



NOTICE TO BIDDERS

1. **TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 10:00 a.m. on August 4, 2017, at which time the bids will be publicly opened from the iCX SecureVault.

2. **DESCRIPTION OF WORK.** The proposed improvement is identified and advertised for bids in the Invitation for Bids as:

**Contract No. WA072
Waukegan National Airport
Waukegan, Illinois
Lake County
Illinois Project No. UGN-4589
SBG Project No. 3-17-SBGP-TBD**

Install Security/Wildlife Fence, Phase 4

For engineering information, please contact Ronald M. Hudson, AICP of Hanson Professional Services, Inc. at (630) 368-2059.

3. **INSTRUCTIONS TO BIDDERS.**

(a) This Notice, the invitation for bids, proposal and letter of award shall, together with all other documents in accordance with Article 10-18 of the Illinois Standard Specifications for Construction of Airports, become part of the contract. Bidders are cautioned to read and examine carefully all documents, to make all required inspections, and to inquire or seek explanation of the same prior to submission of a bid.

(b) State law, and, if the work is to be paid wholly or in part with Federal-aid funds, Federal law requires the bidder to make various certifications as a part of the proposal and contract. By execution and submission of the proposal, the bidder makes the certification contained therein. A false or fraudulent certification shall, in addition to all other remedies provided by law, be a breach of contract and may result in termination of the contract.

4. **AWARD CRITERIA AND REJECTION OF BIDS.** This contract will be awarded to the lowest responsive and responsible bidder considering conformity with the terms and conditions established by the Department in the rules, Invitation for Bids and contract documents. The issuance of plans and proposal forms for bidding based upon a prequalification rating shall not be the sole determinant of responsibility. The Department reserves the right to determine responsibility at the time of award, to reject any or all proposals, to readvertise the proposed improvement, and to waive technicalities.

5. **PRE-BID CONFERENCE.** N/A

6. **DISADVANTAGED BUSINESS POLICY.** The DBE goal for this contract is 18%.

7. **SPECIFICATIONS AND DRAWINGS.** The work shall be done in accordance with the Illinois Standard Specifications for Construction of Airports, the Special Provisions dated June 9, 2017, and the Construction Plans dated June 9, 2017 as approved by the Illinois Department of Transportation, Division of Aeronautics.

8. BIDDING REQUIREMENTS AND BASIS OF AWARD. When alternates are included in the proposal, the following shall apply:

a. Additive Alternates

(1) Bidders must submit a bid for the Base Bid and for all Additive Alternates.

(2) Award of this contract will be made to the lowest responsible qualified bidder computed as follows:

The lowest aggregate amount of (i) the Base Bid plus (ii) any Additive Alternate(s) which the Department elects to award.

The Department may elect not to award any Additive Alternates. In that case, award will be to the lowest responsible qualified bidder of the Base Bid.

b. Optional Alternates

(1) Bidders must submit a bid for the Base Bid and for either Alternate A or Alternate B or for both Alternate A and Alternate B.

(2) Award of this contract will be made to the lowest responsible qualified bidder computed as follows:

The lower of the aggregate of either (i) the Base Bid plus Alternate A or (ii) the Base Bid plus Alternate B.

9. CONTRACT TIME. The Contractor shall complete all work within the specified contract time. Any calendar day extension beyond the specified contract time must be fully justified, requested by the Contractor in writing, and approved by the Engineer, or be subject to liquidated damages.

The contract time for this contract is 92 calendar days.

10. INDEPENDENT WEIGHT CHECKS. The Department reserves the right to conduct random unannounced independent weight checks on any delivery for bituminous, aggregate or other pay item for which the method of measurement for payment is based on weight. The weight checks will be accomplished by selecting, at random, a loaded truck and obtaining a loaded and empty weight on an independent scale. In addition, the department may perform random weight checks by obtaining loaded and empty truck weights on portable scales operated by department personnel.

11. MATERIAL COST ADJUSTMENTS. Federal Aviation Administration rules prohibit the use of escalation clauses for materials. Therefore, the Illinois Department of Transportation, Division of Aeronautics cannot offer any material cost adjustment provisions for projects that utilize Federal Funds.

12. GOOD FAITH COMPLIANCE. The Illinois Department of Transportation has made a good faith effort to include all statements, requirements, and other language required by federal and state law and by various offices within federal and state governments whether that language is required by law or not. If anything of this nature has been left out or if additional language etc. is later required, the bidder/contractor shall cooperate fully with the Department to modify the contract or bid documents to correct the deficiency. If the change results in increased operational costs, the Department shall reimburse the contractor for such costs as it may find to be reasonable.

By Order of the
Illinois Department of Transportation

Randall S. Blankenhorn,
Secretary



Sponsor _____ Item No. _____

IL Proj. No. _____ SBG Pr. No. _____ Letting Date _____

KNOW ALL MEN BY THESE PRESENTS, That We _____

as PRINCIPAL, and _____

_____ as SURETY, are held jointly, severally and firmly bound unto the SPONSOR identified above, in the penal sum of 5 percent of the total bid price, or for the amount specified in Section 6, Proposal Guaranty of the Proposal Document, whichever is the lesser sum, well and truly to be paid unto said SPONSOR, for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH, that whereas, the PRINCIPAL has submitted a bid proposal to the SPONSOR through its AGENT, the State of Illinois, Department of Transportation, Division of Aeronautics, for the improvement designated by the Transportation Bulletin Item Number and Letting Date indicated above.

NOW, THEREFORE, if the SPONSOR through its AGENT shall accept the bid proposal of the PRINCIPAL; and if the PRINCIPAL shall, and as specified in the bidding and contract documents, submit a DBE Utilization Plan that is accepted and approved by the AGENT; and if, after the award by AGENT on behalf of SPONSOR, the PRINCIPAL shall enter into a contract in accordance with the terms of the bidding and contract documents, including evidence of the required insurance coverages and providing such bond as specified with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof; or if, in the event of the failure of the PRINCIPAL to make the required DBE submission or to enter into such contract and to give the specified bond, the PRINCIPAL pays to the SPONSOR the difference not to exceed the penalty hereof between the amount specified in the bid proposal and such larger amount for which the SPONSOR may contract with another party to perform the work covered by said bid proposal, then this obligation shall be null and void, otherwise, it shall remain in full force and effect.

IN THE EVENT the SPONSOR acting through its AGENT determines the PRINCIPAL has failed to comply with any requirement as set forth in the preceding paragraph, then SURETY shall pay the penal sum to the SPONSOR within fifteen (15) days of written demand therefor. If SURETY does not make full payment within such period of time, the AGENT may bring an action to collect the amount owed. SURETY is liable to the SPONSOR and to the AGENT for all its expenses, including attorney's fees, incurred in any litigation in which SPONSOR or AGENT prevail either in whole or in part.

In TESTIMONY WHEREOF, the said PRINCIPAL and the said SURETY have caused this instrument to be signed by their respective officers _____ day of _____ A.D., _____.

PRINCIPAL

SURETY

(Company Name)

(Company Name)

By _____
(Signature & Title)

By: _____
(Signature of Attorney-in-Fact)

Notary Certification for Principal and Surety

STATE OF ILLINOIS,
County of _____

I, _____, a Notary Public in and for said County, do hereby certify that
_____ and _____
(Insert names of individuals signing on behalf of PRINCIPAL & SURETY)

who are each personally known to me to be the same persons whose names are subscribed to the foregoing instrument on behalf of PRINCIPAL and SURETY, appeared before me this day in person and acknowledged respectively, that they signed and delivered said instrument as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this _____ day of _____ A.D. _____

My commission expires _____

Notary Public

In lieu of completing the above section of the Proposal Bid Form, the Principal may file an Electronic Bid Bond. By signing the proposal and marking the check box next to the Signature and Title line below, the Principal is ensuring the identified electronic bid bond has been executed and the Principal and Surety are firmly bound unto the SPONSOR through its AGENT under the conditions of the bid bond as shown above.

Electronic Bid Bond ID# _____ Company / Bidder Name _____ Signature and Title _____

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF AERONAUTICS

REQUIRED CONTRACT PROVISIONS FOR STATE FUNDED AIRPORT CONSTRUCTION PROJECTS

The following provisions are State of Illinois requirements and are in addition to the REQUIRED CONTRACT PROVISIONS FOR AIRPORT IMPROVEMENT PROGRAM AND FOR OBLIGATED SPONSORS

DISADVANTAGED BUSINESS POLICY

NOTICE: This proposal contains the special provision entitled "Disadvantaged Business Participation." Inclusion of this Special Provision in this contract satisfies the obligations of the Department of Transportation under federal law as implemented by 49 CFR 23 and under the Illinois "Minority and Female Business Enterprise Act."

POLICY: It is public policy that the businesses defined in 49 CFR Part 23 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with State or Federal funds. Consequently, the requirements of 49 CFR Part 23 apply to this contract.

OBLIGATION: The Contractor agrees to ensure that the businesses defined in 49 CFR Part 23 have the maximum opportunity to participate in the performance of this contract. In this regard, the Contractor shall take all necessary and reasonable steps, in accordance with 49 CFR Part 23, to ensure that the said businesses have the maximum opportunity to compete for and perform portions of this contract. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

The Contractor shall include the above Policy and Obligation statements of this Special Provision in every subcontract, including procurement of materials and leases of equipment.

DBE/WBE CONTRACTOR FINANCE PROGRAM: On contracts where a loan has been obtained through the DBE/WBE Contractor Finance Program, the Contractor shall cooperate with the Department by making all payments due to the DBE/WBE Contractor by means of a two-payee check payable to the Lender (Bank) and the Borrower (DBE/WBE Contractor).

BREACH OF CONTRACT: Failure to carry out the requirements set forth above and in the Special Provision shall constitute a breach of contract and may result in termination of the contract or liquidated damages as provided in the special provision.

SPECIAL PROVISION FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION (BDE)

Effective: September 1, 2000

Revised: July 2, 2016

FEDERAL OBLIGATION. The Department of Transportation, as a recipient of federal financial assistance, is required to take all necessary and reasonable steps to ensure nondiscrimination in the award and administration of contracts. Consequently, the federal regulatory provisions of 49 CFR Part 26 apply to this contract concerning the utilization of disadvantaged business enterprises. For the purposes of this Special Provision, a disadvantaged business enterprise (DBE) means a business certified by the Department in accordance with the requirements of 49 CFR Part 26 and listed in the Illinois Unified Certification Program (IL UCP) DBE Directory.

STATE OBLIGATION. This Special Provision will also be used by the Department to satisfy the requirements of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575. When this Special Provision is used to satisfy state law requirements on 100 percent state-funded contracts, the federal government has no involvement in such contracts (not a federal-aid contract) and no responsibility to oversee the implementation of this Special Provision by the Department on those contracts. DBE participation on 100 percent state-funded contracts will not be credited toward fulfilling the Department's annual overall DBE goal required by the US Department of Transportation to comply with the federal DBE program requirements.

CONTRACTOR ASSURANCE. The Contractor makes the following assurance and agrees to include the assurance in each subcontract that the Contractor signs with a subcontractor.

The Contractor, subrecipient, or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of contracts funded in whole or in part with federal or state funds. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (a) Withholding progress payments;
- (b) Assessing sanctions;
- (c) Liquidated damages; and/or
- (d) Disqualifying the Contractor from future bidding as non-responsible.

OVERALL GOAL SET FOR THE DEPARTMENT. As a requirement of compliance with 49 CFR Part 26, the Department has set an overall goal for DBE participation in its federally assisted contracts. That goal applies to all federal-aid funds the Department will expend in its federally assisted contracts for the subject reporting fiscal year. The Department is required to make a good faith effort to achieve the overall goal. The dollar amount paid to all approved DBE companies performing work called for in this contract is eligible to be credited toward fulfillment of the Department's overall goal.

CONTRACT GOAL TO BE ACHIEVED BY THE CONTRACTOR. This contract includes a specific DBE utilization goal established by the Department. The goal has been included because the Department has determined that the work of this contract has subcontracting opportunities that may be suitable for performance by DBE companies. The determination is based on an assessment of the type of work, the location of the work, and the availability of DBE companies to do a part of the work. The assessment indicates that, in the absence of unlawful discrimination, and in an arena of fair and open competition, DBE companies can be expected to perform 18% of the work. This percentage is set as the DBE participation goal for this contract. Consequently, in addition to the other award criteria established for this contract, the Department will only award this contract to a bidder who makes a good faith effort to meet this goal of DBE participation in the performance of the work. A bidder makes a good faith effort for award consideration if either of the following is done in accordance with the procedures set for in this Special Provision:

- (a) The bidder documents that enough DBE participation has been obtained to meet the goal or,
- (b) The bidder documents that a good faith effort has been made to meet the goal, even though the effort did not succeed in obtaining enough DBE participation to meet the goal.

DBE LOCATOR REFERENCES. Bidders shall consult the IL UCP DBE Directory as a reference source for DBE-certified companies. In addition, the Department maintains a letting and item specific DBE locator information system whereby DBE companies can register their interest in providing quotes on particular bid items advertised for letting. Information concerning DBE companies willing to quote work for particular contracts may be obtained by contacting the Department's Bureau of Small Business Enterprises at telephone number (217) 785-4611, or by visiting the Department's website at:
<http://www.idot.illinois.gov/doing-business/certifications/disadvantaged-business-enterprise-certification/il-ucp-directory/index>.

BIDDING PROCEDURES. Compliance with this Special Provision is required prior to the award of the contract and the failure of the low bidder to comply will render the bid not responsive.

In order to assure the timely award of the contract, the low bidder shall submit:

- (a) The bidder shall submit a DBE Utilization Plan on completed Department forms SBE 2025 and 2026.
 - (1) The final Utilization Plan must be submitted within five calendar days after the date of the letting in accordance with subsection (a)(2) of Bidding Procedures.
 - (2) To meet the five day requirement, the bidder may send the Utilization Plan electronically by scanning and sending to DOT.DBE.UP@illinois.gov or faxing to (217) 785-1524. The subject line must include the bid Item Number and the Letting date. The Utilization Plan should be sent as one .pdf file, rather than multiple files and emails for the same Item Number. It is the responsibility of the bidder to obtain confirmation of email or fax delivery.

Alternatively, the Utilization Plan may be sent by certified mail or delivery service within the five calendar day period. If a question arises concerning the mailing date of a Utilization Plan, the mailing date will be established by the U.S. Postal Service postmark on the certified mail receipt from the U.S. Postal Service or the receipt issued by a delivery service when the Utilization Plan is received by the Department. It is the responsibility of the bidder to ensure the postmark or receipt date is affixed within the five days if the bidder intends to rely upon mailing or delivery to satisfy the submission day requirement. The Utilization Plan is to be submitted to:

Illinois Department of Transportation
Bureau of Small Business Enterprises
Contract Compliance Section
2300 South Dirksen Parkway, Room 319
Springfield, Illinois 62764

The Department will not accept a Utilization Plan if it does not meet the five day submittal requirement and the bid will be declared not responsive. In the event the bid is declared not responsive due to a failure to submit a Utilization Plan or failure to comply with the bidding procedures set forth herein, the Department may elect to cause the forfeiture of the penal sum of the bidder's proposal guaranty, and may deny authorization to bid the project if re-advertised for bids. The Department reserves the right to invite any other bidder to submit a Utilization Plan at any time for award consideration.

- (b) The Utilization Plan shall indicate that the bidder either has obtained sufficient DBE participation commitments to meet the contract goal or has not obtained enough DBE participation commitments in spite of a good faith effort to meet the goal. The Utilization Plan shall further provide the name, telephone number, and telefax number of a responsible official of the bidder designated for purposes of notification of Utilization Plan approval or disapproval under the procedures of this Special Provision.

- (c) The Utilization Plan shall include a DBE Participation Commitment Statement, Department form SBE 2025, for each DBE proposed for the performance of work to achieve the contract goal. For bidding purposes, submission of the completed SBE 2025 forms, signed by the DBEs and scanned or faxed to the bidder will be acceptable as long as the original is available and provided upon request. All elements of information indicated on the said form shall be provided, including but not limited to the following:
- (1) The names and addresses of DBE firms that will participate in the contract;
 - (2) A description, including pay item numbers, of the work each DBE will perform;
 - (3) The dollar amount of the participation of each DBE firm participating. The dollar amount of participation for identified work shall specifically state the quantity, unit price, and total subcontract price for the work to be completed by the DBE. If partial pay items are to be performed by the DBE, indicate the portion of each item, a unit price where appropriate and the subcontract price amount;
 - (4) DBE Participation Commitment Statements, form SBE 2025, signed by the bidder and each participating DBE firm documenting the commitment to use the DBE subcontractors whose participation is submitted to meet the contract goal;
 - (5) If the bidder is a joint venture comprised of DBE companies and non-DBE companies, the Utilization Plan must also include a clear identification of the portion of the work to be performed by the DBE partner(s); and,
 - (6) If the contract goal is not met, evidence of good faith efforts; the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor is selected over a DBE for work on the contract.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan submitted by the apparent successful bidder is approved. All information submitted by the bidder must be complete, accurate and adequately document that enough DBE participation has been obtained or document that good faith efforts of the bidder, in the event enough DBE participation has not been obtained, before the Department will commit to the performance of the contract by the bidder. The Utilization Plan will be approved by the Department if the Utilization Plan documents sufficient commercially useful DBE work to meet the contract goal or the bidder submits sufficient documentation of a good faith effort to meet the contract goal pursuant to 49 CFR Part 26, Appendix A. The Utilization Plan will not be approved by the Department if the Utilization Plan does not document sufficient DBE participation to meet the contract goal unless the apparent successful bidder documented in the Utilization Plan that it made a good faith effort to meet the goal. This means that the bidder must show that all necessary and reasonable steps were taken to achieve the contract goal. Necessary and reasonable steps are those which, by their scope, intensity and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not successful. The Department will consider the quality, quantity, and intensity of the kinds of efforts that the bidder has made. Mere *pro forma* efforts, in other words, efforts done as a matter of form, are not good faith efforts; rather, the bidder is expected to have taken genuine efforts that would be reasonably expected of a bidder actively and aggressively trying to obtain DBE participation sufficient to meet the contract goal.

- (a) The following is a list of types of action that the Department will consider as part of the evaluation of the bidder's good faith efforts to obtain participation. These listed factors are not intended to be a mandatory checklist and are not intended to be exhaustive. Other factors or efforts brought to the attention of the Department may be relevant in appropriate cases, and will be considered by the Department.
- (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBE companies that have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBE companies to respond to the solicitation. The bidder must determine with certainty if the DBE companies are interested by taking appropriate steps to follow up initial solicitations.
 - (2) Selecting portions of the work to be performed by DBE companies in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime Contractor might otherwise prefer to perform these work items with its own forces.
 - (3) Providing interested DBE companies with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
 - (4) a. Negotiating in good faith with interested DBE companies. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBE companies that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBE companies to perform the work.

- b. A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBE companies is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBE companies if the price difference is excessive or unreasonable. In accordance with subsection (c)(6) of the above Bidding Procedures, the documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.
- (5) Not rejecting DBE companies as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
 - (6) Making efforts to assist interested DBE companies in obtaining bonding, lines of credit, or insurance as required by the recipient or Contractor.
 - (7) Making efforts to assist interested DBE companies in obtaining necessary equipment, supplies, materials, or related assistance or services.
 - (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBE companies.
- (b) If the Department determines that the apparent successful bidder has made a good faith effort to secure the work commitment of DBE companies to meet the contract goal, the Department will award the contract provided that it is otherwise eligible for award. If the Department determines that the bidder has failed to meet the requirements of this Special Provision or that a good faith effort has not been made, the Department will notify the responsible company official designated in the Utilization Plan that the bid is not responsive. The notification shall include a statement of reasons for the determination. If the Utilization Plan is not approved because it is deficient as a technical matter, unless waived by the Department, the bidder will be notified and will be allowed no more than a five calendar day period in order to cure the deficiency.
 - (c) The bidder may request administrative reconsideration of a determination adverse to the bidder within the five working days after the receipt of the notification date of the determination by delivering the request to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764 (Telefax: (217) 785-1524). Deposit of the request in the United States mail on or before the fifth business day shall not be deemed delivery. The determination shall become final if a request is not made and delivered. A request may provide additional written documentation or argument concerning the issues raised in the determination statement of reasons, provided the documentation and arguments address efforts made prior to submitting the bid. The request will be forwarded to the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person in order to consider all issues of documentation and whether the bidder made a good faith effort to meet the goal. After the review by the Reconsideration Officer, the bidder will be sent a written decision within ten working days after receipt of the request for consideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. A final decision by the Reconsideration Officer that a good faith effort was made shall approve the Utilization Plan submitted by the bidder and shall clear the contract for award. A final decision that a good faith effort was not made shall render the bid not responsive.

CALCULATING DBE PARTICIPATION. The Utilization Plan values represent work anticipated to be performed and paid for upon satisfactory completion. The Department is only able to count toward the achievement of the overall goal and the contract goal the value of payments made for the work actually performed by DBE companies. In addition, a DBE must perform a commercially useful function on the contract to be counted. A commercially useful function is generally performed when the DBE is responsible for the work and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The Department and Contractor are governed by the provisions of 49 CFR Part 26.55(c) on questions of commercially useful functions as it affects the work. Specific counting guidelines are provided in 49 CFR Part 26.55, the provisions of which govern over the summary contained herein.

- (a) DBE as the Contractor: 100 percent goal credit for that portion of the work performed by the DBE's own forces, including the cost of materials and supplies. Work that a DBE subcontracts to a non-DBE does not count toward the DBE goals.
- (b) DBE as a joint venture Contractor: 100 percent goal credit for that portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work performed by the DBE's own forces.
- (c) DBE as a subcontractor: 100 percent goal credit for the work of the subcontract performed by the DBE's own forces, including the cost of materials and supplies, excluding the purchase of materials and supplies or the lease of equipment by the DBE subcontractor from the prime Contractor or its affiliates. Work that a DBE subcontractor in turn subcontracts to a non-DBE does not count toward the DBE goal.

- (d) DBE as a trucker: 100 percent goal credit for trucking participation provided the DBE is responsible for the management and supervision of the entire trucking operation for which it is responsible. At least one truck owned, operated, licensed, and insured by the DBE must be used on the contract. Credit will be given for the following:
 - (1) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
 - (2) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission is receives as a result of the lease arrangement.
- (e) DBE as a material supplier:
 - (1) 60 percent goal credit for the cost of the materials or supplies purchased from a DBE regular dealer.
 - (2) 100 percent goal credit for the cost of materials of supplies obtained from a DBE manufacturer.
 - (3) 100 percent credit for the value of reasonable fees and commissions for the procurement of materials and supplies if not a DBE regular dealer or DBE manufacturer.

CONTRACT COMPLIANCE. Compliance with this Special Provision is an essential part of the contract. The Department is prohibited by federal regulations from crediting the participation of a DBE included in the Utilization Plan toward either the contract goal or the Department's overall goal until the amount to be applied toward the goals has been paid to the DBE. The following administrative procedures and remedies govern the compliance by the Contractor with the contractual obligations established by the Utilization Plan. After approval of the Utilization Plan and award of the contract, the Utilization Plan and individual DBE Participation Statements become part of the contract. If the Contractor did not succeed in obtaining enough DBE participation to achieve the advertised contract goal, and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of DBE work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the amended contract goal. All work indicated for performance by an approved DBE shall be performed, managed, and supervised by the DBE executing the DBE Participation Commitment Statement.

- (a) **NO AMENDMENT.** No amendment to the Utilization Plan may be made without prior written approval from the Department's Bureau of Small Business Enterprises. All requests for amendment to the Utilization Plan shall be submitted to the Department of Transportation, Bureau of Small Business Enterprises, Contract Compliance Section, 2300 South Dirksen Parkway, Room 319, Springfield, Illinois 62764. Telephone number (217) 785-4611. Telefax number (217) 785-1524.
- (b) **CHANGES TO WORK.** Any deviation from the DBE condition-of-award or contract plans, specifications, or special provisions must be approved, in writing, by the Department as provided elsewhere in the Contract. The Contractor shall notify affected DBEs in writing of any changes in the scope of work which result in a reduction in the dollar amount condition-of-award to the contract. Where the revision includes work committed to a new DBE subcontractor, not previously involved in the project, then a Request for Approval of Subcontractor, Department form BC 260A or AER 260A, must be signed and submitted. If the commitment of work is in the form of additional tasks assigned to an existing subcontract, then a new Request for Approval of Subcontractor shall not be required. However, the Contractor must document efforts to assure that the existing DBE subcontractor is capable of performing the additional work and has agreed in writing to the change.
- (c) **SUBCONTRACT.** The Contractor must provide DBE subcontracts to IDOT upon request. Subcontractors shall ensure that all lower tier subcontracts or agreements with DBEs to supply labor or materials be performed in accordance with this Special Provision.
- (d) **ALTERNATIVE WORK METHODS.** In addition to the above requirements for reductions in the condition of award, additional requirements apply to the two cases of Contractor-initiated work substitution proposals. Where the contract allows alternate work methods which serve to delete or create underruns in condition of award DBE work, and the Contractor selects that alternate method or, where the Contractor proposes a substitute work method or material that serves to diminish or delete work committed to a DBE and replace it with other work, then the Contractor must demonstrate one of the following:
 - (1) That the replacement work will be performed by the same DBE (as long as the DBE is certified in the respective item of work) in a modification of the condition of award; or
 - (2) That the DBE is aware that its work will be deleted or will experience underruns and has agreed in writing to the change. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so; or
 - (3) That the DBE is not capable of performing the replacement work or has declined to perform the work at a reasonable competitive price. If this occurs, the Contractor shall substitute other work of equivalent value to a certified DBE or provide documentation of good faith efforts to do so.
- (e) **TERMINATION AND REPLACEMENT PROCEDURES.** The Contractor shall not terminate or replace a DBE listed on the approved Utilization Plan, or perform with other forces work designated for a listed DBE except as provided in this Special

Provision. The Contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the Contractor obtains the Department's written consent as provided in subsection (a) of this part. Unless Department consent is provided for termination of a DBE subcontractor, the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the DBE in the Utilization Plan.

As stated above, the Contractor shall not terminate or replace a DBE subcontractor listed in the approved Utilization Plan without prior written consent. This includes, but is not limited to, instances in which the Contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm. Written consent will be granted only if the Bureau of Small Business Enterprises agrees, for reasons stated in its concurrence document, that the Contractor has good cause to terminate or replace the DBE firm. Before transmitting to the Bureau of Small Business Enterprises any request to terminate and/or substitute a DBE subcontractor, the Contractor shall give notice in writing to the DBE subcontractor, with a copy to the Bureau, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor shall give the DBE five days to respond to the Contractor's notice. The DBE so notified shall advise the Bureau and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Bureau should not approve the Contractor's action. If required in a particular case as a matter of public necessity, the Bureau may provide a response period shorter than five days.

For purposes of this paragraph, good cause includes the following circumstances:

- (1) The listed DBE subcontractor fails or refuses to execute a written contract;
- (2) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the prime Contractor's reasonable, nondiscriminatory bond requirements;
- (4) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (5) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1200 or applicable state law.
- (6) You have determined that the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides to you written notice of its withdrawal;
- (8) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (9) A DBE owner dies or becomes disabled with the result that the listed DBE subcontractor is unable to complete its work on the contract;
- (10) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the prime Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the prime Contractor can self-perform the work for which the DBE contractor was engaged or so that the prime Contractor can substitute another DBE or non-DBE contractor after contract award.

When a DBE is terminated, or fails to complete its work on the Contract for any reason the Contractor shall make a good faith effort to find another DBE to substitute for the original DBE to perform at least the same amount of work under the contract as the terminated DBE to the extent needed to meet the established Contract goal. The good faith efforts shall be documented by the Contractor. If the Department requests documentation under this provision, the Contractor shall submit the documentation within seven days, which may be extended for an additional seven days if necessary at the request of the Contractor. The Department shall provide a written determination to the Contractor stating whether or not good faith efforts have been demonstrated.

- (f) PAYMENT RECORDS. The Contractor shall maintain a record of payments for work performed to the DBE participants. The records shall be made available to the Department for inspection upon request. After the performance of the final item of work or delivery of material by a DBE and final payment therefore to the DBE by the Contractor, but not later than thirty calendar days after payment has been made by the Department to the Contractor for such work or material, the Contractor shall submit a DBE Payment Agreement on Department form SBE 2115 to the Resident Engineer. If full and final payment has not been made to the DBE, the DBE Payment Agreement shall indicate whether a disagreement as to the payment required exists between the Contractor and the DBE or if the Contractor believes that the work has not been satisfactorily completed. If the Contractor does not have the full amount of work indicated in the Utilization Plan performed by the DBE companies indicated in the Utilization Plan and after good faith efforts are reviewed, the Department may deduct from contract payments to the Contractor the amount of the goal not achieved as liquidated and ascertained damages. The Contractor may request an administrative reconsideration of any amount deducted as damages pursuant to subsection (h) of this part.

- (g) **ENFORCEMENT.** The Department reserves the right to withhold payment to the Contractor to enforce the provisions of this Special Provision. Final payment shall not be made on the contract until such time as the Contractor submits sufficient documentation demonstrating achievement of the goal in accordance with this Special Provision or after liquidated damages have been determined and collected.
- (h) **RECONSIDERATION.** Notwithstanding any other provision of the contract, including but not limited to Article 109.09 of the Standard Specifications, the Contractor may request administrative reconsideration of a decision to deduct the amount of the goal not achieved as liquidated damages. A request to reconsider shall be delivered to the Contract Compliance Section and shall be handled and considered in the same manner as set forth in paragraph (c) of "Good Faith Effort Procedures" of this Special Provision, except a final decision that a good faith effort was not made during contract performance to achieve the goal agreed to in the Utilization Plan shall be the final administrative decision of the Department. The result of the reconsideration process is not administratively appealable to the U.S. Department of Transportation.

SPECIAL PROVISION FOR WEEKLY DBE TRUCKING REPORTS (BDE)

Effective: June 2, 2012

Revised: April 2, 2015

The Contractor shall submit a weekly report of Disadvantaged Business Enterprise (DBE) trucks hired by the Contractor or subcontractors (i.e. not owned by the Contractor or subcontractors) that are used for DBE goal credit.

The report shall be submitted to the Resident Engineer on Division of Aeronautics Form "AER 723" within ten business days following the reporting period. The reporting period shall be Monday through Sunday for each week reportable trucking activities occur.

Any costs associated with providing weekly DBE trucking reports shall be considered as included in the contract unit prices bid for the various items of work involved and no additional compensation will be allowed.

SPECIAL PROVISION FOR SUBCONTRACTOR MOBILIZATION PAYMENTS

Revised: April 1, 2011

To account for the preparatory work and the operations necessary for the movement of subcontractor personnel, equipment, supplies, and incidentals to the project site and for all other work or operations that must be performed or costs incurred when beginning work approved for subcontracting according to Section 80-01 of the Standard Specifications, the Contractor shall make a mobilization payment to each subcontractor.

This mobilization payment shall be made at least 14 days prior to the subcontractor starting work. The amount paid shall be equal to 3 percent of the amount of the subcontract reported on form AER 260A submitted for the approval of the subcontractor's work.

The mobilization payment to the subcontractor is an advance payment of the reported amount of the subcontract and is not a payment in addition to the amount of the subcontract; therefore, the amount of the advance payment will be deducted from future progress payments.

This provision shall be incorporated directly or by reference into each subcontract approved by the Department

SPECIAL PROVISION FOR PAYMENTS TO SUBCONTRACTORS

Revised: January 1, 2006

Federal regulations found at 49 CFR §26.29 mandate the Department to establish a contract clause to require Contractors to pay subcontractors for satisfactory performance of their subcontracts and to set the time for such payments.

State law also addresses the timing of payments to be made to subcontractors and material suppliers. Section 7 of the Prompt Payment Act, 30 ILCS 540/7, requires that when a Contractor receives any payment from the Department, the Contractor shall make corresponding, proportional payments to each subcontractor and material supplier performing work or supplying material within 15 calendar days after receipt of the Department payment. Section 7 of the Act further provides that interest in the amount of two percent per month, in addition to the payment due, shall be paid to any subcontractor or material supplier by the Contractor if the payment required by the Act is withheld or delayed without reasonable cause. The Act also provides that the time for payment required and the calculation of any interest due applies to transactions between subcontractors and lower-tier subcontractors and material suppliers throughout the contracting chain.

This Special Provision establishes the required federal contract clause, and adopts the 15 calendar day requirement of the State Prompt Payment Act for purposes of compliance with the federal regulation regarding payments to subcontractors. This contract is subject to the following payment obligations.

When progress payments are made to the Contractor according to Article 90-07 of the Standard Specifications, the Contractor shall make a corresponding payment to each subcontractor and material supplier in proportion to the work satisfactorily completed by each subcontractor and for the material supplied to perform any work of the contract. The proportionate amount of partial payment due to each subcontractor and material supplier throughout the contracting chain shall be determined by the quantities measured or otherwise determined as eligible for payment by the Department and included in the progress payment to the Contractor. Subcontractors and material suppliers shall be paid by the Contractor within 15 calendar days after the receipt of payment from the Department. The

Contractor shall not hold retainage from the subcontractors. These obligations shall also apply to any payments made by subcontractors and material suppliers to their subcontractors and material suppliers; and to all payments made to lower tier subcontractors and material suppliers throughout the contracting chain. Any payment or portion of a payment subject to this provision may only be withheld from the subcontractor or material supplier to whom it is due for reasonable cause.

This Special Provision does not create any rights in favor of any subcontractor or material supplier against the State or authorize any cause of action against the State on account of any payment, nonpayment, delayed payment, or interest claimed by application of the State Prompt Payment Act. The Department will not approve any delay or postponement of the 15 day requirement except for reasonable cause shown after notice and hearing pursuant to Section 7(b) of the State Prompt Payment Act. State law creates other and additional remedies available to any subcontractor or material supplier, regardless of tier, who has not been paid for work properly performed or material furnished. These remedies are a lien against public funds set forth in Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c), and a recovery on the Contractor's payment bond according to the Public Construction Bond Act, 30 ILCS 550.

SPECIAL PROVISION FOR ADDITIONAL STATE REQUIREMENTS FOR FEDERAL-AID CONSTRUCTION CONTRACTS

Effective: February 1, 1969

Revised: April 1, 2015

EQUAL EMPLOYMENT OPPORTUNITY

In the event of the Contractor's noncompliance with the provisions of this Equal Employment Opportunity Clause, the Illinois Human Rights Act, or the Illinois Department of Human Rights Rules and Regulations, the Contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political sub-divisions or municipal corporations, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

During the performance of this Contract, the Contractor agrees as follows:

(1) That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, marital status, order of protection status, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, military status, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.

(2) That, if it hires additional employees in order to perform this contract or any portion hereof, it will determine the availability (according to the Illinois Department of Human Rights Rules and Regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.

(3) That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, sexual orientation, marital status, order of protection status, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, military status or an unfavorable discharge from military service.

(4) That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations. If any labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Department of Human Rights and IDOT and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

(5) That it will submit reports as required by the Illinois Department of Human Rights Rules and Regulations, furnish all relevant information as may from time to time be requested by the Illinois Department of Human Rights or IDOT, and in all respects comply with the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations.

(6) That it will permit access to all relevant books, records, accounts, and work sites by personnel of IDOT and the Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations.

(7) That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so that the provisions will be binding upon the subcontractor. In the same manner as with other provisions of this contract, the Contractor will be liable for compliance with applicable provisions of this clause by subcontractors; and further it will promptly notify IDOT and the Illinois Department of Human Rights in the event any subcontractor fails or refuses to comply with these provisions. In addition, the Contractor will not utilize any subcontractor declared by the Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

SPECIAL PROVISION FOR NPDES CERTIFICATION

In accordance with the provisions of the Illinois Environmental Protection Act, the Illinois Pollution Control Board Rules and Regulations (35 Ill. Adm. Code, Subtitle C, Chapter I), and the Clean Water Act, and the regulations thereunder, this certification is required for all construction contracts that will result in the disturbance of one or more acres total land area.

The bidder certifies under penalty of law that he/she understands the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR100000) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

The Airport Owner or its Agent will:

- 1) prepare, sign and submit the Notice of Intent (NOI)
- 2) conduct site inspections and complete and file the inspection reports
- 3) submit Incidence of Non-Compliance (ION) forms
- 4) submit Notice of Termination (NOT) form

Prior to the issuance of the Notice-to-Proceed, for each erosion control measure identified in the Storm Water Pollution Prevention Plan, the contractor or subcontractor responsible for the control measure(s) must sign the above certification (forms to be provided by the Department).

SPECIAL PROVISION FOR COMPLETION TIME VIA CALENDAR DAYS

It being understood and agreed that the completion within the time limit is an essential part of the contract, the bidder agrees to complete the work within 92 calendar days, unless additional time is granted by the Engineer in accordance with the provisions of the specifications. In case of failure to complete the work on or before the time named herein, or within such extra time as may have been allowed by extensions, the bidder agrees that the Department of Transportation shall withhold from such sum as may be due him/her under the terms of this contract, the costs, as set forth in Section 80-09 Failure to Complete on Time of the Standard Specifications, which costs shall be considered and treated not as a penalty but as damages due to the State from the bidder by reason of the failure of the bidder to complete the work within the time specified in the contract.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
SECTION 80 PROSECUTION AND PROGRESS

This Special Provision amends the provisions of the Standard Specifications for Construction of Airports, adopted April 1, 2012 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

80-09 FAILURE TO COMPLETE ON TIME.

DELETE: "See contract documents for current schedule of deductions."

ADD:

Schedule of Deductions for Each Day of Overrun in Contract Time			
Original Contract Amount		Daily Charges	
From More Than	To and Including	Calendar Day	Work Day
\$ 0	\$ 100,000	\$ 475	\$ 675
100,000	500,000	750	1,050
500,000	1,000,000	1,025	1,425
1,000,000	3,000,000	1,275	1,725
3,000,000	6,000,000	1,425	2,000
6,000,000	12,000,000	2,300	3,450
12,000,000	And over	6,775	9,525

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
SECTION 90 MEASUREMENT AND PAYMENT

This Special Provision amends the provisions of the Standard Specifications for Construction of Airports, adopted April 1, 2012 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

90-07 PARTIAL PAYMENTS.

DELETE: The entire section.

ADD: Partial payments will be made to the Contractor at least once each month as the work progresses. The payments will be based upon estimates, prepared by the Resident Engineer, of the value of the work performed and materials complete and in place in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with the Section 90-08 PAYMENT FOR MATERIALS ON HAND. From the amount of partial payment so determined on Federal-Aid projects, there shall be deducted an amount up to ten percent of the cost of the completed work which shall be retained until all conditions necessary for financial closeout of the project are satisfied. The amount of the estimate approved as due for payment will be vouchered by the Department and presented to the State Comptroller for payment. No amount less than \$1,000.00 will be approved for payment other than the final payment. A final voucher for under \$5.00 shall not be paid except through electronic funds transfer. (15 ILCS 405/9(b-1))

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, 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 Department 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 Section 90-09 ACCEPTANCE AND FINAL PAYMENT.

Progress payments may be reduced by liens filed pursuant to Section 23(c) of the Mechanics Lien Act, 770 ILCS 60/23(c).

If a Contractor or subcontractor has defaulted on a loan issued under the Department's Disadvantaged Business Revolving Loan Program (20 ILCS 2705/2705-610) progress payments may be reduced pursuant to the terms of that loan agreement. In such cases, the amount of the estimate related to the work performed by the Contractor or subcontractor, in default of the loan agreement, will be offset, in whole or in part, and vouchered by the Department to the Working Capital Revolving Fund or designated escrow account. Payment for the work shall be considered as issued and received by the Contractor or subcontractor on the date of the offset voucher. Further, the amount of the offset voucher shall be a credit against the Department's obligation to pay the Contractor, the Contractor's obligation to pay the subcontractor, and the Contractor's or subcontractor's total loan indebtedness to the Department. The offset shall continue until such time as the entire loan indebtedness is satisfied. The Department will notify the Contractor and Fund Control Agent in a timely manner of such offset. The Contractor or subcontractor shall not be entitled to additional payment in consideration of the offset.

In accordance with 49 USC § 47111, the Department will not make payments totaling more than 90 percent of the contract until all conditions necessary for financial closeout of the project are satisfied.

The failure to perform any requirement, obligation, or term of the contract by the Contractor shall be reason for withholding any progress payments until the Department determines that compliance has been achieved.

90-10 TRUST AGREEMENT OPTION.

DELETE: The entire section.



Required Contract Provisions for Airport Improvement Program and for Obligated Sponsors

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REQUIREMENTS

1. Required Contract Provisions

Federal laws and regulations require that recipients of federal assistance (Sponsors) include specific contract provisions in certain contracts, requests for proposals, or invitations to bid.

Certain provisions must be included in all sponsor contracts, regardless of *whether or not* the contracts are federally-funded. This requirement was established when a sponsor accepted the Airport Improvement Program (AIP) grant assurances.

To maintain eligibility of their procurement actions, a sponsor must incorporate applicable contract provisions in all federally-assisted procurement and contract documents, including all subcontracts. For purposes of determining requirements for contract provisions, the term **contract** includes subcontracts.

2. Sponsor Requirements

In general, the sponsor must:

- 1) Incorporate applicable contract provisions in each contract funded under AIP;
 - a. Except as noted herein, a sponsor must physically incorporate the text of the provision within the procurement documents.
 - b. Where specifically noted, sponsors may incorporate select provisions by reference provided the sponsor indicates that the reference has the same force and effect as if given in full text.
- 2) Require the contractor (including all subcontractors) to insert these contract provisions in each lower tier contracts (e.g. subcontract or sub-agreement);
- 3) Require the contractor (or subcontractor) to incorporate the applicable requirements of these contract provisions by reference for work done under any purchase orders, rental agreements and other agreements for supplies or services;
- 4) Require that the prime contractor be responsible for compliance with these contract provisions by any subcontractor, lower-tier subcontractor or service provider;
- 5) Verify that any required local or State provision does not conflict with, or alter a Federal law or regulation.

3. Incorporation of Provisions

The statutes and regulations that establish the requirements for contract provisions do not always specify language the sponsor must use to address the requirement. Appendix A of this guide provides information on when a provision or clause has mandatory language that a sponsor must apply. Refer to the subheading *Applicability* for each provision.

Whenever a clause or provision has mandatory text, the sponsor must incorporate the text of the provision without change. The only exception to this restriction is for those instances within the provision text that require the sponsor to insert appropriate information such as name or value. To align with the sponsor's standard contract language, the word "Owner" may also be replaced with "Airport Authority" or their standard method of referring to the sponsor in contracts. Any modification beyond what is specifically permitted is not permitted and may invalidate the clause.

For those provisions that do not have required language, this guidance provides model language acceptable to the FAA in meeting the intent and purpose of the law or regulation. Some sponsors may already have standard procurement language that is equivalent to those Federal provisions that do not have explicit mandatory language. In these cases, sponsors may use their existing standard procurement provision language provided the text meets the intent and purpose of the Federal law or regulation.

Contract clause language must be made available to bidders. The Sponsor does this by including the required language in Requests for Bids, Notices to Bidders, or in the contract.

4. Requests for Bids (Advertisement) and Notice to Bidders

The sponsor may incorporate certain provisions *by reference* in the Request for Bids (the Advertisement) rather than including the entire text of the provision in the Request or Notice to Bidders. The sponsor must incorporate the full text of these provisions within any contract that originates from the procurement action. The provisions that can be incorporated by reference in the Request or Notice are:

- 1) Buy American Preference
- 2) Foreign Trade Restriction
- 3) Davis Bacon
- 4) Affirmative Action
- 5) Government-wide Debarment and Suspension
- 6) Government-wide Requirements for Drug-free Workplace

5. Requirements For All Contracts Entered into by Obligated Sponsors.

A sponsor's acceptance of previous grant assurances obligates them to include certain notifications in all contracts and procurement actions they undertake regardless of funding source. Contracts and agreements fully funded by the sponsor must incorporate those select provisions.

6. Failure to Comply with Provisions

Sponsor failure to incorporate required provisions will jeopardize AIP eligibility of the sponsor's project. Contractor failure to comply with the terms of these contract provisions may be sufficient grounds to:

- 1) Withhold progress payments or final payment;
- 2) Terminate the contract for cause;
- 3) Seek suspension/debarment; or

- 4) Take other action determined to be appropriate by the sponsor or the FAA.

7. Applicability Matrix for Contract Provisions

Table 1 summarizes the applicability of contract provisions based upon the type of contract or agreement. The dollar threshold represents the value at which, when equal to or exceeded, the sponsor must incorporate the provision in their contract or agreement. Supplemental information addressing applicability and use for each provision is located in Appendix A.

Meaning of cell values

- REQD - a provision the sponsor must incorporate in their procurement action.
- Limited –a provision with limited applicability depending on circumstances of the procurement.
- n/a – a provision that is not applicable for that procurement type.

Table 1 – Applicability of Provisions

Provision	Dollar Threshold	Professional Services	Construction	Equipment	Property (Land)	Non-AIP Contracts
a. Access to Records and Reports	\$ 0	REQD	REQD	REQD	REQD	n/a
b. Buy American Preferences	\$ 0	Limited	REQD	REQD	Limited	n/a
c. Civil Rights – General	\$ 0	REQD	REQD	REQD	REQD	REQD
d. Civil Rights - Title VI Assurances	\$ 0	REQD	REQD	REQD	REQD	REQD
(1) Notice - Solicitation	\$ 0	REQD	REQD	REQD	REQD	REQD
(2) Clause - Contracts	\$ 0	REQD	REQD	REQD	REQD	REQD
(3) Clause – Transfer of U.S. Property	\$ 0	n/a	n/a	n/a	REQD	REQD
(4) Clause – Transfer of Real Property	\$ 0	n/a	n/a	n/a	REQD	REQD
(5) Clause - Construct/Use/Access to Real Property	\$ 0	n/a	n/a	n/a	REQD	REQD
(6) List – Pertinent Authorities	\$ 0	REQD	REQD	REQD	REQD	REQD
e. Disadvantaged Business Enterprise	\$ 0	REQD	REQD	REQD	REQD	n/a
f. Energy Conservation Requirements	\$ 0	REQD	REQD	REQD	REQD	n/a
g. Federal Fair Labor Standards Act	\$ 0	REQD	REQD	REQD	REQD	REQD
h. Occupational Safety and Health Act	\$ 0	REQD	REQD	REQD	REQD	REQD
i. Rights to Inventions	\$ 0	Limited	Limited	Limited	n/a	n/a
j. Trade Restriction Certification	\$ 0	REQD	REQD	REQD	REQD	n/a
k. Veteran’s Preference	\$ 0	REQD	REQD	REQD	REQD	n/a
l. Seismic Safety	\$ 0	Limited	Limited	n/a	n/a	n/a
m. Copeland Anti-Kickback	\$ 2,000	Limited	REQD	Limited	Limited	n/a
n. Davis Bacon Requirements	\$ 2,000	Limited	REQD	Limited	Limited	n/a
o. Distracted Driving	\$3,500	REQD	REQD	REQD	REQD	n/a
p. Affirmative Action Requirement	\$10,000	Limited	REQD	Limited	Limited	n/a
q. Equal Employment Opportunity	\$10,000	Limited	REQD	Limited	Limited	n/a
(1) EEO Contract Clause	\$10,000	Limited	REQD	Limited	Limited	n/a
(2) EEO Specification	\$10,000	Limited	REQD	Limited	Limited	n/a
r. Prohibition of Segregated Facilities	\$10,000	Limited	REQD	Limited	Limited	n/a
s. Recovered Materials	\$10,000	Limited	REQD	REQD	Limited	n/a
t. Termination of Contract	\$10,000	REQD	REQD	REQD	REQD	n/a
u. Debarment and Suspension	\$25,000	REQD	REQD	REQD	Limited	n/a
v. Contract Work Hours and Safety Standards	\$100,000	Limited	REQD	Limited	Limited	n/a
w. Lobbying Federal Employees	\$ 100,000	REQD	REQD	REQD	REQD	n/a
x. Breach of Contract	\$150,000	REQD	REQD	REQD	REQD	n/a
y. Clean Air/Water Pollution Control	\$150,000	REQD	REQD	REQD	REQD	n/a

APPENDIX A – CONTRACT PROVISIONS

A1 ACCESS TO RECORDS AND REPORTS

A1.1 SOURCE

2 CFR § 200.333

2 CFR § 200.336

FAA Order 5100.38

A1.2 APPLICABILITY

2 CFR § 200.333 requires a sponsor to retain records pertinent to a Federal award for a period of three years from submission of final closure documents. 2 CFR § 200.336 establishes that sponsors must provide Federal entities the right to access records pertinent to the Federal award. FAA policy extends these requirements to the sponsor's contracts and subcontracts of AIP funded projects.

Contract Types – The sponsor must include this provision in all contracts and subcontracts of AIP funded projects.

Use of Provision – The regulation does not prescribe mandatory language, the following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's language must fully satisfy the requirements of part 200.

A1.3 CONTRACT CLAUSE

ACCESS TO RECORDS AND REPORTS

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the sponsor, the Federal Aviation Administration, and the Comptroller General of the United States or any of their duly authorized representatives, access to any books, documents, papers, and records of the contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

A2 AFFIRMATIVE ACTION REQUIREMENTS

A2.1 SOURCE

41 CFR part 60-4

Executive Order 11246

A2.2 APPLICABILITY

Minority Participation. Sponsors are required to set goals for minority participation in AIP funded projects. The goals for minority participation depend on Economic Area (EA) and Standard Metropolitan Statistical Area (SMSA) as established in Volume 45 of the Federal Register dated 10/3/80. Page 65984 contains a table of all EAs and SMSAs and the associated minority participation goals.

To find the goals for minority participation, a sponsor must either refer to the Federal Register Notice or to the Department of Labor online document, "Participation Goals for Minorities and Females". EA's and SMSA's cross state boundaries so a sponsor may have to refer to entries for adjacent states to find their project location.

A sponsor must insert the applicable percentage minority goal. Sponsor must not simply insert a reference to the Federal Register Notice.

Female Participation. Executive Order 11246 has set a goal of 6.9% nationally for female participation for all construction contractors. This value does not change per county or state.

Contract Types –

Construction: The sponsor must incorporate this notice in all solicitations for bids or requests for proposals for AIP funded construction work contracts and subcontracts that exceed \$10,000. Construction work means construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.

Equipment: The sponsor must incorporate this notice in any equipment project exceeding \$10,000 that involves installation of equipment onsite (e.g. electrical vault equipment). This provision does not apply to equipment acquisition projects where the manufacture of the equipment takes place offsite at the vendor plant (e.g. firefighting and snow removal vehicles)

Professional Services: The sponsor must incorporate this notice in any professional service agreement if the professional service agreement includes construction work (as defined above) that exceed \$10,000. Examples include installation of noise monitoring systems.

Property/Land: The sponsor must incorporate this notice in any agreement associated with land acquisition if the agreement includes construction work (defined above) that exceeds \$10,000. Examples include demolition of structures or installation of boundary fencing.

Use of Provision – The sponsor must incorporate the text of this provision without modification. The sponsor must incorporate the established minority participation goal and the covered area by geographic name within the provision text.

A2.3 CONTRACT CLAUSE

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION to ENSURE EQUAL EMPLOYMENT OPPORTUNITY

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

The following goal for female utilization in each construction craft and trade shall apply to all Contractors holding Federal and federally-assisted construction contracts and subcontracts in excess of \$10,000. The goal is applicable to the Contractor's total on-site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, federally assisted or nonfederally related construction contract or subcontract.

AREA COVERED (STATEWIDE)

Goals for Women apply nationwide.

GOAL

Goal (percent)

Female Utilization..... 6.9

Until further notice, the following goals for minority utilization in each construction craft and trade shall apply to all Contractors holding Federal and federally-assisted construction contracts and subcontracts in excess of \$10,000 to be performed in the respective geographical areas. The goals are applicable to the Contractor's total on-site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, federally-assisted or nonfederally related construction contract or subcontract.

<u>Economic Area (percent)</u>	Goal
056 Paducah, KY: Non-SMSA Counties - IL - Hardin, Massac, Pope KY - Ballard, Caldwell, Calloway, Carlisle, Crittenden, Fulton, Graves, Hickman, Livingston, Lyon, McCracken, Marshall	5.2
080 Evansville, IN: Non-SMSA Counties - IL - Edwards, Gallatin, Hamilton, Lawrence, Saline, Wabash, White IN - Dubois, Knox, Perry, Pike, Spencer KY - Hancock, Hopkins, McLean, Mublenberg, Ohio, Union, Webster	3.5
081 Terre Haute, IN: Non-SMSA Counties - IL - Clark, Crawford IN - Parke	2.5
083 Chicago, IL: SMSA Counties: 1600 Chicago, IL - IL - Cook, DuPage, Kane, Lake, McHenry, Will	19.6
3740 Kankakee, IL - IL - Kankakee	9.1
Non-SMSA Counties IL - Bureau, DeKalb, Grundy, Iroquois, Kendall, LaSalle, Livingston, Putnam IN - Jasper, Laporte, Newton, Pulaski, Starke	18.4
084 Champaign - Urbana, IL: SMSA Counties: 1400 Champaign - Urbana - Rantoul, IL - IL - Champaign	7.8
Non-SMSA Counties - IL - Coles, Cumberland, Douglas, Edgar, Ford, Piatt, Vermilion	4.8
085 Springfield - Decatur, IL: SMSA Counties: 2040 Decatur, IL -	7.6

IL - Macon	
7880 Springfield, IL - IL - Menard, Sangamon	4.5
Non-SMSA Counties IL - Cass, Christian, Dewitt, Logan, Morgan, Moultrie, Scott, Shelby	4.0
086 Quincy, IL: Non-SMSA Counties	3.1
IL - Adams, Brown, Pike MO - Lewis, Marion, Pike, Ralls	
087 Peoria, IL: SMSA Counties: 1040 Bloomington - Normal, IL - IL - McLean	2.5
6120 Peoria, IL - IL - Peoria, Tazewell, Woodford	4.4
Non-SMSA Counties - IL - Fulton, Knox, McDonough, Marshall, Mason, Schuyler, Stark, Warren	3.3
088 Rockford, IL: SMSA Counties: 6880 Rockford, IL - IL - Boone, Winnebago	6.3
Non-SMSA Counties - IL - Lee, Ogle, Stephenson	4.6
098 Dubuque, IA: Non-SMSA Counties - IL - JoDaviess IA - Atlamakee, Clayton, Delaware, Jackson, Winnesheik WI - Crawford, Grant, Lafayette	0.5
099 Davenport, Rock Island, Moline, IA - IL: SMSA Counties: 1960 Davenport, Rock Island, Moline, IA - IL - IL - Henry, Rock Island IA - Scott	4.6
Non-SMSA Counties - IL - Carroll, Hancock, Henderson, Mercer, Whiteside IA - Clinton, DesMoines, Henry, Lee, Louisa, Muscatine MO - Clark	3.4
107 St. Louis, MO: SMSA Counties: 7040 St. Louis, MO - IL - IL - Clinton, Madison, Monroe, St. Clair MO - Franklin, Jefferson, St. Charles, St. Louis, St. Louis City	14.7
Non-SMSA Counties - IL - Alexander, Bond, Calhoun, Clay, Effingham, Fayette, Franklin, Greene, Jackson, Jasper, Jefferson, Jersey, Johnson, Macoupin, Marion, Montgomery, Perry, Pulaski, Randolph, Richland, Union, Washington, Wayne, Williamson MO - Bollinger, Butler, Cape Girardeau, Carter, Crawford, Dent, Gasconade, Iron, Lincoln, Madison, Maries, Mississippi, Montgomery, Perry, Phelps, Reynolds, Ripley, St. Francois, St. Genevieve, Scott, Stoddard, Warren, Washington, Wayne	11.4

These goals are applicable to all of the contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a

violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this notice and in the contract resulting from this solicitation, the "covered area" is Waukegan, Illinois; Lake County.

A3 BREACH OF CONTRACT TERMS

A3.1 SOURCE

2 CFR § 200 Appendix II(A)

A3.2 APPLICABILITY

This provision requires sponsors to incorporate administrative, contractual or legal remedies if contractors violate or breach contract terms. The sponsor must also include appropriate sanctions and penalties.

Contract Types – This provision is required for all contracts that exceed the simplified acquisition threshold as stated in 2 CFR Part 200, Appendix II (A). This threshold is occasionally adjusted for inflation, and is now equal to \$150,000.

Use of Provision – The regulation does not prescribe mandatory language. The following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's language must fully satisfy the requirements of part 200. Select either "contractor" or "consultant" as applicable.

A3.3 CONTRACT CLAUSE

BREACH OF CONTRACT TERMS

Any violation or breach of terms of this contract on the part of the contractor or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

Owner will provide the [*Contractor* / *Consultant*] written notice that describes the nature of the breach and corrective actions the [*Contractor* / *Consultant*] must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the Owner elects to terminate the contract. The Owner's notice will identify a specific date by which the [*Contractor* / *Consultant*] must correct the breach. Owner may proceed with termination of the contract if the [*Contractor* / *Consultant*] fails to correct the breach by deadline indicated in the Owner's notice.

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

A4 BUY AMERICAN PREFERENCE

A4.1 SOURCE

Title 49 USC § 50101

A4.2 APPLICABILITY

The sponsor must meet the Buy American preference requirements found in 49 USC § 50101 in all AIP-funded projects. The Buy America requirements flow down from the sponsor to first tier contractors, who are responsible for ensuring that lower tier contractors and subcontractors are in compliance. The Buy American preference also applies to professional service agreements if the agreement includes any manufactured product as a deliverable.

A4.3 CONTRACT CLAUSE

- (a) The Aviation Safety and Capacity Expansion Act of 1990 provides that preference be given to steel and manufactured products produced in the United States when funds are expended pursuant to a grant issued under the Airport Improvement Program (AIP).
- (b) Any and all steel products used in the performance of this contract by the Contractor, subcontractors, producers, and suppliers are required to adhere to the Illinois Steel Products Procurement Act, which requires that all steel items be of 100 percent domestic origin and manufacture. Any products listed under the Federal Aviation Administration's (FAA) nationwide approved list of "Equipment Meeting Buy American Requirements" shall be deemed as meeting the requirements of the Illinois Steel Products Procurement Act.
- (c) The successful bidder will be required to assure that only domestic steel and domestically manufactured products will be used by the Contractor, subcontractors, producers, and suppliers in the performance of this contract. The North American Free Trade Agreement (NAFTA) specifically excluded federal grant programs such as the AIP. Therefore, NAFTA does not change the requirement to comply with the Buy American requirement in the Act. Exceptions to this are for products, other than steel, that:

- (1) the FAA has determined, under the Aviation Safety and Capacity Expansion Act of 1990, are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality;
- (2) the FAA has determined, under the Aviation Safety and Capacity Expansion Act of 1990, that domestic preference would be inconsistent with the public interest;
- (3) the FAA has determined that inclusion of domestic material will increase the cost of the overall project contract by more than 25 percent; or
- (4) the FAA has determined, under the Aviation Safety and Capacity Expansion Act of 1990,
 - (i) the cost of components and subcomponents produced in the United States is more than 60 percent of the cost of all components of the facility or equipment, and
 - (ii) final assembly of the facility or equipment has occurred in the United States.

The FAA must grant waivers for any items that are included in these above exceptions. Bidders can review items already approved under the FAA nationwide approved list of "Equipment Meeting Buy American Requirements" on the FAA website, which do not require a specific FAA waiver.

All waivers are the responsibility of the Contractor, must be obtained prior to the Notice to Proceed, and must be submitted to the Illinois Division of Aeronautics for review and approval before being forwarded to the FAA. Any products used on the project that cannot meet the domestic requirement, and for which a waiver prior to the Notice to Proceed was not obtained, will be rejected for use and subject to removal and replacement with no additional compensation, and the contractor deemed non-responsive.

A5 CIVIL RIGHTS - GENERAL

A5.1 SOURCE

49 USC § 47123

A5.2 APPLICABILITY

Note: This provision is in addition to the Civil Rights – Title VI provisions.

Contract Types – The General Civil Rights Provisions found in 49 USC § 47123, derived from the Airport and Airway Improvement Act of 1982, Section 520, apply to all sponsor contracts regardless of funding source.

Use of Provision – There are two versions of this provision. One applies to sponsor contracts and the other applies to sponsor lease agreements and transfer agreements. The sponsor must incorporate the text of the appropriate provision without modification.

A5.3 CONTRACT CLAUSE

A5.3.1 Sponsor Contracts

GENERAL CIVIL RIGHTS PROVISIONS

The contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the contractor and subtier contractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

A5.3.2 Sponsor Lease Agreements and Transfer Agreements

GENERAL CIVIL RIGHTS PROVISIONS

The tenant/concessionaire/lessee and its transferee agree to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision obligates the tenant/concessionaire/lessee or its transferee for the period during which Federal assistance is extended to the airport through the Airport Improvement Program.

In cases where Federal assistance provides, or is in the form of personal property; real property or interest therein; structures or improvements thereon, this provision obligates the party or any transferee for the longer of the following periods:

- (a) The period during which the property is used by the airport sponsor or any transferee for a purpose for which Federal assistance is extended, or for another purpose involving the provision of similar services or benefits; or
- (b) The period during which the airport sponsor or any transferee retains ownership or possession of the property.

A6 CIVIL RIGHTS – TITLE VI ASSURANCE

A6.1 SOURCE

49 USC § 47123

FAA Order 1400.11

A6.2 APPLICABILITY

Title VI of the Civil Rights Act of 1964, as amended, (Title VI) prohibits discrimination on the grounds of race, color, or national origin under any program or activity receiving Federal financial assistance. Sponsors must include appropriate clauses from the Standard DOT Title VI Assurances in all contracts and solicitations.

The clauses are as follows:

A6.2.1 Applicability of Title VI Solicitation Notice

a. Contract Clause	b. The Sponsor must include the contract clause in:	c. Clause Text is Included in Paragraph
d. Title VI Solicitation Notice	1) All solicitations for bids, requests for proposals work, or material subject to the nondiscrimination acts and regulations made in connection with Airport Improvement Program grants; and 2) All proposals for negotiated agreements regardless of funding source.	e. A6.3.1
f. Title VI Clauses for Compliance with Nondiscrimination Requirements	g. Every contract or agreement, unless the sponsor has determined and the FAA concurs, that the contract or agreement is not subject to the Nondiscrimination Acts and Authorities	h. A6.3.2
Title VI Required Clause for Property Interests Transferred from the United States	i. As a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a sponsor.	j. A6.3.3
k. Title VI Required Clause for Transfer of Real Property Acquired or Improved Under the Activity, Facility or Program	l. As a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the sponsor with other parties for all transfers of real property acquired or improved under the activity, facility, or program	m. A6.3.4
Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program	n. As a covenant running with the land, in any future deeds, leases, licenses, permits, or similar instruments entered into by the sponsor with other parties for the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program	o. A6.3.5
Title VI List Of Pertinent Nondiscrimination Acts And Authorities	p. Insert this list in every contract or agreement, unless the sponsor has determined and the FAA concurs, that the contract or agreement is not subject to the Nondiscrimination Acts and Authorities	q. A6.3.6

A6.3 CONTRACT CLAUSE

A6.3.1 Title VI Solicitation Notice

Title VI Solicitation Notice:

The Waukegan Port District, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

A6.3.2 Title VI Clauses for Compliance with Nondiscrimination Requirements

Compliance with Nondiscrimination Requirements

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

Compliance with Regulations: The contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts And Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

Non-discrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.

Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Nondiscrimination Acts And Authorities on the grounds of race, color, or national origin.

Information and Reports: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts And Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

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

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

A6.3.3 Title VI Clauses for Deeds Transferring United States Property

CLAUSES FOR DEEDS TRANSFERRING UNITED STATES PROPERTY

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of the Airport Improvement Program grant assurances.

NOW, THEREFORE, the Federal Aviation Administration as authorized by law and upon the condition that the Waukegan Port District will accept title to the lands and maintain the project constructed thereon in accordance with Public Law 114-141, for the Airport Improvement Program and the policies and procedures prescribed by the Federal Aviation Administration of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the Waukegan Port District all the right, title and interest of the U.S. Department of Transportation/Federal Aviation Administration in and to said lands described in the Exhibit A.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto the Waukegan Port District and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the Waukegan Port District, its successors and assigns.

The Waukegan Port District, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [.] [and]* (2) that the Waukegan Port District will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended[, and (3) that in the event of breach of any of the above-mentioned non-discrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the Federal Aviation Administration and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

A6.3.4 Title VI Clauses for Transfer of Real Property Acquired or Improved Under the Activity, Facility, or Program

CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE ACTIVITY, FACILITY, OR PROGRAM

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the Waukegan Port District pursuant to the provisions of the Airport Improvement Program grant assurances.

- A. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add “as a covenant running with the land”] that:
 - 1. In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a Federal Aviation Administration activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Nondiscrimination Acts and Regulations listed in the Pertinent List of Nondiscrimination Authorities (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
- B. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, the Waukegan Port District will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued.*
- C. With respect to a deed, in the event of breach of any of the above Nondiscrimination covenants, the Waukegan Port District will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the Waukegan Port District and its assigns.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

A6.3.5 Title VI Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program

CLAUSES FOR CONSTRUCTION/USE/ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY OR PROGRAM

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by the Waukegan Port District pursuant to the provisions of the Airport Improvement Program grant assurances.

- A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, “as a covenant running with the land”) that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the List of discrimination Acts And Authorities.
- B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above nondiscrimination covenants, the Waukegan Port District will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued.*
- C. With respect to deeds, in the event of breach of any of the above nondiscrimination covenants, the Waukegan Port District will there upon revert to and vest in and become the absolute property of the Waukegan Port District and its assigns.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

A6.3.6 Title VI List of Pertinent Nondiscrimination Acts and Authorities

Title VI List of Pertinent Nondiscrimination Acts and Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);

The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);

Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;

The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

A7 CLEAN AIR AND WATER POLLUTION CONTROL

A7.1 SOURCE

2 CFR § 200, Appendix II(G)

A7.2 APPLICABILITY

Contract Types – This provision is required for all contracts and lower tier contracts that exceed \$150,000.

Use of Provision – The regulation does not prescribe mandatory language. The following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor’s language must fully satisfy the requirements of Appendix II to 2 CFR §200.

A7.3 CONTRACT CLAUSE

CLEAN AIR AND WATER POLLUTION CONTROL

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 U.S.C. § 740-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. § 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

Contractor must include this requirement in all subcontracts that exceeds \$150,000.

A8 CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS

A8.1 SOURCE

2 CFR § 200, Appendix II(E)

A8.2 APPLICABILITY

Contract Workhours and Safety Standards Act Requirements, (CWHSSA) requires contractors and subcontractors on covered contracts to pay laborers and mechanics employed in the performance of the contracts one and one-half times their basic rate of pay for all hours worked over 40 in a workweek. CWHSSA prohibits unsanitary, hazardous, or dangerous working conditions on federally assisted projects. The Wage and Hour Division (WHD) within the U.S. Department of Labor (DOL) enforces the compensation requirements of this Act, while DOL’s Occupational Safety and Health Administration (OSHA) enforces the safety and health requirements

Contract Types –

Construction - This provision applies to all contracts and lower tier contracts that exceed \$100,000, and employ laborers, mechanics, watchmen and guards.

Equipment - This provision applies to any equipment project exceeding \$100,000 that involves installation of equipment onsite (e.g. electrical vault equipment). This provision does not apply to equipment acquisition projects where the manufacture of the equipment takes place offsite at the vendor plant (e.g. ARFF and SRE vehicles)

Professional Services - This provision applies to professional service agreements that exceed \$100,000 and employs laborers, mechanics, watchmen and guards. This includes members of survey crews and exploratory drilling operations.

Property – While most land transactions do not involve employment of laborers, mechanics, watchmen and guards, under certain circumstances, a property acquisition project could require such employment. Examples include the installation of property fencing or testing for environmental contamination

Use of Provision – Sponsors must incorporate this text without modification.

A8.3 CONTRACT CLAUSE

CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS

1. Overtime Requirements.

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

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

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

3. Withholding for Unpaid Wages and Liquidated Damages.

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

4. Subcontractors.

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

A9 COPELAND "ANTI-KICKBACK" ACT

A9.1 SOURCE

2 CFR § 200, Appendix II(D)

29 CFR Parts 3 & 5

A9.2 APPLICABILITY and PURPOSE

The Copeland (Anti-Kickback) Act (18 U.S.C. 874 and 40 U.S.C. 3145) makes it unlawful to induce by force, intimidation, threat of dismissal from employment, or by any other manner, any person employed in the construction or repair of public buildings or public works, financed in whole or in part by the United States, to give up any part of the compensation to which that person is entitled under a contract of employment. The Copeland Act also requires each contractor and subcontractor to furnish weekly a statement of compliance with respect to the wages paid each employee during the preceding week.

Contract Types –

Construction – This provision applies to all construction contracts and subcontracts financed under the AIP program that exceeds \$2,000.

Equipment – This provision applies to all equipment installation projects (e.g. electrical vault improvements) financed under the AIP program that exceeds \$ 2, 000. This provision does not apply to equipment acquisitions where the equipment is manufactured at the vendor's plant (e.g. SRE and ARFF vehicles)

Professional Services - The emergence of different project delivery methods has created situations where Professional Service Agreements (PSA) includes tasks that meet the definition of construction, alteration or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration or repair and it exceeds \$2,000, the PSA must incorporate the Copeland Anti-kickback provision.

Property - Ordinarily, land acquisition projects would not involve employment of laborers or mechanics and thus the Copeland Anti-Kickback provision would not apply. However, land projects that involve installation of boundary fencing and demolition of structures would involve laborers and mechanics. The sponsor must include this provision if the land acquisition project involves employment of laborers or mechanics for a contract exceeding \$2,000.

Use of Provision – 29 CFR Part 5 establishes specific language a sponsor must use in construction contracts. The sponsor may not make any modification to the standard language. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration or repair are acting as a contractor. The sponsor may not substitute the term "contractor" for "consultant" in such instances.

A9.3 CONTRACT CLAUSE

COPELAND "ANTI-KICKBACK" ACT

Contractor must comply with the requirements of the Copeland "Anti-Kickback" Act (18 U.S.C. 874 and 40 U.S.C. 3145), as supplemented by Department of Labor regulation 29 CFR part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the Owner, a weekly statement on the wages paid to each employee performing on covered work during the prior week. Owner must report any violations of the Act to the Federal Aviation Administration.

A10 DAVIS-BACON REQUIREMENTS

A10.1 SOURCE

2 CFR § 200, Appendix II(D)

29 CFR Part 5

A10.2 APPLICABILITY

The Davis-Bacon Act ensures that laborers and mechanics employed under the contract receive pay no less than the locally prevailing wages and fringe benefits as determined by the Department of Labor.

Contract Types –

Construction - Incorporate into all construction contracts and subcontracts that exceed \$2,000 and include funding from the AIP program.

Equipment – This provision applies to all equipment installation projects (e.g. electrical vault improvements) financed under the AIP program that exceeds \$ 2, 000. This provision does not apply to equipment acquisitions where the equipment is manufactured at the vendor's plant (e.g. SRE and ARFF vehicles)

Professional Services - The emergence of different project delivery methods has created situations where Professional Service Agreements (PSA) includes tasks that meet the definition of construction, alteration or repair as defined in 29 CFR Part 5. If such tasks result in work that qualifies as construction, alteration or repair and it exceeds \$2,000, the PSA must incorporate this clause.

Property - Ordinarily, land acquisition projects would not involve employment of laborers or mechanics and thus the provision would not apply. However, land projects that involve installation of boundary fencing and demolition of structures would involve laborers and mechanics. The sponsor must include this provision if the land acquisition project involves employment of laborers or mechanics for a contract exceeding \$2,000.

Fencing Projects - Fencing projects that exceed \$2,000 must include this provision.

Use of Provision – 29 CFR Part 5 establishes specific language a sponsor must use. The sponsor may not make any modification to the standard language. A/E firms that employ laborers and mechanics on a task that meets the definition of construction, alteration or repair are acting as a contractor. The sponsor may not substitute the term "contractor" for "consultant" in such instances.

A10.3 CONTRACT CLAUSE

DAVIS-BACON REQUIREMENTS

1. Minimum Wages

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

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

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

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

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

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

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

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

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

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

2 Withholding.

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

3. Payrolls and basic records.

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

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

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

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i) and that such information is correct and complete;

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

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

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

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

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

4. Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

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

5. Compliance with Copeland Act Requirements.

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

6. Subcontracts.

The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in

any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. Contract Termination: Debarment.

A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance With Davis-Bacon and Related Act Requirements.

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

9. Disputes Concerning Labor Standards.

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility.

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

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

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

A11 DEBARMENT AND SUSPENSION

A11.1 SOURCE

2 CFR part 180 (Subpart C)

2 CFR part 1200

DOT Order 4200.5

A11.2 APPLICABILITY

The sponsor must verify that the firm or individual that it is entering into a contract with are not presently suspended, excluded or debarred by any Federal department or agency from participating in federally-assisted projects. The sponsor accomplishes this by: (1) checking the System for Award Management (SAM.gov) to verify that the firm or individual is not listed in SAM.gov as being suspended, debarred or excluded, (2) collecting a certification from the firm or individual that they are not suspended, debarred or excluded, and (3) incorporating a clause in the contract that requires lower tier contracts to verify that no suspended, debarred or excluded firm or individual are included in the project.

Contract Types – This requirement applies to *covered transactions*, which are defined in 2 CFR part 180. AIP funded contracts are non-procurement transactions, as defined by §180.970. Covered transactions include any AIP-funded contract, regardless of tier, that is awarded by a contractor, subcontractor, supplier, consultant, or its agent or representative in any transaction, if the amount of the contract is expected to equal or exceed \$25,000. This includes contracts associated with land acquisition projects.

Use of Provision – The regulation does not prescribe mandatory language, the following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's language must fully satisfy the requirements of 2 CFR part 180. For professional service agreements, sponsor may substitute bidder/offeror with consultant.

A11.3 CONTRACT CLAUSE

A11.3.1 Bidder or Offeror Certification

CERTIFICATION OF OFFERER/BIDDER REGARDING DEBARMENT

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

A11.3.2 Lower Tier Contract Certification

CERTIFICATION OF LOWER TIER CONTRACTORS REGARDING DEBARMENT

The successful bidder, by administering each lower tier subcontract that exceeds \$25,000 as a "covered transaction", must verify each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: <http://www.sam.gov>

2. Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract

If the FAA later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

A12 DISADVANTAGED BUSINESS ENTERPRISE

A12.1 SOURCE

49 CFR part 26

A12.2 APPLICABILITY and PURPOSE

A sponsor that anticipates awarding \$250,000 or more in AIP funded prime contracts in a federal fiscal year must have an approved Disadvantaged Business Enterprise (DBE) program on file with the FAA Office of Civil Rights (§26.21). The approved DBE program will identify a 3-year overall program goal that the sponsor bases on the availability of ready, willing and able DBEs relative to all businesses ready, willing and able to participate on the project (§26.45).

Contract Types – Sponsors with a DBE program on file with the FAA must include the three following provisions, if applicable:

Clause in all solicitations for proposals for which a contract goal has been established.

Clause in each prime contract

Clause in solicitations that are obtaining DBE participation through race/gender neutral means.

Use of Provision –

1. Solicitations with a DBE Project Goal - 49 CFR §26.53 requires a sponsor's solicitation to address what a contractor must submit on proposed DBE participation. This language is not required for projects where DBE participation is by race-gender neutral means.

The regulation does not prescribe mandatory language, the following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's revised language must fully these requirements.

The sponsor may require the contractor's submittal on proposed DBE participation either with the bid or within a specified timeframe after bidding.

2. Contracts Covered by DBE Program - Sponsors must incorporate this language if they have a DBE program on file with the FAA. This includes projects where DBE participation is obtained through race-gender neutral means (i.e. no project goal). Sections §26.13 and §26.29 establish mandatory language for contractor assurance and prompt payment. The sponsor must not modify the language.
3. The regulation does not prescribe mandatory language. The following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's revised language must fully these requirements for a sponsor that is not applying a project specific contract goal but is covered by a DBE program on file with the FAA.
4. Sponsors that do not have a DBE program on file with the FAA are not required to include DBE provisions and clauses.

A12.3 REQUIRED PROVISIONS

A12.3.1 Solicitation Language (Project Goal)

The Owner's award of this contract is conditioned upon Bidder or Offeror satisfying the good faith effort requirements of 49 CFR §26.53.

As a condition of bid responsiveness, the Bidder or Offeror must submit the following information with their proposal on the forms provided herein:

- (1) The names and addresses of Disadvantaged Business Enterprise (DBE) firms that will participate in the contract;
- (2) A description of the work that each DBE firm will perform;
- (3) The dollar amount of the participation of each DBE firm listed under (1)
- (4) Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal;
- (5) If Bidder or Offeror cannot meet the advertised project DBE goal; evidence of good faith efforts undertaken by the Bidder or Offeror as described in appendix A to 49 CFR Part 26.

The successful Bidder or Offeror must provide written confirmation of participation from each of the DBE firms the Bidder or Offeror lists in their commitment. This Bidder or Offeror must submit the DBE's written confirmation of participation within 5 calendar days after bid opening.

A12.3.2 Solicitation Language (Race/Gender Neutral Means)

The requirements of 49 CFR part 26 apply to this contract. It is the policy of the Waukegan Port District to practice nondiscrimination based on race, color, sex or national origin in the award or performance of this contract. The Owner encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

A12.3.3 Prime Contracts (Projects covered by DBE Program)

DISADVANTAGED BUSINESS ENTERPRISES

Contract Assurance (§ 26.13) - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

Prompt Payment (§26.29) - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than {specify number} days from the receipt of each payment the prime contractor receives from {Name of recipient}. The prime contractor agrees further to return retainage payments to each subcontractor within {specify the same number as above} days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the {Name of Recipient}. This clause applies to both DBE and non-DBE subcontractors.

A13 DISTRACTED DRIVING

A13.1 SOURCE

Executive Order 13513

DOT Order 3902.10

A13.2 APPLICABILITY

The FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

Contract Types – Sponsors must insert this provision in all AIP funded contracts that exceed the micro-purchase threshold of 2 CFR §200.67 (currently set at \$3,500).

Use of Provision – The regulation does not prescribe mandatory language, the following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's revised language must fully these requirements. .

A13.3 CONTRACT CLAUSE

TEXTING WHEN DRIVING

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 "Text Messaging While Driving" (12/30/2009), the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding \$3,500 and involve driving a motor vehicle in performance of work activities associated with the project.

A14 ENERGY CONSERVATION REQUIREMENTS

A14.1 SOURCE

2 CFR § 200, Appendix II(H)

A14.2 APPLICABILITY

The Energy Conservation Requirements found in 2 CFR § 200 Appendix II(H) requires this provision on energy efficiency.

Contract Types – The sponsor must include this provision in all AIP funded contracts and lower-tier contracts.

Use of Provision – The regulation does not prescribe mandatory language, the following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's revised language must fully these requirements. Sponsor may substitute "contractor and subcontractor" with "consultant and sub-consultant" for professional service agreements.

A14.3 CONTRACT CLAUSE

ENERGY CONSERVATION REQUIREMENTS

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201 *et seq*).

A15 EQUAL EMPLOYMENT OPPORTUNITY (E.E.O.)

A15.1 SOURCE

2 CFR 200, Appendix II(C)

41 CFR § 60-1.4

41 CFR § 60-4.3

Executive Order 11246

A15.2 APPLICABILITY

The purpose of this provision is to provide equal opportunity for all persons, without regard to race, color, religion, sex, or national origin who are employed or seeking employment with contractors performing under a federally assisted construction contract. There are two provisions – a construction clause and a specification clause.

The equal opportunity contract clause must be included in any contract or subcontract when the amount exceeds \$10,000. Once the equal opportunity clause is determined to be applicable, the contract or subcontract must include the clause for the remainder of the year, regardless of the amount or the contract.

Contract Types –

Construction – The sponsor must incorporate contract and specification language in all construction contracts and subcontracts as required above.

Equipment - The sponsor must incorporate contract and specification language into all equipment contracts as required above that involves installation of equipment onsite (e.g. electrical vault equipment). This provision does not apply to equipment acquisition projects where the manufacture of the equipment takes place offsite at the vendor plant (e.g. ARFF and SRE vehicles)

Professional Services - The sponsor must include contract and specification language into all professional service agreements as required above. *Property* – The sponsor must include contract and specification language into all land acquisition projects that include work that qualifies as construction work as defined by 41 CFR part 60 as required above. An example is installation of boundary fencing.

Use of Provision – 41 CFR § 60-1.4 provides the mandatory contract language. 41 CFR § 60-4.3 provides the mandatory specification language. The sponsor must incorporate these clauses without modification.

A15.3 MANDATORY CONTRACT CLAUSE

A15.3.1 E.E.O. Contract Clause

EQUAL OPPORTUNITY CLAUSE

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

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identify or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.
- (3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of

Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: *Provided, however,* That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

A15.3.2 EEO Specification

**STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS**

1. As used in these specifications:

- a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
- b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;
- c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
- d. "Minority" includes:
 - (1) Black (all) persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);
 - (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

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

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

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

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

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

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

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

- b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
- c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the contractor by the union or, if referred, not employed by the contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the contractor may have taken.
- d. Provide immediate written notification to the Director when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a minority person or female sent by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.
- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The contractor shall provide notice of these programs to the sources compiled under 7b above.
- f. Disseminate the contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the contractor's EEO policy with other contractors and subcontractors with whom the contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the contractor's obligations under these specifications are being carried out.
- n. Ensure that all facilities and company activities are non-segregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
- p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the contractor's EEO policies and affirmative action obligations.

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

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority.

Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally,) the contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

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

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

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

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

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

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

A16 FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE)

A16.1 SOURCE

29 U.S.C. § 201, et seq

A16.2 APPLICABILITY

The United States Department of Labor (DOL) Wage and Hour Division administers the Fair Labor Standards Act (FLSA). This act prescribes federal standards for basic minimum wage, overtime pay, record keeping and child labor standards.

Contract Types – Per the Department of Labor, all employees of certain enterprises having workers engaged in interstate commerce, producing goods for interstate commerce, or handling, selling, or otherwise working on goods or materials that have been moved in or produced for such commerce by any person, are covered by the FLSA.

All consultants, sub-consultants, contractors and subcontractors employed under this federally assisted project must comply with the FLSA.

Professional Services – 29 CFR § 213 exempts employees in a bona fide executive, administrative or professional capacity. Because professional firms employ individuals that are not covered by this exemption, the sponsor's agreement with a professional services firm must include the FLSA provision.

Use of Provision – The regulation does not prescribe mandatory language, the following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's language must fully satisfy the requirements of 29 U.S.C. § 201. The sponsor must select *contractor* or *consultant*, as appropriate for the contract.

A16.3 CONTRACT CLAUSE

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part time workers.

The [*contractor* / *consultant*] has full responsibility to monitor compliance to the referenced statute or regulation. The [*contractor* / *consultant*] must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division

A17 LOBBYING AND INFLUENCING FEDERAL EMPLOYEES

A17.1 SOURCE

31 U.S.C. § 1352 – Byrd Anti-Lobbying Amendment

2 CFR part 200, Appendix II(J)

49 CFR part 20, Appendix A

A17.2 APPLICABILITY

Consultants and contractors that apply or bid for an award of \$100,000 or more must certify that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or another award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.

Contract Types – The sponsor must incorporate this provision into all contracts exceeding \$100,000.

Use of Provision – Appendix A to 49 CFR Part 20 prescribes language the sponsor must use. The sponsor must incorporate this provision without modification.

A17.3 CONTRACT CLAUSE

CERTIFICATION REGARDING LOBBYING

The bidder or offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

A18 PROHIBITION of SEGREGATED FACILITIES

A18.1 SOURCE

41 CFR § 60

A18.2 APPLICABILITY

The contractor must comply with the requirements of the E.E.O. clause by ensuring that facilities they provide for employees are free of segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin. This clause must be included in all contracts that include the equal opportunity clause, regardless of the amount of the contract.

Contract Types – AIP sponsors must incorporate the Prohibition of Segregated Facilities clause in any contract containing the Equal Employment Opportunity clause of 41 CFR §60.1. This obligation flows down to subcontract and sub-tier purchase orders containing the Equal Employment Opportunity clause.

Construction - Construction work means construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.

Equipment – On site installation of equipment such as airfield lighting control equipment meets the definition of construction and thus this provision would apply. This provision does not apply to equipment projects involving manufacture of the item at a vendor's manufacturing plant. An example would be the manufacture of a SRE or ARFF vehicle.

Professional Services - Professional services that include tasks that qualify as construction work as defined by 41 CFR part 60. Examples include the installation of noise monitoring equipment.

Property/Land - Land acquisition contracts that include tasks that qualify as construction work as defined by 41 CFR part 60. Examples include demolition of structures or installation of boundary fencing.

Use of Provision – The regulation does not prescribe mandatory language, the following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's language must fully satisfy the requirements of 41 CFR § 60.

A18.3 CONTRACT CLAUSE

PROHIBITION of SEGREGATED FACILITIES

(a) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(b) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Opportunity clause of this contract.

A19 OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

A19.1 SOURCE

20 CFR part 1910

A19.2 APPLICABILITY

Contract Types – All contracts and subcontracts must comply with the Occupational Safety and Health Act of 1970 (OSH). The United States Department of Labor Occupational Safety & Health Administration (OSHA) oversees the workplace health and safety standards wage provisions from OSH.

Use of Provision – The regulation does not prescribe mandatory language. The following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's language must fully satisfy the requirements of 20 CFR part 1910.

A19.3 CONTRACT CLAUSE

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The Contractor retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

A20 PROCUREMENT OF RECOVERED MATERIALS

A20.1 SOURCE

2 CFR § 200.322

40 CFR part 247

A20.2 APPLICABILITY

Sponsors of AIP funded development and equipment projects must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. Section 6002 emphasizes maximizing energy and resource recovery through use of affirmative procurement actions for recovered materials identified in the EPA guidelines.

The requirements of § 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition.

Contract Types – This provision applies to any contracts that include procurement of products where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired by the preceding fiscal year exceeded \$10,000.

Construction and Equipment – Include this provision in all construction and equipment projects

Professional Services and Property – Include this provision if the agreement includes procurement of a product that exceeds \$10,000

Use of Provision – The regulation does not prescribe mandatory language. The following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's language must fully satisfy the requirements of 2 CFR § 200.

A20.3 CONTRACT CLAUSE

Procurement of Recovered Materials

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use of products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

- a) The contract requires procurement of \$10,000 or more of a designated item during the fiscal year; or,

The contractor has procured \$10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at www.epa.gov/epawaste/conserve/tools/cpg/products/.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:

- a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
- b) Fails to meet reasonable contract performance requirements; or
- c) Is only available at an unreasonable price.

A21 RIGHT TO INVENTIONS

A21.1 SOURCE

2 CFR § 200, Appendix II(F)

37 CFR §401

A21.2 APPLICABILITY

Contract Types – This provision applies to all contracts and subcontracts with small business firms or nonprofit organizations that includes performance of *experimental, developmental, or research work*. This clause is not applicable to construction, equipment or professional service contracts unless the contract includes *experimental, developmental or research work*.

Use of Provision – The regulation does not prescribe mandatory language. The following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's language must fully satisfy the requirements of Appendix II to 2 CFR part 200.

A21.3 CONTRACT CLAUSE

RIGHTS TO INVENTIONS

Contracts or agreements that include the performance of experimental, developmental, or research work must provide for the rights of the Federal Government and the Owner in any resulting invention as established by 37 CFR part 401, Rights to Inventions Made by Non-profit Organizations and Small Business Firms under Government Grants, Contracts, and Cooperative Agreements. This contract incorporates by reference the patent and inventions rights as specified within in the 37 CFR §401.14. Contractor must include this requirement in all sub-tier contracts involving experimental, developmental or research work.

A22 SEISMIC SAFETY

A22.1 SOURCE

49 CFR part 41

A22.2 APPLICABILITY

Contract Types – This provision applies to construction of new buildings and additions to existing buildings financed in whole or in part through the Airport Improvement Program.

Professional Services and Construction – Sponsor must incorporate this clause in any contract involved in the construction of new buildings or structural addition to existing buildings.

Equipment – Sponsor must include this provision if the project involves construction or structural addition to a building such as an electrical vault project.

Land – This provision will not typically apply to a property/land project.

Use of Provision – The regulation does not prescribe mandatory language. The following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's language must fully satisfy the requirements of 49 CFR part 41.

A22.3 CONTRACT CLAUSE

A22.3.1 Professional Service Agreements for Design

Seismic Safety

In the performance of design services, the Consultant agrees to furnish a building design and associated construction specification that conform to a building code standard which provides a level of seismic safety substantially equivalent to standards as established by the National Earthquake Hazards Reduction Program (NEHRP). Local building codes that model their building code after the current version of the International Building Code (IBC) meet the NEHRP equivalency level for seismic safety. At the conclusion of the design services, the Consultant agrees to furnish the Owner a "certification of compliance" that attests conformance of the building design and the construction specifications with the seismic standards of NEHRP or an equivalent building code.

A22.3.2 Construction Contracts

Seismic Safety

The contractor agrees to ensure that all work performed under this contract, including work performed by subcontractors, conforms to a building code standard that provides a level of seismic safety substantially equivalent to standards established by the National Earthquake Hazards Reduction Program (NEHRP). Local building codes that model their code after the current version of the International Building Code (IBC) meet the NEHRP equivalency level for seismic safety.

A23 TERMINATION OF CONTRACT

A23.1 SOURCE

2 CFR § 200 Appendix II(B)

FAA Advisory Circular 150/5370-10, Section 80-09

A23.2 APPLICABILITY

Contract Types – All contracts and subcontracts in excess of \$10,000 must address *termination for cause* and *termination for convenience* by the sponsor. The provision must address the manner (i.e. notice, opportunity to cure, and effective date) by which the sponsor’s contract will be affected and the basis for settlement (i.e. incurred expenses, completed work, profit, etc.).

Use of Provision –

Termination for Default - Section 80-09 of FAA Advisory Circular 150/5370-10 establishes standard language for Termination for Default under a construction contract. The sponsor must not make any changes to this standard language.

Termination for Convenience – The sponsor must include a clause for termination for convenience. The following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor’s language must fully satisfy the requirements of Appendix II to 2 CFR part 200.

Equipment, Professional Services and Property – The sponsor may use their established clause language provided that it adequately addresses the intent of Appendix II(B) to Part 200, which addresses termination for fault and for convenience.

A23.3 CONTRACT CLAUSE

A23.3.1 Termination for Convenience

Termination for Convenience (Construction & Equipment Contracts)

The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

1. Contractor must immediately discontinue work as specified in the written notice.
2. Terminate all subcontracts to the extent they relate to the work terminated under the notice.
3. Discontinue orders for materials and services except as directed by the written notice.
4. Deliver to the owner all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work and as directed in the written notice.
5. Complete performance of the work not terminated by the notice.
6. Take action as directed by the owner to protect and preserve property and work related to this contract that Owner will take possession.

Owner agrees to pay Contractor for:

- a) completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;

documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;

reasonable and substantiated claims, costs and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and reasonable and substantiated expenses to the contractor directly attributable to Owner’s termination action

Owner will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the Owner’s termination action.

The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

Termination for Convenience (Professional Services)

The Owner may, by written notice to the Consultant, terminate this Agreement for its convenience and without cause or default on the part of Consultant. Upon receipt of the notice of termination, except as explicitly directed by the Owner, the Contractor must immediately discontinue all services affected.

Upon termination of the Agreement, the Consultant must deliver to the Owner all data, surveys, models, drawings, specifications, reports, maps, photographs, estimates, summaries, and other documents and materials prepared by the Engineer under this contract, whether complete or partially complete.

Owner agrees to make just and equitable compensation to the Consultant for satisfactory work completed up through the date the Consultant receives the termination notice. Compensation will not include anticipated profit on non-performed services.

Owner further agrees to hold Consultant harmless for errors or omissions in documents that are incomplete as a result of the termination action under this clause.

A23.3.2 Termination for Default

Termination for Default (Construction)

Section 80-09 of FAA Advisory Circular 150/5370-10 establishes conditions, rights and remedies associated with Owner termination of this contract due default of the Contractor.

Termination for Default (Equipment)

The Owner may, by written notice of default to the Contractor, terminate all or part of this Contract if the Contractor:

1. Fails to commence the Work under the Contract within the time specified in the Notice- to-Proceed;
2. Fails to make adequate progress as to endanger performance of this Contract in accordance with its terms;
3. Fails to make delivery of the equipment within the time specified in the Contract, including any Owner approved extensions;
4. Fails to comply with material provisions of the Contract;
5. Submits certifications made under the Contract and as part of their proposal that include false or fraudulent statements;
6. Becomes insolvent or declares bankruptcy;

If one or more of the stated events occur, the Owner will give notice in writing to the Contractor and Surety of its intent to terminate the contract for cause. At the Owner's discretion, the notice may allow the Contractor and Surety an opportunity to cure the breach or default.

If within [10] days of the receipt of notice, the Contractor or Surety fails to remedy the breach or default to the satisfaction of the Owner, the Owner has authority to acquire equipment by other procurement action. The Contractor will be liable to the Owner for any excess costs the Owner incurs for acquiring such similar equipment.

Payment for completed equipment delivered to and accepted by the Owner shall be at the Contract price. The Owner may withhold from amounts otherwise due the Contractor for such completed equipment, such sum as the Owner determines to be necessary to protect the Owner against loss because of Contractor default.

Owner will not terminate the Contractor's right to proceed with the Work under this clause if the delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such acceptable causes include: acts of God, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, and severe weather events that substantially exceed normal conditions for the location.

If, after termination of the Contractor's right to proceed, the Owner determines that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the Owner issued the termination for the convenience the Owner.

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

Termination for Default (Professional Services)

Either party may terminate this Agreement for cause if the other party fails to fulfill its obligations that are essential to the completion of the work per the terms and conditions of the Agreement. The party initiating the termination action must allow the breaching party an opportunity to dispute or cure the breach.

The terminating party must provide the breaching party [7] days advance written notice of its intent to terminate the Agreement. The notice must specify the nature and extent of the breach, the conditions necessary to cure the breach, and the effective date of the termination action. The rights and remedies in this clause are in addition to any other rights and remedies provided by law or under this agreement.

a) **Termination by Owner:** The Owner may terminate this Agreement in whole or in part, for the failure of the Consultant to:

1. Perform the services within the time specified in this contract or by Owner approved extension;
2. Make adequate progress so as to endanger satisfactory performance of the Project;
3. Fulfill the obligations of the Agreement that are essential to the completion of the Project.

Upon receipt of the notice of termination, the Consultant must immediately discontinue all services affected unless the notice directs otherwise. Upon termination of the Agreement, the Consultant must deliver to the Owner all data, surveys, models, drawings, specifications, reports, maps, photographs, estimates, summaries, and other documents and materials prepared by the Engineer under this contract, whether complete or partially complete.

Owner agrees to make just and equitable compensation to the Consultant for satisfactory work completed up through the date the Consultant receives the termination notice. Compensation will not include anticipated profit on non-performed services.

Owner further agrees to hold Consultant harmless for errors or omissions in documents that are incomplete as a result of the termination action under this clause.

If, after finalization of the termination action, the Owner determines the Consultant was not in default of the Agreement, the rights and obligations of the parties shall be the same as if the Owner issued the termination for the convenience of the Owner.

b) **Termination by Consultant:** The Consultant may terminate this Agreement in whole or in part, if the Owner:

1. Defaults on its obligations under this Agreement;
2. Fails to make payment to the Consultant in accordance with the terms of this Agreement;
3. Suspends the Project for more than [180] days due to reasons beyond the control of the Consultant.

Upon receipt of a notice of termination from the Consultant, Owner agrees to cooperate with Consultant for the purpose of terminating the agreement or portion thereof, by mutual consent. If Owner and Consultant cannot reach mutual agreement on the termination settlement, the Consultant may, without prejudice to any rights and remedies it may have, proceed with terminating all or parts of this Agreement based upon the Owner's breach of the contract.

In the event of termination due to Owner breach, the Engineer is entitled to invoice Owner and to receive full payment for all services performed or furnished in accordance with this Agreement and all justified reimbursable expenses incurred by the Consultant through the effective date of termination action. Owner agrees to hold Consultant harmless for errors or omissions in documents that are incomplete as a result of the termination action under this clause.

A24 TRADE RESTRICTION CERTIFICATION

A24.1 SOURCE

49 USC § 50104

49 CFR part 30

A24.2 APPLICABILITY

Unless waived by the Secretary of Transportation, sponsors may not use AIP funds on a product or service from a foreign country included in the current list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (U.S.T.R.)

Contract Types – The trade restriction certification and clause applies to all AIP funded projects.

Use of Provision – 49 CFR part 30 prescribes the language for this model clause. The sponsor must include this certification language in all contracts and subcontracts without modification.

A24.3 CONTRACT CLAUSE

TRADE RESTRICTION CERTIFICATION

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror -

- a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (U.S.T.R.);
- b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the U.S.T.R.; and
- c. has not entered into any subcontract for any product to be used on the Federal on the project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

- (1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. or
- (2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such U.S.T.R. list or
- (3) who incorporates in the public works project any product of a foreign country on such U.S.T.R. list;

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by U.S.T.R, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

A25 VETERAN'S PREFERENCE

A25.1 SOURCE

49 USC § 47112(c)

A25.2 APPLICABILITY

Contract Types – This provision applies to all AIP funded projects that involve labor to carry out the project. This preference, which excludes executive, administrative and supervisory positions, applies to covered veterans (as defined under §47112(c)) only when they are readily available and qualified to accomplish the work required by the project.

Use of Provision – The regulation does not prescribe mandatory language, the following language is acceptable to the FAA and meets the intent of this requirement. If the sponsor uses different language, the sponsor's language must fully satisfy the requirements of 49 U.S.C. § 47112.

A25.3 CONTRACT CLAUSE

VETERAN'S PREFERENCE

In the employment of labor (excluding executive, administrative, and supervisory positions), the contractor and all sub-tier contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 U.S.C. 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

SECTION III

SPECIAL PROVISIONS

WAUKEGAN NATIONAL AIRPORT (UGN)
WAUKEGAN, LAKE COUNTY, ILLINOIS

INSTALL SECURITY/WILDLIFE FENCE, PHASE 4

ILLINOIS PROJECT NO. UGN-4589
SBG PROJECT NO. 3-17-SBGP-xx
CONTRACT NO. WA072

June 9, 2017



Hanson Professional Services Inc.
815 Commerce Drive, Suite 200
Oak Brook, Illinois 60523
630.990.3800

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GENERAL

These Special Provisions, together with applicable Standard Specifications, Manuals, Policies, Memorandums, Worksheets, Rules and Regulations, Contract Requirements for Airport Improvement Projects, Payroll Requirements and Minimum Wage Rates, which are hereto attached or which by reference are herein incorporated, cover the requirements of the State of Illinois, Department of Transportation (IDOT), Division of Aeronautics (Division) for the following improvement project at Waukegan National Airport, Waukegan, Lake County, Illinois:

☑ **Install Security/Wildlife Fence, Phase 4**

This Project is to extend the perimeter fencing and install gates at Waukegan National Airport including, among other incidental work, the following items:

- Placement of temporary erosion control measures.
- Provide select grading of earth to re-grade fence line and accommodate grade changes and erosion control facilities.
- Install chain -link fencing.
- Install electric vehicular sliding gate and manual vehicular swing gates.
- Construct electrical power and control cabling and equipment.
- Construct PCC sidewalk.
- Topsoil, seed and mulch fence line and disturbed areas.

GOVERNING SPECIFICATIONS AND RULES AND REGULATIONS

The Illinois Standard Specifications for Construction of Airports, State of Illinois Department of Transportation, Division of Aeronautics, adopted April 1, 2012, as revised (Standard Specifications), shall govern the Project except as otherwise revised or noted in these Special Provisions dated June 9, 2017. All references to IDOT Specifications refer to Standard Specifications for Road and Bridge Construction, Illinois Department of Transportation, adopted April 1, 2016, as revised. Resolution of conflicts with any part or parts of said Specifications shall be in accordance with Section 50-03 of the Standard Specifications.

ILLINOIS DEPARTMENT OF TRANSPORTATION, DIVISION OF AERONAUTICS
MANUALS, POLICY MEMORANDUMS, AND WORKSHEETS

The Illinois Department of Transportation, Division of Aeronautics, Manuals, Policies, Memorandums and Worksheets that are incorporated into this Project by reference are listed below. Also provided is a notation as to whether all or a portion of each applicable Manual, Policy Memorandum, and Worksheet has been modified by these Special Provisions.

Manuals

<u>Title</u>	<u>Modified by Special Provisions</u>
Airport Construction Documentation Manual (Updated 6/2014)	No
Manual for Documentation Of Airport Materials (Updated 4/01/2010)	No

Policy Memorandums

<u>No.</u>	<u>Title</u>	<u>Modified by Special Provisions</u>
18-08.2	Acceptance Procedure for Finely Divided Materials Used in Portland Cement Concrete and Other Applications (Updated 7/01/2015)	No
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2001-1	Requirements for Cold Weather Concreting (Updated 4/01/2010)	No

Worksheets

<u>Title</u>	<u>Modified by Special Provisions</u>
Cold Weather Concreting Plan	No

It is the Bidder's and Contractor's responsibility to review and incorporate into their bid and work, the requirements contained in these Manuals, Policies, Memorandums and Worksheets. Copies of each manual, policy memorandum, memorandum and worksheet can be found on the Illinois Department of Transportation, Division of Aeronautics webpage at <http://www.idot.illinois.gov/home/resources/Manuals/Manuals-and-Guides>.

DIVISION I

GENERAL PROVISIONS

SECTION 10

DEFINITION OF TERMS

The Work shall be provided in accordance with Section 10 of the Standard Specifications.

SECTION 20

ADVERTISEMENT, BIDDING, AWARD, AND CONTRACT EXECUTION

The Work shall be provided in accordance with Section 20 of the Standard Specifications.

SECTION 40

SCOPE OF WORK

Revise Section 40 of the Standard Specifications as follows:

40-05 MAINTENANCE OF TRAFFIC. Add the following Paragraphs:

"Prior to the issuance of a construction Notice-to-Proceed (NTP) by the Illinois Division of Aeronautics, the Contractor shall prepare and submit a Safety Plan Compliance Document (SPCD) in accordance with FAA Advisory Circular 150/5370-2F, paragraph 204b, or equivalent section in subsequent/current issues. The SPCD shall be reviewed and approved by the Airport Manager, who will then submit the document to the Illinois Division of Aeronautics for their approval prior to Notice to Proceed.

"Construction of the project shall be performed in accordance with the guidelines specified in FAA Advisory Circular 150/5320-2 (current issue) and the Airport Vehicle Operations Regulations (see Waukegan National Airport's website at <http://waukeganairport.com/wp-content/uploads/Ground-Vehicle-Ops-Training.pdf>). Any Contractor activities required for Project safety shall be provided by the Contractor and incidental to the Contract. **The Contractor shall maintain a copy of FAA Advisory Circular 150/5370-2F, current issue, and the KUGN Airport Vehicle Operations Regulations at the Project site at all times.**

"To minimize disruptions to Airport operations, construction operations must be controlled throughout the Project's duration, and work must be completed expeditiously. A Construction Phasing Plan detailing the sequencing of the Contractor's Work throughout the Project is included in the Plans. The Contractor shall provide his written acceptance of the Project Construction Safety and Phasing Plan at the Pre-construction Conference. Any and all changes to the Construction Safety and Phasing Plan that may be requested by the Contractor must be approved by the Project Engineer and the Airport Owner. It shall be the Contractor's responsibility to provide sufficient advance notice of any proposed phasing change to permit consideration and approval by the Project Engineer and the Airport Owner. The Contractor shall not be entitled to any extra compensation nor extension to the Contract time because of a phasing change request nor for any time necessary in receiving the required approvals. The Contractor shall expedite work at those stages where active runways, taxiways, hangar access, aprons, roadways or parking lots must be closed, to minimize the length of time that Airport operations are restricted.

"At the Pre-construction Conference, the Contractor shall provide a "Contractor Coordination Plan" that coordinates his work with the work of his subcontractors and the work of other contractors of other on-going Airport projects.

"The Contractor shall erect and maintain, at no cost to the Contract, directional and informational signs for the Contractor's access routes at the existing construction entrances and for the Contractor's route within the Airport operations area, as noted on the plans or as directed by the Resident Engineer. Where contractor equipment is operating within active aircraft operations areas, radio-equipped flaggers shall be furnished by the Contractor. Continuous pavement sweeping shall be furnished to remove debris from active aircraft movement paths. The cost of traffic control/flaggers and pavement sweeping shall be incidental to the Contract.

"The Contractor shall not have access to any part of the active airfield (runways, taxiways or aprons) for any equipment or personnel without the approval of the Resident Engineer and the Airport Owner. Activities within the Airport Operations Area (AOA) are subject to federal access control. Because of the high requirements for airport security and safety, the following requirements must be adhered to:

- All employees of the Contractor shall park their personal vehicles in the designated equipment parking and storage area. Each person or vehicle entering the Contractor area shall do so in accordance with the policies and procedures of the Airport Owner. The Contractor will transport the workers from the parking areas to the work area. Only Contractor vehicles will be allowed outside of the proposed equipment storage and parking areas.
- Should any Contractor personnel be identified as noncompliant with any vehicle driving safety requirements in this Project Safety Plan or in the Airport Vehicle Operations Regulations, such drivers shall be penalized by rescission of their on-airport driving privileges, and their access to the Construction Limit Area when operating vehicles shall be revoked.
- The Contractor will be required to be in two-way radio contact with the Waukegan Air Traffic Control Tower Ground Control (121.65 MHZ) whenever his work enters the Airport Operations Area (AOA). This will keep the Contractor in constant contact with FAA personnel and enable the FAA personnel to immediately contact the Contractor in case of an aeronautical emergency that would require action by the Contractor and/or his personnel. The provision of radio equipment by the Contractor for this purpose shall be incidental to the Contract.
- The Contractor shall coordinate gate security, through the Resident Engineer, with the Airport Owner. **Airport security shall be maintained at all times.**

"The Project does **NOT** include the closing of any runway, taxiway, apron or other Airport pavements at any time during the Project. Should the Contractor request, and the Airport Owner agree to any pavement closing, the following shall apply:

- Such closing shall have been prior approved through the submittal and approval of a Revised Construction Safety and Phasing Plan.
- For runways, the Contractor shall, at his expense, place, operate, and maintain the lighted runway closure markers furnished by the Airport Owner, as detailed in the Plans.
- To minimize disruption to aircraft operations associated with the runway closure, construction work must be completed expeditiously. **Runway closings shall only be permitted by prior authorization of the Resident Engineer and the Airport Owner, and in accordance with the Revised Construction Safety and Phasing Plan.**
- The Contractor, at his expense, shall furnish, place, maintain, relocate, and remove temporary barricades on airfield runways, taxiways and other pavement surfaces as shown and detailed in the Construction Plans, or as directed by the Resident Engineer.
- When the runway is to be closed, the Airport Owner will de-energize airport/runway NAVAIDs, and airfield lighting power and control circuits when required by the Contractor's activities. The Contractor shall not proceed with further work until after the required changes to the airport power and control circuits have been made by the Airport Owner.

"The Contractor shall remain within the Construction Limits Line shown in the Plans. When outside the Construction Limit Line, all Contractor activities shall remain more than 200 feet from the centerline and 300 feet from the end of active Runway 14-32, and 250 feet from the centerline and 1,000 feet from the end of active Runway 5-23. For work near taxiways and aprons, the Contractor's personnel and equipment must remain at least 44.5 feet from active Category I taxiway centerlines, 65.5 feet from active Category II taxiway centerlines, and 93 feet from active Category III taxiway centerlines, 44.5 feet from active T-hangar taxiway centerlines, and ten (10) feet from active apron edges. When construction operations must be conducted within these separations, the pavement must be closed to aircraft activity by the Contractor by providing temporary barricades as shown in the Plans, and in the case of runway pavements, closed runway markers. **No closure of any runway will be permitted for this Project, except as noted elsewhere in this Paragraph.**

"Open trenches, excavations and stockpiled material at the construction site shall be delineated with the use of barricades during hours of restricted visibility and/or darkness. No open trenches shall be allowed within the Runway Safety Area (RSA) or the Taxiway Safety Area (TSA) when the runway or taxiway is open to air traffic (including overnight). The RSA is defined as 75 feet from the centerline and 300 feet from the end of Runway 14-32, and 250 feet from the centerline and 1,000 feet from the end of Runway 5-23. The TSA is measured as 24.5 feet from the Category I taxiway centerline, 39.5 feet from the Category II taxiway centerline, and 59 feet from the Category III taxiway centerline, and 24.5 feet from the T-hangar taxiway centerline. No vertical drop of greater than 3-inches in height from pavement edge to earth grade or earth grade to earth grade within the RSA or TSA will be permitted when the runway or taxiway is open to air traffic. The Contractor will have steel plates on-site to allow for the rapid covering of trenches or earth drops in the event of unexpected work stoppages for weather or airport emergencies.

"The Contractor shall keep all of his equipment and personnel at least 15 feet from the edge of any active roadway or auto parking pavement. When his activities require working within 15 feet of the road/pavement edge, the Contractor shall provide for traffic control in accordance with IDOT Specifications (highway standards).

"When not in use and during non-working hours, Contractor's equipment shall be parked within the Contractor's equipment storage and parking areas. The equipment storage and parking areas are to be located as shown on the Construction Safety and Phasing Plan. The Contractor will be responsible for maintaining the construction entrances and Contractor areas in good condition. The cost of maintaining the construction entrance and Contractor areas is to be incidental to the contract. The Contractor shall protect all existing pavement edges from damage from construction equipment and haul vehicles.

"Contractor's access to the project when on Airport property is shown in the Plans. Contractor's access to the Airport itself is to be provided by public rights-of-way. The Contractor is to secure all necessary permits for the use of any public rights-of-way and is to maintain traffic on these public roads at all times, with the costs of permitting, cleaning and repairing of pavement damaged by contractor's activities incidental to the Contract. Use of and repairs to any public facilities are to be completed to the satisfaction of the facility's owner.

"The Contractor is to provide temporary construction roads within the Construction Limit Lines as may be required by his activities. The Contractor may make use of any existing haul routes within the Project limits, but shall repair/maintain same during construction, and shall remove the existing haul routes at project end, if directed by the Resident Engineer. Heavy vehicles shall not cross existing pavement surfaces except as approved by the Airport Owner and the Resident Engineer. Any damage to pavements that may occur by the Contractor's activities shall be repaired at the Contractor's expense and to the satisfaction of the Airport Owner and the Resident Engineer. For haul routes made by Contractor through grassed areas or existing hauls used by the Contractor, Contractor shall remove, grade, level, topsoil, seed and mulch at the end of the Project; cost incidental to the Contract.

"The Contractor is to provide an equipment storage and parking area at the locations shown in the Plans. It is the Contractor's responsibility to maintain the access roads and the storage area during construction and to restore the areas at project completion to conditions suitable to the Airport Owner and the Resident Engineer. At the Airport Owner's discretion, the temporary facilities may remain, but they must be left in conditions suitable to the Airport Owner. The cost of providing, maintaining and restoring the temporary facilities is incidental to the Contract.

"At no time shall the contractor conduct any activities or operate or park equipment so as to obstruct active Part 77 Airport Imaginary Surfaces. **Work within the Runway Protection Zones (RPZ), as delineated in the Plans, shall only be permitted as follows:**

- All Work shall be limited to those areas within the Construction Limit Line shown on the Construction Safety and Phasing Plan, including all men, equipment, and materials/haul vehicles.
- Start of any Work shall be previously notified and prior approved by the Resident Engineer and the Airport Owner.
- The Work shall only be conducted during daylight hours , during periods when the Waukegan Airport Traffic Control Tower is operating, and during visual flight rules weather conditions (1,000-foot ceiling and 3 statute miles visibility),as reported by the KUGN ASOS Weather Observation Station (on-site), phone 847.782.0876, ATIS 132.4 MHZ.
- The Contractor shall be in radio communication with the Waukegan Air Traffic Control Tower (Ground Control at 121.65 MHZ) at all times when working within the Runway Protection Zone.

"Contractor's equipment shall extend no higher than 20 feet. Cranes shall not be used during instrument weather conditions or at night. Cranes shall be lowered when not in use.

"The Contractor must notify the Resident Engineer and the Airport Owner three (3) days in advance of any required partial or complete closing of any runway, taxiway or apron. The date, time and scheduled duration of the closing must be approved by the Resident Engineer and the Airport Owner. The Contractor shall notify the Resident Engineer and Airport Owner three (3) days in advance of the Contractor's closing of other active roadways, airfield or roadway lighting circuits, or other Airport facilities.

"All notes and details shown on the Construction Safety and Phasing Plan are applicable to this Project.

"All work shall be completed in accordance with the approved Project Construction and Phasing Plan, issued by the Illinois Division of Aeronautics. Failure to use these prescribed procedures or adhere to the safety requirements will result in the suspension of work."

SECTION 50

CONTROL OF WORK

Revise Section 50 of the Standard Specifications as follows:

50-12 LOAD RESTRICTIONS. Add the following:

"By submitting his bid, the Contractor acknowledges that the existing Airport pavements are of the "light-duty" type, requiring his consideration of construction vehicle weights. Any damage to existing Airport pavements shall be repaired by the Contractor at his own expense and to the satisfaction of the Airport Owner and the Resident Engineer.

"The Contractor shall acquaint himself with the load restrictions of all local streets, roadways and highways intended for use as access/haul roads.

The Contractor shall erect and maintain, at no cost to the Contract, directional and informational signs for the Contractor's access routes at the existing construction entrance and for the Contractor's route within the Airport Operations Area, as noted on the Plans or as directed by the Resident Engineer."

SECTION 60

CONTROL OF MATERIALS

Revise Section 60 of the Standard Specifications as follows:

60-05 RESIDENT ENGINEER'S FIELD OFFICE. Add the following:

"The Contractor will be required to furnish and maintain a Resident Engineer's Field Office throughout the Project, in accordance with Item 150510 ENGINEER'S FIELD OFFICE."

SECTION 70

LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

The Work shall be provided in accordance with Section 70 of the Standard Specifications.

SECTION 80

PROSECUTION AND PROGRESS

The Work shall be provided in accordance with Section 80 of the Standard Specifications.

SECTION 90

MEASUREMENT AND PAYMENT

The Work shall be provided in accordance with Section 90 of the Standard Specifications.

DIVISION II

PAVING CONSTRUCTION DETAILS

EARTHWORK

ITEM 150510

ENGINEER'S FIELD OFFICE

Revise Item 150510 of the Standard Specifications as follows:

CONSTRUCTION METHODS

150-2.1 Add the following to the first Paragraph:

"Should sanitary facilities that are an integral part of the office not be practicable, temporary toilet facilities shall be provided. The temporary facilities must be of a size to **permit use by access-challenged** persons. A **separate** facility for hand washing must also be available and maintained. Solid waste disposal consisting of two (2) waste baskets and an outside trash container of sufficient size to accommodate a weekly-provided pick-up shall be furnished."

Replace Item H. in the list of equipment to be furnished by the Contractor with the following:

"H. One (1) telephone, with touch tone, where available, and telephone answering machine connected to one dedicated phone line, or a cellular phone with voicemail, for exclusive use by the Resident Engineer."

Replace Item I. in the list of equipment to be furnished by the Contractor with the following:

"I. One dry process copy machine (including maintenance and operating supplies) capable of both collating and reproducing prints up to a Ledger Size (11" by 17"); the copier shall be interconnected with Items J. and N. to permit printing directly from the router and the scanner (a separate printer (with maintenance and operating supplies) may also be permitted)."

Replace Item J. in the list of equipment to be furnished by the Contractor with the following:

"J. One (1) Windows®-compatible scanner configured to operate with the wireless router furnished in this item (Item N. as added to the list of items to be furnished), and capable of producing images of documents sized up to 11 inch by 17 inch, for the exclusive use by the Resident Engineer."

Add the following to Item K. in the list of equipment to be furnished by the Contractor:

"Item K in the list of equipment to be furnished by the Contractor is **NOT** required for this Project."

Add the following to the list of equipment to be furnished by the Contractor:

"N. Available for the exclusive use of the Resident Engineer, an Internet service connection using telephone DSL, cable broadband, or wireless (4G minimum speed) technology. Additionally, an 802.11g/n wireless router shall be provided, which will allow connection by the Resident Engineer and up to four engineer staff."

"O. One (1) 800 watt, 0.8 cubic foot microwave oven.

"P. Two (2) 28-quart wastebaskets with 8-gallon trash bags.

"Q. One (1) first aid cabinet - fully equipped."

BASIS OF PAYMENT

150-3.1 Revise this Section to read:

"The building fully equipped as specified herein will be paid for at the Contract unit price per lump sum for Engineer's Field Office. This price shall include all utility costs and shall reflect the salvage value of the building, equipment, and furniture, which become the property of the Contractor after release by the Resident Engineer. All telephone calls within Area Code 847 and to Area Codes 217, 224, 312, 331, 630, 708, 773, 779, 815 and 847 shall be included in the cost of the Engineer's Field Office. The Resident Engineer shall reimburse the Contractor for all long distance calls outside of these area codes.

"Payment will be made under:

"Item AR150510 Engineer's Field Office - per lump sum."

ITEM 151

CLEARING AND GRUBBING

Revise Item 151 of the Standard Specifications as follows:

CONSTRUCTION METHODS

151-2.1 GENERAL. Revise the fourth paragraph as follows:

"Clearing and grubbing shall consist of clearing the surface of the ground of the designated areas of all trees, stumps, down timber, logs, snags, brush, undergrowth, hedges, heavy growth of grass or weeds, fences structures, debris, and rubbish of any nature, natural obstructions or such material which in the opinion of the Resident Engineer is unsuitable for the installation of fencing or any part of the work, including landscaping, and the foundation of strips, pavements, or other required structures, including the grubbing of stumps, roots, matted roots, foundations, and the disposal from the project of all spoil materials resulting from clearing and grubbing."

Add the following:

"Based upon the approved Project Environmental determination (Documented Categorical Exclusion), Clearing and grubbing may be performed at any time during the calendar year, but prior to any work under Item 152.

"Burning shall not be permitted under this Contract.

"In determining whether a tree shall be measured under "Clearing and Grubbing", the definition noted in the third Paragraph of Section 151-1.1 of the Standard Specifications shall be used."

BASIS OF PAYMENT

151-4.1 Delete this Section.

151-4.2 Delete this Section.

151-4.3 Add the following:

"Payment will be made under:

"Item AR151450 Clearing and Grubbing - per acre."

ITEM 152

EXCAVATION AND EMBANKMENT

Revise Item 152 of the Standard Specifications as follows:

Delete all references to measurement and/or payment for excavation by the cubic yard. Excavation furnished under this project shall not be measured for payment but shall be incidental to Fence installation, Items 161 and 162; aggregate base course, Item 208, and; PCC Sidewalk, Item 501604.

152-1.1 DESCRIPTION. Revise the first Paragraph to read:

"This item shall consist of all select excavation and embankment to furnish a smooth, graded fence line, as prescribed in Item 161, Wire Fence, and Item 162, Chain-Link Fence, and for the construction of Item 208, Aggregate Base Course, and Item 501604, Portland Cement Concrete Sidewalk, and for all earth cut and fills necessary to furnish the grade changes shown in the Construction Plan profiles."

Add the following:

"For the purposes of Excavation and Embankment in this Project, this item is to be constructed for aircraft weighing less than 60,000 pounds (Standard Proctor)."

152-1.2 CLASSIFICATION. Delete the second Paragraph.

Add the following:

"Earthwork cut as required in the Plans may result in an excess of material that cannot be incorporated into the work as fill material when constructing the lines and grades shown in the Plan. All such excess material shall be hauled off-airport at a location authorized by the State of Illinois to accept construction debris. All excess or unstable material shall be used elsewhere in the Work to the extent possible as permitted in the Contract specifications, before the material is hauled away from the Work site and disposed of off-airport. Only material identified by the Resident Engineer for haul and disposal shall be hauled from the Work site and disposed of at the off-site location. Loading, hauling and spreading of the excess material to the off-site disposal site shall **not** be paid for separately, but shall be incidental to Fence installation, Items 161 and 162, and construction of Items 208 and 501604."

CONSTRUCTION METHODS

152-2.2 EXCAVATION. Add the following to the fifth Paragraph:

"Excess cut material not used in the final grades and shoulders of the Work shall be loaded, hauled and disposed of off-airport at a location authorized by the State of Illinois to accept construction debris. Only material identified by the Resident Engineer for haul and disposal shall be hauled from the Work site and disposed of at the off-airport location."

Delete the eighth, ninth, tenth, eleventh and twelfth, thirteenth, and fourteenth Paragraphs and Table 1. Replace with the following:

"Embankment furnished under this item shall be compacted as follows:

"Prior to constructing the embankment, vegetation removal or topsoil stripping shall be performed at the embankment location. Cut material from on-site shall be placed in layers of 12 inches or less, and shaped to facilitate drainage and structural soundness. Compaction of the material shall be furnished by providing five (5) passes of a soil compactor or loaded construction equipment weighing at least 20,000 pounds, to the satisfaction of the Resident Engineer. The excavation/embankment site shall be left with neat lines and grades and sloped to drain. Final shaping shall be as directed by the Resident Engineer. Any vegetation removal or topsoil stripping required for placement at the stockpile location shall **not** be measured separately for payment, but shall be incidental to Fence installation, Items 161 and 162, and construction of Items 208 and 501604.

"The Contractor will not be allowed to haul any materials across existing pavements, except for pavement areas shown for removal in the Plans, or to cross areas designated by the Airport Owner as used for agriculture or which have been seeded under this or previous contracts."

152-2.3 BORROW EXCAVATION. Delete this Section.

Add:

152-2.15 DUST CONTROL WATERING. This Work shall consist exclusively of the control of dust from construction operations and not for use in the compaction of earth embankment.

Dust shall be controlled by the regular, uniform application of sprinkled water to earth surfaces and shall be applied as directed by the Resident Engineer, in a manner meeting his approval. Dust control watering shall not be paid for separately but shall be considered incidental to this item.

METHOD OF MEASUREMENT

152-3.1 Delete this Section.

152-3.2 Delete this Section.

152-3.3 Delete this Section.

Add:

152-3.4 All on-site cut and fill excavation, regardless of classification, including topsoil stripping and excess material disposal, shall not be measured separately for payment, but shall be included in Fence installation, Items 161 and 162, and construction of Items 208 and 501604.

Dust control watering will not be measured for payment, but shall be considered incidental to the Contract items for earthwork."

BASIS OF PAYMENT

152-4.1 Delete this Section.

152-4.2 Delete this Section.

152-4.3 Delete this Section.

152-4.4 Delete this Section.

SPECIAL PROVISIONS
WAUKEGAN NATIONAL AIRPORT (UGN)
INSTALL SECURITY/WILDLIFE FENCE, PHASE 4

IDA PROJECT NO. UGN-4589
SBG PROJECT NO. 3-17-SBGP-xx
CONTRACT NO. WA072

152-4.5 Delete this Section.

Add:

No direct payment will be made for Excavation and Embankment. The cost of furnishing Excavation and Embankment shall be considered incidental to the Contract unit prices for Fence installation, Items 161 and 162, and construction of Items 208 and 501604. These prices shall be full compensation for furnishing all materials and for all preparation, delivering and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete the item.

ITEM 156000

EROSION CONTROL

Revise Item 156000 of the Standard Specifications as follows:

MATERIALS

156-2.1 SILT FENCE. Delete the first Paragraph of this Section and replace with the following:

"This fence shall be of either a pre-fabricated type or shall be constructed in the field, and regardless of the fabrication method, shall be of materials meeting the dimensions and material requirements shown in the Plans. The fabric for silt fence shall be a woven fabric meeting the requirements of AASHTO M 288 for unsupported silt fence with less than 50 percent geotextile elongation."

Add:

156-2.8 EROSION CONTROL BLANKET. Erosion Control Blanket shall be:

Knitted Straw Mat

Straw mat shall be made of a 100% straw-fiber matrix stitched with photodegradable thread between lightweight, photodegradable polypropylene top and bottom nets. Material shall not contain any weed seed or chemical additives. Straw mat shall be North American Green S150 or approved equal. The manufacturer shall furnish a certification with each shipment of blanket stating the number of rolls furnished and that the material complies with the requirements of this Special Provision and all Contract requirements for materials, including the Buy American Preferences Act (49 U.S.C. § 50101).

156-2.9 STAKES FOR EROSION BLANKET. The mat shall be secured with biodegradable stakes acceptable to the Engineer. Metal staples will not be allowed. Separate measurement of the stakes shall not be made, but shall be incidental to the erosion blanket.

CONSTRUCTION METHODS

Add:

156-3.7 EROSION CONTROL BLANKET. Within 24 hours from the time seeding has been performed, the erosion mat shall be placed. Prior to placing the mat, the areas to be covered shall be relatively free of all rocks or clods over 1-½ inches in diameter, and all sticks or other foreign material that will prevent the close contact of the mat or blanket with the seed bed. If as a result of a rain, the prepared seed bed becomes crusted or eroded, or if the eroded places, ruts or depressions exist for any reason, the Contractor will be required to rework the soil until it is smooth and to reseed such areas which are reworked. After the area has been properly shaped, fertilized and seeded, the mat shall be laid out flat, evenly and smoothly, without stretching the material.

The mat shall be laid in accordance with the manufacturer's recommendations. All ends and edges shall be tightly butted together.

The mat shall be held in place by means of stakes. The stakes shall be driven at a 90-degree angle to the plane of the soil. Stakes shall be spaced not more than 3 feet apart in 3 rows for each strip, with a row along each edge and one row alternately spaced in the middle. All ends shall be fastened by stakes spaced 6 inches apart across the width.

Once turf growth has been established, all non-biodegradable components shall be removed by the Contractor. This would include any item that would interfere with the mowing of the new turf or which might damage mowing equipment. Furthermore, the Contractor shall fill with topsoil or smoothly grade any ruts or gullies that developed during the turf grow in period to the satisfaction of the Owner. This Work shall be considered incidental to this item.

METHOD OF MEASUREMENT

Add:

156-4.6 Erosion Control Blanket shall be the number of square yards of erosion mat installed, maintained, accepted, and removed and accepted by the Resident Engineer.

BASIS OF PAYMENT

Add:

156-5.2 Payment will be made at the Contract unit price per square yard for Erosion Control Blanket. This price shall be full compensation for furnishing all materials, for all preparation and installation of these materials, maintenance through the project, and the removal and disposal of all materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Add:

Payment will be made under:

Item AR156510	Silt Fence - per linear foot.
Item AR156531	Erosion Control Blanket - per square yard.

FLEXIBLE BASE COURSES

ITEM 208

AGGREGATE BASE COURSE

Revise Item 208 of the Standard Specifications as follows:

208-1.1 DESCRIPTION. Replace the first Paragraph with the following:

"This item shall consist of a granular base material composed of **crushed** coarse aggregate as specified. It shall be constructed on a prepared underlying course in accordance with these specifications and shall conform to the dimensions and the typical cross section shown on the Plans and with the lines and grades established by the Resident Engineer. Aggregate Base Course shall be placed in lifts of limited thickness as required in the Standard Specifications and to the total uniform compacted thickness(es) shown in the Plans."

MATERIALS

208-2.1 UNCRUSHED COARSE AGGREGATE. Delete this Section.

208-2.3 GRADATION. Add the following:

"The **Gradation B column in Table 1**, Requirements for Gradation of Aggregate, shall be used (CM-6)."

CONSTRUCTION METHODS

208-3.2 PREPARING UNDERLYING SUBGRADE. Add the following as the first Paragraph:

"Prior to placement of the aggregate, the Contractor shall remove topsoil and earth for the depths shown on the Plans for sidewalk. The excavation shall be to the slopes shown on the Plans. Any excess earthwork material shall be disposed of by the Contractor at an off-airport location as specified in Item 152. The subgrade shall then be prepared and compacted in accordance with Item 152. Separate measurement for this topsoil and earth removal, excavation, subgrade preparation and compaction, and haul and disposal shall not be made, but shall be incidental to Item 208."

208-3.5 FINISHING AND COMPACTING. Revise the next to last sentence of the first Paragraph to read:

"Rolling shall continue until the base material has been compacted to not less than 95% density as determined by the compaction control tests specified in Division VII."

Add the following after the first Paragraph:

"For the purpose of compaction control testing, this item is to be constructed for aircraft weighing less than 60,000 pounds (Standard Proctor)."

METHOD OF MEASUREMENT

208-4.1 Delete this Section. Section 208-4.2 of the Standard Specifications shall be used.

208-4.3 Delete this Section.

BASIS OF PAYMENT

208-5.1

Add the following:

"Payment will be made under:

"Item AR208606 6" Aggregate Base Course - per square yard."

RIGID PAVEMENT

ITEM 501604

PORTLAND CEMENT CONCRETE SIDEWALK

501604-1.1 This item shall consist of Portland Cement concrete sidewalk constructed on a prepared subgrade, at the locations shown in the Plans. The concrete thickness shall be four (4) inches, as shown in the Plans.

MATERIALS AND EQUIPMENT

501604-2.1 MATERIALS. Concrete materials shall meet the requirements of Item 610, Structural Portland Cement Concrete. Preformed fiber joint filler shall meet the requirements of Section 1051 of the IDOT Specifications, Standard Specifications for Road and Bridge Construction, Illinois Department of Transportation, adopted April 1, 2016, as revised. Hot-poured joint sealer shall be ASTM D 6690, Type II, Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.

501604-2.2 EQUIPMENT. Equipment shall meet the requirements of Section 424.03 of the IDOT Specifications, Standard Specifications for Road and Bridge Construction, Illinois Department of Transportation, adopted April 1, 2016, as revised.

CONSTRUCTION REQUIREMENTS

501604-3.1 CONSTRUCTION REQUIREMENTS. The construction shall be completed as shown in the details and notes shown in the Plans and in accordance with Sections 424.04 through 424.11 of the IDOT Specifications, Standard Specifications for Road and Bridge Construction, Illinois Department of Transportation, adopted April 1, 2016, as revised.

In addition, all expansion and sawed contraction joints shall be sealed with hot-poured joint sealer, meeting requirements of ASTM D 6690, Type II, Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.

METHOD OF MEASUREMENT

501604-4.1 METHOD OF MEASUREMENT. Portland Cement concrete sidewalk will be measured for payment in place, and the area computed in square feet. Joint filler and sealant shall not be measured separately for payment but shall be incidental to the Contract unit price for sidewalk.

BASIS OF PAYMENT

501604-5.1 BASIS OF PAYMENT. This work will be paid for at the Contract unit price per square foot for Portland Cement Sidewalk of the thickness specified, which price shall be full compensation for furnishing all labor, materials, tools, equipment, and incidentals, including all required expansion joints, sawed or tooled joint sealing, special texturing, and variable height edge treatment at sidewalk aprons and accessibility ramps, necessary to complete the item as specified.

Payment will be made under:

Item AR501604 4" PCC Sidewalk - per square foot.

MISCELLANEOUS

ITEM 610

STRUCTURAL PORTLAND CEMENT CONCRETE

Revise Item 610 of the Standard Specifications as follows:

This item shall be provided in accordance with the Standard Specifications for Item 610, Structural Portland Cement Concrete.

BASIS OF PAYMENT

No direct payment will be made for structural Portland cement concrete. The cost of furnishing and installing structural concrete shall be considered incidental to the Contract unit prices for the respective pay items utilizing the concrete. These prices shall be full compensation for furnishing all materials and for all preparation, delivering and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete the item.

DIVISION III

FENCING (WIRE FENCES)

ITEM 161

WIRE FENCE WITH STEEL POSTS

(Class C)

Revise Item 161 of the Standard Specifications as follows:

DESCRIPTION

161-1.1 Replace the first Paragraph with the following:

"This item covers the requirements for relocating existing woven wire fencing otherwise removed in this Project, and re-erecting the woven wire fence at the new location shown on the Plans, in accordance with the details included herein and as shown on the Plans. The relocated Class "C" fence and gates will be installed at the locations shown on the Construction Plans and in accordance with this specification and in accordance with the Illinois Department of Transportation's Standard Specifications for Road and Bridge Construction, latest edition, IDOT Standard 665001-01. The relocation shall make use of existing fencing materials to the extent reasonable, as determined by the Resident Engineer. And additional fence items needed to complete the relocation to the satisfaction of the Resident Engineer shall meet the requirement specified herein, and in IDOT Standard 665001-01.

"This item shall include the removal of existing woven wire fencing, including any gates that exist, at the locations shown in the Plans.

"All metal materials used in the fencing and fencing materials shall be fabricated from steel made in the U. S. Contractor shall provide certification that the steel was 100 percent domestic-made steel, and that the fence materials were fabricated in the United States."

CONSTRUCTION METHODS

161-3.2 CLEARING FENCE LINE. Add the following:

"All relocated fence shall be placed along a level, smooth, finished grade. The Contractor shall correct any irregularities in the ground's surface prior to installation of the fence where the irregular surface is located outside of the grading limits shown on the Plans. Also, the Contractor shall re-grade the existing ground where indicated on the Construction Plans to furnish a fence grade satisfactory to the Resident Engineer. This grading shall be furnished in accordance with Item 152; however, separate payment will not be made, as this work shall be incidental to Fence installation, Item 161. **This grading shall not be limited to, but shall be in addition to, the grading shown on the Plans or elsewhere specified.**"

161-3.8 EXISTING FENCE CONNECTIONS. Add the following:

"The furnishing and installing of new, additional or replacement terminal posts, line posts, end posts, fabric and brace spans and any other incidental modifications needed to provide an acceptable connection of the new fence to any existing fence, regardless of type of existing fence, as shown in the Plans or as directed by the Resident Engineer, shall not be paid separately, but shall be included in the Contract unit price for new fence."

161-3.10 FENCE AND GATE REMOVAL. Add the following:

"The fence and gate to be removed shall be woven wire or similar type of fence. The existing fence shall be removed completely, including posts and foundations.

"In turf areas, the existing posts shall be pulled and not cut off. All resulting holes in turf shall be filled and compacted to the satisfaction of the Resident Engineer. Turf areas disturbed by removal shall be restored in accordance with Item 901, except the areas will not be measured for payment.

"In paved areas, the existing posts shall be cut off and ground to a depth of two (2.0) inches below the existing pavement surface. All resulting post holes in existing pavements shall be filled with an IDOT-approved nonshrink grout.

"All removed materials not accepted by the Airport Owner, shall be disposed of off airport property.

METHOD OF MEASUREMENT

161-4.1 Delete this Section.

161-4.3 Revise this Section to read:

"161-4.3 Remove Class C Fence to be paid shall be the actual length of chain-link feet (including post widths) removed and completed as specified, except for the space occupied by gates.

161-4.4 Delete this Section.

161-4.5 Delete this Section.

BASIS OF PAYMENT

161-5.1 Delete this Section.

161-5.3 Revise this Section to read:

"161-5.3 Payment shall be made at the Contract unit price per linear foot for Remove Class C Fence, as measured in Section 161-4.3. This price shall be full compensation for furnishing all materials and for all removals, restoration, including grading, backfilling, seeding and mulching, and disposal, and for all labor, equipment, tools, and incidentals necessary to complete this item."

161-5.5 Delete this Section.

Add:

Payment will be made under:

Item AR161900	Remove Class C Fence - per linear foot.
Item AR161960	Relocate Class C Fence - per linear foot.

ITEM 162

CHAIN-LINK FENCES

(Class E)

Revise Item 162 of the Standard Specifications as follows:

DESCRIPTION

162-1.1 Add the following:

"All metal materials used in the fencing and fencing materials shall be fabricated from steel made in the U. S. Contractor shall provide certification that the steel was 100 percent domestic-made steel, and that the fence materials were fabricated in the United States.

"This item shall also include the removal of existing fence and the removal of manual and electric gates at the locations shown on the Plans or as directed by the Resident Engineer."

MATERIALS

162-2.2 BARBED WIRE. Add the following:

"All new Class E fence shall include barbed wire, as specified in Item 162 and in these Special Provisions."

162-2.3 FENCE POSTS, POST TOPS AND EXTENSIONS, RAILS, GATES BRACES, STRETCHER BARS, AND CLIPS. Add the following:

"Top rail shall be furnished for all Class E fence under this item. Additional corner posts shall be furnished at the locations shown in the Plans.

"Fence materials shall meet the specified requirements for 10-foot chain-link fence (posts for the 8-foot high lengths shall be of the same dimensions as that for the 10-foot fence) based upon the details shown in the Construction Plans for the various heights specified.

"Type C pipe may be used. The manufacturer shall furnish test results that indicate that the Type C pipe furnishes the same corrosive resistance as Type A and B pipe, tested in accordance with the materials standard for this item.

Add:

162-2.11 GATE CHAIN AND PADLOCKS. The Contractor shall furnish a new security chain and padlock for each swing or slide gate. Chain shall be 5/16-inch stainless steel cut into a three foot length. Padlock shall be solid brass body, corrosion resistant and ideal for harsh environments. Padlock dimensions shall be 2-inch shackle, 2-inch wide and 3/4-inch thick. Padlocks shall be keyed to match existing Airport padlock system. The Contractor shall coordinate the furnishing of these padlocks with the Airport Owner."

Add:

162-2.12 CERTIFICATION AND SHOP DRAWINGS. The Contractor shall submit shop drawings detailing all fence items to be furnished for approval by the Project Engineer. The Contractor shall provide a written certification that all fence materials used in the Work meet the Contract Documents.

CONSTRUCTION METHODS

162-3.1 CLEARING FENCE LINE. Add the following:

"All new fence shall be placed along a level, smooth, finished grade. The Contractor shall correct any irregularities in the ground's surface prior to installation of the fence where the irregular surface is located outside of the grading limits shown on the Plans. Also, the Contractor shall re-grade the existing ground where indicated on the Construction Plans to furnish a fence grade satisfactory to the Resident Engineer. This grading shall be furnished in accordance with Item 152; however, separate payment will not be made, as this work shall be incidental to Fence installation, Item 162. **This grading shall not be limited to, but shall be in addition to, the grading shown on the Plans or elsewhere specified.**"

162-3.2 INSTALLING POSTS. Delete the first sentence of the last Paragraph and replace with the following:

"All posts shall be set to the minimum depths below the existing ground line as detailed in the Plans. All fence post lengths shall consider the footing depths shown in the details. Concrete encasement shall extend an **additional 6-inches** below the post end."

Add the following:

"In paved areas, the post hole digging shall be completed so as to minimize any damage to pavements. Prior to the pouring of concrete, the pavement shall be neatly saw cut to the full depth of the asphalt or concrete and at a 24-inch square. Saw-cutting and pavement protection shall not be measured for payment but shall be included in the Contract unit price for new fence. Any damaged pavements shall be replaced by the Contractor to the satisfaction of the Resident Engineer and at no additional costs to the Contract. **In existing paved areas and at swing or sliding gate openings, the additional 2-foot buried portion of the fence shall not be installed.**"

162-3.4 INSTALLING BRACES. Add the following:

"At terminal (end, corner and pull) and gate posts, the fabric shall be fastened to the post with stretcher bars and bands that extend below the existing ground to secure the 24 inches of buried fence fabric."

162-3.5 INSTALLING FABRIC. Add the following:

"Where shown in the Plans, the Contractor shall construct a trench of adequate width and depth (greater than 24 inches) to permit the installation of the fence fabric to extend 24 inches below the ground line. The fabric shall be smooth and even throughout the 24-inch depth. The trench shall be backfilled with excavated material and compacted to the satisfaction of the Resident Engineer. **In existing paved areas and at swing or sliding gate openings, the additional 2-foot buried portion of the fence shall not be installed.**

"The bottom tension wire shall be located 2 inches above the final ground line."

162-3.6 ELECTRICAL GROUNDS. Add the following:

"The fence shall be bonded and grounded as detailed on the Plans. The ground wire connections to the fencing shall be with UL listed grounding connectors of cast bronze body and bronze or stainless steel bolts, nuts, and washers. Grounding connectors shall be sized and suitable for the respective application. Connections to ground rods shall be with UL listed grounding connectors suitable for direct burial in earth or exothermic weld type connectors, Cadweld by Erico Products, Inc., Solon, Ohio, (Phone 1-800-248-9353), Thermoweld by Continental Industries, Inc., Tulsa, Oklahoma (Phone 918-663-1440), or Ultraweld by Harger, Grayslake, Illinois (Phone 1-800-842-7437) or approved equal. Exothermic weld connections shall be installed in conformance with the respective manufacturer's directions using molds suitable for each respective application. Ground rods shall be 5/8-inch diameter by 8 feet long (minimum), UL-listed, copper-clad. Steel used to manufacture ground rods shall be 100 percent domestic steel. Include certification that ground rods are made with 100 percent domestic steel. The ground wire used to bond the fencing to the ground rod shall be #6 AWG bare solid copper conductor. The items furnished and installed in providing the specified grounding shall not be measured separately for payment, but shall be included in the Contract unit price for fencing."

162-3.9 EXISTING FENCE CONNECTIONS. Add the following:

"The furnishing and installing of new, additional or replacement terminal posts, line posts, end posts, fabric and brace spans and any other incidental modifications needed to provide an acceptable connection of the new fence to any existing fence, regardless of type of existing fence, as shown in the Plans or as directed by the Resident Engineer, shall not be paid separately, but shall be included in the Contract unit price for new fence."

162-3.11 FENCE AND GATE REMOVAL. Add the following:

"FENCE REMOVAL

"The fence to be removed shall be chain-link type. The existing fence shall be removed completely, including posts and foundations.

"In turf areas, the existing posts shall be pulled and not cut off. All resulting holes in turf shall be filled and compacted to the satisfaction of the Resident Engineer. Turf areas disturbed by removal shall be restored in accordance with Item 901, except the areas will not be measured for payment.

"In paved areas, the existing posts shall be cut off and ground to a depth of two (2.0) inches below the existing pavement surface. All resulting post holes in existing pavements shall be filled with an IDOT-approved nonshrink grout.

"All removed materials not accepted by the Airport Owner, shall be disposed of off airport property.

"GATE REMOVAL

"The Contractor will remove the gates, gate operators, card readers, control stations, concrete footings/foundations, bollards, conduits, wiring, handholes, safety switches and other miscellaneous fittings associated with the gate to be removed. The existing power and control cables from the power source to the existing gate operators will be removed from the conduits. All removed materials not accepted by the Airport Owner, shall be disposed of off airport property.

"A. Contractor shall examine the site to determine the extent of the work.

- "B. Contractor shall coordinate work and any power outages to buildings located on the airport with the Airport Director and/or the respective building personnel. Any shutdown of existing systems shall be scheduled with and approved by the Airport Director prior to shutdown. Once shut down, the circuits shall be labeled as such to prevent accidental energizing of the respective circuits. All personnel shall follow OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures, including, but not limited to, 29 CFR Section 1910.147 The Control of Hazardous Energy (lockout/tagout).
- "C. Contractor shall comply with the requirements of FAA AC No. 150/5370-2F (or most current issue) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
- "D. Contractor shall comply with the applicable requirements of NFPA 70E – Standard for Electrical Safety in the Workplace.
- "E. Power for each respective electric slide gate system shall be disconnected at the respective power source prior to removing the respective electric slide gate system. Contractor shall field verify to confirm the respective power source for each electric slide gate system.
- "F. Coordinate removal of existing gates with the Airport Manager and/or respective Maintenance Staff and to maintain security of the Airport facilities.
- "G. The existing gate operators and card readers shall be removed and turned over to the Airport Owner. Prior to the electric gate removals, the Contractor shall confirm all associated equipment to be turned over to the Airport with the Airport Director and/or the Resident Engineer. Providing the equipment is to be turned over to the Airport, care is to be taken by the Contractor not to damage the equipment while removing it. The Contractor will deliver the equipment to the storage area on the Airport selected by the Airport Owner. Provided that the Airport does not accept the equipment, the Contractor will dispose of it off-site.
- "H. The cable shall be disconnected from the distribution panel at the respective power source. Cable shall be removed where accessible and when under grade abandoned. Contractor may remove cable that is scheduled to be abandoned and shall have the salvage rights to that cable. Removal of existing cables shall be at no additional cost to the Contract.
- "I. **Turf Areas:** All resulting holes in turf shall be filled and compacted to the satisfaction of the Resident Engineer. Turf areas disturbed by removal shall be restored in accordance with Item 901, except the areas will not be measured for payment
- "J. **Paved Areas:** In paved areas, the existing posts shall be cut off and ground to a depth of two (2.0) inches below the existing pavement surface. All resulting post holes in existing pavements shall be filled with an IDOT-approved nonshrink grout."

Add:

162-3.13 LOCATE EXISTING UTILITIES. The location, size, and type of material of existing underground and/or aboveground utilities that may be indicated on the Plans are not represented as being accurate, sufficient or complete. Neither the Owner nor the Engineer assumes any responsibility whatever in respect to the accuracy, completeness, or sufficiency of the information. There is no guarantee, either expressed or implied, that the locations, size and type of material of existing underground utilities indicated are representative of those to be encountered in the construction. It shall be the Contractor's responsibility to determine the actual location of all such facilities, including service connections to underground utilities. Prior to construction, the Contractor shall notify the utility companies of his operational plans and shall obtain from the respective utility companies detailed information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment where required. In the event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner's Representative and/or the Resident Engineer shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract. All utility cables and lines shall be located by the respective utility.

Contact JULIE (Joint Utility Location Information for Excavators) for utility information, phone: 1-800-892-0123. Contact the FAA (Federal Aviation Administration) for assistance in locating FAA cables and utilities. Location of FAA power, control, and communication cables shall be coordinated with and/or located by the FAA. Also, contact Airport Director/Manager and Airport Personnel for assistance in locating underground Airport cables and/or utilities. Also, coordinate work with all aboveground utilities.

Payment for locating and marking underground utilities and cables will not be paid for separately, but shall be considered incidental to the respective work item for which it is required.

METHOD OF MEASUREMENT

162-4.2 Delete this Section.

162-4.3 Revise this Section to read:

"162-4.3 Remove Class E Fence to be paid shall be the actual length of chain-link feet (including post widths) removed and completed as specified, except for the space occupied by gates.

162-4.4 Delete this Section.

162-4.5 Delete this Section.

Add:

162-4.6 Electric Gate Removal to be paid shall be the actual number of electric powered gates removed and completed as specified (including Section 162-3.11), regardless of type (chain-link, architectural aluminum or steel, wooden, swing, or sliding).

BASIS OF PAYMENT

162-5.2 Delete this Section.

162-5.3 Revise this Section to read:

"162-5.3 Payment shall be made at the Contract unit price per linear foot for Remove Class E Fence, as measured in Section 162-4.3. This price shall be full compensation for furnishing all materials and for all removals, restoration, including grading, backfilling, seeding and mulching, and disposal, and for all labor, equipment, tools, and incidentals necessary to complete this item."

162-5.4 Delete this Section.

162-5.5 Delete this Section.

Add:

162-5.6 Payment shall be made at the Contract unit price per each for Electric Gate Removal, as measured in Section 162-4.6. This price shall be full compensation for furnishing all materials and for all removals, restoration, including grading, backfilling, seeding and mulching, and disposal, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Add:

Payment will be made under:

Item AR162628	Class E Gate-28' - per each.
Item AR162900	Remove Class E Fence - per linear foot.
Item AR162908	Remove Electric Gate - per each.
Item AR800944	Cl. E Fence 10' BARB w/ 2' Bur. GALV - per linear foot.
Item AR800945	Class E Fence 8' GALV - per linear foot.

ITEM 162700

ELECTRICAL SLIDING GATE

DESCRIPTION

162700-1.1 This item shall consist of furnishing and installing new electrical sliding gate (**8 feet in height plus barbed wire, with a clear opening as detailed in the Plans for the respective gate**) in accordance with these Special Provisions and at the locations shown on the Construction Plans. This item will include all labor, equipment, and materials required to put the proposed electric sliding gate in proper working order. This item shall also include furnishing and installing surge arresters/protectors, disconnects, conduits, ducts, wire, and all other electrical equipment as detailed the Plans and specified herein, necessary for the completion of the gate operator system as detailed on the Construction Plans and specified herein.

Gate fabric, posts, braces, fittings and related materials shall meet the requirements of Item 162

The electric gate system for each gate shall include the following features:

- A. New slide gate with operating hardware, gate operator, heater, controller, and detector amplifiers.
- B. The gate shall be a keypad access control unit entry/free exit gate.
- C. The gate shall have an automatic closing feature activated by an adjustable timer. Safety loops shall be provided at both sides of the gate to delay the closing of the gate in the event that it detects that the vehicle has not yet passed through the gate. The inner loop shall also provide automatic opening to exit upon detection of a vehicle.
- D. Provide five (5) remote control transmitter units for each gate for automatic gate operation. Coordinate frequencies with the Airport Director.
- E. Power for the gate operator shall be from a 120/240 VAC, 1 phase, 3 wire power source or 120/240 VAC, 1 phase, 3 wire originating from a 240/120 VAC, 3 phase, 4-wire (with high leg) power source as detailed on the Plans.
- F. Controls, safety devices, and associated control wiring shall be in accordance with the respective gate operator and/or equipment manufacturer's recommendations and as detailed herein.
- G. Include New "Open-Close-Stop" control stations for installation at the Fire Station for the respective gate that serves the Fire Station access.
- H. Include surge protection on the gate operator and associated control systems.
- I. Contractor shall examine the existing facility to determine the extent of the work.
- J. Contractor shall confirm and verify part numbers for respective materials and equipment to ensure they are correct and suitable for the respective application.
- K. **Engage a factory trained and authorized service representative to provide commissioning, start-up, testing, adjustments, calibration and checkout for each electrically operated gate. Test reports from the factory trained and authorized service representative shall be provided for each gate.**

162700-1.2 REFERENCES.

- A. ANSI C80.1 - Rigid Steel Conduit, Zinc Coated.
- B. ANSI C80.4 - Fittings Rigid Metal Conduit and EMT.
- C. ASTM Specification B3 - Standard Specification for Soft or Annealed Copper Wire.
- D. ASTM Specification B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft.
- E. ASTM F 1184-05 Standard Specification for Industrial and Commercial Horizontal Slide Gates.
- F. ASTM F1043 Standard Specification for Strength and Protective Coatings on Steel Industrial Chain Link Fence Framework.
- G. ASTM F2200 Standard for Automated Vehicular Gate Construction.
- H. FAA AC No. 150/5370-2F (or most current issue) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
- I. Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Adopted April 1, 2016.
- J. NEMA TC-2 - Electrical Plastic Tubing and Conduit.
- K. NEMA TC-3 - Fittings Rigid PVC Conduit and Tubing.
- L. NFPA 70 - National Electrical Code (most current issue in force).
- M. NFPA 70E - Standard for Electrical Safety in the Workplace.
- N. OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures.
- O. UL Standard 6 - Rigid Metal Conduit.
- P. UL Standard 44 - Thermoset-Insulated Wires and Cables.
- Q. UL Standard 83 - Thermoplastic-Insulated Wires and Cables.
- R. UL 325, (Fourth Edition), Standard for Safety for Door, Drapery, Gate, Louver and Window Operators and Systems.
- S. UL Standard 514B - Conduit, Tubing and Cable Fittings.
- T. UL Standard 651 - Schedule 40 and 80 Rigid PVC Conduit.

162700-1.3 SHOP DRAWINGS. The Contractor shall furnish shop drawings for approval before ordering equipment and/or materials. Shop drawings are required for each wire, conductor, and/or cable type to be used on the project.

Note: Shop drawings that are submitted that do not include all of the following listed requirements will be rejected and will require resubmittal. Contractor shall use the following as a check list and shall verify all information noted below is included with the shop drawing prior to submitting the shop drawing for review. Shop drawings shall be clear and legible. Copies that are illegible will be rejected. Contractor shall submit sufficient copies of shop drawings to meet the needs of his personnel, sub-contractor personnel, and equipment suppliers plus four (4) copies to be retained by the Project Engineer. Shop drawings shall include the following information:

- A. Certification of compliance with the AIP (Airport Improvement Program) Buy American Act Title 49 USC Section 50101 for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) or NAFTA (North American Free Trade) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Shop drawings submitted without certification of compliance with the Airport Improvement Program Buy American Preferences or without certification of manufacture in the United States of America in accordance with the AIP Buy American Requirements will be rejected. See the FAA website at: http://www.faa.gov/airports/aip/buy_american/ for more information on the Airport Improvement Program Buy American Preferences requirements. FAA approved equipment that is on the FAA Buy American Conformance List or the list of Nationwide Buy American Waivers Issued by the FAA complies with the AIP Buy American Preferences and will not require additional waiver paperwork for AIP projects.
- B. In order to expedite the shop drawing review, inspection and/or testing of materials and equipment, the Contractor shall furnish complete statements to the Project Engineer as to the origin and manufacturer of all materials and equipment 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 and equipment.
- C. Any steel used in any materials under this item shall be from steel made in the United States and meet the requirements of (30 ILCS 565/) Steel Products Procurement Act; a manufacturer's certification of domestic source must be furnished.
- D. Cut sheets and specifications for the cantilever slide gate.
- E. Cut sheets and specifications for the gate operator. Include manufacturer's name, address, phone number, gate operator model number, gate operator UL listing or ETL listing, gate load capability and drive rail force requirements, traveling speed, housing data, input voltage, motor horsepower rating, full load amperage requirements, manufacturer's recommended wiring requirements, and respective options, (heater option, audible beeper option, etc.).
- F. Cut sheets and specifications for the keypad access control station.
- G. Include information, specs, and cut sheets for the surge suppressor included with the gate operator.
- H. Provide data sheets for the detector amplifiers with manufacturer's name and model number. (Note these might be part of the gate operator.)
- I. Provide data sheets on the loop/lead-in cables.
- J. Provide data sheets for the Open-Close-Stop stations.
- K. Provide cut sheets, information, voltage rating, amperage rating, fuse size, and manufacturer catalog number, and options for the 30 Amp, 2-pole, 240 VAC, UL listed heavy duty safety switch in a NEMA 4X stainless steel enclosure that is for each gate operator.

- L. Provide cut sheets for the Control Panel Enclosure/Junction Box.
- M. Provide cut sheets for all types of conduit used with the electric gate (for example galvanized rigid steel conduit, Schedule 40 PVC conduit, and UL listed liquid tight flexible metal conduit). Include certification that steel conduits are made with 100 percent domestic steel.
- N. Provide shop drawing with cut sheets for the respective power circuit conductors and control circuit conductors.
- O. Provide cut sheets with manufacturer's name, catalog number, dimensions, material, and UL listing for each type and size of ground rod used with the electric gate installation. Include certification of 100% domestic steel for ground rods.
- P. All steel used in the manufacturer of gate posts and gate materials shall be 100% domestic steel. Contractor shall provide certification that the respective steel used in the manufacture of gate posts and gate materials on this project is manufactured from 100 percent domestic steel.
- Q. Concrete mix design, per Item 610.

EQUIPMENT AND MATERIALS

162700-2.1 GENERAL. All equipment and materials used in the construction shall be in accordance with the Specifications and detailed instructions as furnished by the manufacturer.

162700-2.2 GATE. Gate shall be suitable for the respective application and in accordance with the respective gate manufacturer's recommendation for the respective application. Gate construction shall comply with ASTM F 1184-05 for Type II Cantilever Slide, Class 2 steel frame and aluminum frame gates using internal rollers. Metal pipe and tubing used in the gate construction shall be aluminum complying with ASTM F1043 for materials and protective coatings. The gate shall conform to ASTM F2200 Standard for Automated Vehicular Gate Construction. The gate shall be metal framed manufactured of aluminum, with cross bracing, sliding gate, cantilever type, capable of spanning the prescribed clear opening, **8 feet** in height, **plus barbed wire**, and have an enclosed roller assembly to be protected from freezing rain and snow. Gate shall have double tracks supported by gate posts on each side of the gate (interior and exterior). The gate frame shall be supported from the tracks by four, self aligning, 4 wheeled, sealed lubricant, ball bearing truck assemblies.

The gate shall be covered with chain link fence fabric; 2-inch diamond mesh steel wire, interwoven, minimum 9 gauge thick, top selvage knuckle end closed, bottom selvage twisted tight barbed or knuckle end closed. Fence fabric, posts, braces, fittings, sleeves, bands, clips, rail ends, tension bars, fasteners, and additional miscellaneous fittings shall be galvanized steel.

Gate posts shall be fabricated from round galvanized steel pipe with outside dimensions and minimum weight according to ASTM F 1184 for Type II Gate Opening Width: Over 12 feet but not over 30 feet. Gate posts shall be 4-inch O. D. (round) Schedule 40 weighing 9.11 lbs/ft. All steel used in the manufacturer of gate posts and gate materials shall be 100% domestic steel. Gate shall be a Fortress Structural Slide Gate as manufactured by Tymetal Corporation, a Twin-Trac Cantilevered Sliding Gate as manufactured by Quality Fence Builders, Inc., or approved equal.

162700-2.3 GATE OPERATOR. The hydraulic gate operator shall be equipped with a minimum two (2) horsepower electric motor (**larger motors will be required where recommended by the respective gate operator manufacturer for the respective size and type of gate**) capable of operating cantilever gate up to 50 feet in overall length weighing up to 3,000 pounds with a drive rail draw force requirement of no less than 300 lbs. at a preset speed of approximately 3 ft. per second, to close the prescribed opening.

Gate operators shall be equipped with a heater to allow operation within a temperature range of -40°F to +150°F ambient temperature, in rain, snow, sun, and high humidity. Hydraulic fluid shall be suitable for applications in cold weather and hot weather applications located in Northern Illinois. The gate operator shall be suitable for operation in a climate that has rain, snow, sleet, and ice. The gate operator shall include a snow brush and blade kit suitable and compatible with the respective gate operator. The operator shall consist of the motor starter/controller and all relays required from the operation outlined herein. The operator and components shall be factory assembled and wired so as to require only field connections of the card reader, loops, system power supply, and remote control and safety devices. The operator housing shall be weatherproof, fabricated from stainless steel, or galvanized steel with a corrosion resistant, powder coated paint finish and shall completely enclose the motor and electrical components of the unit. Appropriate time delays shall be incorporated for safe gate operation. Gates shall close automatically after an extensive adjustable delay period, unless manually disabled. The gate operator shall be UL-listed or ETL-listed to have met requirements of UL 325, (Fourth Edition), Standard for Safety for Door, Drapery, Gate, Louver and Window Operators and Systems and suitable for UL 325 Usage Classes III and Class IV applications. The gate operator shall include UL 325 entrapment protection sensors Type A - Inherent entrapment sensing system and Type E- inherent audio alarm to warn personnel of gate activation to comply with the requirements of UL 325 for a Class III usage application.

The proposed gate operator shall be HySecurity Model Slide-Driver 50VF2/3 (222 X3 ST), equivalent unit by Tymetal Corporation Model TYM-HYD-VF3, or approved equal. Include appropriate software and/or hardware to ensure that the gate operator will operate properly on the respective power supply systems.

Supply voltage for the gate operator will be 120/240 VAC, 1 phase, 3 wire with ground. At some locations the power source might be 120/240 VAC, 1 phase, 3 wire with ground from a 240/120 VAC, 3 phase, 4-wire (with high leg) power source as detailed on the Plans.

Gate operators shall be rated for the respective voltage available at the site and shall properly operate on the respective nominal voltage system plus or minus 10 percent. Contractor shall confirm with the gate operator manufacturer that the respective gate operator he selects is rated suitable for the respective application, is suitable and compatible with the respective gate, and will operate properly on the respective power supply. Note the gate operator must also operate properly on standby engine generator power and shall not require manual reset due to transfer from utility power to standby generator power or back to utility power. The gate operator must not require manual reset for momentary power outages. Where a power outage occurs the gate operator shall automatically resume normal operation upon restoration of power.

All gate operators furnished on this project shall be by the same manufacturer.

Include AC surge protector/transient voltage surge suppressor at the point of the input power connection to the gate operator. AC surge protector shall be UL 1449 listed with a surge current rating of 40,000 Amps, suitable for 120/240 VAC, 1 phase, 3 wire plus ground system; Joslyn Model 1265-21, Lightning Protection Corp. Model LPC-11765U-13, Square D Catalog Number TVS120XR50S, or approved equal.

The gate operator foundation shall be a minimum of 48 inch depth, to the dimensions recommended by the manufacturer. Foundation shall be constructed of Class SI concrete. Anchor bolts shall be per the gate operator manufacturer's requirements. The concrete shall meet the requirements of Item 610.

162700-2.4 KEYPAD ACCESS CONTROL UNIT. Keypad access control unit shall be capable of accepting up to 100 different 4 digit codes. Input operating voltage shall be 12 to 24 VAC or VDC (and/or compatible with the respective gate operator control voltage). Keypad access control unit shall be suitable for outdoor installation with a weatherproof housing and operating temperature range of -15 degrees F to +160 degrees F. Contractor shall ensure compatibility between the gate operator control voltages, the keypad access control unit input voltage and output contact ratings, and the respective control interface. Contractor shall include interfacing relays and/or transformers as applicable. Keypad access control unit shall be surface mount housing with appropriate adapters and hardware to install on a gooseneck type pedestal. The key pad and pedestal shall be powder-coated finish in black. The keypad access control unit shall be constructed as detailed on the Construction Plans and in accordance to the manufacturer's Specifications. Keypad access control unit shall be American Access Systems, Inc., Advantage DKE 26-100L, Summit Access Control S-XL-660, or approved equal.

The concrete foundation for the keypad unit shall be a minimum of 48 inches below ground level and to the dimensions recommended by the manufacturer. The concrete shall have the same requirements of the gate operator foundation.

Contractor shall ensure compatibility between the gate operator control voltages, the keypad access control unit input voltage and output contact ratings, and the respective control interface. Include 120 VAC, 15 Amp or 20 Amp specification grade simplex receptacle that is compatible with the respective power supply. Contractor shall include interfacing relays, transformers, power supplies, receptacles, control devices, and power and control wiring, as applicable. Contractor shall provide a NEMA 4X stainless steel enclosure with hinged cover to house the receptacle, transformer, and other associated controls. Where the gate operator housing control panel has adequate space, the components may be installed in that panel.

162700-2.5 DETECTOR AMPLIFIERS. Detector amplifiers shall consist of digital design units capable of automatic tuning, pulse and presence outputs, excellent stability and accuracy, with long-term reliability. The device shall be with plug in and plug out circuits for rapid repair. The unit shall constantly monitor the frequency of the loop, and compare and adjust automatically for changes, such as loop aging, moisture, mechanical deterioration, and foreign bodies in the loop area. Detector amplifiers shall contain lightning protection and be capable of total loop isolation. Amplifiers shall be mounted in or on the outside of the gate controller housing. Weatherproof enclosures, when required, shall be of NEMA 4 design. The amplifiers shall be capable of stable operation and automatic tuning over a range of minus 30° F to plus 180° F. Loop detectors shall be selective as to direction of travel of vehicle with respect to the instantaneous position of the gate, i.e., close loops will activate system only with gate in open or opening state. Open loop will activate gate only with gate in closed or closing state. Contractor shall verify the selected loop detector is suitable for the respective gate installation.

162700-2.6 SECONDARY SAFETY DEVICES. The gate operator shall include UL 325 entrapment protection sensors Type A - Inherent entrapment sensing system and Type E - inherent audio alarm to warn personnel of gate activation to comply with the requirements of UL 325 for a Class III usage application.

162700-2.7 POWER SOURCE. Power for the gate operator shall be from a 120/240 VAC, 1 phase, 3 wire panelboard located as detailed on the Plans. Power to each gate operator shall be 120/240 VAC, 1 phase, 3 wire with ground. Note where the respective gate operator system requires a voltage system other than 120/240 VAC, 1 phase, 3 wire with ground, the Contractor shall be responsible to furnish and install the respective transformers and/or additional feeder cable conductors to accommodate the required voltage system. The power cable feeder circuit shall be sized in accordance with the gate operator manufacturer recommendations, and in accordance with National Electrical Code. Take in to account voltage drop for the respective cable length/run for the power source to the gate operator, and increase cable sizes to maintain a voltage drop of 5% or less, or in accordance with the gate operator manufacturer's recommendations. Include an equipment ground wire with the feeder circuit of the same size as the phase conductors.

The Contractor will be responsible for providing all necessary material for the installation of electrical power and control wiring from the power source to the gate operator, from the gate operator to the key pad station, and from the gate operator to the detector loops. It will also be the Contractor's responsibility to locate, identify and protect all existing utilities. Any damage to these utilities will be immediately repaired at the Contractor's own expense.

162700-2.8 **POWER WIRING.** Power wiring, 600-Volt and below for use with the gate operator, shall be the type, size, and number of conductors as noted on the Plans. Cable shall also conform to the requirements of Item 108 Installation of underground Cable for Airports. Cable shall be manufactured in the United States of America to comply with the Airport Improvement Program Buy American Requirement.

- A. **THWN Wire.** Cable shall comply with Underwriters' Laboratories Standard UL-83 and Federal Specification A-A-59544. Conductor shall be soft-annealed, uncoated Copper and shall comply with ASTM B3 and B8. Insulation shall be rated for 600-Volt. Insulation shall be polyvinyl-chloride conforming to Underwriters' Laboratories requirements for Type THW. The outer covering shall be nylon-conforming to Underwriters' Laboratories for type THHN or THWN. Cable shall be UL-listed and marked THWN-2. Power and control wiring shall be Type THWN-2, or approved equal. **Note where THWN wiring is referenced on the Plans, it shall be THWN-2.**
- B. **XHHW Wire.** Cable shall be UL-listed as Type XHHW-2 per UL Standard 44. Cable shall also conform to ICEA S-95-658/NEMA WC70 and Federal Specification A-A-59544. Conductors shall be Class B stranded, annealed, uncoated Copper per UL Standard 44. Insulation shall be rated for 600-Volt. Insulation shall be cross-linked polyethylene complying with the physical and electrical requirements of UL Standard 44 for Type XHHW-2. XHHW wire may be used in place of THWN wire for all applications.
- C. **XLP-USE Wire.** Cable shall comply with UL Standard 44, UL Standard 854, and Federal Specification A-A-59544. Conductor shall be concentric-strand, soft Copper, conforming to ASTM B8 and Underwriters' Laboratories Standard UL44 for Rubber-Insulated Wires. Insulation shall be rated for 600-Volts. Insulation shall be cross-linked polyethylene conforming to Underwriter's Laboratories Requirements for Type USE-2 insulation. Cable shall be UL-listed and marked USE-2.
- D. Grounding electrode conductors, bonding jumpers, and/or equipment ground wires shall be the size and type, as detailed on the Plans.

162700-2.9 **CONTROL WIRING.** Control wiring for the gate operator system shall be as detailed on the Plans, as specified herein, and as recommended by the respective gate operator manufacturer's representative and shall conform to the applicable sections of National Electrical Code. **Contractor shall furnish and install the type, size, number, and quantity of control wiring to provide a complete and operational system for the respective gate operator.** Control wires between devices shall be Copper, Type THWN, No. 14 minimum, or as recommended by the respective equipment manufacturer, color coded and tagged with wire markers for easy identification. The control wiring between the card reader station and the gate operator shall include a #12 AWG THWN or XHHW Copper with green colored insulation equipment ground wire.

Induction loop feed wires shall be Copper, No. 12 minimum, Twin-Twisted-Shielded, conforming to Illinois Department of Transportation, Standard Specifications for Road and Bridge Construction, Section 1079, DETECTOR LOOP, and all requirements of the manufacturer of the respective Detector Amplifier that is furnished.

One (1.0) - inch Galvanized Rigid Steel conduit will be required for all control wires from outside the pavement area to the operator, from the card reader to the operator, from the photoelectric eye safety devices to the operator, and from the operator to the detector loops. All metal conduits entering the gate operator shall be bonded to the frame of the gate operator.

- 162700-2.10 REMOTE RECEIVER. The Contractor shall provide a remote receiver for each gate operator. Remote receiver shall have frequency as specified by the Airport Manager. Remote receiver shall have proper shielding to eliminate potential problems caused by stray radio frequency interference or noise. Remote receiver shall be high quality and capable of being activated by the respective transmitter at a distance of up to 100 feet. The Contractor is responsible to provide a properly operating receiver and transmitter pair for each gate operator. Antenna for receiver shall be mounted above the fence to ensure proper operation. Include all support and mounting hardware for antenna. **The Contractor shall cooperate with the Airport and the City of Waukegan Fire Department in testing and adjusting the remote system prior to placing the gate in service.**
- 162700-2.11 REMOTE TRANSMITTERS. The Contractor shall provide with the remote receiver, 20 remote transmitters for use by Airport or other authorized personnel. Remote transmitter shall be high quality and capable of activating the respective receiver at a distance of up to 100 feet. Coordinate programming of frequency with the Airport Manager. **The Contractor shall cooperate with the Airport and the City of Waukegan Fire Department in testing and adjusting the remote system prior to placing the gate in service.**
- 162700-2.12 SAFETY SWITCHES. Furnish and install a safety switch for the respective gate operator as detailed on the Plans and specified herein. Safety switches shall be heavy duty, UL-listed, with amperage, voltage, number of poles, and type (fusible or not fusible), and accessories as detailed on the Plans. Safety switches shall be pad lockable in the off position. Include ground lugs or grounding kits with all safety switches. Safety switches located outdoors, or in damp areas shall be in NEMA 4X stainless steel enclosures. Safety switches located in hazardous classified areas shall be UL-listed or FM approved as suitable for the respective location. Safety switches shall be as manufactured by Square D, Eaton Cutler-Hammer, or equivalent. Safety switches shall be manufactured in the United States to comply with the Airport Improvement Program Buy American Preferences requirements.
- 162700-2.13 FUSES. Fuses shall be Class RK5, UL listed with 100,000 Amp (minimum) interrupting rating at the respective voltage system. Fuses shall be properly sized and suitable for the respective equipment in accordance with the respective equipment manufacturer's recommendations and/or in accordance with the requirements of National Electrical Code for the respective motor/equipment. Fuses shall be manufactured by Bussmann, Littlefuse, or approved equal. Furnish two additional fuses of each size and type used on the project, for use as spares.
- 162700-2.14 GALVANIZED RIGID STEEL CONDUIT. Galvanized rigid steel conduit (GRSC) shall be heavy wall hot dipped galvanized steel pipe bearing the UL label and conforming to UL 6 and ANSI Specification C80.1. Couplings, connectors, and fittings for rigid steel conduit shall be threaded galvanized steel or galvanized malleable iron specifically designed and manufactured for the purpose. All fittings shall be threaded type. Fittings shall conform to ANSI C80.4. Set screw type fittings are not acceptable. Steel used to manufacture conduits shall be 100 percent domestic steel. Contractor shall provide certification that the respective steel conduits used on this project are manufactured from 100 percent domestic steel.
- 162700-2.15 LIQUID TIGHT FLEXIBLE METAL CONDUIT. Liquid-tight, flexible metal conduit shall consist of polyvinyl jacket over flexible, hot-dip, galvanized steel tubing. The flexible conduit shall be completely sealed from liquids, dust, dirt, and fumes and be resistant to oil, gasoline, grease, and abrasion. Jacket shall also be sunlight-resistant. Liquid-tight, flexible metal conduit shall be UL-listed, suitable for use as a grounding conductor, and comply with Article 350 of the NEC. **Liquid-tight, flexible metal conduit and associated fittings shall be UL-listed to meet the requirements of NEC 350.6.** Liquid-tight, flexible metal conduit shall be Anaconda Seallite Type UA, as manufactured by Anamet Electrical Inc., 1000 Broadway Avenue East, Mattoon, Illinois 61938-0039, (Phone: 217-234-8844), Liqueatite Type LA as manufactured by Electri-Flex Company, 222 W. Central Ave., Roselle, Illinois 60172, (Phone: 630-529-2920 or 1-800-323-6174), or approved equal. Do not install liquid-tight, flexible metal conduit that is not UL listed. Confirm liquid-tight, flexible metal conduit bears the UL label prior to installation.

- 162700-2.16 SCHEDULE 40 PVC CONDUIT. Schedule 40 PVC and Schedule 80 PVC conduit shall comply with Item 110 and the following: Conduit shall be Schedule 40 PVC, UL-listed or ETL listed, rated for 90°C cable-conforming to NEMA Standard TC-2 and UL 651. Fittings shall conform to NEMA Standard TC-3 and UL 514B. Conduits shall be suitable for underground applications encased in concrete or direct burial, and suitable for exposed applications aboveground.
- 162700-2.17 JUNCTION AND PULL BOXES. Unless otherwise noted on the Plans, all junction boxes shall be 16-gauge minimum construction. Surface mounted exterior junction and pull boxes located in non-hazardous, non-classified areas, shall be NEMA 4X stainless steel or aluminum, Hoffman, or approved equal. Flush-mounted exterior boxes located in non-hazardous, non-classified areas, in floors, walkways, and walls shall be NEMA 4, cast aluminum, Crouse-Hinds, Hubbell-Killark, or approved equal, and shall be supplied with asphalt paint applied to all surfaces imbedded in concrete. All junction and pull boxes installed in classified hazardous areas (Class 1, Division 1 or 2, Group D) shall be NEMA 7 and shall comply with applicable provisions of the NEC including, but not limited to, Articles 500 and 501. Junction and pull boxes shall be sized as required for conductors and splices and per 2014 NEC Article 314. Boxes shall be UL-listed. Special boxes made to suit conditions shall be used to accommodate the respective application or where required by National Electrical Code even though they might not be indicated on the drawings.
- 162700-2.18 GROUND RODS. Ground rods for electrical installations shall be 3/4 inch diameter by 10 foot long, UL listed, copper clad with 10 mil minimum copper coating. Ground rods for fence grounding shall be 5/8 inch diameter by 8 foot long, UL listed, copper clad with 10 mil minimum copper coating. Steel used to manufacture ground rods shall be 100 percent domestic steel.
- 162700-2.19 LEGEND PLATES. Legend plates shall be required for all safety switches, individual circuit breakers, disconnects, etc. Legend plates shall be provided to identify the equipment controlled, the power source, the voltage system, and the function of each device. Legend plates shall be weatherproof and abrasion resistant phenolic material. Lettering shall be black letters on a white background, unless otherwise noted.
- 162700-2.20 SIGNAGE. The gate shall include signage as detailed on the Plans. Furnish and install warning signs at gate exterior face and interior face noting "WARNING - MOVING GATE CAN CAUSE SERIOUS INJURY OR DEATH". Signage shall be secured to the gate with corrosion resistant metal connectors. Additional signage shall be provided as detailed on the Plans and/or as specified herein.
- 162700-2.21 CONCRETE. Concrete for use with the gate installation and/or associated equipment shall conform to Item 610 Portland Cement Concrete of the Standard Specifications for Construction of Airports.
- 162700-2.22 SECURITY CHAIN AND PADLOCK. The Contractor shall furnish a new security chain and padlock for slide gate (electric). Chain shall be 5/16-inch stainless steel cut into a three foot length. Padlock shall be solid brass body, corrosion resistant and ideal for harsh environments. Padlock dimensions shall be 2-inch shackle, 2-inch wide and 3/4-inch thick. Padlocks shall be keyed to match existing Airport padlock system (Best Access). The Contractor shall coordinate the furnishing of these padlocks with the Airport Owner.

CONSTRUCTION METHODS

- 162700-3.1 CONTRACTOR QUALIFICATIONS. The Contractor or Subcontractor responsible for installing the electric driveway gates shall be a factory trained and authorized service representative in regard to the electric gate operator and control systems, and must have attended training and obtained certification directly from the gate operator manufacturer or his designated representative. The responsible party also must have at least five (5) years experience in the installation of electric gates.

162700-3.2 AIRPORT SECURITY. The Contractor will place temporary fencing (minimum height to match existing fence) across the gate opening whenever the proposed gate cannot be closed at the end of the construction day. Security at the Airport shall be maintained at all times and coordinated with the Airport Manager.

162700-3.3 SPLICES. Splices, where allowed, shall be the resin encapsulating type, suitable for direct burial, and be as manufactured by 3 M, Burndy, or equal.

162700-3.4 MATERIALS FURNISHED BY THE CONTRACTOR. All material used in the work shall meet the requirements of the respective Specifications, and no material shall be used until it has been approved by the Project Engineer by means of shop drawings. All material not otherwise specifically indicated shall be furnished by the Contractor. All material furnished by the Contractor shall be new.

162700-3.5 STORAGE OF MATERIALS. Material shall be so stored as to insure the preservation of their quality and fitness for the work. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces and not on the ground, and they shall be placed under cover. Stored materials shall be located so as to facilitate prompt inspection. Private property shall not be used for storage purposes without the written permission of the Owner or lessee.

162700-3.6 LOCATE EXISTING UTILITIES. The location, size, and type of material of existing underground and/or aboveground utilities indicated on the Plans are not represented as being accurate, sufficient or complete. Neither the Owner nor the Engineer assumes any responsibility whatever in respect to the accuracy, completeness, or sufficiency of the information. There is no guarantee, either expressed or implied, that the locations, size and type of material of existing underground utilities indicated are representative of those to be encountered in the construction. It shall be the Contractor's responsibility to determine the actual location of all such facilities, including service connections to underground utilities.

Prior to construction, the Contractor shall notify the utility companies of his operational plans and shall obtain from the respective utility companies detailed information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment where required. In the event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner's Representative and/or the Resident Engineer shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract. All utility cables and lines shall be located by the respective utility. **Contact JULIE (Joint Utility Location Information for Excavators) for utility information, phone: 1-800-892-0123. Contact the FAA (Federal Aviation Administration) for assistance in locating FAA cables and utilities. Location of FAA power, control, and communication cables shall be coordinated with and/or located by the FAA.**

Also contact Airport Manager and Airport Personnel for assistance in locating underground Airport cables and/or utilities. Also coordinate work with all aboveground utilities.

162700-3.7 MANUFACTURER'S DIRECTIONS. Manufactured articles, material, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer unless herein specified to the contrary. Any installations which void the UL listing, ETL listing, (or other third party listing), and/or the manufacturer's warranty of a device will not be permitted.

162700-3.8 CUTTING AND PATCHING. The Contractor shall do all necessary cutting and patching of the pavement that may be required by the drawings and Specifications to complete the structure. He shall restore all such cut or patched areas as directed by the Resident Engineer. Cutting of existing structures that may endanger the work, adjacent property, workmen or the public shall not be done unless approved by the Owner and under his direction.

- 162700-3.9 CLEAN UP. The Contractor shall remove from the Owner's property and from all public and private property, all temporary structures, rubbish, and waste materials resulting from his operation or caused by his employees, and shall remove all surplus materials, leaving the site smooth, clean, and true to line and grade.
- 162700-3.10 WARRANTY PERIOD. Neither the final certificate of payment nor any provision in the Contract, not partial or entire use of the improvement embraced in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract, or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay any damage to other work resulting there from which shall appear within a period of twelve (12) months from the date of final acceptance of the work. The Owner shall give notice of defective materials and work with reasonable promptness. The warranty applies to equipment furnished, as well as to all other work and materials. **The gate operator shall include a 5-year limited warranty against all defects in materials or workmanship. Defective material shall be replaced with the same or comparable materials furnished by the gate operator manufacturer, at no cost to the Owner.**
- 162700-3.11 ELECTRIC SLIDING GATE CONSTRUCTION. The Contractor shall install the electric sliding gate as detailed on the Construction Plans and in accordance with the manufacturer's directions. The Contractor will be responsible for the construction of any and all concrete bases for the proposed gate operator, keypad access control unit, and associated equipment.
- 162700-3.12 GATE CONTROL EQUIPMENT. Installation of all electrical equipment and all gate control equipment shall be in conformance with the requirements of the NFPA 70 National Electrical Code (NEC) most current issue in force, the respective equipment manufacturer's directions, and in strict accordance with the requirements of all local authorities having jurisdiction. **All control power transformers, power supplies, receptacles, loop detector amplifiers, secondary safety device equipment, and any other associated controls shall be installed either inside the gate operator control panel or inside a separate NEMA 4 stainless steel control panel enclosure. Where the control equipment is to be installed inside the gate operator control panel, the Contractor shall coordinate this with the gate operator manufacturer and the respective gate operator equipment supplier. Locating these controls outside of gate operator control panel but within the gate operator housing will not meet this requirement.** All keypad stations, push button stations, operators, and controllers shall be grounded to prevent shock. All concrete work required, and the precise locations for the installation of the gate controller/operator, keypad access control unit, and induction loops, shall be coordinated with the manufacturer's shop drawings, installation instructions, and the Resident Engineer.
- 162700-3.13 INSTALLATION OF DETECTOR LOOPS. New loop detector wiring shall be as specified by the manufacturer furnishing the detector amplifiers. The induction loops shall be equipped with appropriate equipment to operate properly for large trucks and not activate closure of the gate onto vehicles parked in the gate opening. Induction loops shall be installed in saw cut grooves created by the Contractor in the road surface; such grooves of length, width, and depth as required by the manufacturer of the loop control equipment. Loop wires shall be held in place in the bituminous/concrete pavement by completely backfilling and covering slot with a sealer rated suitable for the respective application. Sealer shall conform to the requirements Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Section 1079 DETECTOR LOOP.

The gate will also include loop detectors with a free exit feature. Two loops (one exterior and one interior) shall be provided. The exterior loop shall serve as an "obstruction/safety" loop. The interior loop gate shall also serve as an "obstruction/safety" loop and additionally serve as a "free exit" loop for automatic opening to exit upon detection of a vehicle. Contractor shall coordinate and select controls and wiring in accordance with the respective gate operator representative recommendations. Contractor shall verify the selected loop detectors are suitable for the respective gate installation. Contractor shall include interfacing relays, transformers, power supplies, receptacles, control devices, and power and control wiring, as applicable. New loop detector wiring shall be as specified by the manufacturer furnishing the detector amplifiers. The induction loops shall be equipped with appropriate equipment to operate properly for large trucks and not activate closure of the gate onto vehicles parked in the gate opening. Induction loops shall be installed in saw cut grooves created by the Contractor in the road surface; such grooves of length, width, and depth as required by the manufacturer of the loop control equipment. Loop detector wiring shall be installed in accordance with the respective gate operator and/or loop detector manufacturer instructions. Contractor shall saw cut approximately 6" minimum depth at the pavement edge such that the conduit for the loop detector lead-in wiring will not be less than 6" below grade at the interface point to the pavement. Loop wires shall be held in place in the bituminous/concrete pavement by completely backfilling and covering slot with a suitable for the respective application.

162700-3.14 PROTECTIVE ELECTRICAL GROUND. Continuous fence shall be grounded at intervals not exceeding 500 feet. There shall be a ground within 100 feet of gates in each section of the fence adjacent to the gate. Fence under a power line shall be grounded by three grounds; one directly under the crossing and one on each side 25 feet to 50 feet away. A single ground shall be located directly under each telephone wire or cable crossing. The counterpoise ground shall be used only where it is impossible to drive a ground rod. The ground wire shall be connected to the fabric and tension wire with UL listed grounding connectors of cast bronze body and bronze or stainless steel bolts and washers. Grounding connectors shall be sized and suitable for the respective application. Connections to ground rods shall be with UL listed grounding connectors suitable for direct burial in earth or exothermic weld type connectors, Cadweld by Pentair Erico Products, Inc., Thermoweld by Continental Industries, Inc., Ultraweld by Harger, or approved equal. Exothermic weld connections shall be installed in conformance with the respective manufacturer's directions using molds suitable for each respective application. Ground rods shall be 5/8-in. diameter by 8 feet long (minimum), UL-listed, Copper-clad. The ground wire used to bond the fence fabric and tension wire to the ground rod shall be #6 AWG bare solid Copper conductor.

162700-3.15 ELECTRICAL GENERAL. The Contractor shall furnish and install all electrical materials necessary for complete and operational installation of the gate operator, as stipulated in the respective item and as shown on the Plans. The complete installation and wiring shall be done in a neat, workmanlike manner. All electrical work shall comply with the requirements of the NFPA 70-National Electrical Code (NEC) most current issue in force, the respective equipment manufacturer's directions, and all other applicable local codes, laws, ordinances, and requirements in force. Electrical equipment shall be installed in conformance with the respective manufacturer's directions and recommendations for the respective application. Any installations which void the UL listing, ETL listing, (or other third party listing), and/or the manufacturer's warranty of a device will not be permitted.

- A. The Contractor should examine the proposed site to evaluate the complexity of the work.
- B. Contractor shall keep a copy of the latest NEC in force on site at all times during construction for use as a reference.
- C. Contractor shall keep a copy of the Plans, Special Provision Specifications including any addenda, and copies of any change orders on site at all times during construction.

- D. Contractor shall coordinate work and any power outages to buildings located on the airport with the Airport Director/Manager and/or the respective building personnel. Any shutdown of existing systems shall be scheduled with and approved by the Airport Manager prior to shutdown. Once shut down, the circuits shall be labeled as such to prevent accidental energizing of the respective circuits. All personnel shall follow OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures, including, but not limited to, 29 CFR Section 1910.147 The Control of Hazardous Energy (lockout/tagout).
 - E. Contractor shall comply with the requirements of FAA AC No. 150/5370-2E (or most current issue) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
 - F. Contractor shall comply with the applicable requirements of NFPA 70E - Standard for Electrical Safety in the Workplace.
 - G. Contractor shall confirm that the power to each gate operator rated for 240 VAC, single-phase is 240 VAC, single-phase, 2-wire with ground and that each phase to ground is 120 VAC. Contractor shall confirm that the power to each gate operator rated for 208 VAC, single-phase is 208 VAC, single-phase, 2-wire with ground and that each phase to ground is 120 VAC. Where shown on the Plans or where required to accommodate control power a neutral conductor shall be included with the power circuit to provide 120/240 VAC or 120/208 VAC single-phase, 3-wire with ground to power the gate operator and associated control systems. **Do not connect a high leg of a 240/120 VAC, 3-phase, 4-wire system to a gate operator that is rated for 240 VAC, single-phase power.**
 - H. Splices in conductors will be allowed only within the specified junction boxes or splice cans. Only splices between loop lead in wires and the Twin Twisted Shielded conductors are approved. Circuit conductors for power wiring shall be continuous from source of power to connected device (from the respective panelboard or load center to the safety switch at the gate operator).
 - I. The Contractor shall be responsible for furnishing and setting all anchor bolts required to install his equipment.
 - J. Where concrete mounting pads are required for equipment mounting, the Contractor shall furnish all concreting and form work necessary to complete the installation.
 - K. Where electrical equipment is located on damp or wet walls or locations as directed, it shall be "stand off" mounted ½ inch from the wall in a manner so that the rear of the equipment is freely exposed to the surrounding air. The Resident Engineer shall approve the method of mounting before equipment is mounted.
- 162700-3.16 **INSTALLATION OF BRANCH CIRCUIT BREAKERS.** Install circuit breakers in panelboards and/or load centers in conformance with the respective manufacturer's directions. Connect only one wire/cable to each breaker terminal. Load centers and panelboards shall be thoroughly inspected for physical damage, proper alignment, anchorage, and grounding. Inspections shall be made for proper installation and tightness of connections for circuit breakers. Load centers and/or panelboards shall be thoroughly tested after installation and connection to respective loads. Update circuit directory to identify the respective device fed by each new circuit breaker.

162700-3.17 INSTALLATION OF SAFETY SWITCHES. All safety switches shall be provided with appropriate mounting hardware and strut support. Strut support shall be stainless steel strut support, Unistrut P-1000-SS, or approved equal. All hardware shall be corrosion resistant. Mount safety switches securely in accordance with the manufacturer's recommendations/instructions and as required for the respective application. Inspect all safety switches for proper operation, tight and secure connections, and correctness. All safety switch enclosures shall be bonded to ground with a ground lug or bar and ground wire. Field cut holes in safety switch enclosures to accommodate conduit entrances. Where safety switches are provided with concentric knockouts, and the respective conduit does not use the largest knockout, install a grounding bushing with ground wire connections between the bushing and the ground bus. Do not use safety switch enclosures for a splice box or for a pull box. Do not route control wires or other circuit wiring through a safety switch. Where splices are required or other control circuit wires are installed in the respective conduit to a safety switch, provide a separate junction box to accommodate the splices and/or other circuit conductors. Provide NEMA 4 hubs for all conduit entries into safety switch enclosures that are rated NEMA 4, 4X to maintain NEMA 4, 4X rating. Provide weatherproof abrasion resistant, engraved legend plates for each safety switch noting the device served, the power source, and the voltage system.

162700-3.18 CONDUIT INSTALLATION. Cable in unit duct and/or conduit for the gate operator power shall be direct bury 24 inches minimum below finished grade. Cable in conduit below roadways and walks shall be minimum 24 inches deep. Installation of cable in unit duct and/or conduit shall conform to Item 108. Installation of conduit shall conform to Item 110, as detailed on the Plans and as specified herein.

- A. Conduit(s) under walks shall be pushed or bored where possible to avoid damage to the respective pavement.
- B. Conduit size and fill requirements shall comply with Appendix C, conduit fill tables, of the NEC. It should be noted these are minimum requirements and larger conduit sizes or smaller fill requirements shall be used whenever specified or detailed on the drawings.
- C. Liquid tight flexible conduit shall be provided as a connection between each motor junction box (or any other piece of equipment subject to movement or vibration) and the rigid conduit system.
- D. Ream conduits only after threads are cut. Cut joints square to butt solidly into couplings. Where necessary to join two pieces of conduit, and it is impossible to use standard couplings, use 3 piece malleable iron conduit coupling. The use of running thread is prohibited. This applies to all rigid conduit installations, underground or otherwise.
- E. Make all joints in steel underground conduit watertight with approved joint compound. Temporarily plug conduit openings to exclude water, concrete, or any foreign materials during construction. Clean conduit runs before pulling in conductors.
- F. A run of conduit between outlet and outlet, between fitting and fitting, or between outlet and fitting shall not contain more than the equivalent of four quarter bends, including bends immediately at an outlet or fitting.
- G. Where conduits enter a box or fitting, provide a steel locknut and an insulated metallic bushing. Use this method to terminate conduit in panels, pull boxes, safety switches, etc.
- H. Provide NEMA four hubs for all conduit entries into enclosures rated NEMA 4, 4X to maintain NEMA 4, 4X rating.
- I. Do not run conduit below or adjacent to water piping.

- J. Run exposed conduits parallel with walls and at right angles to the building lines, not diagonally. Make bends and turns with pull boxes or cadmium plated or hot dipped galvanized malleable iron fittings and covers.

162700-3.19 INSTALLATION OF JUNCTION AND PULL BOXES. Use only screws, bolts, washers, etc. fabricated from rust resisting metals for the supporting of boxes. Install pull boxes in runs of conduit such that a total of 360 degrees in bends is not exceeded. Junction boxes shall be installed at all points in conduit runs where taps or splices are located. Boxes required by code or need which are not detailed on the plans shall be considered incidental to the respective work item and will not be paid for separately.

162700-3.20 GROUNDING REQUIREMENTS. Grounding shall conform to the following as applicable: The Contractor shall furnish and install all grounding shown on the Plans and/or as may be necessary or required to make a complete grounding system as required by the latest National Electrical Code (NFPA 70) in force. The reliability of the grounding system is dependent on careful, proper installation and choice of materials. Improper preparation of surfaces to be joined to make an electrical path, loose joints, or corrosion can introduce impedance that will seriously impair the ability of the ground path to protect personnel and equipment and to absorb transients that can cause noise in communications circuits. The following functions are particularly important to ensure a reliable ground system:

- A. All products associated with the grounding system shall be UL listed and labeled.
- B. All bolted or mechanical connections shall be coated with a corrosion preventative, conductive grease and lubricant suitable for electrical connections and grounding connections, before joining; Sanchem Inc. "NO OX ID "A Special" compound; Burndy Penetrox E, or approved equal.
- C. Metallic surfaces to be joined shall be prepared by the removal of all non conductive material, per 2014 National Electrical Code Article 250.12.
- D. Raceway fittings shall be made up tight to provide a permanent low impedance path for all circuits. Metal conduit terminations in enclosures shall be bonded to the enclosure with UL listed fittings suitable for grounding. Provide grounding bushings with bonding jumpers (from bushing to the respective ground connection/enclosure frame) for all metal conduits entering service equipment (meter bases, CT cabinet, service disconnects, service panelboards, main service breaker enclosure, etc.). Provide grounding bushings with bonding jumpers for all metal conduits entering an enclosure through concentric or eccentric knockouts that are punched or otherwise formed so as to impair the electrical connection to ground. Standard locknuts or bushings shall not be the sole means for bonding where a conduit enters an enclosure through a concentric or eccentric knockout.
- E. Furnish and install ground rods at all locations where shown on the Plans or specified herein. Ground rods for electrical installations shall be 3/4 inch diameter, 10 feet long, UL listed, copper clad with 10 mil minimum copper coating. Ground rods for fence grounding shall be 5/8 inch diameter, 8 feet long, UL listed, copper clad with 10 mil minimum copper coating. Top of ground rods shall be a minimum of 30 inches below finish grade unless otherwise noted on the plans. Ground rods shall be spaced as detailed on the Plans and in no case spaced less than one rod length apart. All connections to ground rods and/or ground rings shall be made with exothermic weld type connectors: Cadweld by Erico Products, Inc., Solon, Ohio, (Phone 1-800-248-9353); Thermoweld by Continental Industries, Inc., Tulsa, Oklahoma (Phone 918-663-1440); Ultraweld by Harger, Grayslake, Illinois (Phone 1-800-842-7437), or; approved equal. Exothermic weld connections shall be installed in conformance with the respective manufacturer's directions using molds as required for each respective application. Bolted connections will not be permitted at ground rods or at buried grounding electrode conductors. Grounding electrode conductors shall be bare stranded copper sized as detailed on the Plans.

- F. All connections, located above grade, between the different types of grounding conductors shall be made using UL listed double compression crimp type connectors or UL listed bolted ground connectors. For ground connections to enclosures, cases and frames of electrical equipment not supplied with ground lugs the Contractor shall drill required holes for mounting a bolted ground connector. All bolted ground connectors shall be Burndy, Thomas and Betts, Penn-Union, or approved equal. Tighten connections to comply with tightening torques in UL Standard 486A to assure permanent and effective grounding.
 - G. All metal equipment enclosures, conduits, cabinets, boxes, receptacles, motors, etc. shall be bonded to the respective grounding system. Provide grounding bushings at all conduits entering service entrance equipment (meter bases, service disconnects, service panelboards, etc.) and distribution panels or load centers and ground wire from bushing to ground bus in the respective service entrance equipment or distribution panel.
 - H. The equipment ground wire from equipment shall not be smaller than allowed by 2014 NEC Table 250.122 "Minimum Size Conductors or Grounding Raceway and Equipment." When conductors are adjusted in size to compensate for voltage drop, equipment grounding conductors shall be adjusted proportionately according to circular mil area. All equipment ground wires shall be copper either bare or insulated green in color. Where the equipment grounding conductors are insulated, they shall be identified by the color green and shall be the same insulation type as the phase conductors.
 - I. Bond the main electrical service neutral to ground at the main service disconnect. Bond the service neutral to ground at one location only per the National Electrical Code. A grounding connection shall not be made to any neutral circuit conductor on the load side of the service disconnecting means, except as permitted by 2014 NEC 250.24.
 - J. All exterior metal conduit, where not electrically continuous because of manholes, handholes, non metallic junction boxes, etc., shall be bonded to all other metal conduit in the respective duct run, and at each end, with a copper bonding jumper sized in conformance with 2014 NEC 250.102. Where metal conduits terminate in an enclosure (such as a motor control center, switchboard, etc.) where there is not electrical continuity with the conduit and the respective enclosure, provide a bonding jumper from the respective enclosure ground bus to the conduit sized per 2014 NEC 250.102.
 - K. Install grounding electrode conductors and/or individual ground conductors in Schedule 40 or Schedule 80 PVC conduit. Where grounding electrode conductors or individual ground conductors are run in PVC conduit, Do Not completely encircle conduit with ferrous and/or magnetic materials. Use non metallic reinforced fiberglass strut support. Where metal conduit clamps are installed, use nylon bolts, nuts, washers and spacers to interrupt a complete metallic path from encircling the conduit.
- 162700-3.21 TESTING. The Contractor shall make at his own expense any tests of equipment, wiring, or insulation deemed necessary by any inspection department or by the Contractor Officer and shall provide all apparatus, meters, materials, and labor required to make such tests. **Contractor shall engage a factory authorized service technician to provide start-up, testing, adjustments, calibration and checkout for each electrically operated gate. This shall be scheduled while the Contractor is still on-site and be coordinated such that all of the gates for the project are commissioned on a single site visit to reduce costs. All tests shall be conducted in the presence of the Owner and the Resident Engineer.**

The Contractor shall test and demonstrate to the satisfaction of the Resident Engineer the following:

- A. That all power and control circuits are continuous and free from short circuits.
- B. That all circuits are free from unspecified grounds.

- C. That the insulation resistance to ground of all ungrounded conductors of multiple circuits is not less than 50 megohms.
- D. That all circuits are properly connected in accordance with applicable wiring diagrams.
- E. Test and adjust gate operator, controls, safety devices/features, hardware, and other operable components. Confirm that all circuits operate properly.
- F. Verify ground rod is installed at electric gate operator in accordance with the manufacturer requirements.
- G. Verify metal conduits terminated at gate operator are bonded to the gate operator housing.
- H. Verify ground rods are installed at each side of the gate.
- I. Verify card reader/keypad station includes a ground wire to it. Record size and type.
- J. Verify Operation and Maintenance Manuals were furnished with equipment.
- K. Verify roller assembly has full contact with the drive rail on the gate.
- L. Verify the drive rail on the gate is level.
- M. Verify the gate is level.
- N. Where the drive rail has a splice, verify it is the proper type.
- O. Observe the drive rail and check to see if it has unusual wear.
- P. Release the gate operator braking mechanism and open and close the gate to confirm smooth and free operation over the full length of travel.
- Q. Verify the proximity sensor and the trip plate are installed properly and do not have an interference.
- R. Verify the gate operator beeper works properly and activates at upon gate operation.
- S. Interrupt power to the gate operator and confirm that the gate does not open upon restoration of power. The gate operator shall not activate for a power interruption as it does for a keypad or card reader signal input.
- T. Test gate and verify proper operation.
- U. Check operation of safety loops. Does gate remain open if vehicle stays on the exit loop?
- V. Check operation of free exit.
- W. Train the designated owner's personnel on procedures for operation, starting, stopping, troubleshooting, servicing, programming, and maintaining equipment.
- X. All tests shall be recorded, stating the test results, date, and field conditions.

METHOD OF MEASUREMENT

162700-4.1 The quantity of this item to be furnished and installed shall be measured for payment as a unit price per each for the electric slide gate and shall include all materials, equipment, support structures, foundations, detector loops, cable, wiring, conduits, ducts, raceways, directional boring, grounding, labor, coordination, tools, connections, restoration, and other incidentals as required to perform the specified work and testing the units for satisfactory operation.

BASIS OF PAYMENT

162700-5.1 Payment will be made at the Contract unit price per each for the respective electric sliding gate and shall be full compensation for all materials, equipment, support structures, foundations, detector loops, cable, wiring, conduits, ducts, raceways, directional boring, grounding, labor, coordination, tools, connections, restoration, and other incidentals required to perform the specified work and testing the units for satisfactory operation, and no additional compensation will be allowed.

Payment will be made under:

Item AR162726 Electric Gate -26' - per each.

DIVISION V

TURFING

ITEM 901

SEEDING

Revise Item 901 of the Standard Specifications as follows:

MATERIALS

901-2.1 SEED. Delete the seed mixture listed in the table and replace with the following:

"FOR AREAS OUTSIDE DESIGNATED WETLANDS

<u>"Minimum Amount of Common Name</u>	<u>Pure Live Seed per Acre</u>
Shadow II Chewings Fescue - <i>Festuca commutate</i>	53 Pounds
Quattro Sheep Fescue - <i>Festuca ovina</i>	53 Pounds
Rhino Hard Fescue - <i>Festuca brevipila (F. longifolia)</i>	26 Pounds
Henry Hard Fescue - <i>Festuca brevipila (F. longifolia)</i>	26 Pounds
Sea Fire Slender Creeping Red Fescue - <i>Festuca rubra</i>	26 Pounds
Kent Creeping Red Fescue - <i>Festuca rubra, subsp. rubra</i>	26 Pounds
Gulf Annual Rye Grass - <i>Lolium multiflorum</i>	<u>10 Pounds</u>
Total	220 Pounds per Acre

"FOR AREAS WITHIN DESIGNATED WETLANDS

"Seed for **disturbed areas located within the wetland areas** designated on the Plans shall be IDOT Seeding Mixture 4B, as specified in Article 250.07 in Standard Specifications for Road and Bridge Construction (IDOT Specifications), adopted April 1, 2016."

Delete the third and fourth Paragraphs.

Add the following:

"Planting times shall be between August 20 and October 20. If fall planting is not possible, the mixture may be planted between March 15 and May 15. Seeding between June 1 and August 15 will not be permitted. If planted in the spring, the Contractor shall furnish additional measures beyond that otherwise required in these Special Provisions to prevent weed growth as recommended by a registered nurseryman at no additional cost to the Contract.

"A sample of selected seed species shall be made available on request to the Resident Engineer for viability testing by the tetrazolium trichloride method, not less than 21 calendar days prior to planting.

"Seed mixtures shall contain the proportion of seed of individual species indicated in the planting design. Changes in seed mixtures must be approved by the Project Engineer.

"All seeds shall be guaranteed by the Contractor to be true to name. All seeds shall have the proper pre-planting treatments, including stratification, scarification and/or inoculation to promote good germination and growth, prior to any seeding.

"All seedings shall be planted at the specified rates, utilizing the specified species unless otherwise authorized by the Project Engineer."

901-2.2 LIME. Replace this Section with the following:

"901-2.2 SOIL TESTING AND MODIFICATION. The Contractor shall perform a soil analysis of all on-site and off-site topsoil types to be used in the seedbed. The pH of the topsoil shall be between 5.5 pH and 6.5 pH. Should the pH be less than 5.5, the Contractor shall add agricultural lime of a type and source approved by IDOT, at application rates appropriate to achieve the required pH. Should the pH be greater than 6.5, the Contractor shall add sulfur of a type and source approved by IDOT, at rates appropriate to achieve the required pH. The Contractor shall furnish the test reports and proposed soil modifications for approval to the Engineer prior to any soil modification. All soil testing and modification shall be incidental to seeding."

901-2.3 FERTILIZER. Delete this Section.

CONSTRUCTION METHODS

901-3.1 ADVANCE PREPARATION AND CLEANUP. Add the following as the first Paragraph:

"**ALL** perennial weeds and spontaneous vegetation shall be eliminated within the seedbed prior to seeding, using mowing/raking and herbicide. Herbicides used for weed removal shall be as recommended by the seed producer. Based upon actual conditions, it may be necessary for this weed removal to begin up to eight weeks before planting. When all vegetation is dead, the soil shall be tilled and otherwise prepared for planting as specified herein. Weed removal prior to acceptance of the lawn shall be incidental to the Contract."

Add the following sentence to the second Paragraph:

"Soil shall be prepared to have clods no more than 1½ inches on any side to ensure adequate seed-soil contact."

Add the following paragraphs:

"Seed shall not be placed on ground that is frozen or in any way in a condition that is detrimental to the seed.

"Areas shall be de-watered if necessary to accomplish any specified plantings. The method of de-watering shall be approved by the Resident Engineer.

"Final grading and site preparation must be inspected and approved by the Resident Engineer prior to any planting.

"Seedbed preparation shall commence as soon as practicable prior to planting. After preparation, these areas shall be protected from erosion.

"The proposed seeding method shall be stated by the Contractor. The seeding method shall result in a uniform distribution and complete coverage of the entire area to be seeded. If seed drilling is proposed, the seeder shall have an adjustable gate opening provided uniform flow and shall drop the seed directly into place on the prepared seed bed. If the broadcast method is used, within eight hours of seeding, all seeded areas should be rolled at right angles to the slope with a roller, cultipacker or hand tamped to compact the seedbed. Any areas broadcasted shall be sufficiently rolled or tamped to assist proper germination. All seeding equipment shall be calibrated to ensure the proper flow of seeds to deliver the specified quantities. The Contractor shall use only seeding equipment that is designed to plant grasses.

"All seeding shall be provided within the planting seasons stated in Section 901-2.1, unless season mixes are prior approved by the Project Engineer and conditions are acceptable for seeding as noted in Section 901-2.1.

"Measures to protect planted materials from grazing damage by wildlife shall be recommended and provided by the Contractor.

"Installation and maintenance of erosion control measures pertinent to seeding shall be the responsibility of the Contractor. Erosion control measures which may be damaged and/or removed by the Contractor during planting and related work shall be replaced by the Contractor.

"If on-site conditions change or are otherwise altered due to circumstances beyond the control of the Contractor, the Owner, and/or the Project Engineer, such that the Specifications and/or drawings are no longer valid, the Contractor shall notify the Resident Engineer so that remedial measures may be undertaken."

901-3.4 MAINTENANCE OF SEEDED AREAS. Add the following:

"It is essential that the seeds planted herein are watered for one to two months after planting to increase germination rates and seedling survival. The Contractor shall regularly water the seedlings to promote proper germination. It is the Contractor's responsibility to regularly inspect the growth and furnish watering when required. All inspection and watering shall be incidental to seeding."

BASIS OF PAYMENT

901-5.1 Add the following:

"Payment will be made under:

"Item AR901510 Seeding - per acre."

ITEM 905

TOPSOILING

Revise Item 905 of the Standard Specifications as follows:

DESCRIPTION

905-1.1 Add the following:

"Topsoil shall be from an off-site source identified by the Contractor and approved by the Resident Engineer. When off-site, no separate payment for excavation at the off-site location or haul from off-site will be made, as the Contractor shall include these costs in the Contract unit price for Topsoil."

MATERIALS

905-2.1 TOPSOIL. **Modify the allowed pH to read ... 5.5 pH to 6.5 pH.**

Replace the last sentence of the first Paragraph with the following:

"At least 90 percent of the material shall pass the No. 10 sieve."

Add the following as the last Paragraph:

"Testing shall be performed by the Contractor for both the on-site material and the off-site material, should the on-site material be needed to establish the lines and grades shown on the Construction Plans. Soils testing and modification shall be furnished in accordance with Item 901, as modified by these Special Provisions."

CONSTRUCTION REQUIREMENTS

905-3.4 PLACING TOPSOIL. Delete the first sentence of the first Paragraph and replace with the following:

"The topsoil shall be spread on the prepared areas to receive seeding or sodding. The resulting topsoil layer shall be at least four (4) inches in depth; at the outer limits the 4-inch depth can include the existing topsoil layer not disturbed by the construction."

METHOD OF MEASUREMENT

905-4.1 Delete this Section.

BASIS OF PAYMENT

905-5.1 Replace this Paragraph with the following:

"The quantity, determined as provided in Section 905-4.2, will be paid for at the Contract unit price per cubic yard for the pay item listed below (Off Site), which price and payment shall be full compensation for furnishing and placing all material and for all labor, haul, borrow excavation, equipment, tools, and incidentals necessary to complete the work prescribed in this item, to the satisfaction of the Engineer."

"Payment will be made under:

"Item AR905520 Topsoiling (From Off Site) - per cubic yard."

ITEM 908

MULCHING

Revise Item 908 of the Standard Specifications as follows:

DESCRIPTION

908-1.1 Add the following:

"Material used for mulching shall be **Heavy Duty** hydraulic mulch, applied and secured as otherwise provided in the Standard Specifications."

MATERIALS

908-2.1 MULCH MATERIAL. Delete the first Paragraph and replace with the following:

"Material used for mulching shall be **Heavy Duty** hydraulic mulch, as specified herein."

Delete Subparagraphs A, B and C.

CONSTRUCTION METHODS

908-3.1 MULCHING. Add the following:

"Hydraulic mulch shall be applied as specified herein for **Heavy Duty** applications."

BASIS OF PAYMENT

908-5.1 Add the following:

"Payment will be made under:

"Item AR908510 Mulching - per acre."

DIVISION VI

LIGHTING INSTALLATION

ITEM 108

INSTALLATION OF UNDERGROUND CABLE FOR AIRPORTS

Revise Item 108 of the Standard Specifications as follows:

Add:

108-1.2 REFERENCES. Note: where FAA Advisory Circulars are referenced they shall be the current issue or issues in effect.

- A. ASTM Specification B3 - Standard Specification for Soft or Annealed Copper Wire.
- B. ASTM Specification B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft.
- C. FAA Advisory Circular 150/5345 7 (current issue in effect) "SPECIFICATIONS FOR L 824 UNDERGROUND ELECTRICAL CABLE FOR AIRPORT LIGHTING CIRCUITS.
- D. FAA AC No. 150/5345-53 "AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM" (current issue in effect) and AC 150/5345-53D, AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM Appendix 3 Addendum (current issue in effect).
- E. FAA AC No. 150/5370-2F (current issue in effect) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.
- F. Federal Specification A-A-59544 Cable and Wire, Electrical (Power, Fixed Installation).
- G. NFPA 70 - National Electrical Code (most current issue in force).
- H. NFPA 70E - Standard for Electrical Safety in the Workplace.
- I. OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures.
- J. UL Standard 44 - Thermoset-Insulated Wires and Cables.
- K. UL Standard 83 - Thermoplastic-Insulated Wires and Cables.
- L. UL Standard 854 - Service Entrance Cables.

Add:

108-1.3 SHOP DRAWINGS. The Contractor shall furnish shop drawings for approval before ordering equipment and/or materials. Shop drawings are required for each wire, conductor, and/or cable type to be used on the project.

Note: Shop drawings that are submitted that do not include all of the following listed requirements will be rejected and will require resubmittal. Contractor shall use the following as a check list and shall verify all information noted below is included with the shop drawing prior to submitting the shop drawing for review. Shop drawings shall be clear and legible. Copies that are illegible will be rejected.

Contractor shall submit sufficient copies of shop drawings to meet the needs of his personnel, sub-contractor personnel, and equipment suppliers plus four (4) copies to be retained by the Project Engineer. Shop drawings shall include the following information:

- A. Certification of compliance with the AIP (Airport Improvement Program) Buy American Act Title 49 USC Section 50101 for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) or NAFTA (North American Free Trade) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Shop drawings submitted without certification of compliance with the Airport Improvement Program Buy American Preferences or without certification of manufacture in the United States of America in accordance with the AIP Buy American Requirements will be rejected. See the FAA website at: http://www.faa.gov/airports/aip/buy_american/ for more information on the Airport Improvement Program Buy American Preferences requirements. FAA approved equipment that is on the FAA Buy American Conformance List or the list of Nationwide Buy American Waivers Issued by the FAA complies with the AIP Buy American Preferences and will not require additional waiver paperwork for AIP projects.
- B. In order to expedite the shop drawing review, inspection and/or testing of materials, the Contractor shall furnish complete statements to the Project Engineer as to the origin, composition, and manufacturer of all material 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.
- C. Indicate the pay item number for each respective cable, cable in unit duct, cable in duct, and/or cable in conduit.
- D. Shop drawings shall include wire/conductor/cable cut sheets with type, size, specifications, ETL or UL listing, manufacturer, and catalog or part number.
- E. Shop drawings for cable in unit duct items shall include cut sheets with type, size, specifications, ETL or UL listing, manufacturer, and catalog or part number.
- F. Where cable is required to have colored coded insulation, provide information on the color coding for the respective conductors.

EQUIPMENT AND MATERIALS

108-2.1 GENERAL. Add the following.

"All cable shall be FAA approved or UL-listed as suitable for installed application. Cable furnished on this project shall comply with the requirements of the "Airport Improvement Program Buy American Preference requirements. All conductors shall be Copper."

108-2.2 CABLE. Add the following:

"Cable for use with electric services rated below 600 Volts AC including, but not limited to, Item AR109535 Electric Service Entrance shall be as detailed on the Plans and as specified herein. Cable for use with gate operators, including but not limited to, Item AR162726 Electric Gate - 26' shall be as detailed on the Plans and as specified herein.

"**XLP-USE Wire.** Cable shall comply with UL Standard 44, UL Standard 854, and Federal Specification A-A-59544. Conductor shall be concentric-strand, soft Copper, conforming to ASTM B8 and Underwriters' Laboratories Standard UL44 for Rubber Insulated Wires. Insulation shall be rated for 600-Volt. Insulation shall be cross-linked polyethylene conforming to Underwriters Laboratories Requirements for Type USE-2 insulation. Cable shall be UL-listed and marked USE-2.

"**XHHW Wire.** Cable shall be UL-listed as Type XHHW-2 per UL Standard 44. Cable shall also conform to ICEA S-95-658/NEMA WC70 and Federal Specification A-A-59544. Conductors shall be Class B stranded, annealed, uncoated Copper per UL Standard 44. Insulation shall be rated for 600-Volt. Insulation shall be cross-linked polyethylene complying with the physical and electrical requirements of UL Standard 44 for Type XHHW-2. XHHW wire may be used in place of THWN wire for all applications.

"**THWN Wire.** Cable shall comply with Underwriters' Laboratories Standard UL-83 and Federal Specification A-A-59544. Conductor shall be soft-annealed, uncoated Copper and shall comply with ASTM B3 and B8. Insulation shall be rated for 600-Volt. Insulation shall be polyvinyl-chloride conforming to Underwriters' Laboratories requirements for Type THW. The outer covering shall be nylon-conforming to Underwriters' Laboratories for type THHN or THWN. Cable shall be UL-listed and marked THWN-2. Power and control wiring shall be Type THWN-2, or approved equal. Note where THWN wiring is referenced on the Plans, it shall be THWN-2.

"**Color-coding.** Color-code phase and neutral conductor insulation for No. 6 AWG or smaller. Provide colored marking tape or colored insulation for phase and neutral conductors for No. 4 AWG and larger. **Insulated ground conductors shall have green colored insulation for all conductor sizes (AWG and/or KCMIL) to comply with NEC 250.119. Neutral conductors shall have white colored insulation for No. 6 AWG and smaller to meet the requirements of NEC 200.6.** Standard colors for power wiring and branch circuits for 120/240 VAC, 1-Phase, 3-Wire system shall be Phase A - Black, Phase B - Red, Neutral - White, and Ground - Green. Standard colors for power wiring and branch circuits for 240/120 VAC, 3-Phase, 4-Wire system shall be Phase A - Black, Phase B (High Leg) - Orange, Phase C - Blue, Neutral - White, and Ground - Green. Standard colors for power wiring and branch circuits for 120/240 VAC, 1-Phase, 3-Wire system that originates from a 240/120 VAC, 3-Phase, 4-Wire system shall be Phase A - Black, Phase C - Blue, Neutral - White, and Ground - Green."

108-2.4 CABLE CONNECTIONS. Add the following to this Section:

"The Contractor shall use a cable stripper/penciller whenever cable connections are made.

"All breaks in the unit duct shall be sealed by shrink kits.

"All below grade splices shall be installed in splice cans, handholes, or manholes. Splice cans shall be L-867, Class IA, Size B (12 in. diameter), 24 in. deep, with 3/8 in. thick, galvanized steel cover and stainless steel bolts. Larger size splice cans shall be provided, as applicable, for specific equipment applications or manufacturer's recommendations, and/or where detailed on the Plans. Splice cans located in areas subject to heavy aircraft or vehicle loading shall be L-868 type. The Engineer shall approve all splice locations before work commences. The furnishing and installing of splice cans for new homerun cables shall be incidental to the respective cable pay item, and no additional compensation will be allowed."

108-2.12 LINE MARKING TAPE. Add the following:

"Line marking tape shall be furnished for all cables not installed in PVC/HDPE duct or concrete encased duct."

CONSTRUCTION REQUIREMENTS

108-3.1 GENERAL. Add the following to this Section:

"The cable quantities as shown on the Construction Plans are based on straight-line measurement. All vertical lengths and other cable lengths that are specified or are required by the installation, such as slack or waste, will not be measured for payment.

"If the Contractor wishes to lay cable on a line other than that shown on the Plans, he shall obtain approval of the Resident Engineer/Resident Project Representative before doing so. Any additional cable needed because of such change will be at the Contractor's expense.

"Only cable in unit duct may be plowed or directional-bored.

"The Contractor shall identify all existing underground utilities located within the area where the proposed cables are being installed, and will take all precautions to protect these utilities from damage. Care shall be taken so as not to damage any existing circuits. Any existing circuits damaged shall be immediately repaired to the satisfaction of the Engineer and/or the respective utility or owner where applicable. Any underground utility damaged will be repaired or replaced at the Contractor's own expense. Any repairs of existing cables will be considered incidental to the contract, and no additional compensation will be allowed.

"Contractor shall coordinate work and any power outages with the Airport Manager or respective Airport personnel. Any shutdown of existing systems shall be scheduled with and approved by the Airport Director prior to shutdown. Once shut down, the circuits shall be labeled as such to prevent accidental energizing of the respective circuits. All personnel shall follow U.S. Department of Labor Occupational Safety & Health Administration (OSHA) 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures, including, but not limited to, 29 CFR Section 1910.147 The Control of Hazardous Energy (lockout/tagout).

"Contractor shall comply with the requirements of FAA AC No. 150/5370-2F (or most current issue) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".

"Contractor shall comply with the applicable requirements of NFPA 70E - Standard for Electrical Safety in the Workplace.

"All temporary installations shall comply with National Electrical Code Article 590 - "Temporary Installations". The contractor shall secure, identify, and place temporary exposed wiring in conduit, duct, or unit duct to prevent electrocution and fire ignition sources in conformance with the requirements of FAA AC 150/5370-2F, Part 218, Paragraph c.

"All cables installed by the Contractor shall be properly labeled and tagged at all points of access (handholes, manholes, terminal panels, control panels, and the respective wireways in the vault).

"All changes to cables in the lighting system shall be documented by the Contractor and provided to the Resident Engineer."

108-3.2 INSTALLATION IN DUCT OR CONDUIT. Add the following to this Section:

"The unit duct will be run continuous through all ducts and conduits unless noted otherwise on the Plans for a specific application.

"Where cable in unit duct enters a handhole or manhole with a continuous duct bank system to the termination point (such as from a handhole to the vault or between handholes and/or manholes), the unit duct will not be required for the respective cable."

108-3.3 TRENCHING. Add the following to this Section:

"F. Cable installed in cultivated fields shall be installed a minimum of 42 inches below grade.

"G. Any and all trenches and disturbed areas will be backfilled to a smooth grade to the satisfaction of the Resident Engineer. All trench settlement shall be corrected for a period of one year. In turf areas, the top 4-inches of backfill shall be topsoil. Restoration, grading, and seeding of areas disturbed during the installation of the proposed cable will be incidental to the respective 108 Pay Item."

108-3.4 CABLE MARKERS. Add the following as the first sentence:

"Cable, cable in duct, and cable in unit duct installed under this item shall be marked with concrete cable markers as specified in these Specifications."

108-3.5 SPLICING. Add the following:

"In-line connections for existing cables cut during construction shall be repaired with the cast splice kit. The Contractor shall have a minimum of two splice kits on the job site at all times for emergency repairs. Cast splice kits shall be specified in Paragraph (a) of Item 108-2.4. **Splice cans shall be provided for existing cables cut and repaired for each splice in cables not to be abandoned. Where a splice can is not readily available at the time of the cable damage, splice markers shall be temporarily installed over each splice in cables not to be abandoned, then these splices shall later be replaced with new splices in an L-867 splice can.**

"There shall be no splices between series lighting circuit isolation transformers. In the event that a series lighting circuit cable is cut between isolation transformers, the entire length of cable between these isolation transformers shall be replaced, at the Contractor's own expense.

"The Contractor shall use a cable stripper/penciller whenever cable connections are made.

"All splices and connections will be considered incidental to the respective cable."

Add:

108-3.12 LOCATING OF EXISTING UNDERGROUND UTILITIES AND CABLES. The location, size, and type of material of existing underground and/or aboveground utilities indicated on the Plans are not represented as being accurate, sufficient, or complete. Neither the Owner nor the Engineer assumes any responsibility whatever in respect to the accuracy, completeness, or sufficiency of the information. There is no guarantee, either expressed or implied, that the locations, size, and type of material of existing underground utilities indicated are representative of those to be encountered in the construction. It shall be the Contractor's responsibility to determine the actual location of all such facilities, including service connections to underground utilities.

Prior to construction, the Contractor shall notify the utility companies of his operational plans, and shall obtain, from the respective utility companies, detailed information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment, where required. In the event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner's Representative and/or the Resident Engineer/Resident Project Representative shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract.

All utility cables and lines shall be located by the respective utility. **Contact JULIE (Joint Utility Location Information for Excavators) for utility information, phone: 1-800-892-0123.** Contact the FAA (Federal Aviation Administration) for assistance in locating FAA cables and utilities. Location of FAA power, control, and communication cables shall be coordinated with and/or located by the FAA. Also contact Airport Director/Manager and Airport Personnel for assistance in locating underground Airport cables and/or utilities. Also coordinate work with all aboveground utilities.

Payment for locating and marking underground utilities and cables will not be paid for separately, but shall be considered incidental to the plowing/trenching/boring of cable, cable in unit duct, and cable in duct.

Add:

108-3.13 SEPARATION OF HIGH-VOLTAGE AND LOW-VOLTAGE WIRING. Low-voltage wiring shall maintain separation from high-voltage wiring. Low-voltage wiring and high-voltage wiring shall not be installed in the same raceway, duct, handhole, manhole, or junction box. Where necessary provide split flexible duct around low voltage cables located in a handhole with high voltage cables, to isolate the cables from possible contact with each other.

Add:

108-3.14 SEPARATION OF COMMUNICATION CIRCUITS AND POWER WIRING. Communication circuits shall not be installed in the same raceway, conduit, duct, or handhole with power circuits.

Add:

108-3.15 IDENTIFICATION OF CABLES. At electrical handholes and manholes, identify and label each cable originating in the vault with respect to the system or device served. Provide identification tags rated suitable for the respective locations with permanent markings.

METHOD OF MEASUREMENT

108-4.1 Delete this Section.

108-4.2 Delete this Section.

Add:

108 4.3 The quantity of power cable or conductors and/or control cable installed in conduit, duct, unit duct and/or other raceway associated with the gate operator systems will not be measured for payment. This shall be incidental to the respective item for which it is installed or the respective electric gate installation (including, but not limited to, Item AR162726 Electric Gate -26', or other electric gate installation), and no additional compensation will be allowed.

The quantity of cable or conductors installed in conduit, duct, unit duct and/or other raceway associated with the electric service work will not be measured for payment. This shall be incidental to the respective item for which it is installed, (including, but not limited to, Item AR162726 Electric Gate -26', or other electric service work), and no additional compensation will be allowed.

The line marking tape installed shall be considered incidental to the Work and shall not be paid for separately.

BASIS OF PAYMENT

108-5.1 Delete this Section.

Add:

108-5.2 Payment for the furnishing and installation of power cable or conductors and/or control cable installed in conduit, duct, unit duct and/or other raceway associated with the gate operator systems shall not be measured for payment and shall be incidental to the respective electric gate installation (Including, but not limited to Item AR800947 28' Electrical Sliding Gate GALV, or other electric gate installation), and no additional compensation will be made.

Payment for the furnishing and installation of cable or conductors installed in conduit, duct, unit duct and/or other raceway associated with the electric service work shall not be measured for payment and shall be incidental to the respective electric service work (Including, but not limited to, Item AR109535 Electric Service Entrance, or other electric service work), and no additional compensation will be made.

ITEM 109

INSTALLATION OF AIRPORT TRANSFORMER VAULT AND VAULT EQUIPMENT

Revise Item 109 of the Standard Specifications as follows:

DESCRIPTION

Add:

109-1.2 Item AR109535 Electric Service Entrance shall consist of furnishing and installing new electric service from the respective utility transformer secondary to the respective electric utility meter base and service panel including the electric utility meter pedestal, service panelboard, surge protective device, support structure and associated conduits, wiring, grounding and incidentals to power the electric gate operators as detailed on the Plans and specified herein. This item shall include all labor, field verification of existing conditions, transportation, equipment, materials, conductors, connectors, conduits, tools, coordination, labeling, testing and all incidentals required to place the electric service into proper working order as a completed unit to the satisfaction of the Owner and Engineer, including:

- A. Field verification of existing site conditions to determine complexity of the proposed work.
- B. Coordinating all work with the Airport Manager, the designated Airport Maintenance Staff, and the Resident Engineer/Resident Technician.
- C. Coordinating all service entrance work with the serving electric utility company and the Airport Manager. Service entrance work shall be as detailed on the Plans, per the serving electric utility requirements, and as specified herein.
- D. Furnishing shop drawings for equipment and materials.
- E. Furnishing and installing all service cable/wiring, raceways, conduits, etc. as detailed on the Plans and specified herein.
- F. Furnishing and installing all equipment, materials, support hardware, foundations, power cable, wiring, raceways, conduits, fittings, grounding, and incidentals as detailed on the Plans and specified herein.
- G. Disconnecting and removing existing service and equipment as detailed on the Plans and/or as specified herein.
- H. Testing, adjusting, and retesting (where applicable) the new service and power distribution system for the gate operators for proper operation. Measure and record voltages at service panel.

Add:

109-1.3 REFERENCES. Note: where FAA Advisory Circulars are referenced they shall be the current issue or issues in effect.

- A. ANSI C80.1 - Rigid Steel Conduit, Zinc Coated.
- B. ANSI C80.4 - Fittings Rigid Metal Conduit and EMT.

- C. ANSI Z535.4-2002 - American National Standard for Product Safety Signs and Labels.
- D. ASTM Specification B3 - Standard Specification for Soft or Annealed Copper Wire.
- E. ASTM Specification B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft.
- F. Federal Specification A-A-59544 Cable and Wire, Electrical (Power, Fixed Installation).
- G. FAA-STD-019d dated August 9, 2002, "Department of Transportation Federal Aviation Administration Standard, LIGHTNING AND SURGE PROTECTION, GROUNDING, BONDING AND SHIELDING REQUIREMENTS FOR FACILITIES AND ELECTRONIC EQUIPMENT.
- H. FAA-STD-019e, dated December 22, 2005, "Department of Transportation Federal Aviation Administration Standard, LIGHTNING AND SURGE PROTECTION, GROUNDING, BONDING AND SHIELDING REQUIREMENTS FOR FACILITIES AND ELECTRONIC EQUIPMENT.
- I. NEMA TC-2 - Electrical Plastic Tubing and Conduit.
- J. NEMA TC-3 - Fittings Rigid PVC Conduit and Tubing.
- K. NFPA 70 - National Electrical Code (most current issue in force).
- L. NFPA 70E - Standard for Electrical Safety in the Workplace.
- M. OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures.
- N. Electrical Code (or most current issue in force) of the City of Waukegan, Illinois.
- O. UL Standard 6 - Rigid Metal Conduit.
- P. UL Standard 44 - Thermoset-Insulated Wires and Cables.
- Q. UL Standard 83 - Thermoplastic-Insulated Wires and Cables.
- R. UL Standard 467 - Grounding and Bonding Equipment.
- S. UL Standard 486A-486B Wire Connectors.
- T. UL Standard 514B - Conduit, Tubing and Cable Fittings.
- U. UL Standard 651 - Schedule 40 and 80 Rigid PVC Conduit.
- V. UL Standard 854 - Service Entrance Cables.

Add:

109-1.3 SHOP DRAWINGS. The Contractor shall furnish shop drawings for approval before ordering equipment and/or materials. Shop drawings are required for vault equipment and materials to be used on the project.

Note: Shop drawings that are submitted that do not include all of the following listed requirements will be rejected and will require resubmittal. Contractor shall use the following as a check list and shall verify all information noted below is included with the shop drawing prior to submitting the shop drawing for review. Shop drawings shall be clear and legible. Copies that are illegible will be rejected.

Contractor shall submit sufficient copies of shop drawings to meet the needs of his personnel, sub-contractor personnel, and equipment suppliers plus four (4) copies to be retained by the Project Engineer. Shop drawings shall include the following information:

- A. Certification of compliance with the AIP (Airport Improvement Program) Buy American Act Title 49 USC Section 50101 for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) or NAFTA (North American Free Trade) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Shop drawings submitted without certification of compliance with the Airport Improvement Program Buy American Preferences or without certification of manufacture in the United States of America in accordance with the AIP Buy American Requirements will be rejected. See the FAA website at: http://www.faa.gov/airports/aip/buy_american/ for more information on the Airport Improvement Program Buy American Preferences requirements. FAA approved equipment that is on the FAA Buy American Conformance List or the list of Nationwide Buy American Waivers Issued by the FAA complies with the AIP Buy American Preferences and will not require additional waiver paperwork for AIP projects.
- B. In order to expedite the shop drawing review, inspection and/or testing of materials and equipment, the Contractor shall furnish complete statements to the Project Engineer as to the origin and manufacturer of all materials and equipment 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 and equipment.
- C. Submittals for panelboards shall include manufacturer, catalog numbers, panel schedule, voltage and amperage ratings, service entrance rating, bus material, integrated short circuit ampere rating, circuit breaker arrangement and sizes and respective enclosure.
- D. Cut sheets with part number and specifications for the surge protective device.
- E. Provide cut sheets for all types of conduit used with the installation (for example galvanized rigid steel conduit and Schedule 40 PVC conduits). Include certification that steel conduits are made with 100 percent domestic steel.
- G. Provide cut sheets for the service and power circuit conductors.
- H. Concrete mix design, per Item 610.

EQUIPMENT AND MATERIALS

109-2.1 GENERAL. Add the following to this Section:

- "C. FAA approval of airport lighting equipment and subsequent inclusion in Advisory Circular 150/5345 1 "Approved Airport Equipment", and/or Advisory Circular 150/5345-53 "Airport Lighting Equipment Certification Program" only means that the test data satisfied the applicable Specification requirements. This does not insure that the approved equipment will satisfactorily operate when connected power-wise and/or control-wise to other approved airport lighting equipment or "off the shelf" equipment not requiring FAA approval.

"D. The Contractor shall ascertain that all lighting system components furnished by him (including FAA-approved equipment) are compatible in all respects with each other and the remainder of the new system. Any non compatible components furnished by the Contractor shall be replaced by him, at no additional cost to the Airport Sponsor, with a similar unit approved by the Engineer (different model or different manufacturer) that is compatible with the remainder of the airport lighting system.

"E. Except as specified otherwise, all new equipment shall be provided by the Contractor and shall be tested for Specification conformance as part of the Aviation Lighting Equipment Certification Program. Certification of conformance, as tested by the respective testing laboratory, shall be provided by the manufacturer for all items submitted for approval."

109-2.4 BRICK. Delete this Section.

109-2.5 RIGID STEEL CONDUIT. Add the following:

"GRSC shall be heavy wall, hot-dipped, galvanized steel pipe bearing the UL label and conforming to UL-6 and ANSI Specification C80.1. Couplings, connectors, and fittings for rigid steel conduit shall be threaded, galvanized steel, or galvanized malleable iron specifically designed and manufactured for the purpose. Fittings shall conform to ANSI C80.4 and UL-514B. Set screw type fittings are not acceptable. Steel used to manufacture conduits shall be 100 percent domestic steel. Contractor shall provide certification that the respective steel conduits used on this project are manufactured from 100 percent domestic steel."

109-2.15 GROUND RODS. Revise to read as follows:

"Ground rods for the vault ground ring shall be 3/4-inch diameter, 10 feet long, UL-listed, Copper-clad. Ground rods shall have 10 mils minimum copper coating. Ground rods shall be manufactured in the United States of America. Steel used to manufacture ground rods shall be 100 percent domestic steel."

109-2.16 POTHEADS. Delete this Section.

109-2.17 PREFABRICATED METAL HOUSING. Delete this Section.

109-2.19 OTHER ELECTRICAL EQUIPMENT. Add the following:

"Switches, cutouts, relays, lighting contactors, terminal blocks, circuit breakers, and all other regularly used commercial items of electrical equipment not covered by FAA equipment specifications shall conform to the applicable rulings and standards of the Institute of Electrical and Electronic Engineers or the National Electrical Manufacturer's Association. When specified, test reports from a testing laboratory indicating that the equipment meets the specifications shall be supplied. In all cases, equipment shall be new and a first-grade product. This equipment shall be supplied in the quantities required for the specific project and shall incorporate the electrical and mechanical characteristics specified in the Plans or in the proposal. Contractor shall confirm quantity for all electrical equipment with the Plans. Equipment and Materials shall be manufactured in the United States to comply with the Airport Improvement Program Buy American Requirements and the Buy American Act. Proposed electrical equipment for the vault shall be as follows:

"A. Electric Utility Meter Base. Electric utility meter base or pedestal shall conform to the requirements of the service electric utility company.

- "B. Circuit Breaker Panelboard. Circuit breaker panelboard shall be rated 120/240 VAC, 1 phase, 3-wire and shall have copper bus structure braced for 22,000 RMS Amperes fault current minimum at 120/240 VAC. All copper parts shall be plated to prevent corrosion. Panelboards shall bear the UL label. Panelboards for service entrance applications shall be UL-listed suitable for service entrance. All panelboards shall be dead-front safety-type, equipped with thermal magnetic-molded case breakers and solid neutral bus. Bus bar connections to the branch circuit breakers shall be the "Distributed Phase" or "Phase Sequence" type. Bussing shall be such that adjacent single-pole breakers will be on different phases or polarities, and that two pole breakers can be installed at any location. Panelboard numbering shall be such that starting at the top, odd numbers shall be used in sequence down the left hand side, and even numbers shall be used in sequence down the right hand side. Cabinets shall be fabricated of code-gauge, galvanized steel with gutters per the NEC. Cabinets for outdoor locations shall be rated NEMA 3R and NEMA 12. Fronts shall have doors with matching one-piece trim, be code-gauge, and be finished with rust-inhibiting primer and baked enamel. Fronts shall have adjustable indicating trim clamps completely concealed when door is closed. Provide a circuit directory frame and card with a clear plastic covering on the inside of the doors. Fronts shall have flush locks, and be furnished with two keys per lock. Provide circuit breakers, quick-make, quick-break, thermal-magnetic, trip indicating, and common trip on all multi-pole breakers. Handles shall have "ON", "OFF" and "TRIPPED" positions. Circuit breakers shall be UL-listed in accordance with UL Standard 489. Breakers shall have bolt-on connections to the bus. Amperage trip ratings, voltage ratings, interrupting current ratings, and number of poles shall be as shown on the panelboard schedules. Contractor shall confirm and adjust circuit breaker sizes, as required for the respective equipment or device being fed, in accordance with the respective equipment manufacturer's recommendation and the NEC. Panelboards shall be furnished with copper-ground bus and separate insulated copper neutral bus.
- "C. Surge Protective Device for Service Panelboard. AC power surge protective device shall be UL-listed per UL 1449, Third Edition, and shall conform to the applicable requirements of FAA-STD-019d dated August 9, 2002, "LIGHTNING AND SURGE PROTECTION, GROUNDING, BONDING, AND SHIELDING REQUIREMENTS FOR FACILITIES AND ELECTRONIC EQUIPMENT". AC power surge arrester/TVSS for the service panel shall be suitable for a 120/240 VAC, 1-phase, 3-wire, plus ground system with a surge current rating of 240,000-Amps, 8 x 20 microsecond wave per mode (L-L, L-N, L-G, N-G), and status indication lights in a NEMA 4X stainless steel enclosure, Lightning Protection Corporation Model LPC 2020-8U-5G, Transtector 120/240V Split Phase LEA-LS-PLUS-300 with a NEMA 4X stainless steel enclosure, or approved equal. Include six spare indicator lamps with each AC power surge protective device.
- "D. Junction and Pull Boxes. Junction and pull boxes shall be sized, as required for conductors and splices and per 2014 NEC Article 314. Boxes shall be UL-listed. Special boxes made to suit conditions shall be used to accommodate the respective application, or where required by the NEC, even though they might not be indicated on the Drawings. Surface-mounted exterior junction and pull boxes located in non-hazardous, non-classified areas shall be NEMA 4X stainless steel or aluminum. All junction and pull boxes installed in classified hazardous areas (Class 1, Division 1 or 2, Group D) shall be NEMA 7 and NEMA 4 and shall comply with applicable provisions of the NEC, including, but not limited to, Articles 500 and 501.
- "E. Schedule 40 PVC and Schedule 80 PVC Conduit. Schedule 40 PVC and Schedule 80 PVC conduit shall comply with Item 110 and the following: Conduit shall be Schedule 40 PVC, UL-listed or ETL listed, rated for 90°C cable-conforming to NEMA Standard TC-2 and UL 651. Fittings shall conform to NEMA Standard TC-3 and UL 514B. Conduits shall be suitable for underground applications encased in concrete or direct burial, and suitable for exposed applications aboveground.

"F. Liquid-Tight Flexible Metal Conduit. Liquid-tight, flexible metal conduit shall consist of polyvinyl jacket over flexible hot dip galvanized steel tubing. The flexible conduit shall be completely sealed from liquids, dust, dirt, and fumes and be resistant to oil, gasoline, grease, and abrasion. Jacket shall also be sunlight-resistant. Liquid-tight flexible metal conduit shall be UL-listed, suitable for use as a grounding conductor, and comply with Article 350 of the NEC. Liquid-tight flexible metal conduit and associated fittings shall be UL-listed to meet the requirements of NEC 350.6. Liquid-tight flexible metal conduit shall be Anaconda Sealtite Type UA as manufactured by Anamet Electrical Inc., 1000 Broadway Avenue East, Mattoon, Illinois 61938-0039, (Phone: 217-234-8844), Liqueflex Type LA as manufactured by Electri-Flex Company, 222 W. Central Ave., Roselle, Illinois 60172, (Phone: 630-529-2920 or 1-800-323-6174), Liquid-Tuff Type LFMC as manufactured by Atkore International AFC Cable Systems, 16100 S. Lathrop Ave, Harvey, IL 60426, (Phone: 708-225-2069), or approved equal. Do not install liquid-tight, flexible metal conduit that is not UL listed. Confirm liquid-tight, flexible metal conduit bears the UL label prior to installation."

109-2.20 WIRE. Add the following to Section A. Control Circuits:

"THWN Wire. Cable shall comply with Underwriters' Laboratories Standard UL-83 and Federal Specification A-A-59544. Conductor shall be soft-annealed, uncoated Copper and shall comply with ASTM B3 and B8. Insulation shall be rated for 600-Volt. Insulation shall be polyvinyl-chloride conforming to Underwriters' Laboratories requirements for Type THW. The outer covering shall be nylon-conforming to Underwriters' Laboratories for type THHN or THWN. Cable shall be UL-listed and marked THWN."

Delete paragraphs 1, 2, and 3 under Section B. Power Circuits.

Add the following:

"Power Cable (600-Volt and Below). All power wiring, 600-Volt and below, shall be the type, size, and number of conductors as noted on the Plans. Cable shall be manufactured in the United States of America to comply with the Airport Improvement Program Buy American Requirement.

"THWN Wire. Cable shall comply with Underwriters' Laboratories Standard UL-83 and Federal Specification A-A-59544. Conductor shall be soft-annealed, uncoated Copper and shall comply with ASTM B3 and B8. Insulation shall be rated for 600-Volt. Insulation shall be polyvinyl-chloride conforming to Underwriters' Laboratories requirements for Type THW. The outer covering shall be nylon-conforming to Underwriters' Laboratories for type THHN or THWN. Cable shall be UL-listed and marked THWN-2. Power and control wiring shall be Type THWN-2, or approved equal. **Note where THWN wiring is referenced on the Plans, it shall be THWN-2.**

"XHHW Wire. Cable shall be UL-listed as Type XHHW-2 per UL Standard 44. Cable shall also conform to ICEA S-95-658/NEMA WC70 and Federal Specification A-A-59544. Conductors shall be Class B stranded, annealed, uncoated Copper per UL Standard 44. Insulation shall be rated for 600-Volt. Insulation shall be cross-linked polyethylene complying with the physical and electrical requirements of UL Standard 44 for Type XHHW-2. XHHW wire may be used in place of THWN wire for all applications.

"XLP-USE Wire. Cable shall comply with UL Standard 44, UL Standard 854, and Federal Specification A-A-59544. Conductor shall be concentric-strand, soft Copper, conforming to ASTM B8 and Underwriters' Laboratories Standard UL44 for Rubber-Insulated Wires. Insulation shall be rated for 600-Volts. Insulation shall be cross-linked polyethylene conforming to Underwriter's Laboratories Requirements for Type USE-2 insulation. Cable shall be UL-listed and marked USE-2.

"Grounding electrode conductors and/or bonding jumpers shall be the size and type, as detailed on the Plans."

109-2.21 FLOOR DRAINS. Delete this Section.

CONSTRUCTION METHODS

INSTALLATION OF EQUIPMENT IN VAULT OR PREFABRICATED METAL HOUSING

109-3.10 GENERAL. Add the following to this Section:

"The Contractor shall furnish and install all materials necessary for complete and operational installation of the vault equipment, as specified herein and as shown on the Plans. The complete installation and wiring shall be done in a neat, workmanlike manner. All electrical work shall comply with the requirements of the NFPA 70 - National Electrical Code (NEC) most current issue in force, and all other applicable local codes, laws, ordinances, and requirements in force. Electrical equipment shall be installed in conformance with the respective manufacturer's directions and recommendations for the respective application. Any installations which void the UL listing, Intertek Testing Services verification/ETL listing (or other third party listing), and/or the manufacturer's warranty of a device will not be permitted.

- "A. Contractor shall keep a copy of the latest NEC in force on site at all times during construction for use as a reference.
- "B. Contractor shall keep a copy of the Plans, Special Provision Specifications including any addenda, and copies of any change orders on site at all times during construction.
- "C. Contractor shall coordinate work and any power outages with the Airport Manager and the Resident Engineer/Resident Technician. Any shutdown of existing systems shall be scheduled with and approved by the Airport Manager prior to shutdown. Once shut down, the circuits shall be labeled as such to prevent accidental energizing of the respective circuits. All personnel shall follow U.S. Department of Labor Occupational Safety & Health Administration (OSHA) 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures including, but not limited to, 29 CFR section 1910.147 The Control of Hazardous Energy (lockout/tagout).
- "D. Contractor shall comply with the applicable requirements of NFPA 70E - Standard for Electrical Safety in the Workplace.
- "E. All electrical equipment installed by the Contractor shall be properly labeled, and all cables must be tagged.
- "F. All power and control cables shall be installed in conduit, wireways, pull boxes, junction boxes, or raceways. No exposed power or control wiring will be permitted.
- "G. All changes to the airfield lighting system control wiring will be documented by the Contractor and provided to the Resident Engineer/Resident Technician.
- "H. Locate Existing Underground Utilities and Cables. The location, size, and type of material of existing underground and/or aboveground utilities indicated on the Plans are not represented as being accurate, sufficient, or complete. Neither the Owner nor the Engineer assumes any responsibility whatsoever in respect to the accuracy, completeness, or sufficiency of the information. There is no guarantee, either expressed or implied, that the locations, size, and type of material of existing underground utilities indicated are representative of those to be encountered in the construction. It shall be the Contractor's responsibility to determine the actual location of all such facilities, including service connections to underground utilities.

Prior to construction, the Contractor shall notify the utility companies of his operational plans, and shall obtain, from the respective utility companies, detailed information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment, where required. In the event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner's Representative and/or the Resident Engineer/Resident Technician shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract. All utility cables and lines shall be located by the respective utility. **Contact JULIE (Joint Utility Location Information for Excavators) for utility information, phone: 1-800-892-0123.** Contact the FAA (Federal Aviation Administration) for assistance in locating FAA cables and utilities. Location of FAA power, control, and communication cables shall be coordinated with and/or located by the FAA. Also contact Airport Director/Manager and Airport Personnel for assistance in locating underground Airport cables and/or utilities. Also coordinate work with all aboveground utilities.

- "I. Contractor shall comply with the requirements of FAA AC No. 150/5370-2F (or most current issue) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
- "J. Secure, identify, and place any temporary exposed wiring in conduit to prevent electrocution and fire ignition sources."

109 3.11 POWER SUPPLY EQUIPMENT. Add the following to this Section:

Electric Service for Gate Operator. Contractor shall furnish and install electric service entrance for the Gate Operators, as detailed on the Plans and specified herein. As part of the service entrance work, the Contractor shall coordinate with the serving utility, (Commonwealth Edison Company New Business Department Phone: 866-639-3532) the installation of a 120/240 VAC, single-phase, 3-wire service sufficient to handle a 100-Amp service for the gate operators, and associated equipment. **The Airport Owner will pay for all associated electric utility company charges required to provide electric service. The Contractor is not responsible for electric utility company charges associated with the proposed electric service for the gate operators.** The Contractor shall coordinate the new electric service with the serving electric utility company and the Airport Manager. The service entrance shall include, but not be limited to, all service entrance equipment, labor, and materials, as detailed on the Plans and specified herein, in order to provide a complete and operational electrical system.

- "A. **Electric Utility Company:** Major work items to be performed by the serving electric utility company will be as follows:
 - 1. The furnishing and installing of primary electrical equipment and cables.
 - 2. The furnishing of power for a 120/240 VAC, 1-phase, 3-wire secondary service sufficient to handle the loads for a 100 Amp service (60 Amp service should be adequate for the respective gate operator loads).
 - 3. Furnishing and installing the meter.
 - 4. Making final connections to the utility transformer or service drop.
 - 5. The serving electric utility company will retain the right to review and approve Drawings prior to installation.
- "B. **Contractor:** Major work items to be performed by the Contractor shall be as follows: all work, labor, equipment, and materials shall be as detailed on the Plans, specified herein and per the serving electric utility's requirements, where applicable.

1. Furnishing and installing service entrance cables and conduit from the utility transformer to the utility metering equipment. Provide sufficient slack for the utility company to make connections to their equipment.
2. Furnishing and installing service entrance cables and conduit from the utility metering equipment to the service panelboard.
3. Furnishing and installing a new service panelboard as detailed on the Plans and specified herein.
4. Furnishing and installing ground conductors, ground rods, and grounding electrode conductor conduit.
5. Coordinating work with the Airport Manager and/or the Airport Representative.
6. Coordinating work and verifying all requirements with serving electric utility.
7. Additional work as required by the serving electric utility and as required to provide a complete and operational electric service entrance system."

109-3.12 SWITCHGEAR AND PANELS. Add the following to this Section:

- "A. **Installation of Panelboards.** Panelboards shall be thoroughly inspected for physical damage, proper alignment, anchorage, and grounding. The exterior finish shall be inspected for blemishes, nicks, and bare spots and touched up, as required, using matching touch-up paint. Inspections shall be made for proper installation and tightness of connections for circuit breakers. Install panelboards, as shown on the Plans and in accordance with NEMA PB1.1. Maximum distance from floor to highest breaker shall not exceed 6 feet-6 inches. Provide all support hardware for panelboards. Install panelboards plumb. Install circuit breakers in panelboards in conformance with the respective manufacturer's directions. Connect only one wire/cable to each breaker terminal. Provide filler plates for unused spaces in panelboards. Provide typed circuit directory for each branch circuit panelboard to identify the respective device fed by each circuit breaker. Revise directory to reflect circuiting changes, as required. Provide legend plates for all panelboards to identify the panelboard designation, the power source, and the voltage system. Legend plates shall be weatherproof and abrasion-resistant, phenolic material. Lettering shall be black on white background. Panelboards shall be thoroughly tested after installation and connection to respective loads.
- "B. **Surge Protector Device Installation.** Install Surge Protector Devices (SPD) in conformance with of FAA-STD-019d, dated August 9, 2002, "LIGHTNING AND SURGE PROTECTION, GROUNDING, BONDING AND SHIELDING REQUIREMENTS FOR FACILITIES AND ELECTRONIC EQUIPMENT" and the respective manufacturer's directions and recommendations. Contractor shall confirm all connections to the surge arrester (phases, neutral, and ground) are completed and secure. Connection leads to the surge arrester shall be sized per the respective manufacturer's recommendation and as detailed herein, and shall be maintained as short as possible, maximum 2 feet in length, and laced together for mutual coupling. The conduit or conduit nipple connecting the SPD enclosure to the panel enclosure shall be sealed with duct seal or other nonflammable medium to prevent soot from entering the enclosure in the event of a SPD failure.
- "C. **Installation of Safety Switches.** Safety switches shall be provided with appropriate mounting hardware and strut support. Strut support for interior locations shall be hot-dipped, galvanized steel strut support as manufactured by Unistrut, B-Line, or approved equal. Provide zinc rich paint applied to field cuts of strut support to minimize the potential for corrosion per the respective strut support manufacturer's recommendation. Strut support for exterior locations or other wet or damp locations shall be stainless steel strut support as manufactured by Unistrut, B-Line, or approved equal. All hardware shall be corrosion-resistant stainless steel. Mount safety switches securely in accordance with the manufacturer's recommendations/instructions and as required for the respective application. Inspect all safety switches for proper operation, tight and secure connections, and correctness. All safety switch enclosures shall be bonded to ground with a ground lug or bar and ground wire. Field cut holes in safety switch enclosures to accommodate conduit entrances.

Where safety switch enclosures are provided with concentric knockouts, and the respective conduit does not use the largest knockout, install a grounding bushing with ground wire connections between the bushing and the ground bus. Where safety switches enclosures are used for service entrance applications provide a grounding bushing with ground wire connections between the bushing and the ground bus at each metal conduit entry. Do not use safety switch enclosures for a splice box or for a pull box. Do not route control wires or other circuit wiring through a safety switch enclosure. Where splices are required or other control circuit wires are installed in the respective conduit to a safety switch, provide a separate junction box to accommodate the splices and/or other circuit conductors. Provide weatherproof, abrasion-resistant, engraved legend plates for each safety switch noting the device served, the power source, and the voltage system.

109-3.13 DUCT AND CONDUIT. Add the following to this Section:

"A. Conduit shall be installed in accordance with the following:

1. Service conduits associated with the Gate Operator Service Board shall be Schedule 80 PVC and/or galvanized rigid steel conduit as detailed on the Plans.
2. Feeder and branch circuit conduits located above grade shall be galvanized rigid steel conduit.
3. Schedule 40 PVC conduits shall be used for individual grounding electrode conductors and/or bonding jumpers.
4. Liquid-tight, flexible metal conduit shall be used as specified herein.

"B. Conduit Runs

1. All conduits shall be sized as indicated on the Drawings, or if conduit sizes not shown, shall be in accordance with the NEC. All conduit systems shall be mechanically and electrically continuous from source of current to all outlets and grounded in accordance with the NEC.
2. Run all exposed conduit parallel to building walls using right-angle bends. Exposed diagonal runs of conduit will not be permitted. Do not install conduit on roof surfaces unless specifically indicated on the Plans.
3. Ream conduit after threads are cut. Cut ends square, and butt solidly into couplings.
4. Prevent the accumulation of water, foreign matter, or concrete in the conduits during the execution of the work. Temporarily plug conduit, blowout, and swab before wires are pulled.
5. Fasten conduits to all sheet metal boxes and cabinets with two locknuts in accord with NEC, where insulated bushings are used and where bushings cannot be brought into firm contact with the metal enclosures; otherwise, use at least a single locknut and bushing.
6. Seal each underground joint and make water-tight.
7. Where building construction or other conditions make it impossible to use standard threaded couplings, install water-tight, threaded unions.

8. Make changes in direction of runs with symmetrical bends or cast-metal fittings. Make field-made bends and offsets with conduit bending machine to avoid changing the internal diameter of the conduit and not damage its protective coating either inside or outside. Individual bends shall not exceed 90 degrees and not more than 270 degrees total bends will be allowed in any one conduit run. Where more bends are necessary, and conduit runs exceed 150-linear feet, install a suitable pull box or junction box.
9. Provide empty conduits installed with a pull wire. Pull wire shall be No. 14 AWG zinc-coated steel, or of plastic having not less than 200-lb. tensile strength. Leave not less than 12-inch of slack at each end of the pull wire.
10. Use liquid-tight, flexible metal conduit for final connection to motors, constant current regulators, transformers, portable equipment, and for equipment subject to vibration and noise transmission. For each conduit size up to 1-inch trade size, flexible conduit shall be minimum length of 12 inches and a maximum length of 36 inches, and for conduit sizes above 1-inch trade size, flexible conduit shall be minimum length of 20 inches and maximum length of 48 inches. Liquid-tight flexible metal conduit and associated fitting shall be UL listed to meet the requirements of NEC 350.6. Liquid-tight flexible metal conduit that is used for flexibility (including connections to motors, constant current regulators, and transformers) shall require an external bonding jumper or internal equipment grounding conductor per NEC 350.60. Do not install liquid-tight flexible metal conduit that is not UL listed. Confirm liquid-tight flexible metal conduit bears the UL label prior to installation.
11. Provide duct seal at conduit terminations inside enclosures where the respective conduit is from below grade.
12. All enclosures rated NEMA 4, 4X shall have watertight hubs at conduit entrances UL listed NEMA 4, 4X for the respective enclosure to maintain the NEMA 4, 4X rating. Provide NEMA 4 hubs at conduit entrances for equipment rated NEMA 3R to maintain a watertight seal.

"C. Raceway Support and Hangers

1. Securely fasten raceways in-place and support from ceiling or walls at spacing not exceeding:

<u>Material</u>	<u>Maximum Spacing of Supports</u>
a. ½-inch thru 1-inch trade size conduit	6 feet
b. 1¼-inch thru 1½-inch trade size conduit	8 feet
c. 2-inch to 4-inch trade size conduit	10 feet
d. Liquid-Tight, Flexible Metal Conduit	4½ feet
e. Metal Wireway	10 feet

2. Support rigid conduits within 3 feet of every outlet box, junction box, pull box, cabinet, or termination. Support flexible conduit within 12-inch on each side of every outlet box or fitting.
3. Support conduits by pipe straps, wall brackets, hangers, or ceiling trapeze. The use of perforated iron or wire for supporting conduits is prohibited. Fasten with wood screws or screw nails to wood; by toggle bolts on hollow masonry units, by concrete inserts, or expansion bolts on concrete or spring-tension or threaded C-clamps for rigid steel conduits on steel. Do not weld conduits or pipe straps to steel structures unless specifically indicated.

4. The load applied to fasteners shall not exceed one-third the proof test load of the fasteners.
5. Fasteners attached to concrete shall be vibration-resistant and shock-resistant.
6. All screws, bolts, washers, and miscellaneous hardware used for conduit supports shall be fabricated from rust-resisting metal. Trapeze hangers shall have hanger assemblies protected with galvanized finish."

109-3.15 WIRING AND CONNECTIONS. Add the following to this Section:

"High-voltage circuit wiring (airfield lighting 5000 Volt series circuits and/or other circuits rated above 600 Volts) and low-voltage circuit wiring (rated 600 Volts and below) shall maintain separation from each other. High-voltage wiring and low-voltage wiring shall not be installed in the same wireway, conduit, duct, raceway, junction box, handhole, or manhole. Where necessary provide split flexible duct around low voltage cables located in a handhole with high voltage cables, to isolate the cables from possible contact with each other."

109-3.16 MARKING AND LABELING. Add the following to this Section:

- "C. Legend plates shall be provided for all equipment. Legend plates shall be provided to identify the equipment controlled, the power source, and the function of each device. Legend plates shall be weatherproof, abrasion-resistant, phenolic/plastic, engraved material and fastened with contact-type permanent adhesive, screws, or rivets. Installation shall not break, crack, or deform the legend plate. Lettering shall be ¼ inch high, black on a white background, unless noted otherwise.
- "D. Identify control wiring at each termination point and in junction/terminal boxes with wire number corresponding to the respective control wiring diagram or respective terminal numbering arrangement. Each individual control wire shall have unique identification and shall maintain that same identification from its point of origin to its final termination point. Wire markers shall be permanent pressure sensitive label with suitable numbers or letters for easy recognition. Where new control wiring is interfaced to existing control wiring it shall also match the color coding of the existing control wiring.
- "E. Each individual circuit breaker, control panel, terminal panel, safety switch, etc. shall be furnished with a phenolic-engraved legend plate that identifies the respective device, the power source, and the respective voltage, phase, and wire. Furnish additional phenolic-engraved legend plates as detailed on the Plans and/or where required by code.
- "F. Color Coding. Color-code phase and neutral conductor insulation for No. 6 AWG or smaller. Provide colored marking tape for phase and neutral conductors for No. 4 AWG and larger. **Insulated ground conductors shall have green colored insulation for all conductor sizes (AWG and/or KCMIL) to comply with NEC 250.119. Neutral conductors shall have white or gray colored insulation for No. 6 AWG and smaller to meet the requirements of NEC 200.6.** Standard colors for 120/240 VAC single phase, 3-wire system power wiring and branch circuits shall be as follows: Phase A-Black, Phase B-Red, Neutral-White, and Ground-Green.

"G. Furnish and install weatherproof warning label for each cutout enclosure and control panel to warn persons of potential electric arc flash hazards, per the requirements of NEC 110.16 "Flash Protection". Labels shall also conform to ANSI Z535.4-2002 "American National Standard for Product Safety Signs and Labels". NEC 110.16 requires that switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers that are likely to require examination, adjustment, servicing, or maintenance while energized shall be field marked to warn qualified persons of potential arc flash hazards. The markings shall be located so as to be clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment. This new requirement is intended to help reduce the occurrence of serious injury or death due to arcing faults to those working on or near energized electrical equipment. The warning labels are to indicate to a qualified worker who intends to open the equipment for analysis of work that a serious hazard exists and that the worker should follow appropriate work practices and wear appropriate PPE for the specific hazard. Labels shall be as detailed on the Plans or shall include at least the following information: "Warning - Potential Arc-Flash Hazards exist while working on this energized equipment. Appropriate PPE Required.""

109-3.18 TESTING. Delete this Paragraph and replace with the following:

"The installation shall be tested in operation and as a completed unit prior to acceptance. Contractor shall furnish all equipment, meters, instruments, cable connections, tools, manpower, and labor to perform the respective tests. Test all new equipment and all existing equipment where modifications take place and confirm proper operation. Coordinate tests with the respective Airport personnel and the Resident Engineer. Tests shall include resistance, voltage, and current reading, as applicable, for the respective equipment. When tests disclose any unsatisfactory workmanship or equipment furnished under this Contract, correct defects and retest. Repeat tests until satisfactory results are obtained. When any wiring or equipment is damaged by tests, the wiring or equipment shall be repaired or replaced at no additional cost to the Contract. Test repaired or replaced items to ensure satisfactory operation. Submit three copies of all test reports to the Resident Engineer. All test reports shall be assembled and bound in a folder or binder. Each test report shall include the following information:

- Project number,
- Project title and location,
- Device or system tested,
- Test performed,
- Date performed,
- Test equipment used,
- Respective Contractor's name, address, and telephone number,
- Testing firm's name, address, and telephone number, if other than the Contractor,
- Names of individuals performing tests,
- Names of individuals observing tests,
- Statement verifying each test,
- Nameplate data from respective equipment tested,
- Test results, and
- Retest results after correction of defective components or systems, where applicable."

Add:

109-3.19 GROUNDING REQUIREMENTS. Grounding shall conform to the following:

The Contractor shall furnish and install all grounding shown on the Plans and/or as may be necessary or required to make a complete grounding system, as required by the latest NEC (NFPA 70) in force. The reliability of the grounding system is dependent on careful, proper installation, and choice of materials. Improper preparation of surfaces to be joined to make an electrical path, loose joints, or corrosion can introduce impedance that will seriously impair the ability of the ground path to protect personnel and equipment and to absorb transients that can cause noise in communications circuits. The following functions are particularly important to ensure a reliable ground system:

- A. All products associated with the grounding system shall be UL-listed and labeled.
- B. All bolted or mechanical connections shall be coated with a corrosion preventative compound before joining, Sanchem Inc. "NO-OX-ID "A-Special" compound, Burndy Penetrox E, or approved equal.
- C. Metallic surfaces to be joined shall be prepared by the removal of all non-conductive material, per 2014 NEC, Article 250.12. All copper bus bars must be cleaned prior to making connections to remove surface oxidation.
- D. Metallic raceway fittings shall be made up tight to provide a permanent low impedance path for all circuits. Metal conduit terminations in enclosures shall be bonded to the enclosure with UL-listed fittings suitable for grounding. Provide grounding bushings with bonding jumpers (from bushing to the respective ground connection/enclosure frame) for all metal conduits entering service equipment (meter bases, CT cabinet, service disconnects, service panelboards, main service breaker enclosure, etc.). Provide grounding bushings with bonding jumpers for all metal conduits entering an enclosure through concentric or eccentric knockouts that are punched or otherwise formed so as to impair the electrical connection to ground. Standard locknuts or bushings shall not be the sole means for bonding where a conduit enters an enclosure through a concentric or eccentric knockout.
- E. Furnish and install ground rods at all locations where shown on the Plans or specified herein. Ground rods shall be 3/4-in. diameter, 10 ft. long, UL-listed, Copper-clad. Longer ground rods shall be provided where detailed on the Plans. Ground rods shall have 10 mils minimum Copper coating. Top of ground rods shall be a minimum of 30 in. below finish grade unless otherwise noted on the Plans. Ground rods shall be spaced, as detailed on the Plans, and in no case spaced less than one-rod length apart. All connections to ground rods and/or ground rings shall be made with exothermic weld type connectors, Cadweld by Erico Products, Inc., Solon, Ohio, (Phone 1-800-248-9353), Thermoweld by Continental Industries, Inc., Tulsa, Oklahoma (Phone 918-663-1440) or Ultraweld by Harger, Grayslake, Illinois (Phone 1-800-842-7437), or approved equal. Exothermic weld connections shall be installed in conformance with the respective manufacturer's directions using molds as required for each respective application. Bolted connections will not be permitted at ground rods or at buried grounding electrode conductors. Grounding electrode conductors shall be bare Copper (stranded or solid) sized, as detailed on the Plans. In addition to the grounding work described herein and shown on the Plans, the Contractor shall test the made electrode ground system with an instrument specifically designed for testing ground systems. If ground resistance **exceeds 25 Ohms**, contact the Project Engineer for further direction. Copies of ground system test results shall be furnished to the Resident Engineer.

- F. All connections located above grade between the different types of grounding conductors shall be made using UL-listed, double-compression, crimp-type connectors or UL-listed, bolted ground connectors. For ground connections to enclosures, cases, and frames of electrical equipment not supplied with ground lugs, the Contractor shall drill required holes for mounting a bolted ground connector. All bolted ground connectors shall be Burndy, Thomas and Betts, or equal. Tighten connections to comply with tightening torques in UL Standard 486A to assure permanent and effective grounding.
- G. All metal equipment enclosures, conduits, cabinets, boxes, receptacles, etc. shall be bonded to the respective grounding system. Provide grounding bushings at all conduits entering service entrance equipment (meter bases, service disconnects, service panelboards, etc.) and distribution panels or load centers and ground wire from bushing to ground bus in the respective service entrance equipment or distribution panel.
- H. Each feeder circuit and/or branch circuit shall include an equipment ground wire. Metal raceway or conduit shall not meet this requirement. The equipment ground wire from equipment shall not be smaller than allowed by 2014 NEC Table 250.122 "Minimum Size Conductors or Grounding Raceway and Equipment." When conductors are adjusted in size to compensate for voltage drop, equipment-grounding conductors shall be adjusted proportionately according to circular mil area. All equipment ground wires shall be copper, either bare or insulated, and green in color. Where the equipment grounding conductors are insulated, they shall be identified by the color green, and shall be the same insulation type as the phase conductors.
- I. Bond the main electrical service neutral to ground at the main service disconnect. Bond the service neutral to ground at one location only per the NEC. A grounding connection shall not be made to any neutral circuit conductor on the load side of the service disconnecting means, except as permitted by the 2014 NEC, Article 250.24.
- J. The secondary neutral of all transformers (separately derived system transformers) shall be grounded in accordance with the NEC. The respective grounding electrode conductor shall be connected to the neutral point of the transformer between the transformer and the output disconnect means. Size of the grounding electrode conductor shall be in accordance with the 2014 NEC, Article 250.66 and Table 250.66, unless shown larger on the Drawings. A bond shall be provided between the neutral and transformer case, or other metal that is part of the AC equipment grounding system, so as to complete a circuit for fault current to the transformer winding from the AC equipment grounding system. Size of the neutral bonding conductor shall be in accordance with the 2014 NEC, Article 250.102.
- K. All exterior metal conduits, where not electrically continuous because of manholes, handholes, non-metallic junction boxes, etc., shall be bonded to all other metal conduit in the respective duct run and at each end with a copper-bonding jumper sized in conformance with the 2014 NEC, Article 250.102. Where metal conduits terminate in an enclosure (such as a motor control center, switchboard, etc) where there is not electrical continuity with the conduit and the respective enclosure, provide a bonding jumper from the respective enclosure ground bus to the conduit sized per the 2014 NEC, Article 250.102.
- L. Install grounding electrode conductors and/or individual ground conductors in Schedule 40 or Schedule 80 PVC conduit. Where grounding electrode conductors or individual ground conductors are run in PVC conduit, **do not** completely encircle conduit with ferrous and/or magnetic materials. Use non-metallic, reinforced fiberglass strut support. Where metal conduit clamps are installed, use nylon bolts, nuts, washers, and spacers to interrupt a complete metallic path from encircling the conduit.

- M. Individual ground conductors and/or grounding electrode conductors shall not be run in metallic conduit and shall not be encircled by metallic clamps. If local codes dictate that grounding conductors must be run in metal conduit or raceway, then the conduit or raceway must be bonded to the grounding conductor at both ends with a bonding jumper sized in accordance with the NEC 250.64(E). All such installations requiring individual grounding conduits to be run in metal conduit or raceway shall be verified and reviewed with the Resident Engineer. This does not apply to AC equipment ground wires run with AC circuits.

Add:

- 109-3.20 RESTORATION. Any and all trenches and disturbed areas will be backfilled and restored to a smooth grade and seeded to the satisfaction of the Engineer. All trench settlement or disturbed areas shall be corrected for a period of one year. Restoration, grading, and seeding of areas disturbed during the installation of the proposed vault work and/or vault removal work will be incidental to the respective 109 Pay Item.

METHOD OF MEASUREMENT

- 109-4.1 Delete this Section.
- 109-4.2 Delete this Section.
- 109-4.3. Add the following to this Section:

"The quantity of equipment to be paid for under AR109535 "Electric Service Entrance" shall consist of furnishing and installing new electric service from the respective utility transformer secondary or service drop location to the respective electric utility meter base and an electric utility meter pedestal, service panelboard, surge protective device, support structure and associated conduits, wiring, grounding and incidentals to power the electric gate operator(s) and/or other equipment as detailed on the Plans and specified herein. This item shall include all labor, field verification of existing conditions, transportation, equipment, materials, conductors, connectors, conduits, raceways, junction boxes, grounding, tools, coordination, operational instructions, labeling, testing and all incidentals required to place service and power distribution system and associated equipment into proper working order as a completed unit to the satisfaction of the Owner and Engineer."

BASIS OF PAYMENT

- 109-5.1 Add the following:

"Payment will be made under:

"Item AR109535 Electric Service Entrance - per lump sum."

ITEM 110

INSTALLATION OF AIRPORT UNDERGROUND ELECTRICAL DUCT

Revise Item 110 of the Standard Specifications as follows:

DESCRIPTION

110-1.1 Add the following:

"This item of work shall consist of the installation of all proposed conduits and ducts as shown on the Construction Plans."

Add:

110-1.2 REFERENCES

- A. ANSI C80.1 - Rigid Steel Conduit, Zinc Coated.
- B. ANSI C80.4 - Fittings Rigid Metal Conduit and EMT.
- C. ASTM D3350 - Specification of Polyethylene Plastics Pipe and Fittings Materials.
- D. ASTM F2160 - Standard Specification for Solid Wall, High-Density Polyethylene Conduit Based on Controlled Outside Diameter.
- E. NEMA TC-2 - Electrical Plastic Tubing and Conduit.
- F. NEMA TC-3 - Fittings Rigid PVC Conduit and Tubing.
- G. NEMA Specification TC-7 - Smooth-Wall Coilable Polyethylene Electrical Plastic Conduit.
- H. NFPA 70 - National Electrical Code (NEC), most current issue in force.
- I. UL Standard 6 - Rigid Metal Conduit.
- J. UL Standard 514B - Conduit, Tubing and Cable Fittings.
- K. UL Standard 651 - Schedule 40 and 80 Rigid PVC Conduit.
- L. UL Standard 651B - Standard for Continuous Length High-Density Polyethylene (HDPE) Conduit.
- M. Requirements of the serving electric utility company.

Add:

110-1.3 SHOP DRAWINGS. The Contractor shall furnish shop drawings for approval before ordering equipment and/or materials. Shop drawings are required for each type of conduit or duct to be used on the project.

Note: Shop drawings that are submitted that do not include all of the following listed requirements will be rejected and will require resubmittal. Contractor shall use the following as a check list and shall verify all information noted below is included with the shop drawing prior to submitting the shop drawing for review. Shop drawings shall be clear and legible. Copies that are illegible will be rejected.

Contractor shall submit sufficient copies of shop drawings to meet the needs of his personnel, sub-contractor personnel, and equipment suppliers plus four (4) copies to be retained by the Project Engineer. Shop drawings shall include the following information:

- A. Certification of compliance with the AIP (Airport Improvement Program) Buy American Act Title 49 USC Section 50101 for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) or NAFTA (North American Free Trade) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Shop drawings submitted without certification of compliance with the Airport Improvement Program Buy American Preferences or without certification of manufacture in the United States of America in accordance with the AIP Buy American Requirements will be rejected. See the FAA website at: http://www.faa.gov/airports/aip/buy_american/ for more information on the Airport Improvement Program Buy American Preferences requirements. FAA approved equipment that is on the FAA Buy American Conformance List or the list of Nationwide Buy American Waivers Issued by the FAA complies with the AIP Buy American Preferences and will not require additional waiver paperwork for AIP projects.
- B. In order to expedite the shop drawing review, inspection and/or testing of materials and equipment, the Contractor shall furnish complete statements to the Project Engineer as to the origin and manufacturer of all materials and equipment 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 and equipment.
- C. Indicate the pay item number for each respective conduit or duct.
- D. Shop drawings shall include conduit and/or duct cut sheets with type, size, specifications, UL listing, manufacturer, and catalog or part number.
- E. Provide certification that the respective steel conduits used on this project are manufactured from 100 percent domestic steel.
- F. Provide certification that the respective plastic conduits used on this project are manufactured from domestic materials.

EQUIPMENT AND MATERIALS

110-2.1 GENERAL. Add the following:

"All materials for these items shall be in accordance with the FAA Standard Specification 110 Equipment and Materials, as detailed on the Plans, and as specified herein. The duct to be directional-bored shall be Schedule 40 PVC Conduit, Schedule 80 PVC Conduit or High-Density Polyethylene (HDPE) duct, (Schedule 40, Schedule 80, SDR 9, SDR 11, or SDR 13.5). Where Galvanized Rigid Steel Conduit is noted to be installed on the Plans, plastic conduit will not be permitted as an alternative conduit or duct."

110-2.2 STEEL CONDUIT. Replace this Section with the following:

"Rigid Steel Conduit and fittings shall be hot-dipped, galvanized, UL-listed, and produced in accordance with UL Standard 6 - Rigid Metal Conduit and ANSI C80.1 - Rigid Steel Conduit, Zinc Coated. Couplings, connectors, and fittings for rigid steel conduit shall be threaded, galvanized steel or galvanized, malleable iron, specifically designed and manufactured for the purpose. Fittings shall conform to ANSI C80.4 - Fittings Rigid Metal Conduit and EMT and UL 514B - Conduit, Tubing, and Cable Fittings. Set screw type fittings are not acceptable. Steel used to manufacture conduits shall be 100 percent domestic steel. Contractor shall provide certification that the respective steel conduits used on this project are manufactured from 100 percent domestic steel.

"Miscellaneous Fittings. Fittings shall be suitable for use with conduits and ducts supplied. All fittings for use with rigid metal conduit shall be threaded. Set screw-type fittings are not acceptable. All conduit bodies, fittings, and boxes installed in classified hazardous locations (Class I, Division 1 or 2, Group D) shall be suitable for use in Class I, Division 1, and Group D locations. Fittings shall be as manufactured by Appleton, Crouse-Hinds, Hubbell-Killark, O-Z/Gedney, or approved equal."

110-2.3 PLASTIC CONDUIT. Add the following to this Section:

"Conduits shall be suitable for underground applications encased in concrete or direct burial, and suitable for exposed applications aboveground.

"A. Conduits for concrete encasement shall be Schedule 40 PVC, UL-listed or ETL listed rated for 90°C cable, conforming to NEMA Standard TC-2 and UL 651, listed suitable for concrete encasement or Schedule 40 (minimum) HDPE conduit, UL-listed, conforming to NEMA Standard TC-7 and UL 651B and listed suitable for concrete encasement.

"B. Conduits for directional boring shall be Schedule 40 PVC or Schedule 80 PVC conduit, UL-listed, rated for 90°C cable, conforming to NEMA Standard TC-2 and UL 651 and suitable for directional boring installation, Schedule 40 HDPE or Schedule 80 HDPE conduit, UL-listed, conforming to NEMA Standard TC-7 and UL 651B and suitable for directional boring installation, or Wall Type SDR 9, SDR 11, or SDR 13.5 HDPE conduit manufactured in accordance with ASTM D-3350 (Specification of Polyethylene Plastics Pipe and Fittings Materials) and ASTM F2160 (Standard Specification for Solid Wall, High-Density Polyethylene Conduit Based on Controlled Outside Diameter), and suitable for directional boring installation. **Per NEC 300.5 (K), raceways installed using directional boring equipment shall be approved for the purpose. Provide manufacturer's literature confirming the respective duct is suitable for directional boring with the respective Shop Drawing submittal.**

"C. Conduits for direct burial in earth shall be PVC Schedule 40 (minimum wall thickness), UL-listed, rated for 90°C cable, conforming to NEMA Standard TC-2 and UL 651, listed suitable for direct burial in earth, or HDPE Schedule 40 (minimum wall thickness), conforming to NEMA Standard TC-7 and UL 651B, or HDPE SDR 13.5 (minimum wall thickness) manufactured in accordance with ASTM D-3350 (Specification of Polyethylene Plastics Pipe and Fittings Materials) and ASTM F2160 (Standard Specification for Solid Wall, High-Density Polyethylene Conduit Based on Controlled Outside Diameter). Conduits shall be suitable for direct burial in earth and/or concrete encasement."

CONSTRUCTION METHODS

110-3.1 GENERAL. Add to this Section:

"The proposed conduits and ducts shall be constructed at the locations and in accordance with the details shown on the Construction Plans. Ducts shall be installed 18 in. minimum below grade. Ducts located in area subject to farming shall be 42 in. minimum below grade. Direct bury ducts to located under pavements shall be installed 42 in. minimum below finished grade. Where detailed on the Plans or where required to avoid obstructions, ducts shall be buried deeper. Where concrete-encased duct interfaces to directional-bored duct at a pavement crossing, the concrete encasement shall be installed up to the respective pavement edge. Where concrete-encased duct interfaces to an electrical handhole or manhole, the concrete encasement shall be installed up to the respective handhole or manhole. Provide bushings or bells at conduit terminations in electrical handholes or manholes.

"Underground ducts installed by directional-boring method shall be installed in a manner that will not damage any existing underground utilities, and shall not disturb or damage the respective pavement or roadway surface. Ducts shall be directional-bored at the locations shown on the Construction Plans. The ducts will be bored at a minimum depth of 24 in. below the bottom of the pavement it is being bored under. Ducts installed under paved areas and roadways shall extend a minimum of 10 ft. beyond the respective pavement or roadway surface unless detailed otherwise on the Plans. A pull wire will be left in the conduit if it is to be left vacant. The ends of the conduit will be sealed with approved plugs.

"Ducts indicated to be installed by direct burial method may be installed by plowing or directional boring where the respective duct is rated suitable for the respective installation method.

"The Contractor will determine if there is a conflict between the installation of the proposed electrical ducts and any existing utilities. He will make all necessary adjustments in depth of installation to avoid any and all proposed underground improvements."

110-3.7 RESTORATION. Add the following to this Section:

"Any and all trenches and disturbed areas will be backfilled and restored to a smooth grade and seeded to the satisfaction of the Engineer. All trench settlement shall be corrected for a period of one year. Restoration, grading, and seeding of areas disturbed during the installation of the proposed ducts will be incidental to the respective pay item for which the duct is installed. The seeding will be completed in accordance with Items 901 and 908, but will be incidental to the respective pay item for which the duct is installed.

"Any and all disturbed pavement areas will be restored to original or better condition. Restoration of pavement areas disturbed during the installation of the proposed ducts will be incidental to the respective pay item for which the duct is installed."

Add:

110-3.8 LOCATING EXISTING UNDERGROUND UTILITIES AND CABLES. The location, size, and type of material of existing underground and/or aboveground utilities indicated on the Plans are not represented as being accurate, sufficient, or complete. Neither the Owner nor the Engineer assumes any responsibility whatever in respect to the accuracy, completeness, or sufficiency of the information. There is no guarantee, either expressed or implied, that the locations, size, and type of material of existing underground utilities indicated are representative of those to be encountered in the construction. It shall be the Contractor's responsibility to determine the actual location of all such facilities, including service connections to underground utilities.

Prior to construction, the Contractor shall notify the utility companies of his operational plans, and shall obtain from the respective utility companies detailed information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment, where required. In the event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner's Representative and/or the Resident Engineer shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract.

All utility cables and lines shall be located by the respective utility. **Contact JULIE (Joint Utility Location Information for Excavators) for utility information, phone: 1-800-892-0123.** Contact the FAA (Federal Aviation Administration) for assistance in locating FAA cables and utilities. Location of FAA power, control, and communication cables shall be coordinated with and/or located by the FAA. Also contact Airport Manager and Airport Personnel for assistance in locating underground Airport cables and/or utilities. Also coordinate work with all aboveground utilities.

Contractor shall locate and mark all existing cables within ten (10) feet of proposed excavating/trenching area. Any cables found interfering with proposed excavation or cable/trenching shall be hand dug and exposed. Any damaged cables shall be immediately repaired to the satisfaction of the Resident Engineer at the Contractor's expense. The Resident Engineer and Owner shall be notified immediately if any cables are damaged.

Payment for locating and marking underground utilities and cables will not be paid for separately, but shall be considered incidental to the respective duct installation.

Add:

110-3.9 SEPARATION OF HIGH-VOLTAGE AND LOW-VOLTAGE WIRING. High-voltage circuit wiring (airfield lighting 5000 Volt series circuits and/or other circuits rated above 600 Volts) and low-voltage circuit wiring (rated 600 Volts and below) shall maintain separation from each other. High-voltage wiring and low-voltage wiring shall not be installed in the same wireway, conduit, duct, raceway, handhole, or junction box.

METHOD OF MEASUREMENT

110-4.1 Delete this Section.

110-4.2 Delete this Section.

Add:

110-4.3 The quantity of conduit and/or duct for the electric slide gates and/or gate operator(s) shall not be measured for payment. This shall be incidental to the respective electric gate installation (including, but not limited to, Item AR162726 Electric Gate -26', or other electric gate installation) and shall include furnishing all materials and for all preparation, assembly, and installation of these materials; for all sawing and pavement removal; and for all excavation and backfilling with aggregate backfill, earth backfill and concrete; for all duct interface work to handholes/manholes including coring of handholes/manholes; and for all labor, equipment, tools, and incidentals necessary to complete the installation.

The quantity of conduit and/or duct for the electric service work shall not be measured for payment. This shall be incidental to the respective item for which it is installed (including, but not limited to AR109535 Electric Service Entrance, or other electric service work) and shall include furnishing all materials and for all preparation, assembly, and installation of these materials; for all sawing and pavement removal; and for all excavation and backfilling with aggregate backfill, earth backfill and concrete; for all duct interface work to handholes/manholes including coring of handholes/manholes; and for all labor, equipment, tools, and incidentals necessary to complete the installation.

BASIS OF PAYMENT

110-5.1 Delete this Section

Add:

110-5.2 Payment for the furnishing and installation of conduit and/or duct for the electric slide gates and/or gate operator(s) shall not be measured for payment and shall be incidental to the respective electric gate installation (including, but not limited to Item AR162726 Electric Gate -26', or other electric gate installation), and no additional compensation will be made. For each respective electric gate installation, all costs for furnishing all materials and for all preparation, assembly, and installation of these materials; for all sawing and pavement removal; for all duct interface work to handholes/manholes including coring of handholes/manholes; for all boring and equipment; for all excavation and backfilling with aggregate backfill, earth backfill, and concrete; and for all labor, equipment, tools, and incidentals necessary to complete this item is considered incidental to the item of work for which the duct is being installed.

Payment for the furnishing and installation of conduit and/or duct for the electric service work shall not be measured for payment and shall be incidental to the respective item for which it is installed (including, but not limited to AR109535 Electric Service Entrance, or other electric service work), and no additional compensation will be made. For each respective installation, all costs for furnishing all materials and for all preparation, assembly, and installation of these materials; for all sawing and pavement removal; for all duct interface work to handholes/manholes including coring of handholes/manholes; for all boring and equipment; for all excavation and backfilling with aggregate backfill, earth backfill, and concrete; and for all labor, equipment, tools, and incidentals necessary to complete this item is considered incidental to the item of work for which the duct is being installed.

DIVISION VII

TESTING

ITEM 611

COMPACTION CONTROL TESTS

The Work shall be provided in accordance with Item 611 of the Standard Specifications.

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(END OF SPECIAL PROVISIONS)



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