendors who are currently involved in official financial reorganization or bankruptcy proceedings.

28. PAYMENTS – The contractor shall be paid upon submission of invoices and approval of acceptance by Okaloosa County Board of County Commissioners, Finance Office, 302 N. Wilson St., #203, Crestview FL 32536. The prices stipulated herein for articles delivered and accepted. Invoices must show Purchase Order #.

- 29. AUTHORITY TO PIGGYBACK** - All bidders submitting a response to this Invitation to Bid agree that such response also constitutes a bid to all governmental agencies under the same conditions, for the same contract price, and for the same effective period as this bid, should the bidder feel it is in their best interest to do so.

Each governmental agency desiring to accept these bids and make an award thereof shall do so independently of any other governmental agency. Each agency shall be responsible for its own purchases and each shall be liable only for materials and/or services ordered and received by it, and no agency assumes any liability by virtue of this bid.

This agreement in no way restricts or interferes with the right of any governmental agency to bid any or all items.

- 30. CONFLICT OF INTEREST DISCLOSURE FORM** - The award hereunder is subject to the provisions of Chapter 112, Florida Statutes. All respondents must disclose with their proposals the name of any officer, director, or agent who is also a public officer or an employee of the Okaloosa Board of County Commissioners, or any of its agencies.

Furthermore, all respondents must disclose the name of any County officer or employee who owns, directly or indirectly, an interest of five percent (5%) or more in the firm or any of its branches.

Furthermore, the official, prior to or at the time of submission of the proposal, must file a statement with the Clerk of Circuit Court of Okaloosa County, if he is an officer or employee of the County, disclosing his or spouse's or child's interest and the nature of the intended business.

Note: For bidder's convenience, this certification form is enclosed and is made a part of the bid package.

- 31. IDENTICAL TIE BIDS** - Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids which are equal with respect to price, quality and service are received by the County for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process (see attached certification form).

Established procedures for processing tie bids will be followed if none of the tied vendors have a drug-free workplace program.

Note: For bidder's convenience, this certification form is enclosed and is made a part of the bid package.

- 32. RECYCLE CONTENT INFORMATION** - In support of the Florida Waste Management Law, bidders are encouraged to supply with their bid any information

available regarding recycled material content in the products bid. The County is particularly interested in the type of recycled material used (such as paper, plastic, glass, metal, etc.) and the percentage of recycled material contained in the product. The County also requests information regarding any known or potential material content in the product that may be extracted and recycled after the product has served its intended purpose.

Note: For bidder's convenience, this certification form is enclosed and is made a part of the bid package.

- 33. No Contact Clause** - The Okaloosa County Board of County Commissioners have established a solicitation silence policy (**No Contact Clause**) that prohibits oral and written communication regarding all formal solicitations for goods and services (formal bids, Request for Proposals, Requests for Qualifications) issued by the Board through the County Purchasing Department. The period commences when the procurement document is received and terminates when the Board of County Commissioners approves an award.

Note: For proposer's convenience, this certification form is enclosed and is made a part of the bid package.

- 34.** The following documents are to be submitted with the bid packet.

- A. Specifications
- B. Conflict of Interest Disclosure Form
- C. Drug-Free Workplace Certification Form
- D. Local Preference Data Form
- E. Recycled Content Form
- F. No Contact Clause Form
- G. Bid Sheet

BID FORM

PROJECT IDENTIFICATION:

ACCESS CONTROL SYSTEM REPLACEMENT

THIS BID IS SUBMITTED TO:

OKALOOSA COUNTY PURCHASING DEPARTMENT

1. The undersigned Contractor proposes and agrees, if this Bid is accepted, to enter into an agreement with Owner in the form included in these documents to perform and furnish all Work as specified or indicated in these documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of these documents.
2. Contractor accepts all of the terms and conditions of the Advertisement or Invitation to Bid, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for thirty (30) days after the day of Bid opening. Contractor will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Project Requirements within fifteen (15) days after the date of Owner's Notice of Award.
3. In submitting this Bid, Contractor represents as more fully set forth in the Agreement, that:
 - (a) Contractor has examined and carefully studied the Project Documents and the following Addenda receipt of all which is hereby acknowledged: (List Addenda by Addendum Number and Date)

Addendum No. _____ Date _____

Addendum No. _____ Date _____

Addendum No. _____ Date _____

Addendum No. _____ Date _____

- (b) Contractor has visited the site and become familiar with and is satisfied as to the general, local, and site conditions that may affect cost, progress, performance, and furnishing of the Work.
- (c) Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, performance, and furnishing of the Work.
- (d) Contractor has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except underground facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.2.1 of the General Conditions. Contractor accepts the determination set forth in Article 4 of the Supplementary Conditions of the extent of the "technical data" contained in such reports and drawings upon

which Contractor is entitled to rely as provided in paragraph 4.2 of the General Conditions. Contractor acknowledges that such reports and drawings are not Contract Documents and may not be complete for Contractor's purposes. Contractor acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Project Documents with respect to underground facilities at or contiguous to the site. Contractor has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and underground facilities) at or contiguous to the site or otherwise which may affect cost progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto. Contractor does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the times, price, and other terms and conditions of these Documents.

- (e) Contractor is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which this Bid is submitted as indicated in these documents.
 - (f) Contractor has correlated the information known to Contractor, information and observation obtained from visits to the site, reports and drawings identified in these documents and all additional examinations, investigations, explorations, tests, studies, and data with these documents.
 - (g) Contractor has given Engineer written notice of all conflicts, errors, ambiguities or discrepancies that Contractor has discovered in these documents and the written resolution thereof by Engineer is acceptable to Contractor, and these documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
 - (h) This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Contractor has not directly or indirectly induced or solicited any other Contractor to submit a false or sham Bid; Contractor has not solicited or induced any person, firm or corporation to refrain from Project; and Contractor has not sought by collusion to obtain for itself any advantage over any other Contractor or over Owner.
4. Contractor will complete the Work in accordance with these documents for the price found in the Bid Schedule:

Unit Prices have been computed in accordance with paragraph 11.9.2 of the General Conditions.

Contractor acknowledges that quantities are not guaranteed and final payment will be based on actual quantities determined as provided in these documents.

5. Contractor agrees that Work will be substantially complete 155 calendar days after the date when the Contract Time commences to run as provided in paragraph 2.3 of the General Conditions, and will be completed and ready for final payment in accordance with paragraph 14.13 of the general conditions within 185 calendar days after the date when the Contract Time commences to run.

6. Contractor accepts the provisions of the Agreement as to liquidated damages in the event of failure to achieve substantial complete of the Work within the Substantial Completion time and achieve final completion of the work within the Final Completion time as specified in the Agreement.
7. The following documents are attached to and made a condition of this Bid:
 - a) Bid Security as required by the Instructions to Contractors in the form of a certified or bank check made payable to The Board of County Commissioners of Okaloosa County or a Bid Bond on form attached, issued by a surety meeting the requirements of Paragraph 5.1 of the General Conditions. (ITC-1 to ITC-8)
 - b) Bid Schedule (BS-1 to BS-2)
 - c) Bid Affidavit (BA-1)
 - d) Bid Bond (BB-1 to BB-2)
 - e) A tabulation of Performance of Work by Subcontractors that Contractor prepares to use. (PWSC-1)
 - f) Required Contractor's Qualification Statement with supporting data. (CQQ-1 to CQQ-3)
 - g) Certified Copy of Resolution of Board of Directors (RBD-1)
 - h) Form of Noncollusion Affidavit (NCA-1)
 - i) Certificate as to Corporate Principal (CCP-1)
 - j) Public Entity Crimes (SSPEC-1 to SSPEC-3)
 - k) Certification of Non-Segregated Facilities (NSF-1)
 - l) Conflict of Interest Disclosure Form (OC-1)
 - m) Drug-Free Workplace Certification (OC-2)
 - n) Certification of Contractor Regarding Trench Safety (OC-3)
 - o) Indemnification and Hold Harmless (OC-4)
 - p) Insurance Compliance (OC-5)
 - q) Affidavit – Worker's Compensation (OC-6)
 - r) Recycled Content Form (OC-9)
 - s) Local Preference Data Sheet (OC-10)
 - t) Disadvantaged Business Enterprise Program (OC-9 to OC-12)
 - u) DBE Certificate of Compliance Form (OC-13)

v) E-Verify Compliance Certification (EVCC-1)

w) No Contact Clause (NCC-1)

8. Communications concerning this Bid shall be addressed to the address of Contractor indicated below.

9. Terms used in this Bid which are defined in the General Conditions or Instructions to Contractors will have the meanings indicated in the General Conditions or Instructions.

10. Contractor acknowledges that the Basis of Award shall be the Total Bid Amount, price and other factors considered. The bid bond amount shall be in the amount of the Total Bid Amount.

SUBMITTED on _____, 20__

State Contractor License No. _____

If Contractor is:

An Individual

By _____ (SEAL)

(Individual's Name)

doing business as _____

Business address: _____

Phone No.: _____

A Partnership

By _____ (SEAL)

(Firm Name)

(General Partner)

Business address: _____

Phone No.: _____

A Corporation

By _____ (SEAL)

(Corporation Name)

(State of Incorporation)

By _____ (SEAL)

(Name of person authorized to sign)

(Title)

(Corporate Seal)

Attest _____

(Secretary)

Business address: _____

Phone No.: _____

Date of Incorporation is _____

A Joint Venture

By _____ (SEAL)
(Name)

(Address)

By _____ (SEAL)
(Name)

(Address)

Phone Number and Address for receipt of official communications

(Each joint venturer must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above).

BID SCHEDULE - UNIT PRICES

CONTRACTOR: _____ **DATE:** _____

AIRPORT NAME: Northwest Florida Regional Airport
PROJECT DESCRIPTION: Access Control System Replacement

BID SCHEDULE

Bid Item No.	Item No.	Item Description & Unit Price In Words	Unit	Estimated Quantity	Total Amount (In Numbers)
1	ACS-1	Access Control System Replacement, Complete	LS	1	

Payment will be made at the contract lump sum price for Access Control System, Complete. This price shall be full compensation for all work specified in the Bid Documents including but not limited to:

- 1 All labor, taxes, demolition, disposal, equipment, procurement of materials, installation, shipping, equipment, integration with existing and proposed software, testing, and commissioning of the new Unified Security Platform (USP), Access Control System (ACS), and fingerprint readers,
- 2 Integration of all software and hardware into the USP as described in Technical Specification ACS, Access Control System Replacement,
- 3 All required hardware to support the new improvements,
- 4 The contractor shall visit the site and determine all improvements required to provide the Owner with a complete, functional USP and ACS. The contractor's bid shall account for any additional improvements required to provide the Owner with a fully functional system as described in the Technical Specifications, even if not specifically identified in the technical specifications, and
- 5 The contractor's bid price shall account for all operational requirements required by Okaloosa County Airports including but not limited to security badge application and procurement process and providing certain work during off peak hours (i.e. 11 pm to 5 am) to minimize downtime during hours of operation.

For all work required to perform the work specified above in accordance with the construction specifications and other contract documents, including all costs related to the work, and any required permits, taxes, bonds and insurance, the undersigned submits a Total Bid Amount of:

TOTAL BID AMOUNT (amount in words):

_____ Dollars and
_____ cents
(\$ _____) (amount in numbers)

The Bidder represents that it has examined the site of the Work and informed itself fully in regard to all conditions pertaining to the place where the work is to be done; that it has examined the plans and specifications for the work and other Contract Documents relative thereto and has read all of the Addenda furnished prior to the opening of the Bids, as acknowledged below; and that it has otherwise fully informed itself regarding the nature, extent, scope and details of the Work to be performed.

If provided with a Notice of Intent to Award the Contract by the Owner, the Bidder shall execute and deliver to the Owner all of the documents required by the Contract Documents, including but not limited to, the Addendum to the Agreement and the Performance and Payment Bonds in the form contained in the Contract Documents, furnish the required evidence of the specified insurance coverages, furnish all necessary permits, license, materials, equipment, machinery, maintenance, tools, apparatus, means of transportation and labor necessary to complete the Work.

Dated and signed at _____, _____, this _____ day of _____, 2013.

(Name of Bidder)

(Authorized Signature)

(Title)

(Mailing Address)

(City, State, Zip)

(Federal ID No. or SS No.)

NO CONTACT CLAUSE

The Board of County Commissioners have established a solicitation silence policy (**No Contact Clause**) that prohibits oral and written communication regarding all formal solicitations for goods and services (formal bids, Request for Proposals, Requests for Qualifications) issued by the Board through the County Purchasing Department.

The period commences when the procurement document is received and terminates when the Board of County Commissioners approves an award.

When the solicitation silence period is in effect, no oral or written communication is allowed regarding the solicitation between prospective bidders/proposers and members of the Board of County Commissioners the County Administrator or members of the Board Approved Review Committee. All questions or requests for information regarding the solicitation **MUST** be directed to the designated Purchasing Representative listed in the solicitation.

Any information thought to affect the committee or staff recommendation submitted after bids are due, should be directed to the Purchasing Manager or an appointed representative. It shall be the Purchasing Manager decision whether to consider this information in the decision process.

Any violation of this policy shall be grounds to disqualify the proposer from consideration during the selection process.

All proposers must agree to comply with this policy by signing the following statement and including it with their submittal.

I _____ representing _____
Signature Company Name

On this _____ day of _____, 2014 hereby agree to abide by the County's "**No Contact Clause**" and understand violation of this policy shall result in disqualification of my proposal/submittal.

CONFLICT OF INTEREST DISCLOSURE FORM

For purposes of determining any possible conflict of interest, all bidders/proposers, must disclose if any Okaloosa Board of County Commissioner, employee(s), elected officials(s), or if any of its agencies is also an owner, corporate officer, agency, employee, etc., of their business.

Indicate either "yes" (a county employee, elected official, or agency is also associated with your business), or "no". If yes, give person(s) name(s) and position(s) with your business.

YES _____

NO _____

NAME(S)

POSITION(S)

FIRM NAME: _____

BY (PRINTED): _____

BY (SIGNATURE): _____

TITLE: _____

ADDRESS: _____

PHONE NO. _____

E-MAIL _____

DATE _____

LOCAL PREFERENCE DATA SHEET

Okaloosa County grants a preference to in-county bidders only when bids are received from firms located in states, municipalities or other political subdivisions which offer preference to bidders located in such political subdivisions. The amount of preference given to local bidders will be the same as that given by the state, county, municipality or other political subdivisions in which the out-of-county bidder is located. If the political subdivision in which a bidder is located offers a preference to its local firms, that bidder must plainly state the extent of such preference to include the amount and type preference offered. Any bidder failing to indicate such preference will be removed from the County bid list and any and all bids from that firm will be rejected.

Does the state, county, municipality or political subdivision in which your firm is located offer a preference to their local bidders? If "YES," list below the extent of such preference. (If your firm is located in Okaloosa County, you will check "YES"-reciprocal only.)

YES _____

NO _____

If yes, you must identify how you confirmed this information or who you spoke with within your area of business location below:

Bidder's Company Name

Authorized Signature – Manual

Printed Name

Date

RECYCLED CONTENT FORM

RECYCLED CONTENT INFORMATION

1. Is the material in the above: Virgin_____ or Recycled_____ (Check the applicable blank). If recycled, what percentage _____%.

Product Description: _____

2. Is your product packaged and/or shipped in material containing recycled content?
Yes_____ No_____

Specify: _____

3. Is your product recyclable after it has reached its intended end use?

Yes_____ No_____

Specify: _____

The above is not applicable if there is only a personal service involved with no product involvement.

Name of Bidder: _____

GENERAL CONDITIONS

ARTICLE 1 – DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

- 1.0.1 **AASHTO** – The American Association of State Highway and Transportation Officials, the successor association AASHO.
- 1.0.2 **ACCESS ROAD** – The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public highway.
- 1.1. **ADDENDA** – Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the Project Requirements or the Contract Documents.
 - 1.1.1 **ADVERTISEMENT** – A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.
 - 1.2. **AGREEMENT** – The written contract between Owner and Contractor covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.
 - 1.2.1 **AIP** – The Airport Improvement Program, a grant-in-aid program, administered by the Federal Aviation Administration.
 - 1.2.2 **AIR OPERATIONS AREA** – For the purpose of these specifications, the term air operations area shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.
 - 1.2.3 **AIRPORT** – Airport means the area of land or water which is used or intended to be used for the landing and takeoff of aircraft, and includes its buildings and facilities, if any.
 - 1.3. **APPLICATION FOR PAYMENT** – The form accepted by Engineer which is to be used by Contractor in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 - 1.4. **ASBESTOS** – Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 - 1.4.1 **ASTM** – The American Society for Testing and Materials.
 - 1.4.2 **AWARD** – The acceptance, by the Owner, of the successful contractor's proposal.

- 1.5. **BID** – The offer or proposal of the contractor submitted on the prescribed form setting forth the prices for the Work to be performed.
- 1.5.1 **CONTRACTOR** – Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.
- 1.6. **PROJECT DOCUMENTS** – The advertisement or invitation to Bid, instructions to contractors, the Bid Form, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).
- 1.7. **PROJECT REQUIREMENTS** – The advertisement or invitation to Bid, instructions to contractors, and the Bid Form.
- 1.7.1 **BUILDING AREA** – An area on the airport to be used, considered, or intended to be used for airport buildings, or other facilities or rights-of-way together with all airport buildings and facilities located thereon.
- 1.8. **BONDS** – Performance and Payment bonds and other instruments of security.
- 1.8.1 **CALENDAR DAY** – Every day shown on the calendar.
- 1.8.2 **CERTIFICATES OF COMPLIANCES** – Written statements by the manufacturer stating the material furnished is in conformance with the Specifications.
- 1.9. **CHANGE ORDER** – A document recommended by Engineer, which is signed by Contractor and Owner and authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement. The work covered by a change order shall be within the scope of the contract.
- 1.10. **CONTRACT DOCUMENTS** – The Agreement, Addenda (which pertain to the Contract Documents), Contractor's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders and Engineer's written interpretations and clarifications issued pursuant to paragraphs 3.5, 3.6.1, and 3.6.3 on or after the Effective Date of the Agreement. Shop Drawing submittals approved pursuant to paragraphs 6.26 and 6.27 and the reports and drawings referred to in paragraphs 4.2.1.1 and 4.2.2.2 are not Contract Documents.
- 1.11. **CONTRACT PRICE** – The money payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.9.1 in the case of Unit Price Work).
- 1.12. **CONTRACT TIMES** – The numbers of days or the dates stated in the Agreement: (i) to achieve Substantial Completion, and (ii) to complete the Work so that it is ready for final

payment as evidenced by Engineer's written recommendation of final payment in accordance with paragraph 14.13.

- 1.12.1 **CONTRACT ITEM (PAY ITEM)** – A specific unit of work for which a price is provided in the Contract.
- 1.13. **CONTRACTOR** – The person, firm or corporation with whom Owner has entered into the Agreement.
- 1.14. **DEFECTIVE** – An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, in that it does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with paragraph 14.8 or 14.10).
 - 1.14.1 **DRAINAGE SYSTEM** – The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.
- 1.15. **DRAWINGS** – The drawings which show the scope, extent, and character of the Work to be furnished and performed by Contractor and which have been prepared or approved by Engineer and are referred to in the Contract Documents. Shop drawings are not Drawings as so defined.
- 1.16. **EFFECTIVE DATE OF THE AGREEMENT** – The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
- 1.17. **ENGINEER** – The person, firm, or corporation named as such in the Agreement.
- 1.18. **ENGINEER'S CONSULTANT** – A person, firm, or corporation having a contract with Engineer to furnish services as Engineer's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions. The following list of independent professional associates and consultants are considered the Engineer's consultant for this Construction Contract: AVCON, Inc.
 - 1.18.1 **EQUIPMENT** – All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the work.
 - 1.18.2 **EXTRA WORK** – An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which if found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified.
 - 1.18.3 **FAA** – The Federal Aviation Administration of the U.S. Department of Transportation. When used to designate a person, FAA shall mean the Administrator or his duly authorized representative.

- 1.18.4 **FEDERAL SPECIFICATIONS** – The Federal Specifications and Standards, and supplements, amendments and indices thereto are prepared and issued by the General Services Administration of the Federal Government. They may be obtained from the Specifications Activity, Printed Materials Supply Division, Building 197, Naval Weapons Plant, Washington, D.C. 20407.
- 1.19. **FIELD ORDER** – A written order issued by Engineer which orders minor changes in the Work in accordance with paragraph 9.5 but which does not involve a change in the Contract Price or the Contract Times.
- 1.20. **GENERAL REQUIREMENTS** – Sections of Division 1 of the Specifications.
- 1.21. **HAZARDOUS WASTE** – The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
- 1.22. 1.21.1 **INSPECTOR** – An authorized representative of the Engineer assigned to make all necessary inspections and/or tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.
- 1.21.2 **INTENTION OF TERMS** – Whenever, in these specifications or on the plans, the words, "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of the like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer is intended; and similarly, the words "approved," "acceptable," "Satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer, subject in each case to the final determination of the Owner.
- 1.21.3 **LABORATORY** – The official testing laboratories of the Owner or such other laboratories as may be designated by the Engineer.
- 1.22. **LAWS AND REGULATIONS; LAWS OR REGULATIONS** – Any and all applicable laws, rules, regulations, ordinances, codes and orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.
- 1.23. **LIENS** – Liens, charges, security interests, or encumbrances upon real property or personal property.
- 1.23.1 **LIGHTING** – A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.
- 1.23.2 **MAJOR AND MINOR CONTRACT ITEMS** – A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 25 percent of the total amount of the award contract. All other items shall be considered minor contract items.
- 1.23.3 **MATERIALS** – Any substance specified for use in the construction of the Contract work.

- 1.23.4 **MIL SPECIFICATIONS** – The Military Specifications and Standard, and indices thereto, that are prepared and issued by the Department of Defense.
- 1.24. **MILESTONE** – A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
- 1.25. **NOTICE OF AWARD** – The written notice by Owner to the apparent successful contractor stating that upon compliance by the apparent successful contractor with the conditions precedent enumerated therein, within the time specified, Owner will sign and deliver the Agreement.
- 1.26. **NOTICE TO PROCEED** – A written notice given by Owner to Contractor (with a copy to Engineer) fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform Contractor's obligations under the Contract Documents.
- 1.26.1 **FDOT** – The Florida State Department of Transportation. When used to designate a person, FDOT shall mean the commissioner or his duly authorized representative.
- 1.27. **OWNER** – The public body or authority, corporation, association, firm, or person with whom Contractor has entered into the Agreement and for whom the Work is to be provided.
- 1.28. **PARTIAL UTILIZATION** – Use by Owner of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.
- 1.28.1 **PAVEMENT** – The combined surface course, base course, and subbase course, if any, considered as a single unit.
- 1.28.2 **PAYMENT BOND** – The approved form of security furnished by the Contractor and his/her surety as a guaranty that he will pay in full all bills and accounts for materials and labor used in the construction of the work.
- 1.29. **PCBs** – Polychlorinated biphenyls.
- 1.29.1 **PERFORMANCE BOND** – The approved form of security furnished by the Contractor and his/her surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.
- 1.30. **PETROLEUM** – Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Wastes and crude oils.
- 1.30.1 **PLANS** – The official drawings or exact reproductions which show the location, character, dimensions, and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications.
- 1.31. **PROJECT** – The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.
- 1.31.1 **PROPOSAL** – (See Bid).

- 1.32. **RADIOACTIVE MATERIAL** – Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
- 1.33. **RESIDENT PROJECT REPRESENTATIVE** - The authorized representative of Engineer who may be assigned to the site or any part thereof.
 - 1.33.1 **RUNWAY** – The area on the airport prepared for the landing and takeoff of aircraft.
- 1.34. **SAMPLES** – Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
- 1.35. **SHOP DRAWINGS** – All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
 - 1.35.1 **SPECIAL PROVISIONS** – The specific clauses setting forth conditions or requirements peculiar to the project under consideration, covering work or materials involved in the proposal and estimate, which are not thoroughly or satisfactorily stipulated in these specifications.
- 1.36. **SPECIFICATIONS** – Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.
 - 1.36.1 **SPONSOR** – For AIP Contracts, the term Sponsor shall have the meaning as the term Owner.
 - 1.36.2 **STRUCTURES** – Airport facilities such as bridges; culverts; catch basins; inlets; retaining walls; cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; flexible and rigid pavements; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.
- 1.37. **SUBCONTRACTOR** – An individual, firm, or corporation having a direct contract with Contractor or with any other Subcontractor for performance of a part of the Work at the site.
 - 1.37.1 **SUBGRADE** – The soil which forms the pavement foundation.
 - 1.37.2 **SUPERINTENDENT** – The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instruction from the Engineer, and who shall supervise and direct the construction.
- 1.38. **SUBSTANTIAL COMPLETION** – The Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer as evidenced by Engineer's definitive certificate of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended; or if no such certificate is issued, when the Work is complete and ready

for final payment as evidenced by Engineer's written recommendation of final payment in accordance with paragraph 14.13. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

- 1.38.1 **SUPPLEMENTAL AGREEMENT** – A written agreement between the Contractor and the Owner covering: (1) work that would increase or decrease the total amount of the awarded contract, or any major contract item, by more than 25 percent, such increased or decreased work being within the scope of the originally awarded contract; or (2) work that is not within the scope of the originally awarded contract.
- 1.39. **SUPPLEMENTARY CONDITIONS** – The part of the Contract Documents which amends or supplements these General Conditions.
- 1.40. **SUPPLIER** – A manufacturer, fabricator, supplier, distributor, materialman, or vendor having direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.
- 1.40.1 **SURETY** – The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds which are furnished to the Owner by the Contractor.
- 1.40.2 **TAXIWAY** – For the purpose of this document, the term taxiway means the portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways or aircraft parking areas.
- 1.41. **UNDERGROUND FACILITIES** – All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone, or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.
- 1.42. **UNIT PRICE WORK** – Work to be paid for on the basis of unit prices.
- 1.43. **WORK** – The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work includes and is the result of performing or furnishing labor and furnishings and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents.
- 1.44 **WORK CHANGE DIRECTIVE** - A written directive to Contractor, issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed as provided in paragraph 4.2 or 4.3 or to emergencies under paragraph 6.23. A Work Change Directive will not change the Contract Price or the Contract Times, but is evidence that the parties expect that the change directed or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times as provided in paragraph 10.2.

- 1.44.1 **WORKING DAY** – A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least 6 hours toward completion of the Contract. Unless work is suspended for causes beyond the Contractor's control, Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work, requiring the presence of an inspector, will be considered as working days.
- 1.44.2 **WORK PERIOD** – A work period shall consist of any designated block of time on which the normal working forces of the Contractor may proceed with regular work for at least 5 hours toward completion of the contract. Unless work is suspended for causes beyond the Contractor's control, work occurring on any day, regardless of it being a weekend or holiday, which requires an Inspector, will be considered a work period. Work periods are limited to between 7:00 a.m. and 5:00 p.m. local time Monday through Friday. Weekend work will not be permitted unless contractor obtains written permission from Owner.
- 1.45. **WRITTEN AMENDMENT** – A written amendment of the Contract Documents, signed by Owner and Contractor on or after the Effective Date of the Agreement and normally dealing with the nonengineering or nontechnical rather than strictly construction-related aspects of the Contract Documents.

ARTICLE 2 – PRELIMINARY MATTERS

Delivery of Bonds:

- 2.1. When Contractor delivers the executed Agreements to Owner, Contractor shall also deliver to Owner such Bonds as Contractor may be required to furnish in accordance with paragraph 5.1.

Copies of Documents:

- 2.2. Owner shall furnish to Contractor up to five copies (unless otherwise specified in the Supplementary Conditions) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

Commencement of Contract Times; Notice to Proceed:

- 2.3. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement, or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within thirty days after the Effective Date of the Agreement. In no event will the Contract Time commence to run later than the one hundred twentieth (120th) day after the day of Bid opening or the ninetieth (90th) day after the Effective Date of the Agreement, whichever date is earlier.

Starting the Work:

- 2.4. Contractor shall start to perform the Work on the date when the Contract Times commence to run, but no Work shall be done at the site prior to the date on which the Contract Times commence to run.

Before Starting Construction:

- 2.5. Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby; however, Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity or discrepancy in the Contract Documents, unless Contractor knew or reasonably should have known thereof.
- 2.6. Within ten days after the Construction Notice to Proceed contractor shall submit to Engineer for review:
- 2.6.1. a preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
- 2.6.2. a preliminary schedule of Shop Drawings and Sample submittals which will list each required submittal and the times for submitting, reviewing and processing such submittal;
- 2.6.3. a preliminary schedule of values for all of the Work which will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.
- 2.7. Before any Work at the site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with paragraphs 5.4, 5.6, and 5.7.

Preconstruction Conference:

- 2.8. Within twenty (20) days prior to Construction Notice to Proceed, but before any Work at the site is started, a conference attended by Contractor, Engineer and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in paragraph 2.6, procedures for handling Shop Drawings, and other submittals, processing Applications for Payment and maintaining required records.

Initially Acceptable Schedules:

- 2.9. Unless otherwise provided in the Contract Documents, at least ten days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with paragraph 2.6. Contractor shall have an additional ten days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until the schedules are submitted to and acceptable to Engineer as provided below. The progress schedule will be acceptable to Engineer as providing an orderly progression of the Work to completion within any specified Milestones and the Contract Times, but such acceptance will neither impose on Engineer responsibility for the sequencing, scheduling, or progress of Work nor interfere with or

relieve Contractor from Contractor's full responsibility therefore, Contractor's schedule of Shop Drawing and Sample submissions will be acceptable to Engineer as providing a workable arrangement for reviewing and processing the required submittals. Contractor's schedule of values will be acceptable to Engineer as to form and substance.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

Intent:

- 3.1. The Contract Documents comprise the entire agreement between Owner and Contractor concerning the Work. The Contract Documents are complementary: what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.
- 3.2. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be furnished and performed whether or not specifically called for. When words or phrases, which have a well-known technical or construction industry or trade meaning are used to describe Work, materials, or equipment, such words or phrases shall be interpreted in accordance with the meaning. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in paragraph 9.4.
- 3.3. **Reference to Standards and Specifications of Technical Societies: Reporting and Resolving Discrepancies:**
 - 3.3.1. Reference to standards, specifications, manuals or codes of any technical society, organization, or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 3.3.2. If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such Law or Regulation applicable to the performance of the Work or of any such standard, specification, manual, or code or of any instruction of any Supplier referred to in paragraph 6.5., Contractor shall report it to Engineer in writing at once, and, Contractor shall not proceed with the Work affected thereby (except in an emergency as authorized by paragraph 6.23) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.5 or 3.6; provide, however, that Contractor shall not be liable to Owner or Engineer for failure to report any such conflict, error, ambiguity or discrepancy unless Contractor knew or reasonably should have known thereof.
 - 3.3.3. Except as otherwise specifically stated in the Contract Documents or as may be provided by amendment or supplement thereto issued by one of the methods indicated in paragraph 3.5 or 3.6, the provisions of the Contract Documents shall take precedence in

resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

3.3.3.1. the provisions of any such standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents): or

3.3.3.2. the provisions of any such Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

No provision of any such standard, specification, manual, code, or instruction shall be effective to change the duties and responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to Owner, Engineer, or any of Engineer's Consultants, agents, or employees any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of paragraph 9.13 or any other provision of the Contract Documents.

3.3.4. Whenever the plans or specifications are in conflict, resolution of such conflict shall be in the following order of precedence subject to agreement by Engineer:

Contract Agreement

Addenda, with those of later date having precedence over those of earlier dates

Bid Documents

Supplementary Conditions

General Conditions

Construction Drawings

Technical Specifications

FAA General Provisions

Florida DOT Standard Specifications

In case of our inconsistency within the Contract Drawings, the order of procedure is as follows:

Schedules

Specific Details

Typical Details

Construction Drawings

3.4. Whenever in the Contract Documents the terms "as ordered," "as directed," "as required," "as allowed," "as approved" or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of Engineer as to the Work, it is intended that such requirement, direction, review, or judgment will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to Engineer any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake

responsibility contrary to the provisions of paragraph 9.13 or any other provision of the Contract Documents.

Amending and Supplementing Contract Documents:

- 3.5. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:
 - 3.5.1. a formal Written Amendment.
 - 3.5.2. a Change Order (pursuant to paragraph 10.4) or
 - 3.5.3. a Work Change Directive (pursuant to paragraph 10.1).
- 3.6. In addition, the requirements of the Contract Documents may be supplemented and minor variations, and deviations of the Work may be authorized, in one or more of the following ways:
 - 3.6.1. a Field Order (pursuant to paragraph 9.5).
 - 3.6.2. Engineer's approval of a Shop Drawing or Sample (pursuant to paragraphs 6.26 and 6.27), or
 - 3.6.3. Engineer's written interpretation or clarification (pursuant to paragraph 9.4).

Reuse of Documents:

- 3.7. Contractor and any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with Owner (i) shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's Consultant, and (ii) shall not reuse any of such Drawings, Specifications, other documents, or copies on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

ARTICLE 4 – AVAILABILITY OF LANDS: SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS

Availability of Lands:

- 4.1. Owner shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of Contractor. Upon reasonable written request, Owner shall furnish Contractor with a correct statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's lien against such lands in accordance with applicable Laws and Regulations. Owner shall identify any encumbrances or restrictions not of general application but specifically related to use of lands so furnished with which Contractor will have to comply in performing the Work. Easements for permanent structures

or permanent in existing facilities will be obtained and paid for by Owner, unless otherwise provided in the Contract Documents. If Contractor and Owner are unable to agree on entitlement to or the amount or extent of any adjustments in the Contract Price or the Contract Times as a result of any delay in Owner's furnishing these lands, rights-of-way or easements. Contractor may make a claim therefore as provided in Articles 11 and 12. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2. **SubSurface and Physical Conditions:**

4.2.1. **Reports and Drawings:** Reference is made to the Information Available to Contractors for identification of:

4.2.1.1. **Subsurface Conditions:** Those reports of explorations and tests of subsurface conditions at or contiguous to the site that have been utilized by Engineer in preparing the Contract Documents; and

4.2.1.2. **Physical Conditions:** Those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) that have been utilized by Engineer in preparing the Contract Documents.

4.2.2. **Limited Reliance by Contractor Authorized; Technical Data:** Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Information Available to Contractors. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner, Engineer, or any of Engineer's Consultants with respect to:

4.2.2.1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto, or

4.2.2.2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings, or

4.2.2.3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such data, interpretations, opinions, or information.

4.2.3. **Notice of Differing Subsurface or Physical Conditions:** If Contractor believes that any subsurface or physical condition at or contiguous to the site that is uncovered or revealed either:

4.2.3.1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in paragraphs 4.2.1 and 4.2.2 is materially inaccurate, or

4.2.3.2. is of such a nature as to require a change in the Contract Documents, or

4.2.3.3. differs materially from that shown or indicated in the Contract Documents, or

4.2.3.4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents; then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as permitted by paragraph 6.23), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such conditions or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

4.2.4. **Engineer's Review:** Engineer will promptly review the pertinent conditions, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

4.2.5. **Possible Contract Documents Change:** If Engineer concludes that a change in the Contract Documents is required as a result of a condition that meets one or more of the categories in paragraph 4.2.3., a Work Change Directive or a Change Order will be issued as provided in Article 10 to reflect and document the consequences of such change.

4.2.6. **Possible Price and Times Adjustments:** An equitable adjustment in the Contract Price or in the Contract Times, or both, will be allowed to the extent that the existence of such uncovered or revealed condition causes an increase or decrease in Contractor's cost of, or time required for performance of the Work; subject, however, to the following:

4.2.6.1. such condition must meet any one or more of the categories described in paragraphs 4.2.3.1 through 4.2.3.4. inclusive;

4.2.6.2. a change in the Contract Documents pursuant to paragraph 4.2.5 will not be an automatic authorization of nor a condition precedent to entitlement to any such adjustment:

4.2.6.3. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract price will be subject to the provisions of paragraphs 9.10 and 11.9; and

4.2.6.4. Contractor shall not be entitled to any adjustment in the Contract Price or Times if;

4.2.6.4.1. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner in respect of Contract Price and Contract Times by the submission of a bid or becoming bound under a contract: or

4.2.6.4.2. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the site and contiguous areas required by the Project Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

4.2.6.4.3. Contractor failed to give the written notice within the time and as required by paragraph 4.2.3.

If Owner and Contractor are unable to agree on entitlement to or as to the amount or length of any such equitable adjustment in the Contract Price or Contract Times, a claim may be made therefore as

provided in Articles 11 and 12. However, Owner, Engineer, and Engineer's Consultants shall not be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

4.3. **Physical Conditions – Underground Facilities:**

4.3.1. **Shown or Indicated:** The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided in the Information Available to Contractors:

4.3.1.1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

4.3.1.2. The cost of all of the following will be included in the Contract Price and Contractor shall have full responsibility for: (i) reviewing and checking all such information and data, (ii) locating all Underground Facilities shown or indicated in the Contract Documents, (iii) coordination of the Work with the owners of such Underground Facilities during construction, and (iv) the safety and protection of all such Underground Facilities as provided in paragraph 6.20 and repairing any damage thereto resulting from the Work.

4.3.2. **Not Shown or Indicated:** If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents. Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by paragraph 6.23), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence of the Underground Facility. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued as provided in Article 10 to reflect and document such consequences. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 6.20. Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, to the extent that they are attributable to the existence of any Underground Facility that was not shown or indicated in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or the amount or length of any such adjustment in Contract Price or Contract Times, Contractor may make a claim, therefore, as provided in Articles 11 and 12. However, Owner, Engineer, and Engineer's Consultants shall not be liable to Contractor for any claims, costs, losses or damages incurred or sustained by Contractor on or in connection with any other project or anticipated project.

Reference Points:

4.4. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of Owner, Contractor shall report to Engineer whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel.

4.5. Asbestos, PCBs, Petroleum, Hazardous Waste or Radioactive Material:

4.5.1. Owner shall be responsible for any Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material uncovered or revealed at the site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work and which may present a substantial danger to persons or property exposed thereto in connection with the Work at the site. Owner shall not be responsible for any such materials brought to the site by Contractor, Subcontractor, Suppliers, or anyone else for whom Contractor is responsible.

4.5.2. Contractor shall immediately: (i) stop all Work in connection with such hazardous condition and in any area affected thereby (except in an emergency as required by paragraph 6.23), and (ii) notify Owner and Engineer (and thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such hazardous condition to take corrective action, if any. Contractor shall not be required to resume Work in connection with such hazardous condition or in any such affected area until after Owner has obtained any required permits related thereto and delivered to Contractor special written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of such Work stoppage or such special conditions under which Work is agreed by Contractor to be resumed, either party may make a claim therefore as provided in Articles 11 and 12.

4.5.3. If after receipt of such special written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order such portion of the Work that is in connection with such hazardous condition or in such affected area to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a claim therefore as provided in Articles 11 and 12. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

- 4.5.4. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, Engineer, Engineer's Consultants and the officers, directors, employees, agents, other consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages arising out of or resulting from such hazardous condition, provided that: (i) any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (ii) nothing in this subparagraph 4.5.4. shall obligate Owner to indemnify any person or entity from and against the consequences of that person's or entity's own negligence.
- 4.5.5. The provisions of paragraphs 4.2 and 4.3 are not intended to apply to Asbestos, PCBs, Petroleum, Hazardous Waste or Radioactive Material uncovered or revealed at the site.

ARTICLE 5 – BONDS AND INSURANCE

Performance, Payment, and Other Bonds:

- 5.1. Contractor shall furnish Performance and Payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all Contractor's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other Bonds as are required by the Supplementary Conditions. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff. Bureau of Government Financial Operations, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.
- 5.2. If the surety on any Bond furnished by Contractor is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.1. Contractor shall within ten days thereafter substitute another bond and surety, both of which must be acceptable to Owner.

5.3. Licensed Sureties and Insurers; Certificates of Insurance:

5.3.1. All Bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue Bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.3.2. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain in accordance with paragraph 5.4.

Contractor's Liability Insurance:

- 5.4. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance and furnishing of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed or furnished by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable:
 - 5.4.1. claims under workers' compensation, disability benefits and other similar employee benefit acts;
 - 5.4.2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 5.4.3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 5.4.4. claims for damages insured by customary personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or by any other person for any other reason;
 - 5.4.5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 - 5.4.6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

The policies of insurance so required by this paragraph 5.4 to be purchased and maintained shall:

- 5.4.7. with respect to insurance required by paragraphs 5.4.3 through 5.4.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) Owner, Engineer, Engineer's Consultants and any other persons or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers and employees of all such additional insureds;
- 5.4.8. include the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

5.4.8.1 Contractor's Liability Insurance and the Owner's Protective Liability Insurance specified above shall be provided in not less than the following amount:

a. Injury or death to more than one person or single occurrence	\$1,000,000
b. On and Off Premises Operations Liability	\$1,000,000
c. Explosion and Collapse Hazard	\$1,000,000
d. Underground Hazard	\$1,000,000
e. Completed Operations and Products Liability	\$1,000,000

f. Property damage in account of all occurrences	\$1,000,000
g. Independent Contractors Liability	\$1,000,000
h. Personal Injury Liability Insurance	\$1,000,000

Contractor's Vehicle Insurance as follows:

1. Injury or death to one person	\$1,000,000
2. Injury or death to more than one person or a single occurrence	\$1,000,000
3. Property Damage	\$1,000,000
4. Business Auto Liability, Including all owned, non owned and hired vehicles	\$1,000,000

An Umbrella Policy may be used to meet the above limits.

All policies shall be drawn to cover a period of not less than one (1) year from the date of issue.

- 5.4.10. include contractual liability insurance covering Contractor's indemnity obligations under paragraphs 6.12, 6.16, and 6.31 through 6.33;
- 5.4.11. contain a provision or endorsement that the coverage afforded will not be cancelled, materially changed or renewal refused until at least thirty days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to paragraph 5.3.2 will so provide);
- 5.4.12. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing or replacing **defective** Work in accordance with paragraph 13.12; and
- 5.4.13. with respect to completed operations insurance, and any insurance coverage written on an occurrence basis, remain in effect for at least two years after final payment (and Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter).

Owner's Liability Insurance:

- 5.5. In addition to the insurance required to be provided by Contractor under paragraph 5.4, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents. Any liability insurance carried by Owner is excess and non-contributory to any and all other coverage whether collectable or not.

Property Insurance:

- 5.6 Contractor shall purchase and maintain property insurance upon the Work at the site in amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in these Supplementary Conditions or required by Laws and Regulations). This

insurance shall:

5.6.1 include the interests of Owner, Contractor, Subcontractors, Engineer, Engineer's Consultants and any other persons or entities identified in the Supplementary Conditions each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

5.6.2 include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

5.6.3 cover materials and equipment in transit for incorporation in the Work or stored at the site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer; and

5.6.4 be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with thirty days written notice to each other additional insured to whom a certificate of insurance has been issued.

5.7. NOT USED

5.8. NOT USED

5.9. Owner shall not be responsible for purchasing and maintaining any property insurance to protect the interests of Contractor, Subcontractors or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount, will be borne by Contractor, Subcontractor, or others suffering any such loss and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

5.10. NOT USED

5.11. NOT USED

Receipt and Application of Insurance Proceeds:

5.12. Any insured's loss under the policies of insurance required by paragraphs 5.6 and 5.7 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.13. Owner shall deposit in a separate account any money so received, and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment.

5.13. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within fifteen days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may

reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

Acceptance of Bonds and Insurance; Option to Replace:

5.14. If either party (Owner or Contractor) has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within ten days after receipt of the certificates (or other evidence requested) required by paragraph 2.7. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the Bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent Bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

Partial Utilization – Property Insurance:

5.15. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, such use or occupancy may be accomplished in accordance with paragraph 14.10; provided that no such use or occupancy shall commence before the insurers providing the property insurance have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be cancelled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

Supervision and Superintendence:

6.1. Contractor shall supervise, inspect and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but Contractor shall not be responsible for the negligence of others in the design or specification of a specific means, method, technique, sequence or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. Contractor shall be responsible to see that the completed Work complies accurately with the Contract Documents.

6.2. Contractor shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the site and shall have authority to act on behalf of Contractor. All communications to the superintendent shall be as binding as if given to CONTRACTOR.

Labor, Materials and Equipment:

- 6.3. Contractor shall provide competent, suitably qualified personnel to survey, lay out and construct the Work as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the site. Except as otherwise required for the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours and Contractor will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without Owner's written consent given after prior written notice to Engineer.
- 6.4. Unless otherwise specified in the General Requirements, Contractor shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.
- 6.5. All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents.

Progress Schedule:

- 6.6. Contractor shall adhere to the progress schedule established in accordance with paragraph 2.9 as it may be adjusted from time to time as provided below:
 - 6.6.1. Contractor shall submit to Engineer for acceptance (to the extent indicated in paragraph 2.9) proposed adjustments in the progress schedule that will not change the Contract Times (or Milestones). Such adjustments will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.
 - 6.6.2. Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of paragraph 12.1. Such adjustments may only be made by a Change Order or Written Amendment in accordance with Article 12.

6.7. Substitutes and "Or-Equal" Items:

- 6.7.1. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent or "or-equal" item or no substitution is permitted, other items of material or

equipment or material or equipment of other Suppliers may be accepted by Engineer under the following circumstances:

6.7.1.1. "Or-Equal": If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for acceptance of proposed substitute items.

6.7.1.2. Substitute Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under subparagraph 6.7.1.1, it will be considered a proposed substitute item. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefore. The procedure for review by the Engineer will include the following as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor. If Contractor wishes to furnish or use a substitute item of material or equipment, Contractor shall first make written application to Engineer for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified and be suited to the same use as that specified. The application will state the extent, if any, to which the evaluation and acceptance of the proposed substitute will prejudice Contractor's achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by Engineer in evaluating the proposed substitute. Engineer may require Contractor to furnish additional data about the proposed substitute.

6.7.1.3. Contractor's Expense: All data to be provided by Contractor in support of any proposed "or-equal" or substitute item will be at Contractor's expense.

6.7.2. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence or procedure of construction is shown or indicated in an expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence or procedure of construction acceptable to Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract

Documents. The procedure for review by Engineer will be similar to that provided in subparagraph 6.7.1.2.

6.7.3. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.7.1.2 and 6.7.2. Engineer will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized without Engineer's prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any "or-equal" or substitute. Engineer will record time required by Engineer and Engineer's Consultants in evaluating substitutes proposed or submitted by Contractor pursuant to paragraphs 6.7.1.2 and 6.7.2 and in making changes in the Contract Documents (or in the provisions of any other direct contract with Owner for work on the Project) occasioned thereby. Whether or not Engineer accepts a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the changes of Engineer and Engineer's Consultants for evaluating each such proposed substitute item.

6.8. Concerning Subcontractors, Suppliers and Others:

The Contractor shall submit a list of Subcontractors and major Material Suppliers for the Owner's approval within (24) hours after Bid Opening. Such list shall be accompanied by an experience statement with pertinent information as to similar projects and other evidence of qualifications from each such Subcontractor, person and organization requested by Owner. If Owner, after due investigation has reasonable objections to any proposed Subcontractor, other person or organization, the Owner may before giving the Notice of Award request the apparent successful Contractor to submit an acceptable Subcontractor without an increase in Bid Price. If the apparent successful Contractor declines to make any such substitution, the Contract shall not be awarded to such Contractor, but his declining to make any such substitution will not constitute grounds for sacrificing his Bid Security. Any Subcontractor, other person or organization so listed and to whom Owner does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner.

- 6.8.1. Contractor shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to Owner and Engineer as indicated in paragraph 6.8.2), whether initially or as a substitute, against whom Owner or Engineer may have reasonable objection. Contractor shall not be required to employ any subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom Contractor has reasonable objection.
- 6.8.2. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of materials or equipment) to be submitted to Owner in advance of the specified date prior to the Effective Date of the Agreement for acceptance by Owner and Engineer, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's or Engineer's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the project documents or the Contract Documents) of any such Subcontractor, Supplier or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case Contractor shall submit an acceptable substitute, the Contract Price will be adjusted by the

difference in the cost occasioned by such substitution and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by Owner or Engineer of any such Subcontractor, Supplier or other person or organization shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

- 6.9.1. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with Contractor just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier, or other person or organization any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.
- 6.9.2. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with Contractor. Contractor shall require all Subcontractors, Suppliers and such other persons and organizations performing or furnishing any of the Work to communicate with the Engineer through Contractor.
- 6.10. The divisions and sections of the Specifications and the identifications of any drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- 6.11. All Work performed by Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in paragraph 5.6. or 5.7. the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, Engineer's Consultants and all other additional insureds for all losses and damages caused by, arising out of or resulting from any of the perils covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

Patent Fees and Royalties:

- 6.12. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, Engineer, Engineer's Consultants and the officers,

directors, employees, agents and other consultants of each and any of them from and against all claims, costs, losses and damages arising out of or resulting from any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in the Contract Documents.

Permits:

6.13. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Contractor shall pay all charges of utility owners for connections to the Work, and Owner shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

6.14 Laws and Regulations:

6.14.1. Contractor shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

6.14.2. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses and damages caused by, arising out of or resulting therefrom: however, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor or Contractor's obligations under paragraph 3.3.2.

Taxes:

6.15. Contractor shall pay all sales, consumer, use and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

Use of Premises:

6.16. Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to the site and land and areas identified in and permitted by the Contract Documents, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any adjacent land or areas, resulting from the performance of the Work. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner, Engineer, Engineer's Consultant and anyone directly or indirectly

employed by any of them from and against all claims costs, losses and damages arising out of or resulting from any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

- 6.17. During the progress of the Work, Contractor shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery and surplus materials. Contractor shall leave the site clean and ready for occupancy by Owner at Substantial Completion of the Work. Contractor shall restore to original condition all property not designated for alteration by the Contract Documents.
- 6.18. Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

Record Documents:

- 6.19. Contractor shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order and annotated to show all changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples and Shop Drawings will be delivered to Engineer for Owner.

Safety and Protection:

- 6.20. Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
- 6.20.1. all persons on the Work site or who may be affected by the Work;
- 6.20.2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and
- 6.20.3. other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation or replacement in the course of construction.

Contractor shall comply with all applicable Laws and Regulations of any public body having jurisdiction for safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property referred to in paragraph

6.20.2. or 6.20.3. caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or Engineer's Consultant or anyone employed by any of them or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier or other person or organization directly or indirectly employed by any of them). Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with paragraph 14.13. that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

Safety Representative:

6.21. Contractor shall designate a qualified and experienced safety representative at the site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

Hazard Communication Programs:

6.22. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the site in accordance with Laws or Regulations.

Emergencies:

6.23. In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, Contractor, without special instruction or authorization from Owner or Engineer, is obligated to act to prevent threatened damage, injury or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued to document the consequences of such action.

6.24. Shop Drawings and Samples:

6.24.1. Contractor shall submit Shop Drawings to Engineer for review and approval in accordance with the accepted schedule of Shop Drawings and Sample submittals (see paragraph 2.9.). All submittals will be identified as Engineer may require and in the number of copies specified in the General Requirements. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to shown Engineer the materials and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by paragraph 6.26.

6.24.2. Contractor shall also submit Samples to Engineer for review and approval in accordance with said accepted schedule of Shop Drawings and Sample submittals. Each Sample will be

identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended and otherwise as Engineer may require to enable Engineer to review the submittal for the limited purposes required by paragraph 6.26. The numbers of each Sample to be submitted will be as specified in the Specifications.

6.25. Submittal Procedures:

6.25.1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

6.25.1.1. all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar information with respect thereto,

6.25.1.2. all materials with respect to intended use, fabrication, shipping, handling storage, assembly and installation pertaining to the performance of the Work, and

6.25.1.3. all information relative to Contractor's sole responsibilities in respect of means, methods, techniques, sequences and procedures of construction and safety precautions and programs incident thereto.

Contractor shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

6.25.2 Each submittal will bear a stamp or specific written indication that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

6.25.3. At the time of each submission, Contractor shall give Engineer specific written notice of such variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop Drawing and Sample submitted to Engineer for review and approval of each such variation.

6.26. Engineer will review and approve Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals accepted by Engineer as required by paragraph 2.9. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer's review and approval will not extend to means, methods, techniques, sequences or procedures of construction (except where a particular means, method, technique, sequence or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. Contractor shall make corrections required by Engineer, and shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and

approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

- 6.27. Engineer's review and approval of Shop Drawings or Samples shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has in writing called Engineer's attention to each such variation at the time of submission as required by paragraph 6.25.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying Shop Drawing or Sample approval; nor will any approval by Engineer relieve Contractor from responsibility for complying with the requirements of paragraph 6.25.1.
- 6.28. Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submissions accepted by Engineer as required by paragraph 2.9, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

Continuing the Work:

- 6.29. Contractor shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.5 or as Owner and Contractor may otherwise agree in writing.

6.30. Contractor's General Warranty and Guarantee:

6.30.1. Contractor warrants and guarantees to Owner, Engineer and Engineer's Consultants that all Work will be in accordance with the Contract Documents and will not be defective. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

6.30.1.1. abuse, modification or improper maintenance or operation by persons other than Contractor, Subcontractors or Suppliers; or

6.30.1.2. normal wear and tear under normal usage.

- 6.30.2. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

6.30.2.1. observations by Engineer;

6.30.2.2. recommendation of any progress or final payment by Engineer;

6.30.2.3. the issuance of a certificate of Substantial Completion or any payment by Owner to Contractor under the Contract Documents;

6.30.2.4. use or occupancy of the Work or any part thereof by Owner;

6.30.2.5. any acceptance by Owner or any failure to do so;

6.30.2.6. any review and approval of Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer pursuant to paragraph 14.13;

6.30.2.7. any inspection, test or approval by others; or

6.30.2.8. any correction of defective Work by Owner.

Indemnification:

- 6.31. To the fullest extent permitted by Laws and Regulations. Contractor shall indemnify and hold harmless Owner, Engineer, Engineer's Consultants and the officers, directors, employees, agents and other consultants of each and any of them from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) caused by, arising out of or resulting from the performance of the Work, provided that any such claim, cost, loss or damage: (i) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (ii) is caused in whole or in part by any negligent act or omission of Contractor, any Subcontractor, any Supplier, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of a person or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such person or entity.
- 6.32. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.31 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or any such Subcontractor, Supplier or other person or organization under workers' compensation acts, disability benefit acts or other employee benefit acts.
- 6.33. The indemnification obligations of Contractor under paragraph 6.31 shall not extend to the liability of Engineer and Engineer's Consultants, officers, directors, employees or agents caused by the professional negligence, errors or omissions of any of them.

Survival of Obligations:

- 6.34. All representations, indemnifications, warranties and guarantees made in, required by or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion and acceptance of the Work and termination or completion of the Agreement.

ARTICLE 7 – OTHER WORK

Related Work at Site:

- 7.1. Owner may perform other work related to the Project at the site by Owner's own forces, or let other direct contracts therefore which shall contain General Conditions similar to these, or have other work performed by utility owners. If the fact that such other work is to be performed was not noted in the Contract Documents, then; (i) written notice thereof will be given to Contractor prior to starting any such other work, and (ii) Contractor may make a claim therefore as provided in Articles 11 and 12 if Contractor believes that such performance will involve additional expense to Contractor or requires additional time and the parties are unable to agree as to the amount or extent thereof.
- 7.2. Contractor shall afford each other contractor who is a party to such a direct contract and each utility owner (and Owner if Owner is performing the additional work with Owner's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly connect and coordinate the Work with theirs. Unless otherwise provided in the Contract Documents. Contractor shall do all cutting, fitting, and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- 7.3. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7. Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure so to report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent or non-apparent defects and deficiencies in such other work.

Coordination:

- 7.4. If Owner contracts with others for the performance of other work on the Project at the site, the following will be set forth in Supplementary Conditions:
 - 7.4.1. The person, firm or corporation who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified;
 - 7.4.2. The specific matters to be covered by such authority and responsibility will be itemized: and
 - 7.4.3. The extent of such authority and responsibilities will be provided.

Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility in respect of such coordination.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

- 8.1. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.
- 8.2. In case of termination of the employment of Engineer, Owner shall appoint an engineer, whose status under the Contract Documents shall be that of the former Engineer.
- 8.3. Owner shall furnish the data required of Owner under the Contract Documents promptly and shall make payments to Contractor promptly when they are due as provided in paragraphs 14.4 and 14.13.
- 8.4. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4. Paragraph 4.2 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions at the site and drawings of physical conditions in existing structures at or contiguous to the site that have been utilized by Engineer in preparing the Contract Documents.
- 8.5. Owner's responsibilities in respect of purchasing and maintaining liability and property insurance are set forth in paragraphs 5.5 through 5.10.
- 8.6. Owner is obligated to execute Change Orders as indicated in paragraph 10.4.
- 8.7. Owner's responsibility in respect of certain inspections, tests and approvals is set forth in paragraph 13.4.
- 8.8. In connection with Owner's right to stop Work or suspend Work, see paragraphs 13.10 and 15.1. Paragraph 15.2 deals with Owner's right to terminate services of Contractor under certain circumstances.
- 8.9. The Owner shall not supervise, direct or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences or procedures of construction or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the furnishing or performance of the Work. Owner will not be responsible for Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.
- 8.10. Owner's responsibility in respect of undisclosed Asbestos, PCBs, Petroleum, Hazardous Waste or Radioactive Materials uncovered or revealed at the site is set forth in paragraph 4.5.
- 8.11. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

Owner's Representative:

- 9.1. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and shall not be extended without written consent of Owner and Engineer.

Visits to Site:

- 9.2. Engineer will make visits to the site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer will endeavor for the benefit of Owner to determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and on-site observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work. Engineer's visits and on-site observations are subject to all the limitations on Engineer's authority and responsibility set forth in paragraph 9.13, and particularly, but without limitation, during or as a result of Engineer's on-site visits or observations of Contractor's Work Engineer will not supervise, direct, control or have authority over or be responsible for Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the furnishing or performance of the Work.

Project Representative:

- 9.3. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more continuous observation of the Work. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.13 and in the Supplementary Conditions. If Owner designates another representative or agent to represent Owner at the site who is not Engineer's Consultant, agent or employee, the responsibilities and authority and limitations thereon of such other person will be as provided in the Supplementary Conditions.

9.3.1 Engineer may furnish a Resident Project Representative, assistants and other field staff as needed, to assist Owner in observing performance of the Work. The Resident Project Representative is to observe and inspect, in the Owner's interest, the materials furnished and the work done as the work progresses in order to insure full and complete compliance with the contract and to verify quantities of work completed.

9.3.2 Owner may also designate one of its employees to represent Owner for these purposes.

9.3.3 Engineer, Resident Project Representative, Owner and all such other persons referred to shall have unrestricted access to all parts of the Work. Contractor shall cooperate by supplying necessary facilities and assistance required by above persons to carry out their work of observation and inspection.

9.3.4 It is not the function of the Engineer, Resident Project Representative or Owner to supervise or direct the manner in which the work to be done under this Contract is carried on or conducted. The Engineer, Resident Project Representative or Owner is not responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the work, and they will not be responsible for the Contractor's failure to carry out the work in accordance with the Contract Documents. Nevertheless, Contractor agrees that any method or procedure, which in the opinion of the Engineer or Owner does not achieve the required results or quality of the work specified, shall be discontinued immediately upon the order of the Engineer.

9.3.5 All communications between Contractor and Engineer or Contractor and Owner are to be through the Resident Project Representative.

9.3.6 Duties and Responsibilities of Resident Project Representative (RPR):

- 1) RPR will act as directed by and under the supervision of Engineer and/or Owner, and will confer with Engineer and Owner regarding RPR's actions. RPR's dealings in matters pertaining to the on-site work shall in general be with Engineer and Contractor keeping Owner advised as necessary. RPR's dealings with subcontractors shall only be through or with the full knowledge and approval of Contractor.
- 2) Review progress schedule, schedule of Shop Drawing submittals and schedule of values prepared by Contractor and consult with Engineer and Owner concerning acceptability.
- 3) Attend meetings with Contractor, such as pre-construction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.
- 4) Serve as Engineer's and Owner's liaison with Contractor, working principally through Contractor's superintendent and assist in understanding the intent of the Contract Documents.
- 5) Advise Engineer, Owner and Contractor of the commencement of any Work requiring a Shop Drawing or sample if the submittal has not been approved by Engineer.
- 6) Conduct on-site observations of the Work in progress to assist Engineer and Owner in determining if the Work is in general proceeding in accordance with the Contract Documents. Report to Engineer and Owner whenever RPR believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer and Owner of

Work that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

7) Report to Engineer and Owner when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.

8) Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report with RPR's recommendations to Engineer and Owner. Transmit to Contractor decisions as issued by Engineer and/or Owner.

9) Maintain orderly files for correspondence, reports of job conferences, Shop Drawings and samples, reproductions of original Contract Documents including all Work Directive Changes, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract, Engineer's clarifications and interpretations of the Contract Documents, progress reports, and other Project related documents.

10) Keep a diary or log book, recording Contractor hours on the job site, weather conditions, data relative to questions of Work Directive Changes, Change Orders or Changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer and Owner.

11) Record names, addresses and telephone numbers of all Contractors, subcontractors and major suppliers of materials and equipment.

12) Furnish Engineer and Owner periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and sample submittals.

13) Draft proposed Change Orders and Work Directive Changes, obtaining backup material from Contractor and recommend to Engineer and Owner Change Orders, Work Directive Changes, and Field Orders.

14) Report immediately to Engineer and Owner upon the occurrence of any accident.

15) Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the schedule of values, Work completed and materials and equipment delivered at the site but not incorporated in the Work.

16) During the course of the Work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the

Contract Documents, and have this material delivered to Engineer for review and forwarding to Owner prior to final payment for the work.

17) Before Engineer issues a Certificate of Substantial Completion, submit to Contractor a list of observed items requiring completion or correction.

18) Conduct final inspection in the company of Engineer, Owner and Contractor and prepare a final list of items to be completed or corrected.

19) Observe that all items on final list have been completed or corrected and make recommendations to Engineer and Owner concerning acceptance.

9.3.7 Limitations of Authority of Resident Project Representative (RPR):

1) Shall not authorize any deviation from the Contract Documents or substitution of materials or equipment, unless authorized by Engineer or Owner.

2) Shall not exceed limitations of Engineer's authority as set forth in the Contract Documents.

3) Shall not undertake any of the responsibilities of Contractor, subcontractors or Contractor's superintendent.

4) Shall not advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction unless such advice or directions are specifically required by the Contract Documents.

5) Shall not advise on, issue directions regarding or assume control over safety precautions and programs in connection with the Work.

6) Shall not accept Shop Drawing or sample submittals from anyone other than Contractor.

9.3.8 The Engineer and or Owner shall have the authority to reject any work, or materials, or any part thereof, which does not in his opinion conform to the plans, drawings, specifications and contract, and it shall be permissible for him to do so at any time during the progress of the work and until its acceptance.

No material of any kind shall be used upon the work until it has been inspected and accepted by the Engineer. All materials rejected shall be removed immediately from the work and not again offered for inspection. Any materials or workmanship found at any time to be defective or not of the quality or character required by the plans and specifications shall be remedied at once regardless of previous inspection.

Such inspection shall not relieve the Contractor from any obligation to perform said work strictly in accordance with the plans and specifications and work not so constructed shall be removed and made

good by the Contractor at his own expense, and free from all expense to the Owner whenever so ordered by the Owner without reference to any previous oversight or error in inspection.

Clarifications and Interpretations:

- 9.4. Engineer will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as Engineer may determine necessary, which shall be consistent with the intent of and reasonably inferable from Contract Documents. Such written clarifications and interpretations will be binding on Owner and Contractor. If Owner or Contractor believes that a written clarification or interpretation justifies an adjustment in the Contract Price or the Contract Times and the parties are unable to agree to the amount or extent thereof, if any, Owner or Contractor may make a written claim therefore as provided in Article 11 or Article 12.

Authorized Variations in Work:

- 9.5. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or the Contract Times and the parties are unable to agree as to the amount or extent thereof, Owner or Contractor may make a written claim therefore as provided in Article 11 or 12.

Rejecting Defective Work:

- 9.6. Engineer will have authority to disapprove or reject Work which Engineer believes to be defective, or that Engineer believes will not produce a complete Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in paragraph 13.9, whether or not the Work is fabricated, installed or completed.

Shop Drawings, Change Orders and Payments:

- 9.7. In connection with Engineer's authority as to Shop Drawings and Samples, see paragraphs 6.24 through 6.28 inclusive.
- 9.8. In connection with Engineer's authority as to Change Orders, see Articles 10,11, and 12.
- 9.9. In connection with Engineer's authority as to Applications for Payment, see Article 14.

Determinations for Unit Prices:

- 9.10. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding upon Owner and Contractor, unless, within ten days after the date of any such decision, either Owner or Contractor delivers to the other and to Engineer written notice of intention to appeal from Engineer's decision and, a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction to exercise such rights or remedies as the appealing party may have with respect to Engineer's decision, unless otherwise agreed in writing by Owner and Contractor. Such appeal will not be subject to procedures of paragraph 9.11.

Decisions on Disputes:

- 9.11. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work there under. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and Claims under Articles 11 and 12 in respect of changes in the Contract Price or Contract Times will be referred initially to Engineer in writing with a request for a formal decision in accordance with this paragraph. Written notice of each such claim, dispute or other matter will be delivered by the claimant to Engineer and the other party to the Agreement promptly (but in no event later than thirty days) after the start of the occurrence or event giving rise thereto, and written supporting data will be submitted to Engineer and the other party within sixty days after the start of such occurrence or event unless Engineer allows an additional period of time for the submission of additional or more accurate data in support of such claim, dispute or other matter. The opposing party shall submit any response to Engineer and the claimant within thirty days after receipt of the claimant's last submittal (unless Engineer allows additional time). Engineer will render a formal decision in writing within thirty days after receipt of the opposing party's submittal, if any, in accordance with this paragraph. Engineer's written decision on such claim, dispute or other matter will be final and binding upon Owner and Contractor unless: a written notice of intention to appeal from Engineer's written decision is delivered by Owner or Contractor to the other and to Engineer within thirty days after the date of such decision and a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction to exercise such rights or remedies as the appealing party may have with respect to such claim, dispute or other matter in accordance with applicable Laws and Regulations within sixty days of the date of such decision, unless otherwise agreed in writing by Owner and Contractor.
- 9.12. When functioning as interpreter and judge under paragraphs 9.10 and 9.11, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by Engineer pursuant to paragraphs 9.10 or 9.11 with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.15) will be a condition precedent to any exercise by Owner or Contractor of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such claim, dispute or other matter.

9.13. Limitations on Engineer's Authority and Responsibilities:

9.13.1. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise or performance of any authority or responsibility by Engineer shall create, impose or give rise to any duty owed by Engineer to Contractor, any Subcontractor, and Supplier, any other person or organization, or to any surety for employee or agent of any of them.

9.13.2. Engineer will not supervise, direct, control or have authority over or be responsible for Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the furnishing or performance of the Work. Engineer will not be responsible for Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.

9.13.3. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

9.13.4. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds and certificates of inspection, tests, and approvals and Other documentation required to be delivered by paragraph 4.12 will only be to determine generally that their content complies with the requirements of, and in the case of, certificates of inspections, tests and approvals that the results certified indicate compliance with the Contract Documents.

9.13.5. the limitations upon authority and responsibility set forth in this paragraph 9.13 shall also apply to Engineer's Consultants, Resident Project Representative and assistants.

ARTICLE 10 – CHANGES IN THE WORK

10.1. Without invalidating the Agreement and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions or revisions in the Work. Such additions, deletions or revisions will be authorized by a Written Amendment, a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

10.2. If Owner and Contractor are unable to agree as to the extent, if any, of an adjustment in the Contract Price or an adjustment of the Contract Times that should be allowed as a result of a Work Change Directive, a claim may be made therefore as provided in Article 11 or Article 12.

10.3. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraphs 3.5 and 3.6

except in the case of an emergency as provided in paragraph 6.23 or in the case of uncovering Work as provided in paragraph 13.9.

10.4. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

10.4.1. changes in the Work which are (i) ordered by Owner pursuant to paragraph 10.1, (ii) required because of acceptance of defective Work under paragraph 13.13 or correcting defective Work under paragraph 13.14, or (iii) agreed to by the parties;

10.4.2. changes in the Contract Price or Contract Times which are agreed to by the parties; and

10.4.3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to paragraph 9.11;

Provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the progress schedule as provided in paragraph 6.29.

10.5. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be Contractor's responsibility, and the amount of each applicable Bond will be adjusted accordingly.

ARTICLE 11 – CHANGE OF CONTRACT PRICE

11.1. The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at Contractor's expense without change in the Contract Price.

11.2. The Contract Price may only be changed by a Change Order. Any claim for an adjustment in the Contract Price shall be based on written notice delivered by the party making the claim to the other party and to Engineer promptly (but in no event later than ten days) after the start of the occurrence or event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within thirty days after the start of such occurrence or event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of the claim) and shall be accompanied by claimant's written statement that the adjustment claimed covers all known amounts to which the claimant is entitled as a result of said occurrence or event. All claims for adjustment in the Contract Price shall be determined by Engineer in accordance with paragraph 9.11 if Owner and Contractor cannot otherwise agree on the amount involved. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this paragraph 11.2.

- 11.3 The value of any Work covered by a Change Order or of any claim for an adjustment in the Contract Price will be determined as follows:
- 11.3.1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraphs 11.9.1. through 11.9.3. inclusive);
 - 11.3.2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 11.6.2):
 - 11.3.3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under paragraph 11.3.2, on the basis of the Cost of the Work (determined as provided in paragraphs 11.4 and 11.5) plus a Contractor's fee for overhead and profit (determined as provided in paragraph 11.6).

Cost of the Work Covered by a Change Order:

- 11.4. The term Cost of the Work means the sum of all costs necessarily incurred and paid by Contractor in the proper performance of the Work. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 11.5.

11.4.1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include without limitation superintendents, foremen and other personnel employed full-time at the site. Payroll costs for employees not employed full-time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays, shall be included in the above to the extent authorized by Owner.

11.4.2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

- 11.4.3. Payments made by Contractor to the Subcontractors for Work performed or furnished by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner who will then determine, with the advice of Engineer, which bids, if any, will be accepted. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work

Plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in paragraphs 11.4, 11.5, 11.6 and 11.7. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

11.4.4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants) employed for services specifically related to the Work.

11.4.5. Supplemental costs including the following:

11.4.5.1. The proportion of necessary transportation, travel and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

11.4.5.2. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of Contractor.

11.4.5.3. Rentals of all construction equipment and machinery and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof – all in accordance with the terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

11.4.5.4. Sales, consumer, use or similar taxes related to the work, and for which Contractor is liable, imposed by Laws and Regulations.

11.4.5.5. Deposits lost for causes other than negligence of Contractor, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

11.4.5.6. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance and furnishing of the Work (except losses and damages within the deductible amounts of property insurance established by Owner in accordance with paragraph 5.9), provided they have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee. If, however, any such loss or damage requires reconstruction and Contractor is placed in charge thereof, Contractor is placed in charge thereof, Contractor shall be paid for services a fee proportionate to that stated in paragraph 11.6.2.

11.4.5.7. The cost of utilities, fuel and sanitary facilities at the site.

11.4.5.8. Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

11.4.5.9. Cost of premiums for additional Bonds and insurance required because of changes in the Work.

11.5. The term Cost of the Work Covered by a Change Order shall not include any of the following:

11.5.1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by Contractor whether at the site or in Contractor's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.4.1 or specifically covered by paragraph 11.4.4 – all of which are to be considered administrative costs covered by the Contractor's fee.

11.5.2. Expenses of Contractor's principal and branch offices other than Contractor's office at the site.

11.5.3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

11.5.4. Cost of premiums for all Bonds and for all insurance whether or not Contractor is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 11.4.5.9 above).

11.5.5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 11.4.

11.6. The Contractor's fee allowed to Contractor for overhead and profit shall be determined as follows:

11.6.1. a mutually acceptable fixed fee; or

11.6.2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

11.6.2.1. for costs incurred under paragraphs 11.4.1 and 11.4.2, the Contractor's fee shall be ten percent;

11.6.2.2. for costs incurred under paragraph 11.4.3, the Contractor's fee shall be five percent.

11.6.2.3. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of paragraphs 11.4.1, 11.4.2, 11.4.3 and 11.6.2 is that the Subcontractor who actually performs or furnishes the Work, at whatever tier, will be paid a fee of ten percent of the costs incurred by such Subcontractor under paragraphs 11.4.1 and 11.4.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor:

11.6.2.4. no fee shall be payable on the basis of costs itemized under paragraphs 11.4.4, 11.4.5 and 11.5;

11.6.2.5. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

11.6.2.6. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with paragraphs 11.6.2.1 through 11.6.2.5, inclusive.

- 11.7. Whenever the cost of any work is to be determined pursuant to paragraphs 11.4 and 11.5, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in form acceptable to Engineer an itemized cost breakdown together with supporting data.

Cash Allowances:

11.8. NOT USED

11.9. Unit Price Work:

11.9.1. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer in accordance with paragraph 9.10.

11.9.2. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

11.9.3. Owner or Contractor may make a claim for an adjustment in the Contract Price in accordance with Article 11 if:

11.9.3.1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

11.9.3.2. there is no corresponding adjustment with respect to any other item of Work; and

11.9.3.3. if Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT TIMES

- 12.1. The Contract Times (or Milestones) may only be changed by a Change Order or a Written Amendment. Any claim for an adjustment of the Contract Times (or Milestones) shall be based on written notice delivered by the party making the claim to the other party and to Engineer promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within sixty days after such occurrence (unless Engineer allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Times (or Milestones) shall be determined by Engineer in accordance with paragraph 9.11 if Owner and Contractor cannot otherwise agree. No claim for an adjustment in the Contract Times (or Milestones) will be valid if not submitted in accordance with the requirements of this paragraph 12.1.
- 12.2. All time limits stated in the Contract Documents are of the essence of the Agreement.
- 12.3. Where Contractor is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of Contractor, the Contract Times (or Milestones) will be extended in an amount equal to the time lost due to such delay if a claim is made therefore as provided in paragraph 12.1. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions or acts of God. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.
- 12.4. Where Contractor is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of both Owner and Contractor, an extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be Contractor's sole and exclusive remedy for such delay. In no event shall Owner be liable to Contractor, any Subcontractor, any Supplier, any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from (i) delays caused by or within the control of Contractor, or (ii) delays beyond the control of both parties including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God or acts or neglect by utility owners or other contractors performing other work as contemplated by Article 7.

ARTICLE 13 – TESTS AND INSPECTION: CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.1. **Notice of Defects:** Prompt notice of all defective Work of which Owner or Engineer have actual knowledge will be given to Contractor. All defective Work may be rejected, corrected or accepted as provided in this Article 13.

Access to Work:

13.2. Owner, Engineer, Engineer's Consultants, other representatives and personnel of Owner, independent testing laboratories and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's site safety procedures and programs so that they may comply therewith as applicable.

Tests and Inspections:

13.3. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

13.4. Contractor shall employ and pay for services of an independent testing laboratory to perform all Quality Control inspections, test or approvals required by the contract documents. Contractor shall allow the Engineer access to all work done in the project for Acceptance Testing by the owner. This testing will be in addition to Quality Control Testing required by the Contractor. Owner shall arrange and pay all costs associated with Acceptance Testing done by an independent testing laboratory of the Owners choosing except:

13.4.1. for inspections, tests or approvals covered by paragraph 13.5 below.

13.4.2. that costs incurred in connection with tests or inspections conducted pursuant to paragraph

13.9 below shall be paid as provided in said paragraph 13.9; and

13.4.3. as otherwise specifically provided in the Contract Documents.

13.4.4 Owner shall perform the following test as part of quality assurance / acceptance testing:

All material testing included in the Bidding Documents.

All other required testing is to be completed by the contractor as part of the contractor's quality control procedures and submittals. This section shall take precedence over all other sections that describe testing requirements.

13.5. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested or approved by an employee or other

representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection, or approval. Contractor shall also be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work, or of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Quality Control Testing of materials and equipment shall be the responsibility of the Contractor who shall pay all costs associated with the required testing. Contractor shall provide the Engineer adequate advance notice of intended tests to allow the Engineer to be present during the Testing.

- 13.6. If any Work (or the work of others) that is to be inspected, tested or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.
- 13.7. Uncovering Work as provided in paragraph 13.6 shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

Uncovering Work:

- 13.8. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- 13.9. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose or otherwise make available for observation, inspection or testing as Engineer may require that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, Contractor shall pay all claims, costs, losses and damages caused by, arising out of or resulting from such uncovering, exposure, observation, inspection and testing and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others; and Owner shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, may make a claim therefore as provided in Article 11. If, however, such Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement and reconstruction; and, if the parties are unable to agree as to the amount or extent therefore, Contractor may make a claim therefore as provided in Articles 11 and 12.

Owner May Stop the Work:

- 13.10. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated;

however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor or any surety or other party.

Correction or Removal of Defective Work:

13.11. If required by Engineer, Contractor shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by Engineer, remove it from the site and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses and damages caused by or resulting from such correction or removal (including but not limited to all costs of repair or replacement of work of others).

13.12. Correction Period:

13.12.1. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instruction: (i) correct such defective Work, or, if it has been rejected by Owner, remove it from the site and replace it with Work that is not defective, and (ii) satisfactorily correct or remove and replace any damage to other Work or the work of others resulting therefrom. If Contractor does not promptly comply with the terms of such instructions, or in any emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or the rejected Work removed and replaced, and all claims, costs, losses and damages caused by or resulting from such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

13.12.2. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

13.12.3. Where defective Work (and damage to other Work resulting therefrom) has been corrected, removed or replaced under this paragraph 13.12, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

Acceptance of Defective Work:

13.13. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, also Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness). If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, Owner may make a claim therefore as provided in Article 11.

If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

Owner May Correct Defective Work:

13.14. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with paragraph 13.11, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days' written notice to Contractor, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph Owner shall proceed expeditiously. In connection with such corrective and remedial action, Owner may exclude Contractor from all or part of the site, take possession of all or part of the Work, and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representative, agents and employees, Owner's other contractors and Engineer and Engineer's Consultants access to the site to enable Owner to exercise the rights and remedies under this paragraph. All claims, costs, losses and damages incurred or sustained by Owner in exercising such rights and remedies will be charged against Contractor and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, Owner may make a claim therefore as provided in Article 11. Such claims, costs, losses and damages will include but not be limited to all costs of repair or replacement of work of others destroyed or damaged by correction, removal or replacement of Contractor's defective Work. Contractor shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies hereunder.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

Schedule of Values:

14.1. The schedule of values established as provided in paragraph 2.9 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

Application for Progress Payment:

14.2. At least ten days before the date established for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the

Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect Owner's interest therein, all of which will be satisfactory to Owner. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

Contractor's Warranty of Title:

- 14.3. Contractor warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

Review of Applications for Progress Payment:

- 14.4. Engineer will, within fifteen (15) days after receipt of each Application for Payment, either indicate in writing a recommendation of payment or present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application. Thirty (30) days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of the last sentence of paragraph 14.7) become due and when due will be paid by Owner to Contractor.

- 14.5. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's on-site observations of the executed Work as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

14.5.1. The Work has progressed to the point indicated.

14.5.2. The quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.10, and to any other qualifications stated in the recommendation), and

14.5.3. The conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

However, by recommending any such payment Engineer will not thereby be deemed to have represented that: (i) exhaustive or continuous on-site inspections have been made to check the quality or the quantity of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents or (ii) that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

14.6. Engineer's recommendation of any payment, including final payment, shall not mean that Engineer is responsible for Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the furnishing or performance of Work, or for any failure of Contractor to perform or furnish Work in accordance with the Contract Documents.

14.7. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner referred to in paragraph 14.5. Engineer may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

14.7.1. the Work is defective, or completed Work has been damaged requiring correction or replacement.

14.7.2. the Contract Price has been reduced by Written Amendment or Change Order.

14.7.3. Owner has been required to correct defective Work or complete Work in accordance with paragraph 13.14. or

14.7.4. Engineer has actual knowledge of the occurrence of any of the events enumerated in paragraphs 15.2.1 through 15.2.4 inclusive.

Owner may refuse to make payment of the full amount recommended by Engineer because:

14.7.5. claims have been made against Owner on account of Contractor's performance or furnishing of the Work.

14.7.6. Liens have been filed in connection with the Work, except where Contractor has delivered a specific Bond satisfactory to Owner to secure the satisfaction and discharge of such Liens,

14.7.7. there are other items entitling Owner to a set-off against the amount recommended, or

14.7.8. Owner has actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.7.1 through 14.7.3 or paragraphs 15.2.1 through 15.2.4 inclusive;

but Owner must give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

Substantial Completion:

14.8. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for

items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion. Within a reasonable time thereafter, Owner, Contractor and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefore. If Engineer considers the Work substantially complete, Engineer will prepare and deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within fourteen days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefore. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said fourteen days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner. At the time of delivery of the tentative certificate of Substantial Completion Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, maintenance, heat, utilities, insurance and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

- 14.9. Owner shall have the right to exclude Contractor from the Work after the date of Substantial Completion, but Owner shall allow Contractor reasonable access to complete or correct items on the tentative list.

Partial Utilization:

- 14.10. Use by Owner at Owner's option of any substantially completed part of the Work which: (i) has specifically been identified in the Contract Documents, or (ii) Owner, Engineer and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following:

14.10.1. Owner at any time may request Contractor in writing to permit Owner to use any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, Owner, Contractor and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer

does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefore. If Engineer considers that part of the Work to be substantially complete, the provisions of paragraphs 14.8 and 14.9 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

14.10.2. No occupancy or separate operation of part of the Work will be accomplished prior to compliance with the requirements of paragraph 5.15 in respect of property insurance.

Owner may at any time request Contractor in writing to permit Owner to take over operation of any such part of the work although it is not substantially complete. A copy of such request will be sent to Engineer and within a reasonable time thereafter Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If Contractor does not object in writing to Owner and Engineer that such part of the Work is not ready for separate operation by Owner, Engineer will finalize the list of items to be completed or corrected and will deliver such lists to Owner and Contractor together with a written recommendation as to the division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, maintenance, utilities, insurance, warranties and guarantees for that part of the Work which will become binding upon Owner and Contractor at the time when Owner takes over such operation (unless they shall have otherwise agreed in writing and so informed Engineer). During such operation and prior to Substantial Completion of such part of the Work, Owner shall allow Contractor reasonable access to complete or correct items on said list and to complete other related Work.

Final Inspection:

14.11. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

Final Application for Payment:

14.12. After Contractor has completed all such corrections to the satisfaction of Engineer and delivered in accordance with the Contract Documents all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance required by paragraph 5.4, certificates of inspection, marked-up record documents (as provided in paragraph 6.19) and other documents, Contractor may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied (except as previously delivered) by:

(i) consent of the surety, if any, to final payment.

(ii) complete and legally effective releases or waivers (satisfactory to Owner) of all Liens arising out of or filed in connection with the Work. In lieu of such releases or waivers of

Liens and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and (ii) all payrolls, material and equipment bills and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a Bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

(iii) certification from surety that payment and performance bond shall remain in effect one (1) year following final payment.

(iv) contractor's advertisement of completion – advertisement for a period of four (4) successive weeks in the newspaper or largest circulation published within the county where the work is performed.

(v) certification from insurance company that any insurance coverage written on a claims-made basis, remain in effect for at least two (2) years following final payment.

Final Payment and Acceptance:

14.13. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of paragraph 14.15. Otherwise, Engineer will return the Application to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application. Thirty days after the presentation to Owner of the Application and accompanying documentation, in appropriate form and substance and with Engineer's recommendation and notice of acceptability, the amount recommended by Engineer will become due and will be paid by Owner to Contractor.

14.14. If, through no fault of Contractor, final completion of the Work is significantly delayed and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment and recommendation of Engineer, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.1, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

Waiver of Claims:

14.15. The making and acceptance of final payment will constitute:

14.15.1. a waiver of all claims by Owner against Contractor, except claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.11, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

14.15.12. a waiver of all claims by Contractor against Owner other than those previously made in writing and still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

Owner May Suspend Work:

15.1. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be allowed an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes an approved claim therefore as provided in Articles 11 and 12.

Owner May Terminate:

15.2. Upon the occurrence of any one or more of the following events:

15.2.1. if Contractor persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.9 as adjusted from time to time pursuant to paragraph 6.6);

15.2.2. if Contractor disregards Laws or Regulations of any public body having jurisdiction;

15.2.3. if Contractor disregards the authority of Engineer; or

15.2.4. if Contractor otherwise violates in any substantial way any provisions of the Contract Documents;

15.2.5 if Contractor commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;

15.2.6 if a petition is filed against Contractor under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state law in effect at the time relating to bankruptcy or insolvency;

15.2.7 if Contractor makes a general assignment for the benefit of creditors;

15.2.8 if a trustee, receiver, custodian, or agent of Contractor is appointed under applicable law or under contract, whose appointment or authority to take charge of property of Contractor is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of Contractor's creditors;

15.2.9 if Contractor admits in writing an inability to pay its debts generally as they become due.

Owner may, after giving Contractor (and the surety, if any,) seven days' written notice and to the extent permitted by Laws and Regulations, terminate the services of Contractor, exclude Contractor from the site and take possession of the Work and of all Contractor's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which Owner has paid Contractor but which are stored elsewhere, and finish the Work as Owner may deem expedient. In such case Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses and damages sustained by Owner arising out of or resulting from completing the Work such excess will be paid to Contractor. If such claims, costs, losses and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and when so approved by Engineer incorporated in a Change Order, provided that when exercising any rights or remedies under this paragraph Owner shall not be required to obtain the lowest price for the Work performed.

15.3. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

15.4. Upon seven days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, elect to terminate the Agreement. In such case, Contractor shall be paid (without duplication of any items):

15.4.1. for completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

15.4.2. for expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

15.4.3. for all claims, costs, losses and damages incurred in settlement of terminated contracts with Subcontractors, Suppliers and other; and

15.4.4. for reasonable expenses directly attributable to termination.

Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

Contractor May Stop Work or Terminate:

- 15.5. If, through no act or fault of Contractor, the Work is suspended for a period of more than ninety days by Owner or under an order of court or other public authority, or Engineer fails to act on any Application for Payment within thirty days after it is submitted or Owner fails for thirty days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Agreement and recover from Owner payment on the same terms as provided in paragraph 15.4. In lieu of terminating the Agreement and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within thirty days after it is submitted, or Owner has failed for thirty days to pay Contractor any sum finally determined to be due, Contractor may upon seven day's written notice to Owner and Engineer stop the Work until payment of all such amounts due Contractor, including interest thereon. The provisions of this paragraph 15.5 are not intended to preclude Contractor from making claim under Articles 11 and 12 for an increase in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping Work as permitted by this paragraph.

ARTICLE 17 – MISCELLANEOUS

Giving Notice:

- 17.1. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.2 Computation of Times:

17.2.1. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.2.2. A calendar day of twenty-four hours measured from midnight to the next midnight will constitute a day.

Notice of Claim:

- 17.3. Should Owner or Contractor suffer injury or damage to person or property because of any error, omission or act of the other part or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 17.3 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

Cumulative Remedies:

- 17.4. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon Contractor by paragraphs 6.12, 6.16, 6.30, 6.31, 6.32, 13.1, 13.12, 13.14, 14.3 and 15.2 and all of the rights and remedies available to Owner and Engineer thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply.

Professional Fees and Court Costs Included:

- 17.5. Whenever reference is made to "claims, costs, losses and damages," it shall include in each case, but not be limited to, all fees and charges of engineers, architects, attorneys and other professionals and all court or other dispute resolution costs.

GENERAL PROVISIONS
SECTION 10
DEFINITION OF TERMS

Whenever the following terms are used in these specifications, in the contract, in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be interpreted as follows:

10-01 AASHTO. The American Association of State Highway and Transportation Officials, the successor association to AASHO.

10-02 ACCESS ROAD. The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public highway.

10-03 ADVERTISEMENT. A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.

10-04 AIP. The Airport Improvement Program, a grant-in-aid program, administered by the Federal Aviation Administration.

10-05 AIR OPERATIONS AREA. For the purpose of these specifications, the term air operations area shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.

10-06 AIRPORT. Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft, and includes its buildings and facilities, if any.

10-07 ASTM. The American Society for Testing and Materials.

10-08 AWARD. The acceptance, by the owner, of the successful contractor's proposal.

10-09 BUILDING AREA. An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.

10-10 CALENDAR DAY. Every day shown on the calendar.

10-11 CHANGE ORDER. A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for the work affected by such changes. The work, covered by a change order, shall be within the scope of the contract.

10-12 CONTRACT. The written agreement covering the work to be performed. The awarded contract shall include, but is not limited to: The Advertisement; The Contract Form; The Proposal; The Performance Bond; The Payment Bond; any required insurance certificates; The Specifications; The Plans, and any addenda issued to contractors.

10-13 CONTRACT ITEM (PAY ITEM). A specific unit of work for which a price is provided in the contract.

10-14 CONTRACT TIME. The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.

10-15 CONTRACTOR. The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.

10-16 DRAINAGE SYSTEM. The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.

10-17 ENGINEER. The individual, partnership, firm, or corporation duly authorized by the owner (sponsor) to be responsible for engineering supervision of the contract work and acting directly or through an authorized representative. The following list of independent professional associates and consultants are considered the Engineer's consultant for this Construction Contract:

AVCON, Inc. 850-678-0050

10-18 EQUIPMENT. All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the work.

10-19 EXTRA WORK. An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified.

10-20 FAA. The Federal Aviation Administration of the U.S. Department of Transportation. When used to designate a person, FAA shall mean the Administrator or his/her duly authorized representative.

10-21 FEDERAL SPECIFICATIONS. The Federal Specifications and Standards, and supplements, amendments, and indices thereto are prepared and issued by the General Services Administration of the Federal Government.

10-22 INSPECTOR. An authorized representative of the Engineer assigned to make all necessary inspections and/or tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.

10-23 INTENTION OF TERMS. Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of the like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer, subject in each case to the final determination of the owner.

Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.

10-24 LABORATORY. The official testing laboratories of the owner or such other laboratories as may be designated by the Engineer.

10-25 LIGHTING. A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.

10-26 MAJOR AND MINOR CONTRACT ITEMS. A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20 percent of the total amount of the award contract. All other items shall be considered minor contract items.

10-27 MATERIALS. Any substance specified for use in the construction of the contract work.

10-28 NOTICE TO PROCEED. A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.

10-29 OWNER (SPONSOR). The term owner shall mean the party of the first part or the contracting agency signatory to the contract. For AIP contracts, the term sponsor shall have the same meaning as the term owner.

10-30 PAVEMENT. The combined surface course, base course, and subbase course, if any, considered as a single unit.

10-31 PAYMENT BOND. The approved form of security furnished by the Contractor and his/her surety as a guaranty that he will pay in full all bills and accounts for materials and labor used in the construction of the work.

10-32 PERFORMANCE BOND. The approved form of security furnished by the Contractor and his/her surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.

10-33 PLANS. The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications.

10-34 PROJECT. The agreed scope of work for accomplishing specific airport development with respect to a particular airport.

10-35 PROPOSAL. The written offer of the contractor (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.

10-36 PROPOSAL GUARANTY. The security furnished with a proposal to guarantee that the contractor will enter into a contract if his/her proposal is accepted by the owner.

10-37 RUNWAY. The area on the airport prepared for the landing and takeoff of aircraft.

10-38 SPECIFICATIONS. A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.

10-39 STRUCTURES. Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; flexible and rigid pavements; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.

10-40 SUBGRADE. The soil which forms the pavement foundation.

10-41 SUPERINTENDENT. The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the Engineer, and who shall supervise and direct the construction.

10-42 SUPPLEMENTAL AGREEMENT. A written agreement between the Contractor and the owner covering: (1) work that would increase or decrease the total amount of the awarded contract, or any major contract item, by more than 25 percent, such increased or decreased work being within the scope of the originally awarded contract; or (2) work that is not within the scope of the originally awarded contract.

10-43 SURETY. The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds which are furnished to the owner by the Contractor.

10-44 TAXIWAY. For the purpose of this document, the term taxiway means the portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways or aircraft parking areas.

10-45 WORK. The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.

10-46 WORKING DAY. A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least 6 hours toward completion of the contract. Unless work is suspended for causes beyond the Contractor's control, Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work, requiring the presence of an inspector, will be considered as working days.

END OF SECTION 10

GENERAL PROVISIONS (AIP)
SECTION 20
PROPOSAL REQUIREMENTS AND CONDITIONS

20-01 ADVERTISEMENT (Notice to Contractors). Contractors shall refer to the Notice to Contractors (as amended) for the time and place for the project Pre-Bid Conference and the time and place for submitting sealed proposals.

20-02 PREQUALIFICATION OF CONTRACTORS. Each contractor shall furnish the owner satisfactory evidence of his/her competency to perform the proposed work. Such evidence of competency, unless otherwise specified, shall consist of statements covering the contractor's past experience on similar work, a list of equipment that would be available for the work, and a list of key personnel that would be available. In addition, each contractor shall furnish the owner satisfactory evidence of his/her financial responsibility. Such evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the contractor's financial resources and liabilities as of the last calendar year or the Contractor's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the contractor shall further certify whether his/her financial responsibility is approximately the same as stated or reported by the public accountant. If the contractor's financial responsibility has changed, the contractor shall qualify the public accountant's statement or report to reflect his/her (contractor's) true financial condition at the time such qualified statement or report is submitted to the owner.

Unless otherwise specified, a contractor may submit evidence that he is prequalified with the State Highway Division and is on the current "contractor's list" of the state in which the proposed work is located. Such evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports hereinbefore specified.

Each contractor shall submit "evidence of competency" and "evidence of financial responsibility" to the owner at the time of bid opening.

20-03 CONTENTS OF PROPOSAL FORMS. The owner shall furnish contractors with proposal forms. All papers bound with or attached to the proposal forms are necessary parts and must not be detached.

The plans specifications, and other documents designated in the proposal form shall be considered a part of the proposal whether attached or not.

20-04 ISSUANCE OF PROPOSAL FORMS. The owner reserves the right to refuse to issue a proposal form to a prospective contractor should such contractor be in default for any of the following reasons:

- a. Failure to comply with any prequalification regulations of the owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for the bid.
- b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force (with the owner) at the time the owner issues the proposal to a prospective contractor.

- c. Contractor default under previous contracts with the owner.
- d. Unsatisfactory work on previous contracts with the owner.

20-05 INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The owner does not expressly or by implication agree that the actual quantities involved will correspond exactly therewith; nor shall the contractor plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as hereinafter provided in the subsection titled ALTERATION OF WORK AND QUANTITIES of Section 40 without in any way invalidating the unit bid prices.

20-06 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE. The contractor is expected to carefully examine the site of the proposed work, the proposal, plans specifications, and contract forms. He shall satisfy himself as to the character, quality, and quantities of work to be performed, materials to be furnished, and as to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the contractor has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of contractors. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the contractor, was obtained and is intended for the owner's design and estimating purposes only. Such information has been made available for the convenience of all contractors. It is further understood and agreed that each contractor is solely responsible for all assumptions, deductions, or conclusions which he may make or obtain from his/her examination of the boring logs and other records of subsurface investigations and tests that are furnished by the owner.

20-07 PREPARATION OF PROPOSAL. The contractor shall submit his/her proposal on the forms furnished by the owner. All blank spaces in the proposal forms must be correctly filled in where indicated for each and every item for which a quantity is given. The contractor shall state the price (written in ink or typed) both in words and numerals for which he proposes to do each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The contractor shall sign his/her proposal correctly and in ink. If the proposal is made by an individual, his/her name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state under the laws of which the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of his/her authority to do so and that the signature is binding upon the firm or corporation.

20-08 IRREGULAR PROPOSALS. Proposals shall be considered irregular for the following reasons:

- a. If the proposal is on a form other than that furnished by the owner, or if the owner's form is altered, or if any part of the proposal form is detached.
- b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind which make the proposal incomplete, indefinite, or otherwise ambiguous.
- c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the contractor is not required to furnish a unit price.
- d. If the proposal contains unit prices that are obviously unbalanced.
- e. If the proposal is not accompanied by the proposal guaranty specified by the owner.

The contractor must be a responsible party, i.e. it must have the required financial, managerial, technical, and ethical capacity to perform the contract. A bid that does not conform to all material terms and conditions of the Notice to Contractors that are deemed substantial shall be considered non-responsive.

The owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-09 BID GUARANTEE. Each separate proposal shall be accompanied by a certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such check, or collateral, shall be made payable to the owner.

20-10 DELIVERY OF PROPOSAL. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the contractor on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the contractor unopened.

20-11 WITHDRAWAL OR REVISION OF PROPOSALS. A contractor may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the contractor's request for withdrawal is received by the owner in writing or by telegram before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-12 PUBLIC OPENING OF PROPOSALS. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Contractors, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the contractor unopened.

20-13 DISQUALIFICATION OF CONTRACTORS. A contractor shall be considered disqualified for any of the following reasons:

- a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.
- b. Evidence of collusion among contractors. Contractors participating in such collusion shall be disqualified as contractors for any future work of the owner until any such participating contractor has been reinstated by the owner as a qualified contractor.
- c. If the contractor is considered to be in “default” for any reason specified in the subsection titled ISSUANCE OF PROPOSAL FORMS of this section.

END OF SECTION 20

**GENERAL PROVISIONS - SECTION 30
AWARD AND EXECUTION OF CONTRACT**

30-01 CONSIDERATION OF PROPOSALS. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a contractor's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit price written in words shall govern.

Until the award of a contract is made, the owner reserves the right to reject a contractor's proposal for any of the following reasons:

- a. If the proposal is irregular as specified in the subsection titled **IRREGULAR PROPOSALS** of Section 20.
- b. If the contractor is disqualified for any of the reasons specified in the subsection titled **DISQUALIFICATION OF CONTRACTORS** of Section 20.

In addition, until the award of a contract is made, the owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the owner's best interests.

30-02 AWARD OF CONTRACT. The award of a contract, if it is to be awarded, shall be made within 30 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

Award of the contract shall be made by the owner to the lowest, qualified contractor whose proposal conforms to the cited requirements of the owner.

30-03 CANCELLATION OF AWARD. The owner reserves the right to cancel the award without liability to the contractor, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the owner in accordance with the subsection titled **APPROVAL OF CONTRACT** of this section.

30-04 RETURN OF PROPOSAL GUARANTY. All proposal guaranties, except those of the two lowest contractors, will be returned immediately after the owner has made a comparison of bids as herein before specified in the subsection titled **CONSIDERATION OF PROPOSALS** of this section. Proposal guaranties of the two lowest contractors will be retained by the owner until such time as an award is made, at which time, the unsuccessful contractor's proposal guaranty will be returned. The successful contractor's proposal guaranty will be returned as soon as the owner receives the contracts bonds as specified in the subsection titled **REQUIREMENTS OF CONTRACT BONDS** of this section.

30-05 REQUIREMENTS OF CONTRACT BONDS. At the time of the execution of the contract, the successful contractor shall furnish the owner a surety bond or bonds which have been fully executed by the contractor and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The

surety and the form of the bond or bonds shall be acceptable to the owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 EXECUTION OF CONTRACT. The successful contractor shall sign (execute) the necessary agreements for entering into the contract and return such signed contract to the owner, along with the fully executed surety bond or bonds specified in the subsection titled REQUIREMENTS OF CONTRACT BONDS of this section, within 15 calendar days from the date mailed or otherwise delivered to the successful contractor. If the contract is mailed, special handling is recommended.

The Contractor and all sub-recipients or subcontractors under this contract shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. Failure of the Contractor to carry out the applicable requirements of 49 CFR Part 26 in the award and administration of these requirements is a material breach of this contract, which may result in the termination of this contract.

30-07 APPROVAL OF CONTRACT. Upon receipt of the contract and contract bond or bonds that have been executed by the successful contractor, the owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the owner's approval to be bound by the successful contractor's proposal and the terms of the contract.

30-08 FAILURE TO EXECUTE CONTRACT. Failure of the successful contractor to execute the contract and furnish an acceptable surety bond or bonds within the 15 calendar day period specified in the subsection titled REQUIREMENTS OF CONTRACT BONDS of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidation of damages to the owner.

END OF SECTION 30

GENERAL PROVISIONS - SECTION 40
SCOPE OF WORK

40-01 INTENT OF CONTRACT. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-02 ALTERATION OF WORK AND QUANTITIES. The owner reserves and shall have the right to make such alterations in the work as may be necessary or desirable to complete the work originally intended in an acceptable manner. Unless otherwise specified herein, the Engineer shall be and is hereby authorized to make such alterations in the work as may increase or decrease the originally awarded contract quantities, provided that the aggregate of such alterations does not change the total contract cost or the total cost of any major contract item by more than 25 percent (total cost being based on the unit prices and estimated quantities in the awarded contract). Alterations which do not exceed the 25 percent limitation shall not invalidate the contract nor release the surety, and the Contractor agrees to accept payment for such alterations as if the altered work had been a part of the original contract. These alterations which are for work within the general scope of the contract shall be covered by "Change Orders" issued by the Engineer. Change orders for altered work shall include extensions of contract time where, in the Engineer's opinion, such extensions are commensurate with the amount and difficulty of added work.

Should the aggregate amount of altered work exceed the 25 percent limitation hereinbefore specified, such excess altered work shall be covered by supplemental agreement. If the owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

All supplemental agreements shall be approved by the FAA or FDOT, as applicable, and shall include valid wage determinations of the U.S. Secretary of Labor when the amount of the supplemental agreement exceeds \$2,000. However, if the Contractor elects to waive the limitations on work that increases or decreases the originally awarded contract or any major contract item by more than 25 percent, the supplemental agreement shall be subject to the same U.S. Secretary of Labor wage determination as was included in the originally awarded contract.

All supplemental agreements shall require consent of the Contractor's surety and separate performance and payment bonds.

40-03 OMITTED ITEMS. The Engineer may, in the owner's best interest, omit from the work any contract item, except major contract items. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be nonperformed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with the subsection titled PAYMENT FOR OMITTED ITEMS of Section 90.

40-04 EXTRA WORK. Should acceptable completion of the contract require the Contractor to perform an item of work for which no basis of payment has been provided in the original contract or previously issued change orders or supplemental agreements, the same shall be called Extra Work. Extra work that is within the general scope of the contract shall be covered by written change order. Change orders for such extra work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the Engineer's opinion, is necessary for completion of such extra work.

When determined by the Engineer to be in the owner's best interest, he may order the Contractor to proceed with extra work by force account as provided in the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of Section 90.

Extra work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a Supplemental Agreement as hereinbefore defined in the subsection titled SUPPLEMENTAL AGREEMENT of Section 10.

Any claim for payment of extra work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the owner.

40-05 FINAL CLEANING UP. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. He shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of such property owner.

END OF SECTION 40

GENERAL PROVISIONS - SECTION 50
CONTROL OF WORK

50-01 AUTHORITY OF THE ENGINEER. The Engineer shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work. He shall decide all questions which may arise as to the interpretation of the specifications or plans relating to the work, the fulfillment of the contract on the part of the Contractor, and the rights of different Contractors on the project. The Engineer shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for the under contract.

50-02 CONFORMITY WITH PLANS AND SPECIFICATIONS. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans or specifications.

If the Engineer finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications but that the portion of the work affected will, in his/her opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the owner, he will advise the owner of his/her determination that the affected work be accepted and remain in place. In this event, the Engineer will document his/her determination and recommend to the owner a basis of acceptance which will provide for an adjustment in the contract price for the affected portion of the work. The Engineer's determination and recommended contract price adjustments will be based on good engineering judgment and such tests or retests of the affected work as are, in his/her opinion, needed. Changes in the contract price shall be covered by contract modifications (change order or supplemental agreement) as applicable.

If the Engineer finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the Engineer's written orders.

For the purpose of this subsection, the term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the Engineer's right to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's prosecution of the work, when, in the Engineer's opinion, such compliance is essential to provide an acceptable finished portion of the work.

For the purpose of this subsection, the term "reasonably close conformity" is also intended to provide the Engineer with the authority to use good engineering judgment in his/her determinations as to acceptance of work that is not in strict conformity but will provide a finished product equal to or better than that intended by the requirements of the contract, plans and specifications.

The Engineer should advise the Owner if her/she accepts work that is not in "reasonably close conformity" to the Contract, Plans and Specifications. The Owner will in turn advise the FAA. Change orders or supplemental agreements for AIP contracts must bear the written approval of the FAA.

50-03 COORDINATION OF CONTRACT, PLANS, AND SPECIFICATIONS. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited FAA advisory circulars; contract general provisions shall govern over plans, cited standards for materials or testing, and cited FAA advisory circulars; plans shall govern over cited standards for materials or testing and cited FAA advisory circulars. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, he shall immediately call upon the Engineer for his/her interpretation and decision, and such decision shall be final.

50-04 COOPERATION OF CONTRACTOR. The Contractor will be supplied with two copies each of the plans and specifications. He shall have available on the work at all times one copy each of the plans and specifications. Additional copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and he shall cooperate with the Engineer and his/her inspectors and with other contractors in every way possible. The Engineer shall allocate the work and designate the sequence of construction in case of controversy between contractors. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as his/her agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the Engineer or his/her authorized representative.

50-05 COOPERATION BETWEEN CONTRACTORS. The owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct his/her work so as not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with his/her contract and shall protect and save harmless the owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced by him because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange his/her work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the same project.

He shall join his/her work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-06 AUTHORITY AND DUTIES OF INSPECTORS. Inspectors employed by the owner shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are not authorized to revoke, alter, or waive any provision of the contract. Inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

Inspectors employed by the owner are authorized to notify the Contractor or his/her representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the Engineer for his/her decision.

50-07 INSPECTION OF THE WORK. All materials and each part or detail of the work shall be subject to inspection by the Engineer. The Engineer shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the Engineer requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Any work done or materials used without supervision or inspection by an authorized representative of the owner may be ordered removed and replaced at the Contractor's expense unless the owner's representative failed to inspect after having been given reasonable notice in writing that the work was to be performed.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) owner, authorized representatives of the owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

50-08 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK. All work which does not form to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the Engineer as provided in the subsection titled CONFORMITY WITH PLANS AND SPECIFICATIONS of this section.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall

be removed immediately and replaced in an acceptable manner in accordance with the provisions of the subsection titled CONTRACTOR'S RESPONSIBILITY FOR WORK of Section 70.

Work done contrary to the instructions of the Engineer, work done beyond the lines shown on the plans or as given, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply forthwith with any order of the Engineer made under the provisions of this subsection, the Engineer will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the costs (incurred by the owner) from any monies due or to become due the Contractor.

50-09 LOAD RESTRICTIONS. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage which may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor shall be responsible for all damage done by his/her hauling equipment and shall correct such damage at his/her own expense.

50-10 MAINTENANCE DURING CONSTRUCTION. The Contractor shall maintain the work during construction and until the work is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-11 FAILURE TO MAINTAIN THE WORK. Should the Contractor at any time fail to maintain the work as provided in the subsection titled MAINTENANCE DURING CONSTRUCTION of this section, the Engineer shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the Engineer's notification, the Engineer may suspend any work necessary for the owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the owner, shall be deducted from monies due or to become due the Contractor.

50-12 PARTIAL ACCEPTANCE. If at any time during the prosecution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the owner, he may request the Engineer to make final inspection of that unit. If the Engineer finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, he may accept it as being completed, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the owner shall not void or alter any provision of the contract.

50-13 FINAL ACCEPTANCE. Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer and owner will make an inspection. If all construction provided for and contemplated by the contract is found to be completed in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The Engineer shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-14 CLAIMS FOR ADJUSTMENT AND DISPUTES. If for any reason the Contractor deems that additional compensation is due him for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, he shall notify the Engineer in writing of his/her intention to claim such additional compensation before he begins the work on which he bases the claim. If such notification is not given or the Engineer is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the Engineer has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit his/her written claim to the Engineer who will present it to the owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

END OF SECTION 50

GENERAL PROVISIONS - SECTION 60 CONTROL OF MATERIALS

60-01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS. The materials used on the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish complete statements to the Engineer as to the origin, composition, and manufacture of all materials to be used in the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the Engineer's option, materials may be approved at the source of supply before delivery is stated. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

60-02 SAMPLES, TESTS, AND CITED SPECIFICATIONS. Unless otherwise designated, all materials used in the work shall be inspected, tested, and approved by the Engineer before incorporation in the work. Any work in which untested materials are used without approval or written permission of the Engineer shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense. Unless otherwise designated, tests in accordance with the cited standard methods of ASTM, AASHTO, Federal Specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids, will be made by and at the expense of the Engineer. The testing organizations performing on site field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel, including the Contractor's representative at his/her request. Unless otherwise designated, samples will be taken by a qualified representative of the Engineer. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at his/her request.

The Contractor shall employ a testing organization to perform all Contractor required tests. The Contractor shall submit to the Engineer resumes on all testing organizations and individual persons who will be performing the tests. The Engineer will determine if such persons are qualified. All the test data shall be reported to the Engineer after the results are known. A legible, handwritten copy of all test data shall be given to the Engineer daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the Engineer showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

60-03 CERTIFICATION OF COMPLIANCE. The Engineer may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's certificates of compliance stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the Engineer.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "brand name," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

- a. Conformance to the specified performance, testing, quality or dimensional requirements; and,
- b. Suitability of the material or assembly for the use intended in the contract work.

Should the Contractor propose to furnish an "or equal" material or assembly, he shall furnish the manufacturer's certificates of compliance as hereinbefore described for the specified brand name material or assembly. However, the Engineer shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The Engineer reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 STORAGE OF MATERIALS. Materials shall be so stored as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located so as to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the Engineer. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the Engineer. Private property shall not be used for storage purposes without written permission of the owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the Engineer a copy of the property owner's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at his/her entire expense, except as otherwise agreed to (in writing) by the owner or lessee of the property.

60-05 UNACCEPTABLE MATERIALS. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the Engineer.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the Engineer has approved its use in the work.

60-06 OWNER FURNISHED MATERIALS. The Contractor shall furnish all materials required to complete the work, except those specified herein (if any) to be furnished by the owner. Owner-furnished materials shall be made available to the Contractor at the location specified herein.

All costs of handling, transportation from the specified location to the site of work, storage, and installing owner-furnished materials shall be included in the unit price bid for the contract item in which such owner-furnished material is used.

After any owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies which may occur during the Contractor's handling, storage, or use of such owner-furnished material. The owner will deduct from any monies due or to become due the Contractor any cost incurred by the owner in making good such loss due to the Contractor's handling, storage, or use of owner-furnished materials.

END OF SECTION 60

GENERAL PROVISIONS - SECTION 70
LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

70-01 LAWS TO BE OBSERVED. The Contractor shall keep fully informed of all Federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. He shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the owner and all his/her officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by himself or his/her employees.

70-02 PERMITS, LICENSES, AND TAXES. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the work.

70-03 PATENTED DEVICES, MATERIALS, AND PROCESSES. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, he shall provide for such use by suitable legal agreement with the patentee or owner. The Contractor and the surety shall indemnify and save harmless the owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the prosecution or after the completion of the work.

70-04 RESTORATION OF SURFACES DISTURBED BY OTHERS. The owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the owner, such authorized work (by others) is indicated as follows:

NONE

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the Engineer.

Should the owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such owners by arranging and performing the work in this contract so as to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the Engineer, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 PUBLIC CONVENIENCE AND SAFETY. The Contractor shall control his/her operations and those of his/her subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to his/her own operations and those of his/her subcontractors and all suppliers in accordance with the subsection titled MAINTENANCE OF TRAFFIC of Section 40 hereinbefore specified and shall limit such operations for the convenience and safety of the traveling public as specified in the subsection titled LIMITATION OF OPERATIONS of Section 80 hereinafter.

70-06 BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS. The Contractor shall furnish, erect, and maintain all barricades, warning signs, and markings for hazards necessary to protect the public and the work. When used during periods of darkness, such barricades, warning signs, and hazard markings shall be suitably illuminated.

For vehicular and pedestrian traffic, the Contractor shall furnish, erect, and maintain barricades, warning signs, lights and other traffic control devices in reasonable conformity with the Manual of Uniform Traffic Control Devices for Streets and Highways (published by the United States Government Printing Office).

70-07 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in his/her manner or method of executing the work, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the nonexecution thereof by the Contractor, he shall restore, at his/her own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or he shall make good such damage or injury in an acceptable manner.

70-08 RESPONSIBILITY FOR DAMAGE CLAIMS. The Contractor shall indemnify and save harmless the Engineer and the owner and their officers, and employees from all suits actions, or claims of any character brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of his/her contract as may be considered necessary by the owner for such purpose may be retained for

the use of the owner or, in case no money is due, his/her surety may be held until such suit or suits, action or actions, claim or claims for injuries or damages as aforesaid shall have been settled and suitable evidence to that effect furnished to the owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he is adequately protected by public liability and property damage insurance.

70-09 THIRD PARTY BENEFICIARY CLAUSE. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create the public or any member thereof a third party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-10 CONTRACTOR'S RESPONSIBILITY FOR WORK. Until the Engineer's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with the subsection titled PARTIAL ACCEPTANCE of Section 50, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the nonexecution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at his/her expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seedings, and soddings furnished under his/her contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

It is understood and agreed that the owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of his/her responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the owners of all utility services or other facilities of his/her plan of operations. Such notification shall be in writing addressed to THE PERSON TO CONTACT as provided hereinbefore in this subsection and the subsection titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section. A copy of each notification shall be given to the Engineer.

In addition to the general written notification hereinbefore provided, it shall be the responsibility of the Contractor to keep such individual owners advised of changes in his/her plan of operations that would affect such owners.

Prior to commencing the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such owner of his/her plan of operation. If, in the Contractor's opinion, the owner's assistance is needed to locate the utility service or facility or the presence of a representative of the owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's PERSON TO CONTACT no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the Engineer.

The Contractor's failure to give the two day's notice hereinabove provided shall be cause for the Engineer to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use excavation methods acceptable to the Engineer within 3 feet (90 cm) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, he shall immediately notify the proper authority and the Engineer and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the Engineer continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to his/her operations whether or not due to negligence or accident. The contract owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or his/her surety.

70-11 FURNISHING RIGHTS-OF-WAY. The owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-12 PERSONAL LIABILITY OF PUBLIC OFFICIALS. In carrying out any of the contract provisions or in exercising any power or authority granted to him by this contract, there shall be no liability upon the Engineer, his/her authorized representatives, or any officials of the owner either personally or as an official of the owner. It is understood that in such matters they act solely as agents and representatives of the owner.

70-13 NO WAIVER OF LEGAL RIGHTS. Upon completion of the work, the owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or estop the owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the owner be precluded or estopped from recovering from the Contractor or his/her surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill his/her obligations under the

contract. A waiver on the part of the owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the owner's rights under any warranty or guaranty.

END OF SECTION 70

**GENERAL PROVISIONS - SECTION 80
PROSECUTION AND PROGRESS**

80-01 SUBLETTING OF CONTRACT. The owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Engineer.

Should the Contractor elect to assign his/her contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the owner, and shall be consummated only on the written approval of the owner. In case of approval, the Contractor shall file copies of all subcontracts with the Engineer.

The Contractor shall perform, with his organization, an amount of work equal to at least 25% percent of the total contract cost.

80-02 NOTICE TO PROCEED. The notice to proceed shall state the date on which it is expected the Contractor will begin the construction and from which date contract time will be charged. The Contractor shall begin the work to be performed under the contract within 10 days of the date set by the Engineer in the written notice to proceed, but in any event, the Contractor shall notify the Engineer at least 24 hours in advance of the time actual construction operations will begin.

80-03 PROSECUTION AND PROGRESS. Unless otherwise specified, the Contractor shall submit his/her progress schedule for the Engineer's approval within 10 days after the effective date of the notice to proceed. The Contractor's progress schedule, when approved by the Engineer, may be used to establish major construction operations and to check on the progress of the work. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the Engineer's request, submit a revised schedule for completion of the work within the contract time and modify his/her operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the prosecution of the work be discontinued for any reason, the Contractor shall notify the Engineer at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the owner.

80-04 LIMITATION OF OPERATIONS. The Contractor shall control his/her operations and the operations of his/her subcontractors and all suppliers so as to provide for the free and unobstructed movement of aircraft in the AIR OPERATIONS AREAS of the airport.

When the work requires the Contractor to conduct his/her operations within an AIR OPERATIONS AREA of the airport, the work shall be coordinated with airport management (through the Engineer) at least 48 hours prior to commencement of such work. The Contractor shall not close an AIR OPERATIONS AREA until so authorized by the Engineer and until the necessary temporary marking and associated lighting is in place as provided in the subsection titled BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS of Section 70.

When the contract work requires the Contractor to work within an AIR OPERATIONS AREA of the airport on an intermittent basis (intermittent opening and closing of the AIR OPERATIONS AREA), the Contractor shall maintain constant communications as hereinafter specified; immediately obey all instructions to vacate the AIR OPERATIONS AREA; immediately obey all instructions to resume work in such AIR OPERATIONS AREA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AIR OPERATIONS AREA until the satisfactory conditions are provided. The following AIR OPERATIONS AREA (AOA) cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows:

- **None**

Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction (See Special Provisions).

80-04.1 OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION. All Contractors' operations shall be conducted in accordance with the project safety plan and the provisions set forth within the current version of Advisory Circular 150/5370-2. The safety plan included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a plan that details how it proposes to comply with the requirements presented within the safety plan.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks of the safety plan measures to assure compliance with the safety plan measures. At no time shall equipment or tools be left accessible and unattended in the secure area.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the safety plan and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved safety plan unless approved in writing by the Owner or Engineer.

80-05 CHARACTER OF WORKERS, METHODS, AND EQUIPMENT. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Should the Contractor fail to remove such persons or person, or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Engineer may suspend the work by written notice until compliance with such orders.

All equipment which is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall be such that no injury to previously completed work, adjacent property, or existing airport facilities will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than specified in the contract, he may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this subsection.

80-06 TEMPORARY SUSPENSION OF THE WORK. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods as he may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for the prosecution of the work, or for such time as is necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the Engineer's order to suspend work to the effective date of the Engineer's order to resume the work. Claims for such compensation shall be filed with the Engineer within the time period stated in the Engineer's order to resume work. The Contractor shall submit with his/her claim information substantiating the amount shown on the claim. The Engineer will forward the Contractor's claim to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather, for suspensions made at the request of the Owner, or for any other delay provided for in the contract, plans, or specifications.

If it should become necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. He shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

80-07 DETERMINATION AND EXTENSION OF CONTRACT TIME. The number of calendar or working days allowed for completion of the work shall be stated in the proposal and contract and shall be known as the CONTRACT TIME.

Should the contract time require extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

- a. CONTRACT TIME based on WORKING DAYS shall be calculated weekly by the Engineer. The Engineer will furnish the Contractor a copy of his/her weekly statement of the number of working days charged against the contract time during the week and the number of working days currently specified for completion of the contract (the original contract time plus the number of working days, if any, that have been included in approved CHANGE ORDERS or SUPPLEMENTAL AGREEMENTS covering EXTRA WORK).

The Engineer shall base his/her weekly statement of contract time charged on the following considerations:

- (1) No time shall be charged for days on which the Contractor is unable to proceed with the principal item of work under construction at the time for at least 6 hours with the normal work force employed on such principal item. Should the normal work force be on a double-shift, 12 hours shall be used. Should the normal work force be on a triple-shift, 18 hours shall apply. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the principal item of work under construction or temporary suspension of the entire work which have been ordered by the Owner for reasons not the fault of the Contractor, shall not be charged against the contract time.
- (2) The Engineer will not make charges against the contract time prior to the effective date of the notice to proceed.
- (3) The Engineer will begin charges against the contract time on the first working day after the effective date of the notice to proceed.
- (4) The Engineer will not make charges against the contract time after the date of final acceptance as defined in the subsection titled FINAL ACCEPTANCE of Section 50.
- (5) The Contractor will be allowed 1 week in which to file a written protest setting forth his/her objections to the Engineer's weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor.

The contract time (stated in the proposal) is based on the originally estimated quantities as described in the subsection titled INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES of Section 20. Should the satisfactory completion of the contract require performance of work in greater quantities than those estimated in the proposal, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in contract time shall not consider either the cost of work or the extension of contract time that has been covered by change order or supplemental agreement and shall be made at the time of final payment.

- b. **CONTRACT TIME** based on **CALENDAR DAYS** shall consist of the number of calendar days stated in the contract counting from the effective date of the notice to proceed and including all Saturdays, Sundays, holidays, and nonwork days. All calendar days elapsing between the effective dates of the Owner's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

- c. When the contract time is a specified completion date, it shall be the date on which all contract work shall be substantially completed.

If the Contractor finds it impossible for reasons beyond his/her control to complete the work within the contract time as specified, or as extended in accordance with the provisions of this subsection, he may, at any time prior to the expiration of the contract time as extended, make a written request to the Engineer for an extension of time setting forth the reasons which he believes will justify the granting of his/her request. Requests for extension of time on calendar day projects, caused by inclement weather, shall be supported with National Weather Bureau data showing the actual amount of inclement weather exceeded which could normally be expected during the contract period. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the Engineer finds that the work was delayed because of conditions beyond the control and without the fault of the Contractor, he may extend the time for completion in such amount as the conditions justify. The extended time for completion shall then be in full force and effect, the same as though it were the original time for completion.

80-08 FAILURE TO COMPLETE ON TIME. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in the subsection titled **DETERMINATION AND EXTENSION OF CONTRACT TIME** of this Section) the sum specified in the contract and proposal as liquidated damages will be deducted from any money due or to become due the Contractor or his/her surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages that will be incurred by the owner should the Contractor fail to complete the work in the time provided in his/her contract.

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the owner of any of its rights under the contract.

80-09 DEFAULT AND TERMINATION OF CONTRACT. The Contractor shall be considered in default of his/her contract and such default will be considered as cause for the owner to terminate the contract for any of the following reasons if the Contractor:

- a. Fails to begin the work under the contract within the time specified in the "Notice to Proceed," or

- b. Fails to perform the work or fails to provide sufficient workers, equipment or materials to assure completion of work in accordance with the terms of the contract, or
- c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or
- d. Discontinues the prosecution of the work, or
- e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or
- f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- g. Allows any final judgment to stand against him unsatisfied for a period of 10 days, or
- h. Makes an assignment for the benefit of creditors, or
- i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Engineer consider the Contractor in default of the contract for any reason hereinbefore, he shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the owner will, upon written notification from the Engineer of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the prosecution of the work out of the hands of the Contractor. The owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the Engineer will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the owner the amount of such excess.

80-10 TERMINATION FOR NATIONAL EMERGENCIES. The owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the prosecution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the Engineer.

Termination of the contract or a portion thereof shall neither relieve the Contractor of his/her responsibilities for the completed work nor shall it relieve his/her surety of its obligation for and concerning any just claim arising out of the work performed.

END OF SECTION 80

GENERAL PROVISIONS - SECTION 90
MEASUREMENT AND PAYMENT

90-01 MEASUREMENT OF QUANTITIES. All work completed under the contract will be measured by the Engineer, or his/her authorized representatives, using United States Customary Units of Measurement or the International System of Units.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meter) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the Engineer.

Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

In computing volumes of excavation the average end area method or other acceptable methods will be used.

The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inches.

The term "ton" will mean the short ton consisting of 2,000 pounds (907 kilograms) avoirdupois. All materials which are measured or proportioned by weights shall be weighed on accurate, approved scales by competent, qualified personnel at locations designed by the Engineer. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material be paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the Engineer directs, and each truck shall bear a plainly legible identification mark.

Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable to the Engineer, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.

When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement

to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Bituminous materials will be measured by the gallon (liter) or ton (kilogram). When measured by volume, such volumes will be measured at 60 °F (15 °C) or will be corrected to the volume at 60 °F (15 °C) using ASTM D 1250 for asphalts or ASTM D 633 for tars.

Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work.

When bituminous materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.

Cement will be measured by the ton (kilogram) or hundredweight (kilogram).

Timber will be measured by the thousand feet board measure (M.F.B.M.) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

The term "lump sum" when used as an item of payment will mean complete payment for the work described in the contract.

When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered by the Engineer in connection with force account work will be measured as agreed in the change order or supplemental agreement authorizing such force account work as provided in the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of this section.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales.

Scales shall be accurate within one-half percent of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the inspector before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed one-tenth of 1 percent of the nominal rated capacity of the scale, but not less than 1 pound (454 grams). The use of spring balances will not be permitted.

Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the inspector can safely and conveniently view them.

Scale installations shall have available ten standard 50-pound (2.3 kilogram) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.

Scales must be tested for accuracy and serviced before use at a new site. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.

Scales “overweighing” (indicating more than correct weight) will not be permitted to operate, and all materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of one-half of 1 percent.

In the event inspection reveals the scales have been “underweighing” (indicating less than correct weight), they shall be adjusted, and no additional payment to the Contractor will be allowed for materials previously weighed and recorded.

All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.

When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the Engineer. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-02 SCOPE OF PAYMENT. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the prosecution thereof, subject to the provisions of the subsection titled NO WAIVER OF LEGAL RIGHTS of Section 70.

When the “basis of payment” subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 COMPENSATION FOR ALTERED QUANTITIES. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in the subsection titled ALTERATION OF WORK AND QUANTITIES of Section 40 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from his/her unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-04 PAYMENT FOR OMITTED ITEMS. As specified in the subsection titled OMITTED ITEMS of Section 40, the Engineer shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the owner.

Should the Engineer omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the Engineer's order to omit or nonperform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the Engineer's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the Engineer's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

90-05 PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK. Extra work, performed in accordance with the subsection titled EXTRA WORK of Section 40, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work. When the change order or supplemental agreement authorizing the extra work requires that it be done by force account, such force account shall be measured and paid for based on expended labor, equipment, and materials plus a negotiated and agreed upon allowance for overhead and profit.

- a. **Miscellaneous.** No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.
- b. **Comparison of Record.** The Contractor and the Engineer shall compare records of the cost of force account work at the end of each day. Agreement shall be indicated by signature of the Contractor and the Engineer or their duly authorized representatives.
- c. **Statement.** No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such force account work detailed as follows:
 - (1) Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman.
 - (2) Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
 - (3) Quantities of materials, prices, and extensions.
 - (4) Transportation of materials.
 - (5) Cost of property damage, liability and workman's compensation insurance premiums, unemployment insurance contributions, and social security tax.

Statements shall be accompanied and supported by a receipted invoice for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices the Contractor shall furnish an affidavit certifying that such materials were taken from his/her stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

90-06 PARTIAL PAYMENTS. Partial payments will be made at least once each month as the work progresses. Said payments will be based upon estimates prepared by the Engineer of the value of the work performed and materials complete in place in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with the subsection titled PAYMENT FOR MATERIALS ON HAND of this section.

No partial payment will be made when the amount due the Contractor since the last estimate amounts to less than five hundred dollars (\$500.00).

From the total of the amount determined to be payable on a partial payment, 10 percent of such total amount will be deducted and retained by the owner until the final payment is made, except as may be provided (at the Contractor's option) in the subsection titled PAYMENT OF WITHHELD FUNDS of this section. The balance (90 percent) of the amount payable, less all previous payments, shall be certified for payment. Should the Contractor exercise his/her option, as provided in the subsection titled PAYMENT OF WITHHELD FUNDS of this section, no such 10 percent retainage shall be deducted.

When not less than 95 percent of the work has been completed the Engineer may, at his/her discretion and with the consent of the surety, prepare an estimate from which will be retained an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the Engineer to be a part of the final quantity for the item of work in question.

No partial payment shall bind the owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in the subsection titled ACCEPTANCE AND FINAL PAYMENT of this section.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final retained percentage or final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

90-07 PAYMENT FOR MATERIALS ON HAND. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet

the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

- a. The material has been stored or stockpiled in a manner acceptable to the Engineer at or on an approved site.
- b. The Contractor has furnished the Engineer with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
- c. The Contractor has furnished the Engineer with satisfactory evidence that the material and transportation costs have been paid.
- d. The Contractor has furnished the owner legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled.
- e. The Contractor has furnished the owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at anytime prior to use in the work.

It is understood and agreed that the transfer of title and the owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of his/her responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.

90-08 PAYMENT OF WITHHELD FUNDS. At the Contractor's option, he/she may request that the owner accept (in lieu of the 10 percent retainage on partial payments described in the subsection titled PARTIAL PAYMENTS of this section) the Contractor's deposits in escrow under the following conditions.

- a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the owner.
- b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the owner and having a value not less than the 10 percent retainage that would otherwise be withheld from partial payment.
- c. The Contractor shall enter into an escrow agreement satisfactory to the owner.
- d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 ACCEPTANCE AND FINAL PAYMENT. When the contract work has been accepted in accordance with the requirements of the subsection titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of his/her objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the Engineer shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the Engineer's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the Engineer's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the owner as a claim in accordance with the subsection titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 50.

After the Contractor has approved, or approved under protest, the Engineer's final estimate, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of the subsection titled CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 50 or under the provisions of this subsection, such claims will be considered by the owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

END OF SECTION 90

SPECIAL PROVISION NO. 1
AIRPORT SAFETY AND SECURITY REQUIREMENTS

A. General

The provisions of this safety and security plan and associated procedures are applicable within the boundaries of the Northwest Florida Regional Airport. A complete understanding of all procedures and requirements contained herein is required to ensure safety and security during construction. Satisfying these safety and security requirements is a part of this contract and deviations from the requirements established herein will be sufficient cause for contract termination.

Required reference material associated with this safety plan includes:

FAA AC 150/5200-18C (or latest edition), Airport Safety Self Inspection
FAA AC 150/5370-2F (or latest edition), Operational Safety on Airport During Construction

Copies of each of these documents may be examined through coordination with the Engineer or available online.

B. Airport Safety and Security Coordinator

A qualified individual shall act as the duly authorized representative of the Contractor to coordinate safety and security issues for the duration of the contract. This individual will be responsible for the overall coordination of safety and security matters during construction and ensuring that all procedures and requirements are followed. The individual shall be physically present on the airport at all times during the period of construction when activity related to fulfilling the Contractor's responsibilities is taking place.

The individual shall be the Owner's point of contact and is also responsible for coordinating all construction activity with any organizations prior to the start of construction at any location within the Project Area, at any time the construction schedule or procedure that would affect safety or security is altered and upon completion of work. In addition the Owner's point of contact shall maintain a file of all advisories issued; periodically review advisories issued to assure currency and appropriately cancel portions of previously issued advisories when construction covered by that advisory is completed or otherwise terminated.

C. Contractor Safety and Security Coordinator

The Contractor shall appoint a qualified individual as its duly authorized representative to coordinate safety and security issues for the duration of the contract. The Contractor's point of contact shall thoroughly understand the safety and security requirements of the contract and shall have sufficient authority to implement its provisions without significant deviation.

The Contractor shall be accountable for safety and security requirement compliance. The Contractor's point of contact for safety and security shall be especially knowledgeable regarding the requirements of FAA AC's 150/5200-18C and 150/5370-2F, Airport Self Inspection Guide and Operational Safety on Airports during Construction, respectively. The Contractor shall be thoroughly familiar with all The Contractor shall be accountable for safety and security requirement compliance. The Contractor's point of contact for safety and security shall be especially

knowledgeable regarding the requirements of FAA AC's 150/5200-18C and 150/5370-2F, Airport Self Inspection Guide and Operational Safety on Airports During Construction, respectively. The Contractor shall be thoroughly familiar with all contract requirements relevant to the handling of hazardous materials and all applicable trade practices related to maintain safety and security during construction.

D. Construction Sequence

The construction sequence defined in the plans and specifications has been developed to minimize possible adverse safety and security impacts. The Contractor may deviate from this sequence provided the Engineer authorizes the deviation in writing.

1. Access to the Site of Construction

a. General Construction - the Contractor's access to the airport, employee parking and marshalling area(s) and route across the airport to the construction sites shall be as designated by the Owner. No other airport access point or cross-airport route shall be permitted unless approved in advance by the Owner. In addition, the following requirements are applicable:

- (1) All Contractor traffic authorized to travel on the airport shall have been briefed as part of the Contractor's construction safety and security orientation program, be thoroughly familiar with the access procedures and route for travel or be escorted by personnel authorized by the Owner.
- (2) The Contractor shall install work site identification signs at the authorized access point(s) if required by the Owner. If in the opinion of the Owner, directional signs are needed for clarity they shall be installed along the route authorized for access to each construction site.
- (3) Under no circumstance will Contractor personnel be permitted to drive their individually owned vehicles to any construction on the airport. All vehicles must be parked in the area designated for employee parking; transportation to the work site shall be provided by the Contractor for those employees that are not otherwise occupying authorized vehicles.
- (4) In addition to the periodic cleanup of the site, the Contractor is responsible for the immediate cleanup of any debris generated along the construction site access route(s) as a result of construction related traffic or operations whether or not created by Contractor personnel.
- (5) There shall be no travel by foot within an active aircraft operational area. The Contractor shall arrange transportation for all employees between the designated marshalling area and each construction site, as necessary.

2. Material Suppliers, Subcontractors and Visitors - All material suppliers, subcontractors and visitors to the work site are obligated to follow the same safety and security operating procedures as the prime contractor. All material suppliers shall make their deliveries using the same access points and routes as the Contractor and shall be advised of the appropriate delivery procedures at the time the materials order is placed. If it is not practical to conform

to the vehicle identification and/or safety and security orientation program requirements, the Contractor shall be prepared to escort all suppliers, subcontractors and visitors while they are on the work site or within a secured area.

E. Basis of Payment

No separate payment shall be made for airport safety and security measures or personnel or materials related to this item and incidentally required to satisfy the specified objective(s). Adequate compensation shall be included by the Contractor in the lump sum price for Mobilization. This compensation shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item. This compensation shall also be full compensation for adhering to NWFRA access and badging requirements which include application for badges, time to procure a badge, and time required to badge subcontractors.

SPECIAL PROVISION NO. 4
STAGING AND PHASING PROVISIONS FOR CONTRACTOR OPERATIONS

The Contractor shall prepare a written plan for his staging and phasing procedures in conformance with the Contract Drawings for all work. It shall be understood that the outline requirements presented are the minimum requirements. The Contractor is expected to provide added detailing as appropriate to fully inform the Project Manager of his/her intended method of operations and his/her schedules for proposed work.

The Engineer reserves the right to make changes to this plan to facilitate changes to the airport operations, which are in the best interest of the airport.

All costs associated with preparing the storage and staging area site shall be borne by the Contractor. This includes, but is not limited to, clearing and grading of the site, desired stabilization of the work yard surface, construction of any temporary utilities, access roads, all security fencing, etc.

END OF SP-4

**SPECIAL PROVISION NO. 6
TIME OF COMPLETION AND LIQUIDATED DAMAGES**

A. General

This project consists of several project elements, which are defined throughout the contract documents. The specific details pertaining to contract sequence and time are an important aspect of the project for planning of the various operational requirements of the airport. The Contractor shall be required to comply with the general intent of the phasing, scheduling and duration of the project as outlined in the contract documents or as otherwise approved by submittals allowed by the documents.

B. Construction Time

1. The construction plans and specifications set forth the time allocated to each of the elements of work required as part of this contract. The work shall be completed within the times established or as otherwise approved or liquidated damages in the amounts specified hereafter shall be assessed.
2. The Contractor must request and receive written approval from the Project Manager for acceptance of the work included in each of the phases or work prior to satisfying the requirements of being "complete."
3. The specified times for each of the project phases shall be outlined in these specifications or as otherwise agreed to in writing among the Owner, Project Manager and Contractor based upon the actual contract work awarded.

Substantial Completion contract time = **155 Calendar Days** (This is a calendar day contract); Total contract time = **185 Calendar Days**

C. Construction Schedule

1. The Contractor shall prepare and submit a detailed schedule for his operations within the general limits and phasing restrictions included in the contract documents. This schedule shall be based upon the actual work ultimately awarded. This schedule shall be reviewed with the County, Project Manager and Contractor in order to establish the final approved schedule as it relates to this Special Provision.

D. Liquidated Damages

1. For this project, the rates for liquidated damages are as determined in the liquidated damages paragraph in the Okaloosa County Standard Clauses section.

END OF SP-6

SPECIAL PROVISION NO. 7
AIRPORT PROJECT PROCEDURES

A. Permits

Contractor shall be required to procure and pay for all construction permits if required, and arrange for all inspections and similar procedural items as required by the code enforcement authorities having jurisdiction.

B. Airport Operations

Airport operations shall be maintained throughout this Contract. The Contractor shall in no way curtail or handicap normal operational characteristics of the airport facility except as specifically indicated and specified in these Contract Documents.

C. Limits of Construction

Any surface graded or disturbed outside the construction limits as shown on the plans will be restored and sodded or seeded and mulched as directed by the Engineer at the Contractor's expense.

D. Construction Layout and Stakes

Contractor shall furnish all lines, grades and measurements necessary for the proper prosecution and control of the work and contracted for under these specifications. The Contractor will establish horizontal and vertical control points only. Contractor is thereafter responsible to maintain these control points for use by subsequent contractors.

E. Verification of Existing Conditions

Prior to bidding and commencing with construction, the Contractor shall familiarize himself as to the existing conditions. Should the Contractor discover any inaccuracies, errors or omissions between the actual existing conditions and the Contract Documents, he shall within seven (7) calendar days prior to Bid Opening, notify the Engineer in writing. Submission of Bid by the Contractor shall be held as an acceptance of the existing conditions by the Contractor.

F. Safety and Protection

1. Safety: Inasmuch as each work area will be accessible to and used by the public, the Owner and other companies doing business at the Airport during the construction period, it is the Contractor's responsibility to maintain each work area in a safe, hazard free condition at all times. Should the Owner find the area unsafe at any time, they will notify the Contractor, and the Contractor shall take whatever steps necessary to remedy the unsafe condition. Should the Contractor not be immediately available for corrective action, the Owner will remedy the problem and the Contractor shall reimburse the Owner for the expense of such correction.
2. Protection of Property: Fixed structures, equipment, paving, landscaping and vehicles (automobiles, trucks, etc.) shall be protected with drop cloths, shielding and other appropriate measures to ensure maximum protection of all property and vehicles.

G. Pre-Construction Conference

Before beginning work at the site, the Contractor shall attend a pre-construction conference and bring with him the superintendent employed for this project. In the event the Contractor is unable to attend, he shall send a letter of introduction with the superintendent in which he advises the superintendent's full name and states that he is assigned to the project and will be in full responsible charge. This conference

will be called by the Engineer, who will arrange for the Owner's representative and other interested parties to be present. At this time, all parties will discuss the project under contract and prepare a program of procedure in keeping with requirements of the drawings and specifications. The superintendent will henceforth make every effort to expeditiously coordinate all phases of the work, including the required reporting procedure, to obtain the end result within the full purpose and intent of the drawings and specifications for the project.

H. Coordination and Progress Meetings

1. Weekly Coordination and Progress Meetings: The Contractor / Engineer will hold weekly general project coordination and progress meetings at regularly scheduled times convenient for all parties involved. These meetings are in addition to specific meetings held for other purposes, such as special project meetings and special pre-installation meetings. The Engineer will require representation at each meeting by every party currently involved in coordination or planning for the work of the entire project. Meetings will be conducted in a manner which will resolve coordination problems.
2. The Engineer will record results of the meeting and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

I. Administrative/Supervisory Personnel

The Contractor shall provide a full-time Project Management Team consisting of a Contractor's Engineer, Project Superintendent and other supervisory personnel for the duration of the Project. The names and qualifications of this team for this work shall be submitted to the Owner as part of the Bidder Qualification Form. They shall have a minimum of five (5) years of experience on suitable projects of equal difficulty. Either the Contractor's Engineer or the Project Superintendent shall be at the construction site at all periods when work is in progress. This person shall have full authority to act in the Contractor's behalf. It is agreed and understood that, if requested in writing by the Owner, the Contractor shall replace any member of the team with another meeting the required qualifications within three (3) days of the receipt of the request.

J. Special Reports

1. Reporting Unusual Events: When an event of an unusual and significant nature occurs at the site, the Contractor shall prepare and submit a special report to the Engineer. List chain of events, persons participating, response by the Contractor's personnel, an evaluation of the results or effects and similar pertinent information. Advise the Owner and Engineer as soon as possible when such events are known.
2. Submit special reports directly to the Owner within one day of occurrence. Submit a copy of the report to the Engineer and other entities that are affected by the occurrence within one day of the occurrence.

K. Schedule of Work

1. Prepare and submit, in triplicate, for the Engineer's information, progress schedules for the work.
2. Progress schedules shall relate to the entire project to the extent required by the Contract Documents and shall provide for expeditious and practicable execution of the work.

3. Progress schedules shall be updated monthly.
4. Percent complete shall be based on actual construction in place or dollar volume of the work. If dollar volume of the work reflects the greater percent complete, the maximum percent complete shall in no case exceed 5 percent of the value of the in-place construction.

L. Progress Schedule

1. Preliminary Schedule: Within 15 days after date of Notice of Award and Acceptance or at the Pre-Construction Conference, whichever is earlier, the Contractor shall submit his preliminary network phasing diagram (Preliminary Schedule) indicating a comprehensive overview of the Project including an activity line for each of the work segments to be performed at the site.
 - a. Arrange the schedule to indicate required sequencing of work and to show time allowances for submittals, inspections, and similar time margins.
 - b. The submitted schedule will be reviewed by the Engineer and Owner for conformance to Critical Dates and overall project completion time criteria. Lack of this information will be cause for rejection of the schedule.
 - c. Following initial submittal of the schedule to and response by the Engineer, print and distribute the Progress Schedule to entities with a need-to-know responsibility, including three (3) copies to the Engineer. Revise at intervals matching payment requests, and redistribute and repost. Provide the copies required with payment requests.

M. Maintenance of Schedule

The Contractor's Progress Schedule must be updated on a monthly basis, and a copy thereof submitted with each of the Contractor's Applications for Payment. The updated Progress Schedule shall not only indicate revisions to the Schedule for upcoming work but show "as-built" schedule progress data. The Engineer will not recommend for payment by the Owner an Application for Payment without the Contractor's submission of a Monthly Schedule Update.

1. If the Contractor's Monthly Schedule Update reflects, or the Engineer determines, that the Contractor is at least ten percent (10%) behind the original Progress Schedule or fourteen (14) or more calendar days behind the original Progress Schedule for:
 - a. the work as a whole;
 - b. a major Contract item;
 - c. an item of work which is on the critical path; or
 - d. an item of work not on the original critical path that, because of the delay or anticipated delay became a critical path item; then the Contractor must submit with the Monthly Schedule Update his proposed plan for bringing the work back on schedule and completing the Work within the Contract time.
2. The Progress Schedule shall be coordinated by the Owner's Project Administrator with the overall schedule for the Airport Projects. The Contractor is required to revise the

Progress Schedule promptly in accordance with the conditions of the work, subject to approval by the Owner's Project Coordinator and the Engineer.

3. The Contractor shall comply fully with all time and other requirements of the Contract Documents. Recommendation of an Application of Payment by the Engineer and payment thereon by the Owner, without the submission of a Monthly Schedule Update, shall not constitute a waiver of the requirements of such updates, nor shall it relieve the Contractor from the obligation to complete the Work within the Contract Time.
4. Should a review of work indicate a critical path (milestone) item has fallen behind the approved schedule, at the option of the Engineer, funds equal to the established liquidated damages for the number of calendar days behind schedule will be withheld until that critical path item is brought back on schedule.

N. Changes in the Schedule

1. Minor Changes: Each week, prior to the weekly coordination meeting during the time of the contract, the Contractor shall notify the Engineer and Engineer of any minor changes that are anticipated in the schedule for the following week.
2. Major Changes: If for any reason a major change in the approved schedule is anticipated, the Contractor shall make the necessary changes to the schedule and resubmit the revised schedule for approval.

Copies of the approved schedule shall be posted in the Contractor's field office with completed work identified in colored pencil.

O. Maintenance of Traffic

1. The Contractor shall not obstruct nor create a hazard to any traffic during the prosecution of the work and shall be responsible for repair of all damage to existing pavement or facilities caused by his operations.
2. Beginning date of Contractor's Responsibility: The Contractor's responsibility for maintenance of traffic shall begin on the day he starts the work and continue until Final Completion and Acceptance of the Project.
3. Sections Not Requiring Traffic Maintenance: The Contractor will not be required to maintain traffic over those portions of the Project where no work is to be accomplished or where construction operations will not affect aircraft operations. The Contractor, however, shall not obstruct nor create a hazard to any traffic during the prosecution of the work and shall be responsible for repair of any damage to existing pavement or facilities caused by his operations.
4. Traffic During Construction: All construction vehicles are required to use existing traffic routes. Normal traffic lanes are not to be used as staging areas for arriving delivery vehicles. The Contractor's employees shall utilize the designated Contractor employee parking area.
5. Contractor Signing: The Contractor may furnish and install construction traffic directional signs along the existing traffic route. The signs shall depict Contractor's logo

or name, directional arrows and "deliveries". Signs shall be of sufficient size to have 6" high message and shall be located at each decision point. All signs and their locations shall be approved by the Engineer. NO OTHER SIGNS ARE PERMITTED.

6. Material Deliveries: The Contractor shall make his own material and equipment deliveries. No deliveries shall be made by vendors or suppliers without escort by a representative of the Contractor.
7. Notification: On days when construction traffic is expected to be extra heavy or when oversized pieces of equipment are to be delivered, give minimum forty-eight (48) hours notice to the Engineer.
8. All Contractor material orders for the work site shall be delivered to the areas designated as the Contractor's receiving area. All deliveries shall be made only during the Contractor's working hours.
9. Interference Request:
 - a. The Contractor shall be responsible for notifying the Owner in writing and securing approval for any and all interruptions or interference with traffic (pedestrian, automobile or other necessary function of the Airport.
 - b. The request shall include a traffic control plan indicating barricades, lighting and flagger where required.
 - c. Such notification shall be made as soon as possible but in no case less than 48 hours prior to interference.
 - d. It is suggested that the Contractor utilize a standard form addressed to the Owner with a blank space for a description of the interference, the exact area affected, the exact times and dates the interference will take place and blanks for the Owner's approval. The forms shall be submitted in duplicate. No interference will be allowed until the Contractor has received back a copy of the approved interference request form.
10. Personnel Traffic:
 - a. General: All construction personnel shall be restricted to construction areas. They shall wear shirts with sleeves and long pants at all times.
 - b. Use of Public Areas: The Contractor's workmen shall not utilize public areas for taking their "work breaks" or "lunch breaks." Areas for this purpose can be designated by the Owner upon request. No Public Toilets shall be used by any workmen at any time.

P. Daily Clean-Up and Trash Removal

1. Debris from this work shall be promptly removed from the site at least daily. It shall not be allowed to become a hazard to the safety of the public.

2. The Contractor shall be responsible for clean-up and trash removal. Accumulation of trash and debris will not be allowed and the Engineer may at any time direct the Contractor to immediately remove his trash and debris from the site of the work when in the opinion of the Owner such trash constitutes a nuisance or in any way hinders the work or the Airports operations. If the Contractor should fail to remove his trash and debris from the site of the work in a timely manner, the Owner may have this work performed and deduct the cost of such from Contractor's payment.

Q. Cleaning and Protection

1. General: During handling and installation of work at the project site, clean and protect work in progress and adjoining work on the basis of continuous daily maintenance. Apply protective covering on installed work to ensure freedom from damage or deterioration.
2. Clean and perform maintenance on installed work as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
3. Limiting Exposures of Work: To the extent possible through appropriate control and protection methods, supervise performance of the work in such a manner and by such means which will ensure that none of the work, whether completed or in progress, will be subjected to harmful, dangerous, damaging or otherwise deleterious exposure during the construction period. Such exposures include, where applicable, but not by way of limitation the following:
 - a. Excessive static or dynamic loading
 - b. Excessive internal or external pressures
 - c. Solvents
 - d. Chemicals
 - e. Light
 - f. Puncture
 - g. Abrasion
 - h. Heavy Traffic
 - i. Soiling
 - j. Combustion
 - k. High speed operation, improper lubrication, unusual wear
 - l. Improper shipping or handling
 - m. Theft
 - n. Vandalism
4. Protection at Openings: The Contractor shall provide protection at all openings in structures and finishes to maintain the building weather and dust tight. All protection shall be of solid material and substantial so that it will not be disturbed by wind and weather normal to the area and season, and also tight fitting to prevent noise infiltration.
5. Protection of Improvements:
 - a. Damage to Existing Facilities: Existing surfaces and materials of the Owner's property not requiring work by the Contract Documents that is damaged by the Contractor's operations shall be immediately repaired. Repaired surfaces and materials shall match existing adjacent undamaged surfaces and materials.

Repair work shall be coordinated with the Engineer and Owner with regard to time and method.

- b. Accidental Demolition: All structures or parts thereof that may become damaged due to accident or Contractor's error shall be restored to their original condition at no cost to the Owner. Materials and equipment being used in the repair or replacement resulting from damage shall be new and shall perform at the manufacturer's published capacities. If the existing equipment or materials cannot be identified, or if unavailable, the selection of the replacement will be subject to approval by the Engineer in writing.

6. Overhead Protection

- a. No cranes or other construction equipment shall cross over non-construction personnel, their travel ways or ride systems.
- b. The plan of operation of cranes and other hoisting equipment shall be established in writing by the Contractor. This plan of operation shall be subject to approval by the Engineer.

R. Conservation and Salvage

1. General: It is a requirement for supervision and administration of the Work that construction operations be carried out with the maximum possible consideration given to conservation of energy, water and materials. In addition, maximum consideration shall be given to salvaging materials and equipment involved in performance of the work but not incorporated therein. Refer to other sections for required disposition of salvaged materials which are the Owner's property.

S. Testing Cost Borne by Owner

Unless otherwise specified herein, all initial construction "Quality Assurance" testing costs shall be borne by the Owner. An independent testing laboratory selected and responsible to the Engineer shall perform all "Quality Assurance" testing required by the technical specifications or as directed by the Owner and/or the Engineer.

T. Testing Cost Borne by Contractor

The Contractor shall bear the cost of all "Quality Control" testing to include the following conditions:

1. If substitute materials or equipment are proposed by the Contractor, he shall pay the cost of all tests which may be necessary to satisfy the Engineer that specification requirements are satisfied. The Contractor shall pay for the Engineer's time spent in review and administrating such proposed substitution.
2. If materials or workmanship are used which fail to meet specification requirements, the Contractor shall pay the cost of all re-testing, including laboratory costs, deemed necessary by the Engineer to determine the safety or suitability of the material or element. The Contractor shall make arrangements with the Owner's Testing Laboratory to have all re-testing costs billed directly to the Contractor, or deducted from amounts

due to the Contractor unless otherwise directed by the Engineer in writing. The Contractor shall take prompt action to insure that all re-testing costs are paid in a reasonable time period.

3. The Contractor shall pay for all testing costs including, but not limited to, power, fuel, and equipment cost, which may be required for complete testing of all equipment and systems for proper operation.
4. The Contractor shall pay for all testing required for materials, job mix designs, equipment, structures and related items included in all shop drawings and other submittals as required by the Technical Specifications to be submitted and approved by the Engineer prior to construction.
5. The Contractor shall bear all costs necessary for the Quality Control testing as stipulated in General Provisions Section 100.

U. Project Documentation

1. **Project Drawings:** The successful Contractor will be furnished, at no charge, four (4) copies of drawings and specifications. Additional copies may be purchased at actual cost of reproduction.

A field set of drawings and specifications shall remain on the job site at all times and shall be available at all times to the Engineer. The field set shall be continuously updated to reflect the "as-built" condition of all work included in this Contract.

The Contractor shall immediately include plainly and conspicuously on the field set of drawings, and at appropriate paragraphs in the specifications, all changes or corrections made by addenda and change orders as they are issued.

Approved copies of all shop drawings and other submittals are to be kept on the job site at all times and shall be available at all times to the Engineer.

Changes and deviations from the existing conditions shall be submitted in writing for approval prior to installation. In no case shall any unspecified equipment or materials be installed without prior approval by the Engineer.

2. **Record Documents:**

- a. **Definition:** Record copies are defined to include those documents or copies relating directly to performance of the work, which the Contractor is required to prepare or maintain for the Owner's records, recording the work as actually performed. In particular, record copies show changes in the work in relation to the way in which work was shown and specified by the original contract documents and show additional information of value to the Owner's records but not indicated by the original Contract Documents.

Record copies include newly-prepared drawings (if any are specified), marked-up copies of contract drawings, shop drawings, specifications, addenda and change orders, marked-up product data submittals, record samples, field records for variable and concealed conditions such as excavations and foundations, and

miscellaneous record information on work which is otherwise recorded only schematically or not at all.

b. Record Drawings: The Contractor shall maintain a set of Record Drawings at the job site. These shall be kept legible and current and shall be available for inspection at all times by the Engineer. Show all changes or work added on these Record Drawings in a contrasting color.

(1) Mark-up Procedure: During progress of the work, maintain a white-print set (blue-line or black-line) of contract drawings and shop drawings, with mark-up of actual installations which vary substantially from the work as originally shown. Mark whatever drawing is most capable of showing actual physical condition, fully and accurately. Where shop drawings are marked up, mark cross-reference on contract drawings at corresponding location. Mark with erasable colored pencil, using separate colors where feasible to distinguish between changes for different categories of work at the same general location. Mark-up important additional information, which was either shown schematically or omitted from original drawings. Give particular attention to information on work concealed, which would be difficult to identify or measure and record at a later date. Note alternate numbers, change order numbers and similar identification. Require each person preparing the mark-up to initial and date the mark-up and indicate the name of the firm. Label each sheet "PROJECT RECORD" in 1-1/2 inch high letters.

In showing changes in the work, use the same legends as used on the original drawings. Indicate exact locations by dimensions and exact elevations by job datum. Give dimensions from a permanent point.

(2) Preparation of Transparencies: In preparation for certification of substantial completion on the last major portion of the work, review the completed mark-up of record drawings and shop drawings with the Engineer. The Engineer will then proceed with preparation of a full set of corrected transparencies for contract drawings. The Engineer will date each updated drawing and label each sheet "PROJECT RECORD" in 1-1/2 inch high letters. Printing as required herein is the responsibility of the Engineer.

(3) Copies, Distribution: Upon completion of transparency record drawings, the Engineer shall prepare three blue-line or black-line prints of each drawing, regardless of whether changes and additional information were recorded thereon. The Engineer shall then organize each of the three copies into manageable sets, bind with durable paper cover sheets, and print suitable titles and dates. The mark-up set of prints maintained during the construction period shall be bound in the same manner. The Engineer will retain one copy set. At the completion of the project, the Engineer shall submit one set of mylars and one set of prints with changes noted thereon to the Owner.

c. Record Drawings shall contain the names, addresses and phone numbers of the General Contractor and the major subcontractors.

- d. The Engineer shall be the sole judge of the acceptability of the Record Drawings. Receipt and acceptance of the As-Built drawings is a pre-requisite for Final Payment.

3. Record Specifications

- a. During the progress of the work, maintain one copy of specifications, including addenda, change orders and similar modifications issued in printed form during construction. Mark-up variations (of substance) in actual work in comparison with text of specifications and modifications as issued. Give particular attention to substitutions, selection of options, and similar information on work where it is concealed or cannot otherwise be readily discerned at a later date by direct observation. Note related record drawing information and product data where applicable. Upon completion of the mark-up, submit to the Engineer for the Owner's records. Label the front cover "PROJECT RECORD" in 1-1/2 inch high letters.
- b. Where the manual is printed on one side of the page only, mark variations on the blank left-hand pages of the Project Manual, facing printed right-hand pages containing original text affected by variation.

4. Record Product Data

During progress of the work, maintain one copy of each product data submittal and mark up significant variations in the actual work in comparison with submitted information. Include both variations in product as delivered to site and variations from the manufacturer's instructions and recommendations for installation. Give particular attention to concealed products and portions of the work which cannot otherwise be readily discerned at a later date by direct observation. Note related change orders and mark-ups of record drawings and specifications. Upon completion of the mark-up, submit a complete set of product data submittals to the Engineer for the Owner's records. Label each data submittal "PROJECT RECORD" in 1-1/2 inch high letters.

5. Record Sample Submittal

Immediately prior to the date(s) of substantial completion, the Engineer and Owner's personnel will meet with the Contractor on site and will determine if any of the submitted samples maintained by the Contractor during progress of the work are to be transmitted to the Owner for record purposes. Comply with the Engineer's instructions for packaging, identification marking and delivery to the Owner's sample storage space. Dispose of other samples in the manner specified for disposal of surplus and waste materials, unless otherwise indicated by the Engineer.

6. Miscellaneous Record Submittals

Refer to other sections of these specifications for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the work. Immediately prior to the date(s) of substantial completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Engineer for the Owner's records. Categories of requirements resulting in miscellaneous work records are recognized to include, but are not limited to, the following:

- a. Required field records on excavations, foundations, underground construction, wells and similar work.
- b. Accurate survey showing locations and elevations of underground lines, including invert elevations of drainage piping, valves, tanks and manholes.
- c. Surveys by a Registered Land Surveyor establishing lines and levels of finished construction.
- d. Soil treatment certification.
- e. Inspection and Test Reports: Where not processed as shop drawings or product data.
- f. Asphalt or PCC concrete pavement or structural mix design record.
- g. Concrete block certification.

7. Project Closeout

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

8. Prerequisites to Substantial Completion

- a. Prior to requesting the Engineer's inspection for certification of substantial completion, for either the entire work or portions thereof, complete the following and list known exceptions in request:
 - (1) In the progress payment request coincident with or first following the date claimed, show 100% completion for the portion of work claimed as "substantially completed", or list incomplete items, value of incompleteness, and reasons for being incomplete.
 - (2) Include supporting documentation for completion as indicated in the Contract Documents.
 - (3) Submit statement showing accounting of changes to the Contract Sum.
 - (4) Advise the Owner of pending insurance change-over requirements.
 - (5) Obtain and submit releases enabling the Owner's full and unrestricted use of the work and access to services and utilities, including, where required, occupancy permits, operating certificates, and similar releases.

- (6) Deliver tools, spare parts, extra stocks of materials, and similar physical items to the Owner.
- (7) Make the final change-over of locks and transmit keys to the Owner and advise Owner's personnel of change-over in security provisions.
- (8) Complete start-up testing of systems and instructions of Owner's operating-maintenance personnel. Discontinue or change over and remove from the project site, temporary facilities and services, along with construction tools and facilities, mock-ups and similar elements.

b. Inspection Procedures: Upon receipt of the Contractor's request, the Engineer will proceed with inspection or advise the Contractor of prerequisites not fulfilled. Following initial inspection, the Engineer will prepare a Certificate of Substantial Completion or advise the Contractor of the work which must be performed prior to issuance of the Certificate and will perform a repeat inspection when requested and assured by the Contractor that the work has been substantially completed. Results of the completed inspection will form the initial "punchlist" for final acceptance.

9. Prerequisites to Final Acceptance

- a. Prior to requesting the Engineer's final inspection for certification of final acceptance as required by the General Provisions, the Contractor shall complete the following and list known exceptions in the request:
 - (1) Submit a certified copy of the Engineer's final punchlist of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, endorsed and dated by the Engineer.
 - (2) Submit final meter readings for utilities, measured record of stored fuel, and similar data as of time of substantial completion or when the Owner took possession of and responsibility for corresponding elements of the work.
 - (3) Complete final cleaning up requirements, including touch-up of marred surfaces.
 - (4) Touch up and otherwise repair and restore marred exposed finishes.
- b. Re-inspection Procedures: Following Substantial Completion, the Contractor shall correct or remedy all Punchlist items to the satisfaction of the Engineer and Owner within a two (2) week period after the Date of Substantial Completion. If subsequent inspections are necessary after the two week period in order to eliminate all deficiencies, the cost of all subsequent inspections with respect to the Owner and Engineer's time shall be paid by the Contractor. When ready, the Contractor shall request in writing a final inspection of the work. Upon completion of re-inspection, the Engineer will prepare a Certificate of Final Acceptance or advise the Contractor of work not completed or obligations not

fulfilled as required for Final Acceptance. If necessary, the procedures will be repeated.

10. Prerequisites to Final Payment

- a. Final Payment: Final Payment will be made after final acceptance of the project by the Engineer and Owner upon request by the Contractor on condition that the Contractor:
- (1) Furnish properly executed complete releases of lien from all materialmen and subcontractors who have furnished materials or labor for the Work and submit supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 - (2) Furnish the Contractor's Affidavit of Release of Liens (2 copies) that all materialmen and subcontractors have been paid in full. In the event they have not been paid in full, the Owner shall retain a sufficient sum to pay them in full and at his option may make direct payment as provided in Chapter 84, Florida Statutes, as amended, to obtain complete releases of lien.
 - (3) Furnish Contractor's Affidavit of Debts and Claims (2 copies).
 - (4) Furnish required sets of record drawings and maintenance and operating instructions of new mechanical equipment.
 - (5) Furnish guarantees signed by subcontractors, material suppliers, and countersigned by the Contractor for operating equipment.
 - (6) Submit specific warranties, workmanship-maintenance bonds, maintenance agreements, final certifications and similar documents.
 - (7) Furnish a signed guarantee, in form acceptable to the Engineer and Owner agreeing to repair or replace as decided by the Engineer, all work and materials that prove defective within one (1) year (or more) from the date of final acceptance, including restoration of all other work damaged in making such repairs or replacements.
 - (8) Furnish Consent of Surety to final payment.
 - (9) Submit updated final statement, accounting for final changes to Contract Sum.
 - (10) Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 - (11) Certify that all Social Security, Unemployment and all other taxes (City, State, Federal Government) have been paid.

- (12) Provide receipt, as applicable, of affidavits certifying all labor standards of local, State, or Federal requirements have been complied with by the Contractor.
- (13) Submit actual DBE participation percentages.

11. Record Document Submittals

Specific requirements for record documents are shown in the section, PROJECT RECORD DOCUMENTS. Other requirements are indicated in the General Provisions. General submittal requirements are indicated in "Submittals" sections. Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Engineer's reference during normal working hours.

- a. Record Drawings: The Engineer shall organize record drawing sheets into manageable sets, bind with durable paper cover sheets and print suitable titles, dates and other identification on the cover of each set.
- b. Record Specifications: Upon completion of mark-ups, submit to the Engineer for the Owner's records.
- c. Record Product Data: Upon completion of mark-ups, submit complete sets to the Engineer for the Owner's records.
- d. Record Sample Submittal: Comply with the Engineer's instructions for packaging, identification, marking and delivery to the Owner's sample storage space.
- e. Miscellaneous Record Submittals: Complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Engineer for the Owner's records.
- f. Maintenance Manuals: Complete, place in order, properly identify and submit to the Engineer for the Owner's records.

12. Closeout Procedures

General Operating and Maintenance Instructions: Arrange for each installer of work requiring continuing maintenance or operation, to meet with the Owner's personnel at the project site to provide basic instructions needed for proper operation and maintenance of the entire work. Include instructions by manufacturer's representatives where installers are not expert in the required procedures. Review maintenance manuals, record documentation, tools, spare parts and materials, lubricants, fuel, identification system, control sequences, hazards, cleaning and similar procedures and facilities. For operational equipment, demonstrate start-up, shut-down, emergency operations, noise and vibration adjustments, safety, economy, efficiency adjustments, and similar operations. Review maintenance and operations in relation with applicable warranties, agreements to maintain bonds, and similar continuing commitments.

Final Cleaning

1. Provide final cleaning of the work, at the time indicated, consisting of cleaning each surface or unit of work to normal "clean" condition in a manner acceptable to the Engineer and Owner.
2. Removal of Protection: Remove temporary protection devices and facilities which were installed during the course of the work to protect previous completed work during the remainder of the construction period.
3. Compliances: Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at site, bury debris or excess materials on the Owner's property. Do not discharge volatile or other harmful or dangerous materials into drainage systems. Remove waste materials from site and dispose of in a lawful manner.

Where extra materials of value remaining after the completion of the associated work have become the Owner's property, dispose of these as directed by the Owner.

END OF SP-7

SECTION ACS

ACCESS CONTROL SYSTEM REPLACEMENT

ACS-1 Description.

The purpose of this project is to replace the existing UTCFS Diamond II Access Control System with a new IP-based access control system (ACS) at the Northwest Florida Regional Airport. This ACS is deployed in the airport terminal, cargo building, fuel farm, intrusion alarm, and four airport gates. This work requires the procurement, installation, configuration, testing, and commissioning of the new software Unified Security Platform (USP), ACS solution, and all required hardware upgrades to support the new ACS.

The airport utilizes the Genetec Omnicast Video Management System (VMS) and this system shall be upgraded to Genetec Security Center 5.2, or the latest edition, as part of this project to provide a Unified Security Platform (USP). This USP shall be an enterprise class IP-enabled security and safety software solution and shall support the seamless unification of IP ACS (included in this project) and IP VMS (existing) under a single platform. The USP user interface (UI) applications shall present a unified security interface for the management, configuration, monitoring, and reporting of embedded ACS, VMS, and associated edge devices. The complete system shall provide the functionalities outlined in Section ACS-2.

The new ACS shall be fully integrated into the new USP. The manufacturer and software platform of the ACS shall be either Genetec using the Synergis ACS, Lenel using the On Guard ACS, or Software House using the CCure 9000 ACS due to the ability of these ACSs to integrate with the Genetec Security Center 5.2. If the Lenel or Software House ACSs are proposed, the contractor shall provide all plug-ins required to show the events from the ACS (such as alarms) in the USP and shall provide all required data conduit type applications to output the events to the USP. The contractor shall incorporate the airport intrusion alarm system into the USP.

The contractor shall provide all hardware improvements required to accommodate the new USP and ACS including but not limited to servers, workstations, and electrical and infrastructure improvements to support the new USP and ACS. The hardware improvements shall also include replacement of the existing 26 biometric readers (currently not supported by the manufacturer) with a new non-proprietary HID Reader/Enroller in the Airport Operations Center (Part Number 6180BKR000000) or approved equal and new HID stand-alone biometric readers (Part Number 6180BKT000000) or approved equal at the 26 door locations. These readers shall provide similar functionality to the existing Bioscrypt devices. The contractor shall paint any newly exposed wall behind the existing biometric readers to match the surrounding wall color. The contractor shall furnish and install the import tool license which will allow the Owner to transfer the existing card holder database onto the new system. The reader/enroller shall be installed in the Airport Operations Center at least 60 days prior to transitioning to the new biometric readers to provide the airport time to re-enroll the fingerprints into the new reader/enroller. The contractor shall also configure the access control system to ensure that the existing airport security badges will provide access through the existing and new biometric readers concurrently during the construction period.

The contractor shall replace all panels, communication, and power infrastructure that require replacement to support the new biometric readers and provide connectivity to the USP. It is the responsibility of the contractor to review the existing infrastructure prior to submittal of their bid and to determine the infrastructure improvements which are required to support the proposed devices. All costs for infrastructure improvements required to support the new biometric readers and the new USP and ACS shall be included in the contractor's lump sum proposal.

The contractor's bid shall include all work required to furnish, install, and configure a new double-sided HID Direct-to-Card (DTC) badge printer (Part Number DTC1250e) or approved equal in the Airport Operations Center.

The contractor shall furnish, install, configure, incorporate, and test a new server for the access control system. This server shall meet the following minimum requirements:

1. Quad Core Intel Xeon E5640 2.66 GHz or better,
2. 12 GB of RAM or better,
3. 64 bits operating system (Windows 7 or newer)
4. 80 GB SATA II hard drive or better for OS and Security Center applications,
5. Standard SVGA video card
6. 1024 x 768 or higher screen resolution
7. 100/1000 Ethernet Network Interface Card
8. DVD ROM Drive

This server shall be installed in the equipment rack in the Airport Operations Center server room. This new server shall be installed and fully configured before the access control operations are transferred from the existing server to the new server to minimize the scheduled down-time of the access control system. The contractor shall take all reasonable steps to minimize the scheduled down-time.

The contractor's bid shall include two new client work stations to be installed at positions 1 and 3 at the console in the Airport Operations Center. These work stations are specified to enable the Airport to run the new access control system on the Airport network and independent from the Okaloosa County network. These two work stations shall meet the following minimum requirements:

1. Intel Core i7 2600 @ 3.4 GHz
2. 8 GB of RAM DDR3
3. 1 GB PCI-Express x16 dual-head video adapter
4. 1600 x 1200 or higher screen resolution
5. 100/1000 Ethernet Network Interface Card
6. 16x DVD +/- RW Drive

The installation, configuration, and testing of the Genetec Security Center 5.2 shall be performed by a Genetec Certified integrator. The ACS shall similarly be installed, configured, and tested by an integrator certified to do so by the respective manufacturer (i.e. Genetec, Lenel, or Software House).

The contractor's bid shall include a software maintenance warranty for the entire system for the duration of the construction contract and two years from the date of final acceptance of the project. The cost of this warranty shall be included in the contractor's bid proposal.

The contractor's bid shall include all work required to provide the airport with a fully functioning system as described above and shall include but not limited to labor, taxes, demolition, disposal, equipment, procurement of materials, installation, shipping, equipment, integration with existing and proposed software, testing, and commissioning of the new software USP, ACS, fingerprint readers, and all required hardware to support the new system. The contractor's bid shall account for any additional improvements required to provide the airport with a fully functional system as described above even if not specifically identified in this technical specification.

ACS-2 Functionalities.

The functionalities of the USP shall include the following:

1. Configuration of embedded systems such as ACS and VMS systems.
2. Live event monitoring.
3. Live video monitoring and playback of archived video.
4. Alarm management.
5. Monitoring of the airport intrusion alarm.
6. Transfer alarms to mobile devices such as phones and tablets.
7. Record video five seconds prior and following for each card swipe.
8. Reporting, including creating custom report templates and incident reports.
9. Federation for global monitoring, reporting, and alarm management of multiple remote and independent ACS and/or VMS systems spread across multiple facilities and geographic areas.
10. Global cardholder management across multiple facilities and geographic areas each with their own independent ACS system.
11. Microsoft Active Directory integration for synchronizing USP user accounts and ACS cardholder accounts.
12. Intrusion device and panel integration (live monitoring, reporting, and arming/disarming).
13. Integration to third party systems and databases via plug-ins (access control, video analytics, and more).
14. Dynamic graphical map viewing.

ACS-3 Licensing

A single central license shall be applied centrally on the configuration server. There shall be no requirement to apply a license at every server computer or client workstation. Based on selected options, one or more embedded systems shall be enabled or disabled.

ACS-4 Hardware and Software Requirements

The hardware and software requirements shall be as follows:

1. The USP and embedded systems (video, access control) shall be designed to run on a standard PC-based platform loaded with a Windows operating system.
2. The server software module (SSM) shall be compatible with both 32-bit and 64-bit operating systems including Windows 7, Windows 8, and Windows Server 2012. Refer to latest USP workstation, server, and operating systems specifications for more information.
3. The client modules shall run on Windows 7 or Windows 8.
4. The core client/server software shall be built in its entirety using the Microsoft .NET software framework and the C# (C-Sharp) programming language.
5. The USP database server(s) shall be built on Microsoft's SQL Server 2012.
6. The USP shall be compatible with virtual environment including VMware 5.0.

7. The USP shall use the latest user interface (UI) development and programming technologies such as Microsoft WPF (Windows Presentation Foundation), the XAML markup language, and .NET software framework.

ACS-5 Architecture

1. Overview

- a. The USP shall be based on a client/server model. The USP shall consist of a standard Server Software Module (SSM) and Client Software Applications (CSA).
- b. The USP shall be an IP enabled solution. All communication between the SSM and CSA shall be based on standard TCP/IP protocol and shall use encryption when enabled by the administrator.
- c. The SSM shall be a Windows service that can be configured to start when the operating system is booted and run in the background. The SSM shall automatically launch at computer startup, irrespective of whether a user is logged onto the machine or not.
- d. Users shall be able to deploy the SSM on a single server or across several servers for a distributed architecture. The USP shall not be restricted in the number of SSM deployed.
- e. The USP shall support the concept of Federation whereby multiple independent ACS and VMS installations can be merged into a single large virtual system for centralized monitoring, reporting, and alarm management.
- f. The USP shall protect against potential database server failure and continue to run through standard off-the-shelf solutions.
- g. The USP shall support one thousand instances of Client Software Applications (CSA) connected at the same time. An unrestricted number of CSA however can be installed at any time.
- h. The USP shall support an unrestricted number of logs and historical transactions (events and alarms) with the maximum allowed being limited by the amount of hard disk space available.
- i. The USP shall support uninterrupted video streaming. The CSA shall keep existing video connections active in the eventuality that a SSM (except Archiver) become unavailable.

2. Roles-Based Architecture

- a. The USP shall consist of a role-based architecture, with each SSM hosting one or more roles.
- b. Each role shall execute a specific set of tasks related to either core system, license plate recognition (LPR), video (VMS), or access control (ACS) functionalities, among many others. Installation shall be streamlined through the USP's abilities to allow administrators to:
 - c. Deploy one or several SSM across the network prior to activating roles.
 - d. Activate and deactivate roles as needed on each and every SSM.
 - e. Centralize role configuration and management.
 - f. Support for remote configuration.
 - g. Move roles over from one SSM to another.

- h. Each role, where needed, shall have its own database to store events and role-specific configuration information.
 - i. Roles without databases (Federation, Active Directory, Global Cardholder Management) shall support near real-time standby without any third party failover software being required.
3. Standard Roles
- a. Directory Role
 - i. The Directory Role shall manage the central database that contains all the system information and component configuration of the USP.
 - ii. The Directory Role shall authenticate users and give access to the USP based on predefined user access rights or privileges, and security partition settings.
 - iii. The Directory Role shall support the configuration/management of the following components common to the ACS, LPR, and VMS sub-systems:
 - 1. Security Partitions, users and user groups.
 - 2. Areas.
 - 3. Zones, input/output (IO) linking rules, custom output behavior.
 - 4. Alarms. Schedules, scheduled tasks.
 - 5. Custom events.
 - 6. Macros or custom scripts.
 - iv. The Directory Role shall support the configuration/management of the following components specific to VMS:
 - 1. Video servers and their peripherals (e.g. audio, IOs, serial ports).
 - 2. PTZ.
 - 3. Camera sequences.
 - 4. Recording and archiving schedules.
 - v. The Directory Role shall support the configuration/management of the following components specific to ACS:
 - 1. Door controllers, input and output (IO) modules.
 - 2. Doors, Elevators, Access rules.
 - 3. Cardholders and cardholder groups, credentials, and badge templates.
 - b. Video Archiver Role shall be responsible for managing cameras and encoders under its control and archiving video
 - c. Media Router Role shall be responsible for routing video and audio streams across local and wide area networks from the source (e.g. DVS) to the destination (e.g. CSA).
 - d. Access Manager Role shall be responsible for synchronizing access control hardware units under its control, such as door controllers and IO modules. It shall also be able to validate and log all access activities and events when the door controllers and IO modules are online.

- e. Zone Manager Role shall be responsible for managing all software zones (collection of inputs) and logging associated zone events. Zones shall consist of inputs from both access control and video devices.
 - f. Health Monitoring Role shall be responsible for monitoring and logging health events and warnings from the various client applications, roles, and services that are part of the USP. This role shall also be responsible for logging events within the Windows Event Log, generating reports on health statistics and health history.
4. Optional Roles (to be included in this scope of work)
- a. Plug-in Manager Role shall be responsible for the communications between the USP and third party systems such as video analytics, access control and video systems, and building management systems.
5. Server Monitoring Service (Watchdog)
- a. The USP shall include a Server Monitoring Service that continuously monitors the state of the Server Software Module (SSM) service.
 - b. The Server Monitoring Service shall be a Windows service that automatically launches at system startup, irrespective of whether a user is logged into his account or not.
 - c. The Server Monitoring Service shall be installed on all PCs/servers running an SSM. In the event of a malfunction or failure, the Server Monitoring Service shall restart the failed service. As a last resort, the Server Monitoring Service shall reboot the server/PC should it be unable to restart the service.

ACS-5 Client Software Applications (CSA)

1. Overview
- a. The Client Software Applications (CSA) shall provide the user interface for USP configuration and monitoring over any network, accessible locally or from a remote connection.
 - b. The CSA shall consist of the Configuration UI for system configuration and the Surveillance UI for monitoring. The CSA shall be Windows based and provide an easy-to-use graphical user interface (UI).
 - c. The Server Administrator shall be used to configure the server database(s). It shall be web-based and accessible locally on the SSM or across the network.
 - d. The CSA shall seamlessly merge access control, license plate recognition (LPR), and video functionalities within the same user application.
 - e. The USP shall use the latest user interface (UI) development and programming technologies such as Microsoft WPF (Windows Presentation Foundation), the XAML markup language, and the .NET software framework.
 - f. All applications shall provide an authentication mechanism, which verifies the validity of the user. As such, the administrator (who has all rights and privileges) can define specific access rights and privileges for each user in the system.
 - g. Logging on to a CSA shall be done either through locally stored USP user accounts and passwords or using the operators Windows credentials when Active Directory integration is enabled.

- h. When integrated with Microsoft's Active Directory, the CSA and USP shall authenticate users using their Windows credentials. As such, the USP will benefit from Active Directory password authentication and strong security features.
- i. The CSA shall support multiple languages, including but not limited to the following: English, French, Arabic, Czech, Dutch, German, Hebrew, Hungarian, Italian, Japanese, Korean, Norwegian, Persian (Farsi), Polish, Portuguese (Brazilian), Simplified and Traditional Chinese, Spanish, Thai and Turkish.
- j. The Configuration UI and Surveillance UI shall support many of the latest UI concepts to enhance usability and operator efficiency such as
 - i. A customizable Home Page including favorite and recently used tasks.
 - ii. Task-oriented approach for administrator/operator activities where each type of activity (surveillance, visitor management, individual reports, and more) is an operator task.
 - iii. Consolidated and consistent workflows for video, LPR, and access control.
 - iv. Single click functionality for reporting and tracking. The Surveillance UI shall support single-click reporting for access control, LPR, and video, as well as single-click tracking of areas, cameras, doors, zones, cardholders, elevators, LPR entities, and more. Single-click reporting or tracking shall create a new task with the selected entities to report on or to track.
- k. Configuration UI and Surveillance UI Home Page and Tasks
 - i. The Configuration UI and Surveillance UI shall be task-oriented.
 - ii. A task shall be user interface design patterns whose goal is to simplify the user interface by grouping related features from different systems such as video and access in the same display window. Features are grouped together in a task based on their common relevance to help the user perform a specific task.
 - iii. Tasks shall be accessible via the Configuration or the Surveillance CSA's Home Page.
 - iv. Newly created tasks shall be accessible via the Configuration UI or the Surveillance UI taskbar.
 - v. Similar tasks shall be grouped into the following categories:
 1. Operation: Access control management, LRP management, and more.
 2. Investigation: Video bookmark/motion/archive reports, access control activity reports, visitor activity reports, alarm reports, LPR activity reports, and more.
 3. Maintenance: Access control and video configuration reports, troubleshooters, audit trails, health-related reports, and more.
 - vi. An operator shall be able to launch a specific task only if he has the appropriate privileges.
 - vii. The Home Page content shall be customizable through the use of privileges to hide tasks an operator should not have access to and through a list a favorite and recently used tasks. Further to that, editing a USP XML file to add new tasks on the fly shall be possible.

2. Configuration User Interface (UI)

- a. The Configuration UI application shall allow the administrator or users with appropriate privileges to change the system configuration. The Configuration UI shall provide decentralized configuration and administration of the USP system from anywhere on the IP network.
- b. The configuration of all embedded ACS, VMS, and LPR systems shall be accessible via the Configuration UI.
- c. The Configuration UI shall have a home page with single-click access to various tasks.
- d. The Configuration UI shall include a variety of tools such as troubleshooting utilities, import tools, and a unit discover tool, amongst many more.
- e. The Configuration UI shall include a static reporting interface to:
 - i. View historical events based on entity activity. The user shall be able to perform actions such as printing a report and troubleshooting a specific access event from the reporting view.
 - ii. View audit trails that show a history of user / administrator changes to an entity.
- f. Common entities such as users, schedules, alarms and many more, can be reused by all embedded systems (ACS, VMS, and LPR).

3. Surveillance User Interface (UI)

- a. The Surveillance UI shall fulfill the role of a Unified Security Interface able to monitor video, LPR, and access control events and alarms, as well as video live and recorded video.
- b. The Surveillance UI shall provide a graphical user interface to control and monitor the USP over any IP network. It shall allow administrators and operators with appropriate privileges to monitor their unified security platform, run reports, and manage alarms.
- c. The Surveillance UI shall support the following UI concepts to enhance usability and operator efficiency such as
 - i. Dynamically adaptive interface that adjusts in real-time to what the operator is doing.
 - ii. A dynamic dashboard loaded with entity-specific widgets, e.g. door and camera widget.
 - iii. Use of transparent overlays that can display multiple data in a seamless fashion.
 - iv. Display tile menus and quick commands.
 - v. Consolidated and consistent workflows.
 - vi. Tile menus and quick commands easily accessible within every display tile of the user workspace.
 - vii. Single click functionality for reporting and tracking. The Surveillance UI shall support single-click reporting for access control, LPR, and video, as well as single-click tracking of areas, cameras, doors, zones, cardholders, elevators, LPR entities, and more. Single-click reporting or tracking shall create a new task with the selected entities to report on or to track.

- d. Surveillance UI Home Page and Tasks
 - i. Similar tasks shall be grouped into the following categories:
 - 1. Operation: Access control/LRP/video surveillance, visitor management, mustering, access control and video alarm monitoring, and more.
 - 2. Investigation: Video bookmark/motion/archive reports, access control activity reports, visitor activity reports, alarm reports, LPR activity reports, and more.
 - 3. Maintenance: Access control and video configuration reports, troubleshooters, audit trails, and more.
- e. Dynamically Adaptive UI, Dashboard, and Widgets
 - i. The Surveillance UI shall dynamically adapt to what the operator is doing. This shall be accomplished through the concept of widgets that are grouped in the Surveillance UI dashboard.
 - ii. Widgets are mini-applications or mini-groupings in the Surveillance UI dashboard that let you perform common tasks and provide you with fast access to information and actions.
 - iii. With a single click on an entity (e.g. door or camera) the specific widgets associated to that entity appear and other non-relevant widgets disappear dynamically (instantly). Widgets shall bring the operator information such as door status and camera stream information, as well as user actions such, door unlock, PTZ controls, and more.
 - iv. Specific widgets include those for a door, camera, alarm, zone, display tile, video stream (statistics), PTZ camera, and more.
- f. Operator Workflows
 - i. A workflow shall be a sequence of operations an operator or administrator shall execute to complete an activity. The “flow” relates to a clearly defined timeline or sequence for executing the activity.
 - ii. The Surveillance UI shall be equipped with consistent workflows for the LPR, video, and access control systems it unifies.
 - iii. Generating or printing a report, setting up or acknowledging an alarm, or creating an incident report shall follow the same process (workflow) whether the operator is working with video, LPR, or access control, or both video and access control.
- g. Each task within the surveillance UI shall consist of one or more of the following items:
 - i. Event list.
 - ii. Logical tree. Doors, cameras, zones, LPR units, and elevators shall be grouped under Areas in a hierarchical fashion.
 - iii. Entities list of all entities being tracked.
 - iv. Display tiles with various patterns (1 x 1, 2 x 2, and more).
 - v. Display tile menu with various commands related to cameras, doors, PTZ, and tile controls.

- vi. Dashboard with widgets.
- h. The Surveillance UI shall support multiple event lists and display tile patterns, including:
 - i. Event/alarm list layout only
 - ii. Display tile layout only
 - iii. Display tile and alarm/event list combination
 - iv. LPR map and alarm/event list combination
- i. User workspace customization
 - i. The user shall have full control over the user workspace through a variety of user-selectable customization options. Administrators shall also be able to limit what users and operators can modify in their workspace through privileges.
 - ii. Once customized, the user shall be able to save his workspace.
 - iii. The user workspace shall be accessible by a specific user from any client application on the network.
 - iv. Display tile patterns shall be customizable.
 - v. Event or alarm lists shall span anywhere from a portion of the screen up to the entire screen, and shall be resizable by the user. The length of event or alarm lists shall be user-defined. Scroll bars shall enable the user to navigate through lengthy lists of events and alarms.
 - vi. The Surveillance UI shall support multiple display tile patterns, e.g. 1 display tile (1x1 matrix), 16 tiles (8x8 matrix), and multiple additional variations.
 - vii. The Surveillance UI shall support as many monitors as the PC video adapters and Windows Operating System are capable of accepting.
 - viii. Additional customization options include: show/hide window panes, show/hide menus/toolbars, show/hide overlaid information on video, resize different window panes, choice of tile display pattern on a per task basis.
- j. The Surveillance UI shall provide an interface to support the following tasks and activities common to access control, LPR, and video:
 - i. Monitoring the events from a live security system (ACS and/or VMS and/or LPR).
 - ii. Generating reports, including custom reports.
 - iii. Monitoring and acknowledging alarms.
 - iv. Creating and editing incidents and generating incident reports.
 - v. Displaying dynamic graphical maps and floor plans. Executing actions from a dynamic graphical map and floor plan.
 - vi. Management and execution of hot actions and macros.
- k. The Surveillance UI shall be able to monitor the activity of the following entities in real-time through the surveillance task, among others: areas, LPR entities, doors, elevators, cameras, cardholders, cardholder groups, zones (input points), and more. The

Surveillance UI shall provide an interface to support the following access control tasks and capabilities:

- i. Monitoring and management of access events and alarms.
 - ii. Viewing of cardholder picture or badge IDs.
 - iii. Verification of cardholder picture IDs against live video.
 - iv. Visitor management.
 - v. People counting or mustering, including resetting the people count in an area
 - vi. Door control (remotely unlocking doors, overriding a door's unlocking schedules, enabling door maintenance mode).
 - vii. Forgiving antipassback.
 - viii. Generation of ACS configuration and activity reports.
 - ix. Viewing of HTML files including alarm instructions.
- l. The Surveillance UI shall include advanced video capabilities:
- i. Advanced live video viewing functionality.
 - ii. Advanced archive playing and video playback functionality.
 - iii. Monitoring and management of video system events and alarms.
 - iv. Intercom or duplex audio.
 - v. Generation of video reports.
 - vi. Control of PTZ cameras.
- m. The Surveillance UI's video live viewing capabilities shall include:
- i. Display of all cameras attached to the USP and all cameras attached to federated systems.
 - ii. Shall support live video monitoring on each and every display tile within a task in the user's workspace.
 - iii. The USP shall support uninterrupted video streaming. The CSA shall keep existing video connections active in the eventuality that a SSM (except Archiver) become unavailable.
 - iv. The operator shall be able to drag and drop a camera into a display tile for live viewing.
 - v. The operator shall be able to drag and drop a camera into a display tile for live viewing on an analog monitor connected to a IP hardware decoder (converting IP encoded stream into analog video signal).
 - vi. The operator shall be able to drag and drop a camera from a map into a display tile for live viewing.
 - vii. Shall support digital zoom on live camera video streams.
 - viii. Shall allow for audio communication with video units with audio input and output.

- ix. The operator shall be able to control pan-tilt-zoom, iris, focus, and presets.
- x. Shall allow operators to bookmark important events for later retrieval on any archiving camera. Operators can uniquely name each bookmark in order to facilitate future searches.
- xi. The operator shall be able to start/stop recording on any camera in the system, which is configured to allow manual recording, by clicking on a single button.
- xii. The operator shall have the capability to activate or de-activate viewing of all system events as they occur.
- xiii. Shall allow operators to switch to instant replay of the video for any archiving camera with the simple click of button.
- xiv. Users shall be able to take snapshots of live video and be able to save or print the snapshots.
- xv. The user shall be able to view the same camera multiple times in different tiles.
- n. The Surveillance UI's video playback (archive playing) capabilities shall include:
 - i. Shall support audio and video playback of any time span.
 - ii. Shall support video playback on each and every display tile.
 - iii. Shall allow operators to switch to instant replay of the video for any archiving camera with the simple click of button.
 - iv. Shall allow the operator to select between instant synch of all video streams in playback mode allowing operators to view events from multiple angles or across several camera fields, or non-synchronous playback.
 - v. Shall allow the operator to simultaneously view the same camera in multiple tiles at different time intervals.
 - vi. Shall allow the operator to control the playback with:
 - 1. Pause
 - 2. Lock Speed
 - 3. Forward and Reverse Playback at: 1x, 2x, 4x, 6x, 8x, 10x, 20x, 40x, 100x.
 - 4. Forward and Reverse Playback frame by frame
 - 5. Slow Forward and Reverse Playback at: 1/8x, 1/4x, 1/3x, 1/2x.
 - 6. Loop playback between two time markers
 - vii. Shall display a single timeline, or optionally one timeline for each selected video stream, with which the operator can navigate through the video sequence by simply clicking on any point in the timeline.
 - viii. Shall display the level of motion at any point on a timeline.
 - ix. Shall clearly display bookmarks events on the timeline(s).
 - x. Shall be able to query archived video using various search criteria, including but not limited to, time, date, camera, and area, among others.

- xi. Shall provide the tool to search video and associated audio on user-defined events or motion parameters.
 - xii. Shall allow operators to define an area of the video field in which to search for motion as well as define the amount of motion that will trigger search results. The Surveillance UI then retrieves all archived video streams which contain motion which meets the search parameters. There shall be a graphical timeline where the time of each search hit shall be indicated.
 - xiii. Shall allow operators to browse through a list of all bookmarks created on the system and select any bookmarked event for viewing.
 - xiv. Shall allow the user to add bookmarks to previously archived video for easier searching and retrieval.
 - xv. Shall support digital zoom on playback video streams.
 - xvi. Shall provide still image export to PNG, JPEG, GIF, and BMP format with Date and Time stamp, and Camera Name on the image (snapshot).
 - xvii. Shall provide tools to export video and a self-contained video player on various media such as a USB keys, CD/DVD-ROM.
 - xviii. Shall provide tools to export video sequences in standard video formats, such as ASF.
 - xix. Shall provide the ability to encrypt exported video files
 - xx. Shall allow operators to load previously exported video files from their computer or network.
 - xxi. Shall allow queries to be saved upon closing the CSA and reappear when the application is reopened.
 - xxii. Shall allow operators to block, on demand, video stream dynamically to lower level users to prevent access, for a specific time, to live and recorded video.
- o. The Surveillance UI shall provide an interface to support the following LPR tasks and capabilities:
- i. Monitoring and management of LPR events and alarms.
 - ii. Viewing of license plate picture(s) and context images.
 - iii. Viewing of license plate data (e.g. license plate reads)
 - iv. Verification of LPR data against live and recorded video.
- p. Tracking
- i. The USP shall permit the user to select multiple entities to monitor from the Surveillance UI by adding the entities one by one to the tracking list.
 - ii. The Surveillance UI shall provide the option to filter which events shall be displayed in the display tile layout and/or event list layout.
 - iii. It shall be possible to lock a Surveillance UI display tile so that it only tracks the activity of a specific entity, e.g. specific door or camera.

- iv. The user shall be able to drag and drop an event from an event list (or an alarm from an alarm list) onto a display tile to view a license plate read, cardholder picture ID, badge ID, or live/archived video, among other options.
 - v. Event, alarm, monitoring/tracking, and report lists shall contain cardholder pictures, where applicable.
 - vi. The user shall be permitted to start or pause the viewing of events within each display tile.
- q. Display Tile Packing and Unpacking
- i. The Surveillance UI shall support single-click unpacking and packing for LPR hits, LPR reads, areas, doors, zones, camera sequences, and alarms.
 - ii. Packing and unpacking of entities shall allow operators to quickly obtain additional information and camera views of a specific entity.
 - iii. Unpacking of an entity shall display associated entities. For example, unpacking a door with multiple associated cameras shall display all cameras associated to the door. Unpacking shall reconfigure the display tiles to be able to display all associated entities. For example, unpacking a door (or zone , or alarm) that is currently in a 1 x 1 tile configuration and that has 3 cameras tied to it will create a 1 x 3 display tile arrangement to view all associated entities.
 - iv. Packing will return the display to the original tile pattern.
- r. Visual Tracking
- i. The Surveillance UI shall support the ability to manually track a moving target with the single click of a button.
 - ii. The ability to switch from one camera view to an adjacent camera shall be done within a single display tile.
 - iii. Switching between camera streams shall be accomplished by simply clicking on a semi-transparent shape or overlay.
 - iv. Visual tracking shall be available with both live and recorded video.
- s. The following additional tools or utilities shall be available from the Surveillance UI: create credentials, create cardholders, and access control troubleshooter.
4. Server Administrator
- a. The Server Administrator shall be used to configure the SSM, as well as the Directory Role (main configuration) and its database(s), apply the license, and more.
 - b. The Server Administrator shall be a web-based application. Through the Server Administrator, it shall be possible to access the SSM across the network or locally on the server.
 - c. Access to the Server Administrator shall be protected via login name and password, as well as encrypted communications.
 - d. The Server Administrator shall allow the administrator (user) to perform the following functions:
 - i. Manage the system license.

- ii. Configure the database(s) and database server for the Directory Role,
- iii. Activate/Deactivate the Directory Role.
- iv. Manually back up the Directory Role database(s) and/or restore the server database(s), as well as configure scheduled backups of the databases.
- v. Define the client-to-server communications security settings.
- vi. Configure the network communications hardware, including connection addresses and ports.
- vii. Configure system SMTP settings (mail server and port).
- viii. Configure event and alarm history storage options.

5. Unified Web Client (UWC)

- a. The UPS shall support a unified web client (UWC) for access control, video, and LPR.
- b. The UWC shall be a truly thin client with no download required other than an internet web browser or standard web browser plugins.
- c. The UWC shall be platform independent and run within Microsoft Internet Explorer, Firefox, Safari, and Google Chrome.
- d. Web pages for the web client shall be managed and pushed by the Mobile Server. Microsoft IIS or any other web hosting service shall not be required given that all the web pages shall be hosted by the Mobile Server.
- e. Functionalities:
 - i. Login using name and password or Active Directory support shall be available.
 - ii. Encrypted communications for all transactions.
 - iii. Print reports, export to CSV file
 - iv. User management (add, modify, delete, change partition, change group)
 - v. Customer logo customization shall be available for multi-tenant and hosted services applications.
 - vi. Video
 - 1. Live and playback video 320 x 240 @ 15 fps
 - 2. Video export
 - 3. 1 or 4 tiles
 - 4. Basic PTZ Controls (Pan/Tilt, Zoom, go to presets, start pattern)
 - 5. Start / Stop recording
 - 6. Sample web page for customers to see how to view video for own development
 - vii. Access Control
 - 1. Cardholder and group, credential management (add/modify/delete)
 - 2. Visitor management (add/modify/delete)

3. Access rule management (add/modify/delete)
4. Area management (view and name modification)
5. Door management (view, name modification, add/remove access rules)
6. Access control reports

ACS-6 System Functionality

1. Unification of Video and Access Control

- a. The Surveillance UI shall present a true Unified Security Interface for live monitoring and reporting of the ACS and VMS. Advanced live video viewing and playback of archived video shall be available through the Surveillance UI.
- b. The Configuration UI shall present a true Unified Security Interface for configuration and management of the ACS and VMS.
- c. User shall be able to associate one or more video cameras to the following entity types, among others: areas, doors, elevators, zones, alarms, and intrusion panels.
- d. It shall be possible to view video associated to access control events when viewing a report.
- e. It shall be possible to view video associated to intrusion panel events when viewing a report.

2. Third Party System Integration

- a. The USP shall support multiple approaches to integrating third party systems. These shall include: Software Development Kits (SDKs), Driver Development Kits (DDKs), REST-based Web Service SDKs, and more.
- b. The USP architecture shall support the addition of new connectors to integrate to third party system integration such as:
 - i. Video analytics.
 - ii. Third party video systems.
 - iii. Third party access control systems.
 - iv. Point-of-sale (POS) systems.
 - v. Building management systems.
 - vi. Human resource management systems (HRMS).

3. Alarm Management

- a. The USP shall support the following Alarm Management functionality:
 - i. Create and modify user-defined alarms. An unrestricted number of user-defined alarms shall be supported.
 - ii. Assign a time schedule or a coverage period to an alarm. An alarm shall be triggered only if it is a valid alarm for the current time period.
 - iii. Set the priority level of an alarm and its reactivation threshold.

- iv. Define the time period after which the alarm is automatically acknowledged.
 - v. Define the recipients of an alarm. Alarm notifications shall be routed to one or more recipients. Recipients shall be assigned a priority level which prioritizes the order of reception of an alarm.
 - vi. Define the alarm broadcast mode. Alarm notifications shall be sent using either a sequential or an all-at-once broadcast mode.
 - vii. Define whether to display the source of the alarm, one or more entities, or an HTML page.
 - viii. Specify whether an incident report is mandatory during acknowledgment.
- b. The workflows to create, modify, add instructions and procedures, and acknowledge an alarm shall be consistent for access control, LPR, and video alarms.
 - c. Alarms shall be federated allowing global alarm management across multiple independent USP, ACS, and VMS systems.
 - d. The USP shall also support alarm notification to an email address or any device using the SMTP protocol.
 - e. The ability to create alarm-related instructions shall be supported through the display of one or more HTML pages following an alarm event. The HTML pages shall be user-defined and can be interlinked.
 - f. Alarm unpacking and packing shall be supported where all the entities associated to an alarm can be display in the Surveillance UI with the single click of button.
 - g. User shall have the ability to acknowledge alarms, create an incident upon alarm acknowledgement, and put an alarm to snooze.
 - h. The user shall be able to spontaneously trigger alarms based on something he or she sees in the system.
 - i. An alarm must be configured in such a way that it remains visible until the source condition has been acknowledged
 - j. A user must be able to investigate an alarm without acknowledging it
4. Threat Levels
- a. The USP shall support Threat Levels to dynamically change the system behavior to respond to critical events.
 - b. Threat Levels are activated and deactivated by the CSA operator with the right privilege.
 - c. Threat Levels can be set on an area or on the entire system.
 - d. Threat Levels can affect the system behavior by executing any action available in the USP such as: trigger output, start recording, block camera, override recording quality, arm zone, set a door in maintenance mode, etc.
 - e. The following specific actions shall be available with Threat Level:
 - i. Set minimum security clearance to restrict or permit access to cardholders on specific areas on top of the restrictions imposed by the access rules.
 - ii. Set minimum user level to automatically log out user from the USP.

- iii. Set reader mode to change how the doors are accessed (e.g. card and PIN, or card or PIN).
 - f. A visible notification shall be displayed in all operator CSA when a Threat Level is activated
- 5. Remote Task
 - a. The USP shall provide, through a Remote Task, capabilities to remotely monitor and control the content of other workstations running the CSA (Surveillance UI) that are part of the same system.
 - b. The USP shall support video wall applications by connecting and controlling multiple workstations and monitors simultaneously.
 - c. The Remote Task shall be a graphical interface showing a replication of the remote workstation running the CSA (Surveillance UI).
 - d. The Remote Task shall allow to connect to other workstations with a low bandwidth mode to receive only snapshots of the video viewed remotely.
 - e. The Remote Task shall allow to connect to other workstations with a spy mode to remain invisible to the remotely connected workstation.
 - f. The functionality provided by the remote monitoring and control capability shall include:
 - i. Remote monitoring and control of the monitoring and alarm monitoring tasks.
 - ii. Ability to remotely switch cameras, doors and zones into display tiles.
 - iii. Ability to remotely control live and playback video.
 - iv. Ability to remotely change the tile pattern
 - v. Ability to remotely create and delete tasks
 - vi. Ability to remotely start/stop task cycling
 - vii. Ability to remotely go into full screen mode
 - viii. Ability to remotely save and reload the workspace
- 6. Health Monitoring
 - a. The USP shall monitor health of the system, log health-related events, and calculate statistics.
 - b. USP services, roles, agents, units, and client apps will trigger health events.
 - c. It shall populate the Windows Event Log with health events related to USP roles, services, and client apps.
 - d. A dedicated role, the Health Monitoring Role, shall perform the following actions:
 - e. Monitor health of the entire system and logs events
 - f. Calculate statistics within specified time frame (hours, days, months)
 - g. Calculates availability for clients, server, video/access/LPR units
 - h. A Health Monitoring task and Health History reporting task shall be available for live and historical reporting.

- i. Health events shall be accessible via the SDK (can be used to create SNMP traps)
- 7. Advanced Task Management
 - a. The USP shall support an infrastructure for managing Surveillance UI tasks used for live monitoring, day to day activities, and reporting.
 - b. Administrators shall be able to assign tasks and lock the operator's workspace. User management of their workspace shall be limited by their assigned privileges.
 - c. Operators shall be able save their tasks as either Public Tasks or Private Tasks and in a specific partition. Public tasks shall be available to all users. Private tasks shall only be available to the owner of the task.
 - d. Operators shall be able to share their tasks by sending them to one or more online users. Recipients shall have the option to accept the sent task.
- 8. Reporting
 - a. The USP shall support report generation (database reporting) for access control, LPR, video, and intrusion.
 - b. Each and every report in the system shall be a USP task, each associate with its own privilege. A user shall have access to a specific report task if he or she has the appropriate privilege.
 - c. The workflows to create, modify, and run a report shall be consistent for access control, LPR, and video reports.
 - d. Reports shall be federated allowing global consolidated reporting across multiple independent USP, ACS, and VMS systems.
 - e. Access control and LPR reports shall support cardholder pictures and license plate pictures, respectively.
 - f. The USP shall support the following types of reports:
 - i. Alarm report
 - ii. Video-specific reports (archive, bookmark, motion, and more)
 - iii. Configuration reports (cardholders, credentials, units, access rules, readers/inputs/outputs, and more)
 - iv. Activity reports (Cardholder, cardholder group, visitor, credential, door, unit, area, zone, elevator, and more)
 - v. LPR-specific reports (mobile LPR playback, hits, plate reads, reads/hits per day, reads/hits per LPR zone, and more)
 - vi. Health activity and health statistics reports
 - vii. Other types of reports include visitor reports, audit trail reports, incident reports, and time and attendance reports.
 - g. Generic Reports, Custom Reports and Reports Templates
 - i. A user has the option of generating generic reports from an existing list, generating reports from a list of user-defined templates, or creating a new report or report template.

- ii. The user shall be able to customize the predefined reports and save them as new report templates. There shall be no need for an external reporting tool to create custom reports and report templates. Customization options shall include setting filters, report lengths, and timeout period. The user shall also set which columns shall be visible in a report. The sorting of reported data shall be available by clicking on the appropriate column and selecting a sort order (ascending or descending).
 - iii. All report templates shall be created within the Surveillance UI.
 - iv. These templates can be used to generate reports on a schedule in PDF or Excel formats.
 - v. An unrestricted number of custom reports and templates shall be supported.
 - h. A reporting task layout shall consist of panes with settings (report length, filters, go and reset commands, etc.), the actual report data in column format, and a pane with display tiles. The user shall be able to drag and drop individual records in a report onto one or more display tiles to view a cardholder's picture ID, playback a video sequence, or both.
 - i. The USP shall support comprehensive data filtering for most reports based on entity type, event type, event timestamp, custom fields, and more.
 - j. The user shall be able to click on an entity within an existing report to generate additional reports from the Surveillance UI.
 - k. The USP shall support the following actions on a report: Print report, export report to a PDF/Microsoft Excel/CSV file, automatically email a report based on a schedule and a list of one or more recipients.
9. Microsoft Active Directory Integration (Already existing with Omnicast)
- a. The USP shall support a direct connection to one or multiple Microsoft Active Directory server via the Active Directory Role(s). Active Directory integration shall enable the synchronization of information from the Active Directory server to the USP.
 - b. Active Directory integration shall permit the central management of the USP users, user groups, cardholders, and cardholder groups.
 - c. The USP shall be able to connect to and synchronize data from multiple Active Directory servers (up to 10).
 - d. The USP shall support Microsoft Active Directory encryption using LDAP SSL.
 - e. When enabled, Active Directory shall manage user logon to the USP client applications through the user's Windows credentials. Logon to the USP shall utilize native Active Directory password management and authentication features.
 - f. It shall be possible to synchronize the following USP entities and their information from Active Directory to the USP:
 - i. Users (username, first and last names, email address, and more)
 - ii. User groups (user group name, description, and group email address)
 - iii. Cardholders (first and last names, description, email, and more)
 - iv. Cardholder groups (cardholder group name, description, and group email address)

- v. Active Directory attributes to USP custom fields.
- g. When enabled, the addition, removal, or suspension of a user's Windows account in Active Directory shall result in the creation, deletion, or disabling of the equivalent user account in the USP.
- h. When enabled, the addition, removal, or suspension of a user's Windows account in Active Directory shall result in the creation, deletion, or disabling of the equivalent cardholder account in the USP.
- i. Supported synchronization methods for additions, modification, and deletions of synchronized entities shall include: on first logon (users only), manual synchronization, scheduled synchronization.

10. Zone Management (This feature is required to monitor the intrusion alarm system)

- a. The USP shall support the configuration and management of zones for input point monitoring via the Zone Manager Role. A user shall be able to add, delete, or modify a zone if he has the appropriate privileges.
- b. A zone shall monitor the status of one or more inputs points. Zone monitoring or input point monitoring shall be possible through the use of a controller and one or more input modules. Inputs from video cameras or video encoders shall also be accessible via a zone.
- c. Supervised inputs shall be supported depending on the hardware installed. Depending on the input module used, both 3-state and 4-state supervision shall be available.
- d. A schedule shall be defined for a zone, indicating when the zone will be monitored.
- e. Custom Events shall provide full flexibility in creating custom events tailored to a zone. Users shall be able to associate custom events to state changes in monitored inputs.
- f. The ACS shall support one or more cameras per zone. Video shall then be associated to zone state changes.
- g. Input/Output (IO) Linking
 - i. Zone management shall support Input/Output (IO) Linking. IO linking shall allow one or more inputs to trigger one or more outputs.
 - ii. IO linking shall be available in offline mode when communication between the server and hardware is not available.
 - iii. Custom Output Behaviors shall provide full flexibility in creating a variety of complex output signal patterns: Simple pulses, periodic pulses, variable duty-cycle pulses, state changes.
 - iv. Through the "trigger an output" action, the ACS shall support the triggering of outputs with custom output behaviors.

11. User and User Group Security, Partitions, and Privileges Management

- a. The USP shall support the configuration and management of users and user groups. A user shall be able to add, delete, or modify a user or user group if he has the appropriate privileges.
- b. Common access rights and privileges shared by multiple users shall be defined as User Groups. Individual group members shall inherit the rights and privileges from their parent user groups. User group nesting shall be allowed.

- c. User privileges shall be extensive in the USP. All configurable entities for the USP, including access control/video/video, shall have associated privileges.
- d. Specific entities such as cardholders, cardholder groups, and credentials shall include a more granular set of privileges such as the right to access custom fields and change the activation or profile status of an entity.
- e. Partitions
 - i. The USP shall limit what users can view in the configuration database via security partitions (database segments). The administrator, who has all rights and privileges, shall be allowed to segment a system into multiple security partitions.
 - ii. All entities that are part of the USP can be assigned to one or more partitions.
 - iii. A user who is given access to a specific partition shall only be able to view entities (components) within the partition he has been assigned. Access to a user is given by assigning the user as an accepted user to view the entities that are members of a particular partition.
 - iv. A user or user group can be assigned administrator rights over the partition.
- f. It shall be possible to specify user and user group privileges on a per partition basis.
- g. Advanced logon options shall be available such as dual logon and more.

12. Event/Action Management

- a. The USP shall support the configuration and management of events for access control, LPR, and video. A user shall be able to add, delete, or modify an action tied to an event if he has the appropriate privileges.
- b. The USP shall receive all incoming events from one or more ACS and/or VMS. The USP shall take the appropriate actions based on user-define event/action relationships.
- c. The USP shall receive and log the following events:
 - i. System-wide events
 - ii. Application events (clients and servers)
 - iii. Area, camera, door, elevator, and LPR events (reads, hits)
 - iv. Cardholder, credential events
 - v. Unit events
 - vi. Zone events
 - vii. Alarm events
 - viii. First Person In and Last Person Out events, antipassback events.
 - ix. Intrusion events.
 - x. Asset management events.
- d. The USP shall allow the creation of custom events.
- e. The USP shall have the capability to execute an action in response to an access control, video, and LPT event.

- f. The USP shall allow a schedule to be associated with an action. The action shall be executed only if it is an appropriate action for the current time period.

13. Schedules and Scheduled Tasks

a. Schedules

- i. The USP shall support the configuration and management of complex schedules. A user shall be able to add, delete, or modify a schedule if he has the appropriate privileges.
- ii. The USP shall provide full flexibility and granularity in creating a schedule. The user shall be able to define a schedule in 1-minute or 15-minute increments.
- iii. Daily, weekly, ordinal, and specific schedules shall be supported.

b. Schedules Tasks

- i. The USP shall support scheduled tasks for access control, LPR, and video.
- ii. Scheduled tasks shall be executed on a user-defined schedule at a specific day and time. Recurring or periodic scheduled tasks shall also be supported.
- iii. Scheduled tasks shall support all standard actions available within the USP such as sending an email or emailing a report.

14. Macros and Custom Scripts

- a. The USP shall enable users to automate and extend the functionalities of the system through the use of macros or custom scripts for access control, LPR, and video.
- b. Custom macros shall be created with the USP Software Development Kit (SDK).
- c. A macro shall be executed either automatically or manually.
- d. In the Surveillance UI, a macro shall be launched through hot actions.

15. Dynamic Graphical Maps (DGM)

- a. The USP shall support Mapping functionality for access control, video and intrusion.
- b. The USP shall enable Mapping functionality to display any type of third party entities integrated through an SDK.
- c. The DGM shall provide a user friendly and intuitive navigation:
 - i. It shall be possible to create maps with hierarchies to facilitate navigation within and between various sites and buildings.
 - ii. It shall be possible to define favorites for recurrent position recall. Favorites shall be restricted per user or public
 - iii. It shall be possible to create links between maps
 - iv. GIS or private maps shall provide the same level of user experience regarding the navigation into the map
- d. The DGM shall support the use of GIS maps or private maps for map background.
- e. Any GIS compliant with the OGC and supporting WMS shall be connectable to the DGM. It includes, but not limited to ESRI maps.

- f. Digital maps shall be used to represent the physical location of: areas, cameras, doors, alarms, zones (monitored inputs), and intrusion area.
- g. It shall be possible to add advanced functionality to dynamic maps using the SDK. Any functionality available through the SDK shall be available within maps.
- h. Various actions shall be available within maps for execution through simple and intuitive double-click, right-click, or drag-and-drop functionality. Examples of actions available through maps shall include unlocking a door and acknowledging an alarm.
- i. It shall be possible to create maps with hierarchies to facilitate navigation within and between various sites and buildings.
- j. Mapping shall support the following drag-and-drop user actions:
 - i. Drag-and-drop a door from a map into a display tile for viewing
 - ii. Drag-and-drop a camera from a map into a display tile for viewing

16. Audit and User Activity Trails (Logs)

- a. The USP shall support the generation of audit trails. Audit trails shall consist of logs of operator/administrator additions, deletions, and modifications.
- b. Audit trails shall be generated as reports. They shall be able to track changes made within specific time periods. Querying on specific users, changes, affected entities, and time periods shall also be possible.
- c. The USP shall support the generation of user activity trails. User activity trails shall consist of logs of operator activity on the USP such as login, camera viewed, badge printing, video export, etc.
- d. The ACS shall support the following actions on an audit and activity trail report: print report, export report to a PDF/ Microsoft Excel/CSV file.

17. Incident Reports

- a. Incident reports shall allow the security operator to create reports of incidents that occurred during a shift. Both video-related and access control-related incident reports shall be supported.
- b. The operator shall be able to create standalone incident reports or incident reports tied to alarms.
- c. Incident reports shall allow entities, events, and alarms to be added to support the report's conclusions.

ACS-7 Access Control System Functionality

1. General

- a. The ACS shall be an enterprise class IP access control software solution. It shall be fully embedded within a Unified Security Platform (USP). The USP shall allow the seamless unification of the ACS with an IP video management system (VMS).
- b. The ACS shall be highly scalable to support configurations consisting of thousands of doors with facilities spanning multiple geographic areas.

- c. The ACS shall support an unrestricted number of logs and historical transactions (events and alarms) with the maximum allowed being limited by the amount of hard disk space available.
- d. The ACS shall support a variety of access control functionality, including but not limited to:
 - i. Controller (Unit) management, door management, elevator management, and area management
 - ii. Cardholder and cardholder group management, credential management, and access rule management
 - iii. Badge printing and template creation.
 - iv. Visitor Management.
 - v. People counting, area presence tracking, and mustering.
 - vi. Offer a framework for third party hardware integration such as card and signature scanner

2. Access Management

- a. The ACS shall be based on an open architecture able to support multiple access control hardware manufacturers. The ACS shall be able to integrate with multiple non-proprietary interface modules and controllers, access readers, and other third party applications.
- b. The ACS shall be an IP enabled solution. All communication between the ACS and hardware controllers shall be based on standard TCP/IP protocol.
- c. Access Manager Role
 - i. The Access Manager Role shall be the server that synchronizes all access control hardware units under its control, such as door controllers and IO modules. It shall also be able to validate and log all access activities and events when the door controllers and IO modules are online.
 - ii. The Access Manager Role shall maintain the communication link with the hardware controllers under its control. It shall also continuously monitor whether the controllers are online or offline.
 - iii. Synchronization of hardware units shall be automated and transparent to users and shall occur in the background. It shall also be possible to manually synchronize units or on a schedule.
 - iv. The Access Manager Role shall support doors and controllers located within one or more facilities. The Access Server shall support a minimum of 200 readers per computer.
- d. The Access Server shall store all access events associated with the doors, areas, hardware zones (hardware input points), elevators, and controllers under its direct control.

3. Hardware Compatibility List

- a. The ACS shall have an open architecture that supports the integration of third party IP-based door controllers and IO modules. The ACS shall simultaneously support mixed configurations of access control hardware from multiple vendors.

- b. The ACS shall support multiple types of hardware devices: Single-reader controllers, 2-reader controllers, 1- to 64-reader controllers, integrated readers and door controllers, Power-over-Ethernet (PoE) enabled door controllers.
- c. The ACS shall support most industry standard card readers that output card data using the Wiegand protocol and Clock-and-Data.
- d. The ACS shall support the following IP-enabled controllers. For a description of the capabilities of the controller, refer to the specific controller's A&E specification.
 - i. Genetec Synergis Master Controller, which shall support the following downstream interface modules:
 - 1. VertX V100 reader interface module
 - 2. VertX V200 input module
 - 3. VertX V300 output module
 - 4. Mercury MR52 reader interface module
 - 5. Mercury MR16OUT output module
 - 6. Mercury MR16IN input module
 - 7. STid LXS W33-E/PH5 7AA
 - 8. DDS AS34/TPL4
 - ii. HID Corporation
 - 1. VertX V2000 reader interface/network gateway
 - 2. VertX V2000 Evo reader interface/network gateway
 - 3. iCLASS EdgeReader integrated reader and controller (PoE)
 - 4. iCLASS EdgeReader EVO integrated reader and controller (PoE)
 - 5. EdgePlus door controller (PoE)
 - 6. Edge EVO door controller (PoE)
 - 7. Edge EVO Hi-O interface modules
 - 8. VertX V1000 network gateway
 - 9. VertX V1000 EVO network gateway
 - 10. VertX V100 reader interface module
 - 11. VertX V200 input module
 - 12. VertX V300 output module
- e. The following USB enrollment readers shall be supported:
 - i. RF Ideas pcProx HID USB reader for enrolling proximity cards
 - ii. RF Ideas AIR ID Enroll iCLASS ID# USB reader for enrolling HID iCLASS cards
 - iii. RF Ideas AIR ID Enroll 14443/15693 CSN USB reader for enrolling a MIFARE card using the CSN (card serial number)

- iv. RF Idea AIR ID Enroll pcProx Plus w/iCLASS reader for enrolling proximity and iCLASS cards
- v. STid STR-W35-E/PH5-5AA

4. Software Functionality

a. Seamless Unification with IP Video Management System (VMS)

- i. Through the USP (Unified Security Platform), the ACS shall support integration with an IP Video Surveillance System or MVS. Integration with an IP video surveillance system shall permit the user to view live and recorded video.
- ii. User shall be able to associate one or more video cameras to the following entity types, among others: doors, elevator, and hardware zone (input points).
- iii. The Surveillance UI shall present a true Unified Security Interface for access control and video surveillance. Advanced live video viewing and playback of archived video shall be available through the Surveillance UI.
- iv. It shall be possible to view video associated to access control events when viewing a report.

b. Controller (Unit) Management

- i. The ACS shall support the discovery, configuration, and management of IP enabled controllers and IO modules (hardware units). A user shall be permitted to add, delete, or modify a controller if he has the appropriate privileges.
- ii. The ACS shall support automatic unit discovery. The user shall set the settings for discovery ports and types of unit discovery and the ACS shall automatically detect all connected devices.
- iii. Unit Swap Utility. The ACS shall support a unit swap utility to swap out an existing controller with a new controller. The unit swap utility shall avoid the reprogramming of the system whenever a unit is replaced. All logs and events from the old unit are maintained.
- iv. The ACS shall support preconfiguration of the system prior to the physical hardware installation

c. Cardholder And Cardholder Group Management

- i. The ACS shall support the configuration and management of cardholders and cardholder groups. A user shall be able to add, delete, or modify a cardholder or cardholder group if he has the appropriate privileges.
- ii. Custom fields shall be supported for both cardholders and cardholder groups.
- iii. The ACS shall permit the following activation/expiration options for a cardholder's profile: delayed activation of a cardholder's profile, expiration based on the date of first use of credential, or expiration on a user-defined date
- iv. It shall be possible to associate a picture to the cardholder's profile. The picture shall be imported from a file, captured with a digital camera, or captured from a video surveillance camera. When a cardholder event occurs, the picture of the cardholder shall be displayed in the Surveillance UI. The ACS shall support multiple standard picture formats.

- v. Cardholder groups shall enable the grouping of cardholders to facilitate mass changes to system settings. It shall be possible to assign cardholder groups to access rules, thus avoiding the assignment of one cardholder at a time.
- vi. It shall be possible to search by picture association, custom fields and names
- vii. It shall be possible to select multiple cardholder for immediate deactivation or reactivation
- viii. The ACS shall support synchronization of cardholders and cardholders group through Active Directory including credential and picture of the cardholders

d. Credential Management

- i. The ACS shall support the configuration and management of credentials, e.g. access cards and keypad PIN numbers. A user shall be able to add, delete, or modify a credential if he has the appropriate privileges.
- ii. User shall be able to add Custom Fields (user-defined fields) to credentials. Creating a new credential shall be accomplished either manually or automatically.
- iii. Automatic creation shall allow the user to create a credential entity by presenting a credential to a selected reader. The ACS shall read the card data and associate it to the credential entity. It shall be possible to automatically enroll any card format (128 bits or less).
- iv. The ACS shall support multiple credentials per cardholder, without necessitating duplicate cardholder information. The ACS shall automatically detect and prevent attempts to register an already-registered credential.
- v. Batch enrollment of credentials shall be supported.
- vi. The ACS shall provide a workflow for badge issuance and card requests

e. Custom Card Formats

- i. A custom card format feature shall allow the administrator to add additional custom card formats using an intuitive tool within the Configuration UI. The custom card format tool shall be flexible in the following ways:
 - 1. Once enrolled, new custom card formats shall appear in the card format lists for manual card enrollment.
 - 2. An unrestricted number of additional custom card formats can be added.
- ii. The administrator shall be able to set the following options when defining a new format:
 - 1. The order in which card fields appear in the user interface or CSA.
 - 2. Whether a field is hidden from, or visible to an operator.
 - 3. Whether a field is read only or modifiable by an operator.
 - 4. Complex parity checking schemes.
 - 5. The order and location of a field's data. Location can be defined on a bit-by-bit basis

f. Badge Designer (This is a licensed feature and shall be included in this scope of work)

- i. The badge designer shall allow the creation of badge templates that define the content and presentation format of a cardholder badge to be printed.
 - ii. Badge production shall consist of selecting the credential, the badge template, and clicking print.
 - iii. Batch printing of cards shall be available.
 - iv. The contents of a badge template can include: cardholder's first name, last name, picture, custom fields, bitmap graphics, lines, ovals, rectangles, dynamic text labels linked to custom fields and static text labels, barcodes (Interleaved 2 of 5, Extended Code 39).
 - v. Copy and paste of badge template objects shall be available.
 - vi. It shall be possible to set the border thickness, border color, fill color of badge objects (content), and the color of text labels.
 - vii. Settings such as object transparency, text orientation, and auto-sizing of text shall be available or transparent to the user.
 - viii. Supported badge formats shall be (portrait and landscape): CR70 (2.875" x 2.125"), CR80 (3.37" x 2.125"), CR90 (3.63" x 2.37"), CR100 (3.88" x 2.63"), and custom card sizes.
 - ix. Dual-sided badges shall be supported.
 - x. A badge template import and export function shall be available to allow the sharing of badge templates between distinct or independent ACS.
 - xi. Chromakey shall be supported
- g. Door Management
- i. The ACS shall support the configuration and management of doors. A user shall be able to add, delete, or modify a door if he has the appropriate privileges.
 - ii. The ACS shall permit multiple access rules to be associated to a door.
 - iii. The ACS shall support the following forms of authentication: Card Only, Card or Keypad (PIN), Card and Keypad (PIN) or Card and Biometrics. It shall be possible to define a schedule for when Card Only or Card and Keypad authentication modes shall be required.
 - iv. Extended Grant Time. It shall be possible to set an extended grant time on a per-door basis (in addition to the standard grant time). Cardholder properties shall include the option of using the extended grant time. When flagged cardholders are granted access, the door shall be unlocked for the duration of the extended grant time instead of the standard grant time.
 - v. Unlocking schedules and exceptions to unlocking schedules shall be associated to a door. An unlocking schedule shall determine when a door should be automatically unlocked. The ACS shall also support the use of a specific offline unlocking schedule. Exceptions to unlocking schedules shall be used to define time periods during which unlocking schedules shall not be applied, e.g. during statutory holidays.
 - vi. The ACS shall support one or more cameras per door. Video shall then be associated to door access events, e.g. access grant or access denied.

- h. Elevator Management
 - i. The ACS shall support the configuration and management of elevators. A user shall be able to add, delete, or modify an elevator if he has the appropriate privileges.
 - ii. The ACS shall be able to control access to specific floors using a reader within the elevator cab. Control shall be available through the use of a controller with an interface to a reader and to multiple output modules with relays.
 - iii. Elevator floor selections shall be tracked using a controller with an interface to multiple input modules. Floor tracking shall be available within an elevator activity report.
 - iv. The elevator control module shall continue to function in offline mode should communication between the ACS and the controller fail.
 - v. The ACS shall support one or more cameras per elevator cab. Video shall then be associated to elevator access events, e.g. access grant or access denied.
- i. Custom Fields (User-Defined Fields)
 - i. The ACS shall permit the creation of custom fields. Up to 1,000 custom fields shall be supported.
 - ii. Custom fields shall be supported for the following entities: Cardholders, Cardholder groups, Credentials, and Visitors.
 - iii. Supported custom fields include: Text, Integers, Decimal Numbers, Dates, Boolean, and Images (graphics).
 - iv. User shall be able to define a default value for a custom field.
 - v. The creation of new custom field types shall be possible. New custom field types shall be based on the standard custom fields supported. They shall support user-defined values from which an operator must make a selection.
 - vi. Administrators have the ability to define which users can view and modify specific custom fields. This shall limit the access to custom field data to users with pre-defined privileges. The ACS shall support querying and report generation using custom fields.
 - vii. Custom fields can be grouped and ordered within these groups as defined by the user.
 - viii. Values for custom fields can be imported using the Import Tool.
- j. Import Tool (This is a licensed feature and shall be included in this scope of work)
 - i. The ACS shall support an integrated Import Tool to facilitate the import of existing cardholder and credential data. The import of data shall be through the use of the CSV file format. The tool shall be available from the Configuration UI.
 - ii. The Import Tool shall also support the ability to manually import data that has been exported from a third party database if it is in CSV format.
 - iii. The import tool shall permit the import of the following data:
 - 1. Cardholder name, descriptions, picture, email, and status

2. Cardholder group information
 3. Credential name, status, format, and card number (including credentials with custom formats)
 4. Partition information
 5. Custom fields
- iv. Full flexibility in selecting the fields import during an import session shall be available.
 - v. The option to use a custom and unique cardholder key shall be specified during the import process to ensure that cardholders with duplicate names will not have their data overwritten. Cardholder key generation shall be automated. The end user shall have the option to select which fields will be used to create this unique key, e.g. credential number, custom fields, cardholder name.
 - vi. The ACS shall also support re-importing a CSV file containing new information to update existing information in the ACS database. Re-importing shall enable bulk amendments to existing access control data.

k. Web Client

- i. The Web Client shall allow users to perform configuration, management, and reporting activities of the ACS.
- ii. The Web Client shall be accessible through Microsoft Internet Explorer. It shall be a truly thin client. It shall not require the download of any ACS-specific files or executable on the client workstation.
- iii. Functionality available through the web client includes:
 1. Configuration and management of cardholders and cardholder groups
 2. Configuration and management of credentials
 3. Configuration and management of access rules
 4. Badge printing over the network
 5. Assignment of access rules to doors and areas
 6. Visitor management including visitor check-in and check-out and reporting
 7. Advanced reporting.

ACS-10 Basis of Payment.

No separate measurements shall be made for Access Control System Replacement, Complete.

Payment for all work specified in this technical specification, including but not limited to labor, taxes, demolition, disposal, equipment, procurement of materials, installation, shipping, equipment, integration with existing and proposed software, testing, and commissioning of the new software USP, ACS, biometric readers, and all required hardware and licenses to support the new system, shall be paid for under the lump sum pay item, Access Control System Replacement, Complete. The contractor shall visit the site and determine all improvements required to provide the Owner with a complete, functional USF and ACS. The contractor's bid shall account for any additional improvements required to provide the airport with a fully functional system as described above even if not specifically identified in this technical specification.

Payment shall be provided under:

ACS-1	Access Control System Replacement, Complete	--Lump Sum (LS)
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