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Letting January 17, 2020

Notice to Bidders, Specifications and Proposal



**Illinois Department
of Transportation**

Springfield, Illinois 62764

**Contract No. CO067
Coles County Memorial Airport
Mattoon, Illinois
Coles County
Illinois Project No. MTO-4752
SBG Project No. 3-17-SBGP-159**



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 January 17, 2020, 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. CO067
Coles County Memorial Airport
Mattoon, Illinois
Coles County
Illinois Project No. MTO-4752
SBG Project No. 3-17-SBGP-159**

Phase 2: Reconstruct Taxiway B

For engineering information, please contact Kyle B. Schweizer, P.E. of Hanson Professional Services, Inc. at 217.747.9219.

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 within 90 calendar days 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 6.0%.

7. **SPECIFICATIONS AND DRAWINGS.** The work shall be done in accordance with the Illinois Standard Specifications for Construction of Airports, the Special Provisions dated November 15, 2019, and the Construction Plans dated November 15, 2019 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 109 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

Omer Osman,
Acting Secretary

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: March 2, 2019

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 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 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, in the absence of unlawful discrimination and in an arena of fair and open competition, DBE companies can be expected to perform 6.0% 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 enough DBE participation has been obtained to meet the goal or,
- (b) The bidder documents 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 a material bidding requirement and failure of the bidder to comply will render the bid not responsive.

The bidder shall submit a DBE Utilization Plan (form SBE 2026), and a DBE Participation Statement (form SBE 2025) for each DBE company proposed for the performance of work to achieve the contract goal, with the bid. If the Utilization Plan indicates the contract goal will not be met, documentation of good faith efforts shall also be submitted. 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. The required forms and documentation must be submitted as a single .pdf file using the "Integrated Contractor Exchange (iCX)" application within the Department's "EBids System".

The Department will not accept a Utilization Plan if it does not meet the bidding procedures set forth herein and the bid will be declared not responsive. In the event the bid is declared not responsive, 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.

GOOD FAITH EFFORT PROCEDURES. The contract will not be awarded until the Utilization Plan is approved. All information submitted by the bidder must be complete, accurate and adequately document enough DBE participation has been obtained or document the 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. This means 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 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 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 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 the 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 it is otherwise eligible for award. If the Department determines 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 will also include a statement of reasons for the adverse 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 to cure the deficiency.

(c) The bidder may request administrative reconsideration of an adverse determination by emailing the Department at "DOT.DBE.UP@illinois.gov" within the five calendar days after the receipt of the notification of the determination. The determination shall become final if a request is not made on or before the fifth calendar day. 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 reviewed by the Department's Reconsideration Officer. The Reconsideration Officer will extend an opportunity to the bidder to meet in person 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 reconsideration, 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 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 it 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 or 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 emailed to the Department at DOT.DBEP@illinois.gov.

(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, a new Request for Approval of Subcontractor will not be required. However, the Contractor must document efforts to assure 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 copies of DBE subcontracts to the Department 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) 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) The DBE is aware 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) 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 Contractor;
- (3) The listed DBE subcontractor fails or refuses to meet the 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) The Contractor has determined the listed DBE subcontractor is not a responsible contractor;
- (7) The listed DBE subcontractor voluntarily withdraws from the projects and provides written notice to the Contractor 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 Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE contractor was engaged or so that the 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 will provide a written determination to the Contractor stating whether or not good faith efforts have been demonstrated.

(f) FINAL PAYMENT. 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 30 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 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

Effective: November 2, 2017

Revised: April 1, 2019

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 seven days prior to the subcontractor starting work. The amount paid shall be at the following percentage of the amount of the subcontract reported on form AER 260A submitted for the approval of the subcontractor's work.

Value of Subcontract Reported on Form AER 260A	Mobilization Percentage
Less than \$10,000	25%
\$10,000 to less than \$20,000	20%
\$20,000 to less than \$40,000	18%
\$40,000 to less than \$60,000	16%
\$60,000 to less than \$80,000	14%
\$80,000 to less than \$100,000	12%
\$100,000 to less than \$250,000	10%
\$250,000 to less than \$500,000	9%
\$500,000 to \$750,000	8%
Over \$750,000	7%

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

Effective: November 2, 2017

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. If reasonable cause is asserted, written notice shall be provided to the applicable subcontractor and/or material supplier and the Engineer within five days of the Contractor receiving payment. The written notice shall identify the contract number, the subcontract or material purchase agreement, a detailed reason for refusal, the value of payment being withheld, and the specific remedial actions required of the subcontractor and/or material supplier so that payment can be made.

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 SUBCONTRACTOR AND DBE PAYMENT REPORTING (BDE)

Effective: April 2, 2018

Subcontractor and Disadvantaged Business Enterprise Payment Reporting

The Contractor shall report all payments made to the following parties:

- (a) first tier subcontractors;
- (b) lower tier subcontractors affecting disadvantaged business enterprise (DBE) goal credit;
- (c) material suppliers or trucking firms that are part of the Contractor's submitted DBE utilization plan.

The report shall be made through the Department's on-line subcontractor payment reporting system within 21 days of making the payment.

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

Effective: February 1, 1969

Revised: January 1, 2017

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 (in accordance with 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 109 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.

APPENDIX A – FEDERAL AVIATION ADMINISTRATION (FAA) REQUIRED CONTRACT PROVISIONS

A1 ACCESS TO RECORDS AND REPORTS

A1.1 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 SOLICITATION 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 - IL - Macon	7.6
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,	11.4

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

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 Mattoon, Illinois; Coles County.

A3 BREACH OF CONTRACT TERMS

A3.1 CONTRACT CLAUSE

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.

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 written notice that describes the nature of the breach and corrective actions the Contractor 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 must correct the breach. Owner may proceed with termination of the contract if the Contractor 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 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 CONTRACT CLAUSE

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.

A6 CIVIL RIGHTS – TITLE VI ASSURANCE

A6.1 CONTRACT CLAUSE

A6.1.1 Title VI Solicitation Notice

Title VI Solicitation Notice:

The Coles County Airport Authority, 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.

A6.1.2 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.

A6.1.3 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 CONTRACT CLAUSE

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

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 CONTRACT CLAUSE

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

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 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 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 CONTRACT CLAUSE

A11.1.1 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.

A11.1.2 Lower Tier Contract Certification

CERTIFICATION OF LOWER TIER CONTRACTORS REGARDING DEBARMENT

The successful bidder, by administering each lower tier subcontract that exceeds \$25,000 as a "covered transaction", must 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 REQUIRED PROVISIONS

A12.1.1 Solicitation Language (Solicitations that include a 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.

A12.1.2 Solicitation Language (Race/Gender Neutral Means)

The requirements of 49 CFR part 26 apply to this contract. It is the policy of the Coles County Airport Authority 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.

A12.1.3 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 Department of Transportation-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 Owner deems appropriate, which may include, but is not limited to:

- 1) Withholding monthly progress payments;
- 2) Assessing sanctions;
- 3) Liquidated damages; and/or
- 4) Disqualifying the Contractor from future bidding as non-responsible.

A13 DISTRACTED DRIVING

A13.1 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 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 MANDATORY CONTRACT CLAUSE

A15.1.1 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.

A15.1.2 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 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 has full responsibility to monitor compliance to the referenced statute or regulation. The contractor 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 CONTRACT CLAUSE

This provision is required for all contracts that exceed \$100,000.

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 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 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 (29 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 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 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 CONTRACT CLAUSE

A22.1.1 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 TAX DELINQUENCY AND FELONY CONVICTIONS

A23.1 CONTRACT CLAUSE

CERTIFICATION OF OFFERER/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

Certifications

- 1) The applicant represents that it is not a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
- 2) The applicant represents that it is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

Note

If an applicant cannot comply with either of the above representations, the applicant is ineligible to receive an award unless the sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The applicant therefore must provide information to the owner about its tax liability or conviction to the Owner, who will then notify the FAA Airports District Office, which will then notify the agency's SDO to facilitate completion of the required considerations before award decisions are made.

The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Term Definitions

Felony conviction: Felony conviction means a conviction within the preceding twenty-four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. § 3559.

Tax Delinquency: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

A24 TERMINATION OF CONTRACT

A24.1 CONTRACT CLAUSE

A24.1.1 Termination for Convenience

Termination for Convenience (Construction & Equipment Contracts)

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

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

Owner agrees to pay Contractor for:

- 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.

A24.1.2 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.

A25 TRADE RESTRICTION CERTIFICATION

A25.1 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 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.

A26 VETERAN'S PREFERENCE

A26.1 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

PHASE 2: RECONSTRUCT TAXIWAY B

Illinois Project No.: MTO-4752
Block Grant Project No.: 3-17-SBGP-159

Coles County Memorial Airport
Mattoon, Illinois

Prepared by:



Kyle B. Schweitzer

11-15-2019

Lic. Exp. 11-30-2021



Engineering | Planning | Allied Services

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November 15, 2019



Kevin N. Lightfoot
11-15-2019

EXPIRES: 11-30-2021
COVERING ELECTRICAL
DESIGN

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FOREWORD

These Special Provisions, together with applicable Standard Specifications, 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 (IDA) for the following improvement project at the Coles County Memorial Airport, Mattoon, Illinois including the following:

SCOPE OF WORK

The project will consist of reconstructing the eastern portion of Taxiway B and a small portion of Runway 6-24 through rubblization of the existing pavement for a direct HMA overlay. The project will also include relocating the portion of Taxiway C that connects the main apron to Taxiway B.

GOVERNING SPECIFICATIONS AND RULES AND REGULATIONS

The Standard Specifications for Construction of Airports, Illinois Department of Transportation, Division of Aeronautics, adopted April 1, 2012, shall govern the project, except as otherwise revised or noted in these Special Provisions. All references to IDOT Specifications refer to Standard Specifications for Road and Bridge Construction, Illinois Department of Transportation, adopted April 1, 2016, as revised. In the event of inconsistencies between the Standard Specifications and the Special Provisions, the Special Provisions shall govern.

REFERENCES

The following Federal Aviation Administration Advisory Circulars are referenced on the Plans and/or Special Provision Specifications in regard to safety on airports. These Advisory Circulars are available on the FAA web site at http://www.faa.gov/regulations_policies/advisory_circulars

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

- A. FAA AC No. 70/7460-1 (current issue in effect) Obstruction Marking and Lighting.
- B. FAA AC No. 150/5210-5 (current issue in effect) Painting, Marking, and Lighting of Vehicles Used on an Airport.
- C. FAA AC No. 150/5300-13 (current issue in effect) AIRPORT DESIGN.
- D. FAA AC No. 150/5370-2 (current issue in effect) Operational Safety on Airports During Construction.

END OF FOREWORD

DIVISION I – GENERAL PROVISIONS

SECTION 40. SCOPE OF WORK

Section 40 of the Standard Specifications is modified as outlined below.

40-05 MAINTENANCE OF TRAFFIC. Add the following paragraph to this section:

Construction of the project shall be performed in accordance with the guidelines specified in FAA Advisory Circular 150/5370-2 (current issue). Any Contractor activities required for Project safety shall be provided by the Contractor and incidental to the Contract.

Add the following:

40-09 SAFETY PLAN COMPLIANCE DOCUMENT. The Contractor shall consult with the Airport Manager and the Resident Engineer in arranging his construction operations. The Airport Manager will at all times have jurisdiction over the safety of air traffic during construction. Wherever the safety of air traffic during construction is affected, his decisions as to methods, procedures and measures used shall be final, and any and all Contractors performing work must be governed by said decisions.

The Airport Director shall retain the authority to change the phasing of the work and/or the sequence of construction.

The Contractor shall not have access to any part of the active airfield (runway, taxiway or apron) for all equipment or personnel without the approval of the Resident Engineer. The Contractor will erect signs stating Construction Access Only and Construction Exit Route at all gates or areas where they are gaining access/egress to/from the airfield. These signs will be provided to help keep the public off the airfield. The Contractor shall be responsible for coordinating all hauling and access on City, township or county roads with the agency responsible for the roadway.

To maintain airport operations and to facilitate the construction of the proposed work, the project has been divided into separate phases in accordance with FAA Advisory Circular 150/5370-2 (Latest Edition) Operational Safety on Airports During Construction. References to Construction Safety and Phasing Plans (CSPP) in that document shall be interpreted to mean the phase limits, barricade locations, access points and notes shown on the construction activity plan sheets included in the as-bid contract documents. When safety is used or referred to in the contract documents and in the Advisory Circular(s) (AC) it shall be redefined by this contract as meaning operational safety. The CSPP establishes the airport and project specific requirements, supplementing the requirements in the AC, that are to be included in the Contractor's bid for maintaining operational safety during construction.

The CSPP contained herein has been approved by both the Airport, Department and FAA. The Contractor shall be required to divide the overall work into separate phases in substantial conformance with the CSPP shown in the plans, except as allowed by the contract documents and approved by the Department on behalf of the FAA. Durations specified for individual phases shall become requirements of the contract and shall be subject to liquidated damages.

Prior to the preconstruction conference, the Contractor shall submit a Safety Plan Compliance Document (SPCD) to the Airport describing how he will comply with the requirements of the Advisory Circular plus the CSPP and supplying any details that could not be determined before contract award. The SPCD must include a certification statement by the Contractor that indicates he understands the operational safety requirements of the CSPP, that the Contractor has incorporated these requirements into their overall work plan and that the Contractor will maintain the right of control for all means, methods and details of the work performed by the

Contractor and any of his subcontractors within the framework of the operational safety plan. The SPCD must be reviewed, approved and signed by the Airport Sponsor.

The Contractor shall be fully aware and continuously monitor all requirements and activities for compliance with the contract documents and the FAA Advisory Circular 150/5370-2 (Latest Edition).

Ten (10) days prior to the commencement of each phase, the Contractor shall submit an updated Safety Plan Compliance Document for that phase that meets the requirement of the FAA Advisory Circular 150/5370-2 (Latest Edition). The updated Safety Plan Compliance Document(s) shall detail implementation of the construction haul routes, procedures utilized by the Contractor to eliminate conflicts between construction operations and aircraft traffic shall be included.

Significant changes to the CSPP may require aeronautical review by the Department through the FAA's Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) System. Modification of the CSPP and/or the critical points shown in the contract documents will require airspace approval from the Department and/or the FAA and may require the Contractor to submit FAA Form 7460 for approval.

The Contractor shall not be entitled to any extra compensation due to delays or inconveniences caused by said necessary methods, procedures, and measured to protect air traffic.

END OF SECTION 40

SECTION 50. CONTROL OF WORK

Section 50 Control of Work is modified as outlined below.

50-06 CONSTRUCTION LAYOUT STAKES. Revise the first paragraph to read:

The Contractor shall be responsible for all construction layout and any extension of the control network provided in the plans necessary to properly complete the work.

Also from RESPONSIBILITY OF THE RESIDENT ENGINEER, delete paragraphs A, B, and C.

Also:

50-16 FINAL INSPECTION. Revise the first sentence of the first paragraph to say the following:

Upon due notice to the Resident Engineer by the Contractor of presumptive completion of the entire project, the charging of Contract Time shall be suspended and the Engineer will make an inspection.

Add after the first sentence of the second paragraph:

The charging of Contract Time shall resume upon receipt of the Punchlist from the Engineer and continue until the remaining work, including work as required in Section 40-08 Final Clean Up, is completed to the satisfaction of the Engineer.

END OF SECTION 50

SECTION 70. LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

Section 70 of the Standard Specifications is modified as outlined below.

70-10 BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS. Add the following paragraphs to this section:

The Coles County Memorial Airport has two paved runways: Runway 6-24 and Runway 11-29, and one STOL (Short Take Off and Landing) sod strip (Runway 18-36).

This project will require the closure of Runways 11-29 and 6-24. Runway 18-36 will not be closed for this project, unless additional work or unforeseen circumstances require their closure.

Runways 11-29 and 6-24 will be closed any time the Contractor is working within 250 ft. of the runway centerline. Runway 18-36 will be closed any time the Contractor is working within 150 ft. of the runway centerline. Any taxiway will be closed when the Contractor is working within 93' of the respective taxiway centerline (taxiway object free area). Any taxi-lane will be closed when the contractor is working within 81 ft. of the respective taxi-lane centerline, (taxi-lane object free area). Runway closures shall be completed in accordance with the details and phasing plans shown in the Construction Plans. The Contractor shall coordinate all closures with the Airport Manager.

The Contractor shall coordinate with the Airport and the Resident Engineer/Resident Technician to turn off the runway and taxiway lighting circuits as well as the Nav aids. When the runway is re-opened these circuits must be re-activated. All existing Nav aids associated with the respective runway that is closed, will be inactive during runway closures.

When a runway is closed the associated runway lighting system shall be shut off and the associated Nav aids for that runway shall also be shut off.

Prior to re-opening a runway the Contractor shall backfill all holes and trenches and move all equipment and material at least 400 feet from the Runway 11-29 centerline, 400 feet from the Runway 6-24 centerline, and 200 feet from the Runway 18-36 centerline. Prior to opening a Runway a Representative of the Airport, the Contractor, and the Resident Engineer/Resident Technician will inspect the respective Runway to be sure the pavement is clean, all holes and trenches have been backfilled, and all equipment and materials are clear from the Runway centerline as described above. Any deficiencies noticed will be corrected before the Contractor will be allowed to re-open the runway.

All work included in opening and closing the runways and taxiways will be considered incidental to the Project and no additional compensation will be allowed.

The Contractor will notify the Airport Manager in advance of the commencement of work, which would necessitate the closing of a runway. It will be the responsibility of the Contractor to properly mark the closed runway, and when the runway is re-opened, to remove the marking. The appropriate marking for a closed runway is a cross at both ends of the runway. The legs of the cross will be 60 ft in length and 10 ft in width. The

crosses will be constructed of any suitable, locally available materials, such as fabric, plywood, or other similar material. They will be held in place in a manner locally determined to be suitable. The Contractor will be responsible for placing and removing the crosses as the runways are closed and opened. The Contractor will provide the Engineer with a proposed schedule of when and length of time for all closures. The Project Engineer must review and approve this schedule before any construction begins. The placement, maintenance and removal of the crosses will be considered as an incidental item to the contract and no additional compensation will be allowed.

When the Contractor's vehicles are on Airport property, they shall be properly marked. The markings shall consist of a 3-ft sq. flag consisting of a checkered pattern of international orange and white squares of not less than 1 ft on each side displayed in full view above the vehicle. Contractor vehicles engaged in continuous hauling operations will not be required to display a flag.

The Contractor will be responsible for placing barricades and/or traffic cones at the locations shown on the Construction Plans, or as directed by the Airport Manager. It will be the Contractor's responsibility to furnish and maintain the barricades equipped with red flashing or red, steady-burn lights throughout the duration of this project.

The barricades and their maintenance will be considered as an incidental item to the contract, and no additional compensation will be allowed. Any cost of labor and equipment, which is necessary to insure safety at the Airport during the duration of the project, will be considered incidental to the contract, and no additional reimbursement for these items of work will be received.

All runway closures will be coordinated with the Airport Manager. The runway will be closed in accordance with the procedures set forth on the Proposed Safety Plan. Prior to re-opening the runway the Contractor will insure the following:

1. All open holes/trenches have been backfilled.
2. All equipment has been moved to the Equipment Parking Area.
3. All trucks have their beds lowered and all cranes have their booms lowered.
4. There is no material stockpiled within the Runway Object Free Area.
5. All active pavements have been swept of foreign material.
6. All lighting circuits associated with the pavement being re-opened are active and functioning correctly.
7. Representatives of the Contractor, Airport Manager and Resident Engineer/Resident Technician shall inspect the pavement prior to re-opening. Anything noted will be corrected prior to re-opening.

Add the following:

70-27 AIRPORT SECURITY NOTES. Airport security will be maintained at all times. The Contractor will monitor the site access to the proposed job site to insure no one will enter the access gate that is not authorized to be on the construction site or on the air side of the airport.

70-28 MAINTAINING OPERATION OF AIRFIELD LIGHTING AND NAVAIDS. Shut down of the lighting circuit and/or Navaids on Runway 11-29 or Runway 6-24 shall occur when construction activities are within 250 ft. of the centerline of the runway.

70-29 SITE INSPECTION. The Contractor shall be responsible for an on-site inspection prior to submitting a bid on this project. Upon receipt of a bid, it shall be assumed that the Contractor is fully familiar with the construction site.

END OF SECTION 70

SECTION 80. PROSECUTION AND PROGRESS

Section 80 of the Standard Specifications is modified as outlined below.

80-13 CONTRACTOR'S ACCESS TO AIRFIELD. Add the following to this section:

The Contractor's personnel and equipment shall not traverse outside the designated work areas to other locations on the Airport. The designated haul route will be the only vehicular access to the construction site. It will be the responsibility of the Contractor to maintain the proposed haul route and equipment parking area for the duration of the project.

The Contractor will be responsible for obtaining any permits necessary to use the State/County/Township/City roads. All work required in complying with the above requirement will be considered incidental to the Contract, and no additional compensation will be allowed.

Failure to use the prescribed haul routes and equipment parking area or adhere to the safety requirements will result in the suspension of work.

Add the following:

80-14 EMPLOYEE PARKING. The Contractor's employees shall park their personal vehicles in the designated Equipment Parking and Material Storage area as shown on the Safety Plan. The Contractor will transport the workers from the parking area to the work area. Only Contractor vehicles will be allowed outside of the proposed equipment storage and parking areas. No employee vehicle will be allowed onto the proposed construction site.

80-15 EQUIPMENT PARKING AND MATERIAL STORAGE. The Contractor will be allowed to park equipment and store material in the proposed material storage and equipment parking area shown on the safety plan. The Contractor will maintain this area throughout the duration of the project and restore it to its' original condition upon completion of the project. This work will be considered incidental to the Contract and no additional compensation will be allowed.

END OF SECTION 80

DIVISION II – PAVING CONSTRUCTION DETAILS

ITEM 150510 ENGINEER'S FIELD OFFICE

Revise Item 150510 of the Standard Specifications as follows:

CONSTRUCTION METHODS

150-2.1 Revise this section as follows:

- B. Delete this item
- C. One four-drawer legal letter size filing cabinet with lock and an Underwriter's Laboratories insulated file device 350 degrees one hour rating.
- G. One electric water cooler dispenser with water supply as needed, or bottled water.
- H. One land-line telephone with answering machine, or a cellular telephone with voicemail and a functional internet Wi-Fi device such as a mobile hot spot providing hi-speed broadband internet access to the field office.
- I. A multi-function printer/scanner/copy machine (including maintenance and supplies) that has a USB port for connection to the Resident Engineer/Resident Technician's computer.
- J. Delete this item
- K. Delete this item
- L. One mini-refrigerator with a minimum size of 4 cubic feet with a freezer unit.

BASIS OF PAYMENT

150-3.1 Add the following to this section:

Payment will be made under:

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

END OF ITEM 150510

ITEM 150520 MOBILIZATION

Revise Item 150520 of the Standard Specifications as follows:

BASIS OF PAYMENT

150-3.1 Add the following to this section:

Payment will be made under:

Item AR150520 Mobilization --- per lump sum.

END OF ITEM 150520

ITEM 150540 HAUL ROUTE

DESCRIPTION

150540-1.1. This item of work shall consist of the construction, maintenance, and removal of the proposed haul routes and equipment parking and material storage areas that are needed to provide all-weather access to the proposed construction areas as shown on the Construction Plans. The entrance to the project site will be from Illinois Route 16. The Contractor's parking and storage area will be located immediately inside the gate at the entrance. The Contractor's personnel will park their personal vehicles in this area and be transported to the construction site by a Contractor vehicle. The haul route will use an existing gravel access road from the entrance gates to the Localizer area, and a temporary route will be constructed the remaining length to the project area. The proposed parking and material storage area and haul routes will be constructed as shown on the Proposed Site and Safety Plan of the Construction Plan Set.

CONSTRUCTION METHODS

150540-2.1. In accordance with Section 50-04 of the Standard Specifications, it is the Contractor's responsibility to obtain permission and any applicable permits to use the roads (federal, state, county, township) leading to the airport construction site.

The Contractor shall construct the haul routes and equipment parking and material storage areas to provide all-weather access to the construction site. The haul routes and equipment parking and material storage areas will be maintained so as not to cause delays to the proposed construction.

The equipment parking and material storage areas and haul route will be made of any suitable aggregate material and/or bituminous millings over separation fabric to provide an all-weather access area. A culvert will also be installed in the area of a small ditch the haul route will cross.

Restoration: Upon completion of the project, all disturbed areas, excluding any areas indicated to remain in place, will have all non-organic material removed, and will be filled and graded to their original elevations. All disturbed areas that are outside of the proposed seeding and mulching limits will be seeded and mulched in accordance with Item 901 - Seeding and Item 908 - Mulching. The restoration of these areas will be considered as part of this Item.

Safety: All traffic control, safety, and permitting requirements associated with the construction and use of the haul routes are the responsibility of the Contractor.

Security: The Contractor will access the proposed construction site through two existing gates. The Contractor will keep these two gates closed except when in a continuous hauling operation. At that time he will furnish personnel to monitor these gates to ensure only authorized persons/vehicles use these gates. The access gates will be closed and locked at the end of the construction day. The Contractor will furnish his own lock and interlock it with the existing lock in such a manner that will allow the Contractor or Airport Personnel to access the airport through these gates. All costs associated with providing the required security though out this construction project will be considered as an incidental item to this item of work and no additional compensation will be allowed.

BASIS OF PAYMENT

150540-3.1. Payment will be made at the contract unit price per lump sum for constructing, maintaining and removing the haul route, parking and storage area as specified. This price shall be full compensation for furnishing, installing, maintaining and removal of all materials; restoration and turfing; for all labor, equipment, and incidentals necessary to complete this item of work.

Payment will be made under:

Item AR150540 Haul Route --- per lump sum.

END OF ITEM 150540

ITEM 152 EXCAVATION AND EMBANKMENT

Revise Item 152 of the Standard Specifications as follows

DESCRIPTION

152-1.1. Add the following:

Shoulder Adjustment work shall consist of shaping the earth shoulders adjacent to the new or rehabilitated pavement areas. The shoulder shall be placed in accordance with the dimensions shown on the Construction Plans.

152-1.2 Classification. Add the following:

The material for the shoulder adjustment will be a quality topsoil material obtained from an off-site location that meets Item 905 Topsoiling. The material shall be approved by the Resident Engineer/Resident Technician prior to its incorporation into the project.

CONSTRUCTION METHODS

152-2.1 General. Revise this section to read as follows:

The shoulder adjustment areas will be constructed to achieve the prescribed edge drop of 1-1/2 in., and will tie in to the existing earth grade as shown on the Typical and Cross Sections in the Plans. Prior to the placement of the shoulder adjustment material, the existing shoulder area will be mowed and disked/pulverized until the existing sod has been completely cut up. After the material is placed, it will be lightly shaped and rolled to achieve minimal compaction.

152-2.6 Formation of Embankments. Add the following:

No compaction control tests are required for shoulder adjustment work.

METHOD OF MEASUREMENT

152-3.1. Revise the first paragraph of this section to read as follows:

Shoulder Adjustment shall be paid for at the measured number of sq. yds. of graded shoulder completed in accordance with this Specification.

BASIS OF PAYMENT

152-4.1. Add the following to this section:

Payment will be made under:

Item AR152410 Unclassified Excavation --- per cubic yard.
Item AR152480 Shoulder Adjustment --- per square yard.

END OF ITEM 152

ITEM 156000 EROSION CONTROL

Revise Item 156000 of the Standard Specifications as follows:

BASIS OF PAYMENT

156-5.1. Add the following to this section:

Payment will be made under:

Item AR156510 Silt Fence --- per linear foot.

END OF ITEM 156000

ITEM 156513 SEPARATION FABRIC

DESCRIPTION

Revise Item 156513 of the Standard Specifications as follows:

156-1.1 This work shall consist of placing a soil stabilization & separation fabric on a prepared subgrade prior to the placement of aggregate base as shown in the plans.

MATERIALS

156-2.1 SEPARATION FABRIC Revise the item as follows:

The stabilization and separation fabric shall contain as a minimum the following specific properties:

Mechanical Properties	Test Method	Minimum Average Roll Value
Tensile Strength (at Ultimate)	ASTM D4595	4800 (MD)/4800 (CD)
Tensile Strength (at 2% Strain)	ASTM D4595	960 (MD)/1320 (CD)
Tensile Strength (at 5% Strain)	ASTM D4595	2400 (MD)/2700 (CD)
Flow Rate	ASTM D4491	30
Permittivity	ASTM D4491	.40
Apparent Opening Size (AOS)	ASTM D4751	30
Pore Size O_{95}	ASTM D6767	465
Pore Size O_{50}	ASTM D6767	632
Factory Sewn Seam	ASTM D4884	3000
UV Resistance (at 500 Hours)	ASTM D4355	80

In accordance with FAA Buy American Preferences, required under this Project, all materials used for this item shall be made in the USA from raw materials manufactured in the USA. The Contractor shall furnish a certification attesting to adherence to the Buy American Preferences Act.

BASIS OF PAYMENT

156-5.1 Add the following to this section:

Payment will be made under:

Item AR156513 Separation Fabric --- per square yard.

END OF ITEM 156513

ITEM 156530 TEMPORARY SEEDING

DESCRIPTION

This item of work shall consist of temporary seeding as a partial implementation of a Storm Water Pollution Prevention Plan. The measures of the plan are shown on the Construction Drawings and shall be constructed in accordance with the Illinois Environmental Protection Agency (IEPA) Standards and Specifications for soil erosion and sediment control and these special provisions. The temporary seeding shall be required on any cleared or graded areas in which construction activities are anticipated to temporarily cease for a period of 21 days or more. The temporary seeding shall be completed within 14 days of the suspension of work.

CONSTRUCTION METHODS

The Contractor shall be required to loosen the soil to a minimum depth of 4 in. prior to placement of seed. The temporary seed mix will be as shown below:

<u>Seeds</u>	<u>Lbs./Acre</u>
Perennial Ryegrass	50
Oats, Spring*	64

* Other seeds may be used if approved by the Engineer.

The Contractor will be required to irrigate the seeded area if there is insufficient soil moisture to allow proper germination of the seed.

METHOD OF MEASUREMENT

The quantity of temporary seeding to be paid for shall be the number of acres seeded as specified and accepted by the Resident Engineer/Resident Technician.

BASIS OF PAYMENT

Payment will be made at the contract unit bid price for Temporary Seeding. This price shall be full compensation for furnishing the required materials and planting the seed in accordance with this special provision and the specifications incorporated by reference.

Payment will be made under:

Item AR156530 Temporary Seeding - per acre.

END OF ITEM 156530

ITEM 208 AGGREGATE BASE COURSE

MATERIALS

208-2.3. Add the following:

The aggregate material shall meet the gradation of either an IDOT CA-1 or RR 1 bedding stone material.

CONSTRUCTION METHODS

208-3.4.C. Revise to read:

The oversize aggregate may be constructed in a single lift and compacted with a minimum 3 passes of a steel drum roller.

208-5.1 Add the following:

Payment will be made under:

Item AR208540 Oversize Aggregate --- per ton.

END OF ITEM 208

ITEM 209 CRUSHED AGGREGATE BASE COURSE

BASIS OF PAYMENT

209-5.1 Add the following to this section:

Payment will be made under:

Item AR209606 Crushed Agg. Base Course – 6” --- per square yard.

END OF ITEM 209

ITEM 401 BITUMINOUS SURFACE COURSE - SUPERPAVE

Revise Item 401 of the Standard Specifications as follows:

DESCRIPTION

401-1.1 Add the following to this section:

Method II paving shall be used, and proportioning shall be for aircraft weighing greater than 60,000 pounds, runway or taxiway pavement.

CONSTRUCTION METHODS

401-4.4 HMA PAVERS.

Add the following to the first paragraph of this section:

A tracked paver shall be used to place the bituminous surface course over the previously placed bituminous base course.

Add the following to the end of this section:

If the Contractor elects to use a material transfer device, it must also be mounted on tracks.

BASIS OF PAYMENT

401-5.1 Add the following to this section:

Payment will be made under:

Item AR401614 Bit. Surf. Cse.-Method II, Superpave --- per ton.
Item AR401630 Bituminous Surface Test Section --- per each.

END OF ITEM 401

ITEM 401640 BITUMINOUS PAVEMENT GROOVING

Revise Item 401640 of the Standard Specifications as follows:

CONSTRUCTION METHODS

401-3.1 Cure Time Revise this section to read as follows:

Grooving operations shall not be initiated until the bituminous surface course has cured for a period of 30 days after the bituminous surface course has been completed on the runway to be grooved. If, prior to the completion of the 30 day cure period, it can be shown that the bituminous surface pavement has sufficiently cured to allow the grooving operation; then at the discretion of the Engineer, the remainder of the cure period will be waived and the grooving operation could begin.

BASIS OF PAYMENT

401-5.1 Add the following to this section:

Payment will be made under:

Item AR401640 Bituminous Pavement Grooving --- per square yard.

END OF ITEM 401640

ITEM 401650 BITUMINOUS PAVEMENT MILLING

Revise Item 401650 of the Standard Specifications as follows:

BASIS OF PAYMENT

401-5.1 Add the following to this section:

Payment will be made under:

Item AR401650 Bituminous Pavement Milling --- per square yard.

END OF ITEM 401650

ITEM 401663 LONGITUDINAL JOINT SEALING

DESCRIPTION

401663-1.1 This item shall consist of the installation of either a pre-formed rollout banding or hot-poured bituminous material produced on-site for bonding longitudinal construction joints on all of the lifts of both the bituminous base and bituminous surface courses.

MATERIALS

401663-2.1 LONGITUDINAL JOINT SEALANT. Longitudinal Joint Sealant (LJS) will be accepted according to the Illinois Department of Transportation Bureau of Materials and Physical Research Policy Memorandum, "Performance Graded Asphalt Binder Acceptance Procedure" with the following exceptions. Articles 3.1.9 and 3.4.1.4 of the policy memorandum will be excluded.

The bituminous material used for the LJS shall be according to the following table. Elastomers shall be added to a base asphalt and shall be either a styrene-butadiene diblock or triblock copolymer without oil extension, or a styrene-butadiene rubber. Air blown asphalt, acid modification, or other modifiers will not be allowed. LJS in the form of pre-formed rollout banding may also be used.

Specification for Use in Longitudinal Joint Sealant	
Dynamic shear @ 82°C (unaged), G*/sin δ, kPa, Test Method AASHTO T 315	1.00 min.
Creep stiffness @ -18°C (unaged), Stiffness (S), MPa m-value, Test Method AASHTO T 313	300 Max. 0.300 min.
Ash %, Test Method AASHTO T 111	1.0-4.0
Elastic Recovery, 100 mm elongation, cut immediately, 25°C, , Test Method ASTM D 6084 (Procedure	70 min.
Separation of Polymer, Difference in °C of the softening point (ring and ball), Test Method ITP Separation of Polymer from Asphalt Binder	3 max.

CONSTRUCTION METHODS

401663-3.1 GENERAL. Any HMA lift shall be complete before construction of the subsequent lift. The longitudinal joints in all lifts shall be as prescribed in section 401 and 403 of the standard specifications.

401663-3.2 EQUIPMENT. If the bituminous material is to be placed using the hot-pour method the following equipment are acceptable for use:

(1) **Longitudinal Joint Sealant Pressure Distributor:** When a pressure distributor is used to apply the LJS, the distributor shall be equipped with a heating and recirculating system along with a functioning auger agitating system or vertical shaft mixer in the hauling tank to prevent localized overheating. The distributor shall be equipped with a guide or lase system to aid in the proper placement of the LJS application.

(2) **Longitudinal Joint Sealant Melter Kettle:** When a melter kettle is used to transport and apply the LJS longitudinal joint sealant, the melter kettle shall be an oil jacketed double-boiler with agitating and recirculating systems. Material from the kettle may be dispensed through a pressure feed wand with an applicator shoe or through a pressure feed wand into a hand-operated thermal push cart.”

401663-3.3 PREPARATION OF BITUMINOUS PAVEMENT: When the use of longitudinal joint sealant (LJS) is specified, it shall be applied for all lifts of paving as shown on the plans. The surface to which the LJS is applied shall be dry and cleaned of all dust, debris, and any substances that will prevent the LJS from adhering. Cleaning shall be accomplished by means of a sweeper/vacuum truck, power broom, air compressor or by hand. The LJS may be placed before or after the tack or prime coat. When placed after the tack or prime coat, the tack or prime shall be fully cured prior to placement of the LJS.

401663-3.4 APPLICATION OF LONGITUDINAL JOINT SEALANT: The width and minimum application rate shall be according to the following table:

LJS Application Rate Table		
Overlay Thickness in. (mm)	LJS Width “W” in. (mm)	Application Rate ^{1/} lb/ft (kg/m)
HMA Mixtures		
2 (50)	18 (450)	1.80 (2.68)

^{1/} The application rate has a surface demand for liquid included within it. The nominal thickness of the LJS may taper from the center of the application to a lesser thickness on the edge of the application. The width and weight/foot (mass/meter) shall be maintained. The Contractor shall furnish to the Engineer a bill of lading for each tanker supplying material to the project. The application rate of LJS will be verified within the first 1000 ft (300 m) of the day’s scheduled application length and every 6000 ft (1800 m) the remainder of the day.

The Contractor shall provide a suitable paper or pan to be placed at a random location in the path of the placement for the LJS. The Contractor shall also provide a device to properly weigh the aforementioned paper or pan. This provision shall be included in the contract unit price. After application of the LJS, the paper or pan shall be picked up and weighed. The weight per foot will be calculated. The tolerance from the plan target weight/foot (mass/meter) from the LJS Application Rate Table shall be ± 15 percent. The Contractor shall replace the LJS in the area where the sample was taken.

The LJS shall be applied in a single pass with a pressure distributor, melter kettle, or hand applied from a roll for HMA lifts up to 2 in. (50 mm) in thickness. The LJS shall be applied in two passes for HMA lifts between 2 and 4 in. (50 and 100 mm) in thickness. At the time of installation the pavement surface temperature and the ambient temperature shall be a minimum of 40 °F (4 °C) and rising.

The LJS shall be applied at a width of not less than or greater than 1 ½ in. (38 mm) of the width specified. If the LJS flows more than 2 in. (50 mm) from the initial placement width, LJS placement shall stop and remedial action shall be taken.

When starting another run of LJS placement, suitable release paper shall be placed over the previous application of LJS to prevent doubling up of thickness of LJS.

The LJS shall be suitable for construction traffic to drive on without pickup or tracking of the LJS within 30 minutes of placement. If pickup or tracking occurs, LJS placement shall stop and damaged areas shall be repaired.

Prior to start of paving of pavement course, ensure the paver end plate and grade control device is adequately raised above the finished height of the LJS.

The LJS shall not flush to the final surface of the HMA pavement.”

METHOD OF MEASUREMENT

401663-4.1 The longitudinal joint sealant shall be measured by the length in linear feet of joint sealant placed regardless of how many passes of joint sealant are specified. Each lift of bituminous base or surface course with joint sealant shall be measured for payment separately. The length measured for payment in linear feet shall be the length of joint sealant actually constructed in accordance with the details shown in the Plans and accepted by the Resident Engineer.

BASIS OF PAYMENT

401663-5.1 Payment for the Longitudinal Joint Sealant shall be made at the Contract unit price for Longitudinal Joint Sealant. This price shall be full compensation for furnishing all materials, equipment and for all preparation, installation and for all labor, equipment, tools, and incidentals necessary to complete these items as specified.

Payment will be made under:

Item AR401663 Longitudinal Joint Sealant - per linear foot.

END OF ITEM 401663

ITEM 403 BITUMINOUS BASE COURSE – SUPERPAVE

Revise Item 403 of the Standard Specifications as follows:

DESCRIPTION

403-1.1 Add the following to this section:

Method II paving shall be used, and proportioning shall be for aircraft weighing greater than 60,000 pounds, runway or taxiway pavement. However, paving in the Phase 4 East Project Area as detailed on the Construction Safety and Phasing Plan, may be paved prior to the completion of the Bituminous Base Test Section, with acceptance testing and payment completed under Method I requirements.

CONSTRUCTION METHODS

403-4.4 HMA PAVERS.

Add the following to the first paragraph of this section:

A tracked paver shall be used to place the bituminous base course over the rubblized concrete pavement.

Add the following to the end of this section:

If the Contractor elects to use a material transfer device, it must also be mounted on tracks.

BASIS OF PAYMENT

403-5.1 Add the following to this section:

Payment will be made under:

Item AR403614 Bit. Base Cse.-Method II, Superpave --- per ton.
Item AR403630 Bituminous Base Test Section --- per each.

END OF ITEM 403

ITEM 501120 RUBBLIZE PAVEMENT

DESCRIPTION

501120-1.1 This item of work shall consist of rubblizing and compacting the existing 14 inch PCC pavement prior to construction of the bituminous overlay. The Contractor shall rubblize the concrete pavement into pieces of the sizes shown on the plans and specified within this provision, then compact the resulting rubblized material as specified herein.

EQUIPMENT AND MATERIALS

501120-2.1 Aggregate Replacement Material.

Aggregate replacement material shall be a Class D Quality (or better) crushed stone, crushed slag, crushed concrete, or crushed gravel meeting a CA 6 or CA 10 gradation; according to Section 1004 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Adopted January 1, 2016.

501120-2.2 Pavement Breaker.

This equipment shall consist of a self-contained, self-propelled multi-head breaker capable of producing particle sizes (measured at the top of the pavement) ranging 2 to 3 by varying the number of breaker heads engaged. The hammer heads shall be mounted laterally in a single row on in pairs with half the hammers in a forward row, and the remainder diagonally offset in a rear row so there is continuous pavement breaking from side to side. This equipment shall have the capability of rubblizing pavement up to 13 feet in width in a single pass. Hammer drop height shall have the ability to be independently controlled.

501120-2.3 Z-Pattern Steel Grid Roller.

The equipment shall consist of a self-contained, self-propelled vibratory steel wheel roller with a Z-pattern grid cladding mounted transversely to the surface of the drum. The vibratory roller shall have a minimum gross weight of 10 tons.

501120-2.4 Vibratory Roller.

The vibratory roller shall be in accordance with Section 1101-01 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Adopted January 1, 2016. The vibratory roller shall have a minimum gross weight of 10 tons.

501120-2.5 Pneumatic Tired Roller.

The pneumatic tired roller shall be in accordance with Section 1101-01 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Adopted January 1, 2016. The pneumatic tired roller shall develop a compression of not less than 300 pounds per inch, nor do more than 500 pounds per inch, of width of the tire tread in surface contact. If the pneumatic tire roller cannot properly seat the rubblized material, then the Contractor will provide a heavy pneumatic tire roller that is in accordance with Section 1101-01 of the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Adopted January 1, 2016.

CONSTRUCTION METHODS

501120-3.1 General.

The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the construction plans and specified herein. All machinery and equipment owned or controlled by the Contractor with which he proposes to use on the work, shall be of sufficient size to meet the requirements of the work, and shall be such as to produce satisfactory work; all work shall be subject to the inspection and approval of the Engineer.

If an edge drain system is specified on the construction plans, the system shall be installed and functioning (for at least 7 days) before rubblizing begins on the section of pavement adjacent to the newly place edge drain system.

The Contractor shall prevent damage to underground utilities and drainage structures during rubblizing.

Concrete to steel bond shall be broken. Reinforcement shall be left in place, except that reinforcement projecting from the surface after breaking or compaction shall be cut off below the surface and removed. Any loose joint filler, expansion material, or other similar items shall also be removed.

Rubblization machines and rollers of other design that will accomplish similar results may also be used with the approval of the Engineer. All rubblization and seating equipment necessary to perform the work will be considered essential to the completion of the project, and will not be paid for separately.

Any rubblization machine or roller that causes severe displacement of the rubblized pavement will be removed from the project and replaced with a similar purpose machine that does not cause severe displacement of the rubblized pavement. Such replacement will be considered as essential to the well-being of the rubblized pavement and no additional payment will be considered.

501120-3.2 Test Strip.

Before the rubblization operation begins, the Engineer will designate a test section of approximately 150 feet by 12 feet. The Contractor shall rubblize the test section using varying degrees of energy and/or various striking heights until a procedure is established that will rubblize the pavement to the required extent as contained in these specifications. No separate payment will be considered for the test strip.

501120-3.3 Test Pit.

A 4 foot square test pit shall be excavated in the middle of the test strip, at a location selected by the Engineer, to determine that the breaker is producing pieces of the specified sizes as contained in these specifications. The rubblized particle sizes shall be checked throughout the entire depth of the pavement. The test pit material shall be removed from the project and the hole filled using aggregate replacement material as designated under section 501120-2.1. The replacement material shall be placed and properly compacted by the Contractor.

Throughout the duration of the rubblizing of the concrete pavement, two more test pits may be excavated at other locations selected by the Engineer to ensure the breaker is still producing pieces of the specified sizes as contained in these specifications.

The Engineer and the Contactor shall mutually agree upon the rubblization procedure based upon compliance with the performance criteria contained here within. The established procedure shall be used to rubblize the remainder of the pavement. The Contactor shall continuously monitor the rubblization operation, and make minor adjustments in the striking pattern, striking energy, number of passes, and other factors necessary to continually achieve acceptable breaking throughout the project. The Contractor shall inform the Engineer of any major adjustments that may be required in the process to provide rubblized pavement that confirms to the specification requirements contained herein.

501120-3.4 Rubblization Criteria.

The upper one-half of the existing concrete pavement shall be rubblized such that at least seventy-five (75%) percent (as determined by visual observation) of the pieces are a maximum particle size of three (3) inches. The lower one-half of the pavement shall be rubblized such that at least seventy-five (75%) (as determined by visual observation) of the pieces are a maximum particle size of twelve (12) inches.

After rubblization has been completed any concrete particle greater than 12 inches in maximum size remaining on the pavement surface shall be reduced to an acceptable size or removed. The void left after concrete particle removal shall be filled with aggregate replacement material and compacted to the satisfaction of the Resident Engineer.

Due to lack of edge support, concrete pieces below the reinforcing steel up to 15 inches in any dimension will be accepted along the outside edge of the existing PCC pavement, up to 15 inches from the edge.

501120-3.5 General Rubblization Procedures.

The Contractor will blade any sod back off the pavement edge so the original pavement edge can be seen.

If concrete pavement milling is required within the proposed rubblization area, then it shall be completed prior to the start of rubblization.

Where the rubblizing abuts concrete pavement which is to remain in place, a full depth saw cut shall sever the existing pavement, pavement joint and reinforcement. Rubblized pavement dislodged by construction traffic shall be removed immediately in front of the paving operation.

The equipment shall break the existing concrete into PCC segments to meet the requirements of rubblization as indicated in these special provisions.

The breaking pattern shall be proposed by the Contractor before the start of the project and must be accepted by the Project Engineer.

The Contractor shall exercise care during rubblizing operations to protect and/or prevent damage to underground utilities and drainage facilities. All damage to underground utilities shall be repaired or replaced, as approved by the Engineer, at the Contractor's expense. Alternate breaking methods

may be used in areas of identified underground utilities and drainage structures, if approved by the Engineer. Reinforcement in the rubblized pavement shall be left in place. However, any reinforcement exposed at the surface as a result of rubblizing and/or compaction operations shall be cut off below the surface and removed from the site and become the property of the Contractor. All loose joint fillers, expansion material, or other similar items shall also be removed from the rubblized surface.

501120-3.6 Compaction.

After the breaker has rubblized the concrete pavement the Contractor will operate the following equipment over the rubblized pavement:

1. Minimum of four passes with Z-pattern steel grid roller.
2. Four passes with a vibratory roller.
3. Two passes with a pneumatic-tired roller.

Any depressions, 2 inches or greater in depth from that of the immediate surrounding area, that result from the rubblizing or compaction effort shall be filled with aggregate replacement material or bituminous surface course and compacted prior to overlaying. Any unsuitable or unstable material observed while compacting or under construction trafficking shall be removed and replaced with bituminous surface course of the type specified on the plans. If a large area of unsuitable or unstable material is identified during the rubblizing or compacting process, work shall be halted and the Resident Engineer notified.

Water to aid in compaction shall be added if deemed necessary by the Resident Engineer.

The Contractor shall not trim the rubblized pavement, or otherwise attempt to grade the rubblized pavement to improve grade lines.

Immediately prior to placing the bituminous overlay the Contractor shall do two passes with a vibratory roller.

501120-3.6 Dust Control.

The Contractor shall minimize the dispersion of dust from the rubblization operation until the rubblized surface is overlaid with bituminous pavement. The Contractor shall provide a water truck, operator, and all water necessary for dust-control purposes. Excessive water shall not be applied to the rubblized surface. Dust control is incidental to the rubblization process and will not be paid for separately. The Project Engineer shall approve dust-mitigation measures.

501120-3.7 Rubblization/Paving Limitations.

If the long range weather forecast (7-10 day) does not indicate any anticipated rain, then the Contractor will be allowed to rubblize the concrete pavement for a period of five (5) days before the Contractor must begin his paving operation. If rain is anticipated within the next three (3) days, then the Contractor must begin his paving operation within 48 hours of his rubblization operation. If rain occurs between rubblizing and paving, the rubblized pavement shall be dry and stable to the satisfaction of the Project Engineer before the paving operation begins.

Prior to placement of the bituminous overlay, dirt, debris, or other foreign material shall be removed from the pavement surface. The method of removal will be approved by the Resident Engineer.

Construction traffic shall not be allowed on the rubblized pavement prior to placement of the first lift of bituminous base course.

METHOD OF MEASUREMENT

501120-4.1

The quantity of rubblized pavement of the size shown on the plans to be paid for shall be the number of square yards of area rubblized, compacted and cleaned as specified completed and accepted. No measurement will be made for pavement saw cutting, inspection pit excavation and backfill, or aggregate replacement material, which shall be considered incidental to the pavement rubblization pay item.

BASIS OF PAYMENT

501120-5.1

The accepted quantity of rubblized pavement of the size shown on the plans will be paid for at the contract unit price per square yard which price and payment shall be full compensation for furnishing all equipment and materials, and for all preparation, modification of equipment as needed, saw cutting, rubblizing, compacting, cleaning, watering, inspection pit excavation and backfill, aggregate replacement material, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

Item AR501120 Rubblize Pavement --- per square yard.

END OF ITEM 501120

ITEM 501550 PCC PAVEMENT MILLING

Revise Item 501550 of the Standard Specifications as follows:

DESCRIPTION

501-1.1 Revise this section to read as follows:

This Item of work shall consist of removing a variable depth of rubblized PCC surface, as shown in the Plans and as directed by the Resident Engineer. The Contractor shall be responsible for the removal and proper disposal of the waste material off-site from the airport.

This item will include butt joint milling required in order to transition from the proposed pavement to the existing pavement in several locations as shown on the plans.

CONSTRUCTION METHODS

501-2.1 Add the following to this section:

In the variable depth milling areas, the Contractor shall utilize a string line (guide wire) or equivalent automatic grade control system to achieve the proposed grades as shown in the plans. An equivalent system must be capable of achieving a uniform grade accuracy of 1/4-inch or less, independently of existing surface grade. At the conclusion of the milling, the Contractor shall perform a grade verification survey of the milled surface under the direction of a licensed Professional Land Surveyor, and provide the record grades to the Resident Engineer for review. Pavement cross-sections shall be taken at a minimum interval of 100 feet. Any surface variations greater than 1/4-inch above the proposed milled surface grade shall be replanned. No additional compensation shall be allowed for overruns in asphalt quantity due to surface variations more than 1/2-inch below proposed grade.

Following milling completion of the milling and prior to paving, the Contractor shall cut off or remove and exposed existing steel reinforcement, backfill and smooth grade and surface pits or irregularities, and roll the surface with a smooth drum roller.

Sawing, where depicted in the plans, will be considered as an incidental item to the proposed PCC pavement milling, and no additional compensation will be allowed.

BASIS OF PAYMENT

501-4.1 Add the following to this section:

Payment will be made under:

Item AR501550 PCC Pavement Milling --- square yard.

END OF ITEM 501550

ITEM 501900 REMOVE PCC PAVEMENT

Revise Item 501900 of the Standard Specifications as follows:

BASIS OF PAYMENT

501900-5.1 Add the following to this section:

Payment will be made under:

Item AR501900 Remove PCC Pavement --- per square yard.

END OF ITEM 501900

ITEM 501900 REMOVE & REPLACE PCC PAVEMENT

DESCRIPTION

501-1.1 This item of work shall consist of removing existing Portland Cement Concrete (PCC) pavement structure as described to accommodate installation of a drainage pipe, and replacing with granular backfill and PCC to re-establish a uniform PCC pavement structure prior to rubblization.

MATERIALS

501-2.1 Replacement PCC shall be an approved Item 610 mix. Granular backfill shall be IDOT CA-6

CONSTRUCTION METHODS

501-3.1 The Contractor shall saw cut the existing pavement structure full depth and at the locations as shown in the plans. Saw cutting shall provide a vertical surface. After completion of the saw cutting, the Contractor shall remove the pavement structure using methods which will allow a vertical surface along all sides of the removal area.

Once the pavement structure has been removed, the Contractor shall excavate, install, and backfill around the drainage pipe per Item 701 and as shown in the Plans. Once the granular backfill has reached subbase elevation, the Contractor shall form, pour and finish the replacement PCC flush to the existing pavement surface per Item 610.

Material obtained from removal operations shall be hauled to a disposal site off airport property by the Contractor. No additional compensation will be made for hauling and disposal of the removed material.

METHOD OF MEASUREMENT

501-4.1 The quantity to be paid for shall be the number of square yards of PCC pavement removed and replaced as measured in the field, completed and accepted

BASIS OF PAYMENT

501-5.1 Payment for PCC removal and replacement shall be made at the contract unit price bid per square yard. This price shall be full compensation for furnishing all materials, labor, equipment, tools, hauling, and incidentals necessary to complete the item.

Payment will be made under:

Item AR501910 Remove & Replace PCC Pavement --- per square yard.

END OF ITEM 501900

ITEM 602 BITUMINOUS PRIME COAT

BASIS OF PAYMENT

602-5.1 Add the following to this section:

Payment will be made under:

Item AR602510 Bituminous Prime Coat --- per gallon.

END OF ITEM 602

ITEM 603 BITUMINOUS TACK COAT

Revise Item 603 of the Standard Specifications as follows:

MATERIALS

603-2.1 Add the following to this section:

Add IDOT-approved “Non-Tracking Emulsified Asphalt” (NTEA) to the first row of the “Allowable Tack Material” column in Table 1.

BASIS OF PAYMENT

603-5.1 Add the following to this section:

Payment will be made under:

Item AR603510 Bituminous Tack Coat --- per gallon.

END OF ITEM 603

ITEM 620 PAVEMENT MARKING

Revise Item 620 of the Standard Specifications as follows:

MATERIALS

620-2.2 PAINT

Add the following as the first paragraph:

White paint color shall match color 37925 of Federal Standard No. 595.
Yellow paint color shall match color 33655 of Federal Standard No. 595.
Black paint color shall match color 37038 or 33538 of Federal Standard No. 595.

620-3.7 PAVEMENT MARKING REMOVAL

Replace the section with the following:

The Contractor shall remove existing and temporary markings as shown in the plans or as directed by the Engineer using a grinding method. Grinding equipment shall be approved by the Engineer.

The existing pavement markings shall be removed from the pavement by a method that does not materially damage the surface or texture of the pavement or surfacing. Very small particles of tightly adhering existing markings may remain in place, if in the opinion of the Engineer, complete removal of the small particles will result in pavement surface damage. Any damage to the pavement or surfacing caused by pavement marking removal shall be repaired by methods acceptable to the Engineer.

If deemed necessary by the resident engineer, the pavement surfaces shall be cleaned of all debris by compressed air.

BASIS OF PAYMENT

620-5.1 Add the following to this section:

Payment will be made under:

Item AR620520 Pavement Marking–Waterborne --- per square foot.
Item AR620525 Pavement Marking–Black Border --- per square foot.
Item AR620900 Pavement Marking Removal --- per square foot.

END OF ITEM 620

DIVISION IV – DRAINAGE

ITEM 701 PIPE FOR STORM SEWERS AND CULVERTS

Revise Item 701 of the Standard Specifications as follows:

MATERIALS

701-2.1 Add the following to this section:

Pipe for steel casing shall be 1/4" thick steel per ASTM A 252 of the diameter shown in the plans.

BASIS OF PAYMENT

701-5.1 Add the following to this section:

Payment will be made under:

Item AR701512 12" RCP, Class IV --- per linear feet.
Item AR760708 8" Steel Casing--- per linear foot.

END OF ITEM 701

ITEM 705 PIPE UNDERDRAINS FOR AIRPORTS

Revise Item 705 of the Standard Specifications as follows:

DESCRIPTION

705-1.1. Add the following to this section:

This work shall include the removal of the existing underdrain pipe wherever it interferes with the installation of the proposed underdrain pipe. The existing inspection holes designated for removal conflict with the installation of the proposed underdrain pipe or proposed drainage structures. The Contractor will remove the conflicting underdrain pipe and designated inspection holes and dispose of them off the airport site.

METHOD OF MEASUREMENT

705-4.1 Add the following to this section:

The number of existing inspection holes removed to be paid for shall be the number of inspection holes removed and/or adjusted, complete, accepted and measured by the unit.

BASIS OF PAYMENT

705-5.1 Basis of Payment. Add the following to this section:

Payment will be made under:

- Item AR705526 6" Perforated Underdrain w/sock --- per linear foot.
- Item AR705546 6" Non Perforated Underdrain --- per linear foot.
- Item AR705630 Underdrain Inspection Hole --- per each.
- Item AR705635 Underdrain Collection Structure --- per each.
- Item AR705640 Underdrain Cleanout --- per each.
- Item AR705900 Remove Underdrain --- linear foot.
- Item AR705904 Remove Underdrain Cleanout --- per each.

END OF ITEM 705

ITEM 751 MANHOLES, CATCH BASINS, INLETS, AND INSPECTION HOLES

Revise Item 751 of the Standard Specifications as follows:

DESCRIPTION

751-1.1 Add the following to the first paragraph:

This item shall also meet IDOT Specifications and AASHTO M 199 (ASTM C-478) for pre-cast drainage structures. Fabrication shall also include pre-cast cutouts for underdrain connections. The Contractor shall submit dimensioned, plant fabrication shop drawings to the Project Engineer for review prior to any fabrication.

Add the following:

This item shall also include the removal of an existing inlet at the location shown in the Construction Plans, or as directed by the Resident Engineer.

MATERIALS

751-2.6 FRAMES, COVERS AND GRATES Add the following:

The frames and grates for inlets and manholes shall be of the size and type specified. The frames and grates for new inlets and manholes shall be included in the Contract unit price for inlets and manholes. Bolts and washers for bolted frame and lid/grate assemblies, if specified, shall be stainless steel.

In accordance with FAA Buy American Preferences, required under this Project, all materials used for this item shall be made in USA from raw materials manufactured in the USA. The Contractor shall furnish a certification attesting to adherence to the Buy American Preferences Act.

751-2.7 STEPS Add the following to this Section:

Steps made from weather resistant copolymer polypropylene, of the size detailed in the Plans, and meeting the requirements of ASTM C-478 and AASHTO M-199, may also be used. The polypropylene shall conform to ASTM D-4101; the 1/2-inch Grade 60 deformed reinforcing bar shall meet ASTM A-615.

CONSTRUCTION METHODS

751-3.11 PROVISIONS FOR UNDERDRAIN CONNECTIONS New concrete manhole and inlet structures shall include pre-cast holes for use in making underdrain pipe connections at those locations and at the inverts shown in the Plans and schedules. This pre-cast work shall be incidental to the manhole or inlet.

751-3.12 REMOVE INLET Existing inlet marked for removal shall be carefully removed. Backfill and restoration of the opening shall be in accordance with Item 751 for structures under pavement. The removed structure shall be legally disposed of off-site by the Contractor. Backfill,

restoration and disposal costs shall not be measured separately for payment but shall be incidental to the Contract unit price for inlet removal.

METHOD OF MEASUREMENT

751-4.1 Add the following:

The number of inlets removed shall be the number of existing structures removed, disposed of and accepted in accordance with this Item and shall be counted and measured as one unit.

BASIS OF PAYMENT

751-5.1 Add the following:

The accepted number of inlets removed shall be paid at the Contract unit price per each, complete and accepted. These prices shall be full compensation for furnishing all materials and all preparation, excavation, backfilling, placing and adjusting of the materials; furnishing and installation of such specials and connections to pipes and other structures as may be required to complete the item as shown in the Plans, and; for all labor, equipment, tools and incidentals necessary to complete the item.

Payment will be made under:

- Item AR751410 Inlet --- per each.
- Item AR751550 Manhole 5' --- per each.
- Item AR751900 Remove Inlet --- per each.

END OF ITEM 751

DIVISION V – TURFING

ITEM 901 SEEDING

Revise Item 901 of the Standard Specifications as follows:

BASIS OF PAYMENT

901-5.1 Add the following to this section:

Payment will be made under:

Item AR901510 Seeding --- per acre.

END OF ITEM 901

ITEM 905 TOPSOILING

Revise Item 905 of the Standard Specifications as follows:

BASIS OF PAYMENT

905-5.1 Add the following to this section:

Payment will be made under:

Item AR905530 Topsoiling --- per square yard.

END OF ITEM 901

ITEM 908 MULCHING

Revise Item 908 of the Standard Specifications as follows:

MATERIALS

908-2.1 Mulch Material. Remove Options A, B, and C. Hydraulic mulch, as specified, shall be used exclusively.

BASIS OF PAYMENT

908-5.1 Add the following to this section:

Payment will be made under:

Item AR908510 Mulching --- per acre.

END OF ITEM 908

DIVISION VI – LIGHTING INSTALLATION

ITEM 108 INSTALLATION OF UNDERGROUND CABLE FOR AIRPORTS

DESCRIPTION

108-1.1. Add the following to this section:

“This Item of work shall consist of the installation (plowing, trenching, directional-boring, or installing in ducts or raceways) of cable for airfield lighting circuits and/or navaid circuits on the runways, taxiways, aprons, and the associated homeruns at the locations shown on the Plans and in accordance with these Specifications. This Item shall include cable in unit duct where noted on the Plans and specified herein.

In areas where there is a congestion of buried cable or where the proposed cable crosses an existing cable, the Contractor will be required to trench the proposed cable into place. In all other areas, the Contractor has the option to either trench or plow the proposed cable in unit duct into place.

When crossing existing circuits, the Contractor will be required to hand dig the trenches for the proposed cable.”

Add the following:

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 150/5340-30J (current issue in effect) DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS
- D. FAA Advisory Circular 150/5345-7 (current issue in effect) "SPECIFICATIONS FOR L-824 UNDERGROUND ELECTRICAL CABLE FOR AIRPORT LIGHTING CIRCUITS.
- E. FAA Advisory Circular 150/5345-26 (current issue in effect) “FAA SPECIFICATIONS FOR L-823 PLUG AND RECEPTACLE CABLE CONNECTORS”.
- F. 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).
- G. FAA AC No. 150/5370-2G “Operational Safety on Airports During Construction” (current issue in effect).
- H. Federal Specification A-A-59544 Cable and Wire, Electrical (Power, Fixed Installation).

- I. NFPA 70 – National Electrical Code (most current issue in force).
- J. NFPA 70E – Standard for Electrical Safety in the Workplace.
- K. NFPA 2638645-1 National Fire Protection Association MBR
- L. OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures.
- M. UL Standard 44 – Thermoset-Insulated Wires and Cables.
- N. UL Standard 83 – Thermoplastic-Insulated Wires and Cables.
- O. UL Standard 854 – Service Entrance Cables.

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. **Shop drawings shall be clear and legible. Copies that are illegible will be rejected.** The preferred shop drawing submittal format shall be electronic (PDF) copies. Shop drawings shall include the following information:

- A. **Certification of compliance with the AIP (Airport Improvement Program) Buy American Preferences for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Do not submit NAFTA (North American Free Trade Agreement) 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 AIP 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. See the FAA website at:**

https://www.faa.gov/airports/aip/buy_american/media/nationwide-buy-american-waivers-issued.pdf for a list of Nationwide Buy American Waivers Issued by the FAA.

- 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. Illinois Department of Transportation Division of Aeronautics requires the following: ***“Under the FAA Buy American Preference, the contractor is required to submit certification that assures only domestic steel, domestic materials and domestic manufactured products are used. The Buy American statement must come from the producer, not the supplier. Producer verification must state that the items are produced in the United States and are made from 100% domestic materials. Statements that solely refer to the “Buy American Act” or “ARRA” or any federal purchasing act other than Title 49 United States Code (USC), Section 50101 will be rejected. Producers may use the Illinois Department of Transportation Domestic Material Compliance Certification Form AER 25 to satisfy this requirement.”***
- D. Indicate the pay item number for each respective cable and/or cable in unit duct.
- E. Shop drawings shall include wire/conductor/cable cut sheets with type, size, specifications, Intertek Testing Services verification/ETL listing or UL listing, manufacturer, and catalog or part number.
- F. Shop drawings for cable in unit duct items shall include cut sheets with type, size, specifications, Intertek Testing Services verification/ETL listing or UL listing, manufacturer, and catalog or part number for the respective unit duct.
- G. 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. Revise this section to read as follows:

“L-824 Cable – L-824 cable shall be FAA L-824, Type C and shall conform to the requirements of FAA Advisory Circular 150/5345-7 (current edition in effect) "SPECIFICATIONS FOR L-824 UNDERGROUND ELECTRICAL CABLE FOR AIRPORT LIGHTING CIRCUITS". L-824 cable shall be FAA approved and listed in the current AC 150/5345-53D, AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM Appendix 3 Addendum. Circuits for use with constant current regulator outputs (runway or taxiway lighting circuits) shall use 5000-Volt rated cable. Circuits for use with low voltage applications (600 Volts or below) shall use either 5000-Volt rated cable or 600-Volt rated cable and shall have colored insulation corresponding to the respective voltage system. Cable shall be manufactured in the United States of America to comply with the Airport Improvement Program Buy American Requirement or be on the Federal Aviation Administration list of Nationwide Buy American Waivers.

Cable for use with airfield lighting series circuits (including runway lighting, taxiway lighting and taxi guidance signs) shall be one conductor No. 8, 5,000-Volt, FAA L-824, Type C, stranded.

Item AR108108, 1/C #8 5KV UG Cable shall be one conductor No. 8, 5,000-Volt, FAA L-824, Type C, stranded.

Item AR108158, 1/C #8 5KV UG Cable in UD shall be one conductor No. 8, 5,000-Volt, FAA L-824, Type C, stranded, **in blue colored unit duct (3/4-in.) for Taxiway A-East and Taxiway C lighting circuits, to match existing unit duct colors for the respective circuits.**

Item AR108158, 1/C #8 5KV UG Cable in UD shall be one conductor No. 8, 5,000-Volt, FAA L-824, Type C, stranded, **in orange colored unit duct (3/4-in.) for Taxiway A-West and Taxiway B lighting circuits to match existing unit duct colors for the respective circuits.**

Item AR108158, 1/C #8 5KV UG Cable in UD shall be one conductor No. 8, 5,000-Volt, FAA L-824, Type C, stranded, in unit duct (3/4-in.) for runway 11-29 lighting circuit. Color may be black, gray, blue or orange.

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 Underwriter's Laboratories Requirements for Type USE-2 insulation. Cable shall be UL-listed and marked USE-2. Cable shall be manufactured in the United States of America to comply with the Airport Improvement Program Buy American Preference Requirements.

Item AR108084 1/C #4 XLP-USE shall consist of 1/C #4 AWG, XLP-USE, 600-Volt cable installed in conduit, ducts, handholes, and manholes from the Vault, or respective location in the field, to the respective termination point or splice point. Conductor insulation for 240 VAC, 1 phase, 2-wire with ground circuits shall be color-coded: Phase A – Black, Phase B – Red, and Ground – Green.

Color-coding: Color-code phase and neutral conductor insulation for No. 4 AWG or smaller. Provide colored marking tape or colored insulation for phase and neutral conductors for No. 3 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.”

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

“The Contractor will 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 D (16 in. diameter), 24 inches deep, with 3/8 inch (minimum) 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 Resident Engineer/Resident Technician 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.”

108-2.5 RESERVED. Revise 108-2.5 as follows to comply with the requirements of FAA Advisory Circular Number 150/5370-10H Standards for Specifying Construction of Airports, Item L-108 Underground Power Cable for Airports:

“108-2.5 SPLICER QUALIFICATIONS. Every airfield lighting cable splicer shall be qualified in making cable splices and terminations on cables rated at and/or above 5000 Volts AC. The Contractor shall submit to the Project Engineer proof of the qualifications of each proposed cable splicer for the cable type and voltage level to be worked on. Cable splicing/terminating personnel shall have a minimum of three (3) years continuous experience in terminating/splicing medium voltage cable.”

108-2.12 LINE MARKING TAPE. Delete this section.

108-2.13 UNIT DUCT. Add the following:

“Standard sizes of smooth wall polyethylene duct shall conform to the dimensional requirements specified below:

Nominal Duct Size	Nominal Inside Diameter	Nominal Standard Wall	Nominal Outside Diameter*
¾”	0.910”	0.070”	1.050”
1”	1.145”	0.085”	1.315”
1-1/4”	1.440”	0.110”	1.660”
1-1/2”	1.650”	0.125”	1.900”
2”	2.065”	0.155”	2.375”
2-1/2”	2.449”	0.213”	2.875”
3”	3.048”	0.226”	3.500”
4”	4.000”	0.250”	4.500”

* Dimensions include allowance for duct eccentricity.”

CONSTRUCTION METHODS

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

“Keep all work, power outages, and/or shut down of existing systems coordinated 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).

Examine the site to determine the extent of the work. Contractor shall field verify existing site conditions.

Verify respective circuits and power sources prior to removing, disconnecting, relocating, installing, connecting, or working on the respective airfield lighting, taxi sign, NAVAID, or other device. Identify each respective circuit prior to performing work on that circuit.

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

New airfield lighting series circuit cables shall be installed a minimum of 18 inches below grade to comply with NEC 300.5 Underground Installations. Deeper depths might be required to avoid obstructions or where detailed herein.

Locate and 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.

In areas where there is a congestion of buried cables or where the proposed cable crosses an existing cable, the Contractor will be required to had dig and/or carefully excavate the trench necessary for the proposed cable. At other locations the proposed cable may be trenched or plowed into place. Hand digging, trenching, and/or plowing will be considered incidental to the proposed cables and no additional compensation will be allowed.

Grounding work and modifications shall not be performed during a thunderstorm or when a thunderstorm is predicted in the area. Grounding for airfield lights and taxi signs shall be as detailed on the Plans and as specified herein.

Homerun cables for a respective circuit that are installed in conduit or duct shall be run together in the same raceway or duct.

The respective personnel performing airfield lighting work, vault work, and/or test shall be familiar with, and qualified to work on 5000 volt airfield lighting series circuits, constant current regulators and associated airport electrical vault equipment.

FAA requires that every airfield lighting cable splicer shall be qualified in making cable splices and terminations on cables rated at and/or above 5000 Volts AC and shall have a minimum of three (3) years continuous experience in terminating/splicing medium voltage cable.

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

Obey and comply with the applicable requirements of NFPA 70E – Standard for Electrical Safety in the Workplace.

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

In the event a conflict is determined with respect to manufacturer installation instructions, National Electrical Code, and/or the Contract Documents, contact the Project Engineer for further direction.

Secure, identify and place any above ground temporary wiring in conduit to prevent electrocution and fire ignition sources in conformance with the requirements of FAA AC 150/5370-2G, Part 2.18.3 "Lighting and Visual NAVAIDs". All temporary installations shall comply with National Electrical Code Article 590 – "Temporary Installations."

Existing ducts and cables associated with removal work shall be abandoned in place unless it conflicts with the installation of the airfield light, sign, duct, cable, handhole, manhole, site work, pavement or other work, then it shall be disconnected, removed, and disposed of off the site at no additional cost to the Contract. Contractor may remove abandoned cables at no additional cost to the Contract and shall have the salvage rights to abandoned cables.

Other construction projects might be in progress on the Airport at the same time as this project. The Contractor will be required to cooperate with all other contractors and the Airport Manager in the coordination of the work.

Relocation of existing cables and/or cable in unit duct will require careful excavation of the cables to prevent damage to them. The cables and/or cable in unit duct shall be excavated and exposed and then relocated to a different depth and/or route to accommodate the respective site work.

The cable quantities as shown on the Construction plans are based on straight-line measurement. All other cable lengths, such as slack or waste, will not be measured for payment.

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 wireway in the vault).

All changes to the airfield lighting system shall be documented by the Contractor and provided to the Resident Engineer/Technician."

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.

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 in. below grade.

G. Cable installed in cultivated fields shall be installed a minimum of 42 in. below grade. Any and all trenches will be backfilled to a smooth grade to the satisfaction of the

Resident Engineer/Resident Technician. 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 cable will be incidental to the respective 108 Pay Item and shall be in accordance with Item 901 Seeding and Item 908 Mulching.”

108-3.5 SPLICING. Add the following:

“In-line connections for existing cables cut during construction shall be repaired with a cast splice kit. The Contractor shall have a minimum of ten 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 unless detailed otherwise on the Plans. 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.

Provide adequate slack cable required to perform cable splices outside of the respective splice cans, handholes, manholes, or other junction structures. Provide adequate slack cable to accommodate the ability to perform future cable splices outside of the respective splice cans, handholes, manholes, or other junction structure.”

108-3.8 TESTING. Add the following.

- “K. Prior to beginning any excavations, airfield lighting modifications, cable installation or any other activities that might possibly affect airfield lighting, all existing series circuit cables shall be Megger tested with an insulation resistance tester and recorded at the vault. All existing series circuit cable loops shall have the resistance measured with an Ohmmeter and recorded for each circuit at the vault. Each constant current regulator shall be tested with results recorded. Copies of test results shall be provided to the Resident Engineer/Resident Technician and the respective Project Engineer within 5 business days of conducting the tests.

- L. After airfield lighting modifications, additions, and/or upgrades have been completed, series circuit cables shall be Megger tested with an insulation resistance tester and recorded at the vault. All series circuit cable loops shall have the resistance measured with an Ohmmeter and recorded for each circuit at the vault. Each constant current regulator shall be tested with results recorded. Copies of test results shall be provided to the Resident Engineer/Technician and the respective Project Engineer within 5 business days of conducting the tests.

- M. Insulation resistance testing equipment for use with 5,000 Volt series circuit cables shall use an insulation resistance tester capable of testing the cables at 5,000 Volts. Older series circuit cables and/or cables in poor condition may require the test voltage to be performed at a voltage lower than 5,000 Volts (Example 1,000 Volts, 500 Volts, or less than 500 Volts). The respective test voltage shall be recorded for each cable insulation resistance test result.
- N. Insulation resistance testing equipment for use with 600 Volt rated cables shall use a 500 Volt insulation resistance tester. The respective test voltage shall be recorded for each cable insulation resistance test result.
- O. It is recommended to use the same insulation resistance test equipment throughout the project to ensure reliable comparative readings at the beginning of the project and at the completion of the project.
- P. The Contractor is responsible to employ qualified personnel that are capable of properly conducting the required tests to the satisfaction of the Project Engineer. Tests that provide unsatisfactory results shall be reviewed to determine the possible cause of unsatisfactory results, corrections shall be made, and the tests shall be conducted again.”

Add the following:

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 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.

Contractor is responsible for the repairs of any utilities, lines, and/or cables damaged as a result of his operations.

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 and cable in unit duct.

108-3.13 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. 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.

108-3.14 IDENTIFICATION OF CABLES. At electrical handholes, manholes, pull boxes, and wireways, 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. Add the following:

“The footage of cable and/or cable in unit duct installed in duct, conduit, or raceway to be paid for shall be the number of linear feet of cable installed in duct, conduit, or raceway measured in place by direct measurement, completed, ready for operation and accepted as satisfactory with no allowance being made for overrun due to slack, turns, splices, etc. Slack cable required to perform cable splices outside of the respective splice cans, handholes, or manholes, shall be incidental to the respective cable pay item and no additional measurement for payment will be made. Coring and interface to handholes or manholes shall be incidental to the respective cable pay item and no additional measurement for payment will be made. Cable will be measured for payment from the respective termination or splice point in the field to the respective termination or splice point. Cable runs that extend to the vault will be measured for payment from the respective termination or splice point in the field up to the vault.

All temporary wiring will be considered incidental to the associated work for which it is necessary and no additional compensation will be allowed.

All cable and duct removals associated with airfield lighting removals, relocations, and /or cable or duct replacements will be considered incidental to the associated work and no additional compensation will be allowed.

For item AR108108; 1/C #8 5KV UG Cable where multiple cables are installed each one conductor cable will be measured for payment. Slack cable located at a splice can, light base, handhole, or manhole will not be measured for payment.”

BASIS OF PAYMENT

108-5.1. Add the following:

“Payment will be made at the contract unit price per lin. ft. of cable completed and accepted by the Resident Engineer/Resident Technician. This price shall be full compensation for furnishing all materials, and for all preparation, assembly, and installation of these materials; for all plowing, trenching, directional-boring, coring of manholes or handholes, installation in ducts, raceways, conduits, splice cans, handholes, or manholes, and for all excavation and backfilling; for all site restoration (topsoiling, grading, seeding, mulching) and pavement restoration; and for all labor, equipment, tools, and incidentals necessary to complete this Item.

Payment will be made under:

Item AR108084	1/C #4 XLP-USE - per linear foot
Item AR108108	1/C #8 5KV UG Cable - per linear foot
Item AR108158	1/C #8 5KV UG Cable in UD - per linear foot

END OF ITEM 108

ITEM 110 INSTALLATION OF AIRPORT UNDERGROUND ELECTRICAL DUCT

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.”

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.

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. **Shop drawings shall be clear and legible. Copies that are illegible will be rejected.** The preferred shop drawing submittal format shall be electronic (PDF) copies. Shop drawings shall include the following information:

- A. **Certification of compliance with the AIP (Airport Improvement Program) Buy American Preferences for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Do not submit NAFTA (North American Free Trade Agreement) 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 AIP Buy American Preferences requirements.

- 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. Illinois Department of Transportation Division of Aeronautics requires the following: ***“Under the FAA Buy American Preference, the contractor is required to submit certification that assures only domestic steel, domestic materials and domestic manufactured products are used. The Buy American statement must come from the producer, not the supplier. Producer verification must state that the items are produced in the United States and are made from 100% domestic materials. Statements that solely refer to the “Buy American Act” or “ARRA” or any federal purchasing act other than Title 49 United States Code (USC), Section 50101 will be rejected. Producers may use the Illinois Department of Transportation Domestic Material Compliance Certification Form AER 25 to satisfy this requirement.”***
- D. Indicate the pay item number for each respective conduit or duct.
- E. Shop drawings shall include conduit and/or duct cut sheets with type, size, specifications, UL listing, manufacturer, and catalog or part number.
- F. Provide manufacturer’s literature confirming the respective duct to be bored is suitable for directional boring with the respective Shop Drawing submittal.
- G. Provide certification that the respective steel conduits used on this project are manufactured from 100 percent domestic steel.
- H. 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.

- A. Conduit for concrete encased duct shall be Schedule 40 (minimum) Polyvinyl Chloride (PVC) or Schedule 40 (minimum) High-Density Polyethylene (HDPE), sized as detailed on the Plans, and suitable for concrete encasement.

- B. 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 11, or SDR 13.5), and suitable for directional boring installation.”

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 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, 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.”

Add the following:

110-2.9 DUCT SPACERS. Provide duct spacers to provide proper separation of conduits installed in concrete encased duct. Duct spacers shall be designed to provide 3” separation of conduits. Duct spacers shall be suitable for the respective size and quantity of ducts. Duct spacers shall be Underground Devices Incorporated Wunpeece Series, Carlon Snap–N–Stac Combo Spacers Series, or approved equal. Confirm catalog numbers with the manufacturer for the respective application.

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. 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. 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.

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 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 Resident Engineer/Resident Technician. 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 and shall be in accordance with Item 901 Seeding and Item 908 Mulching.

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. The restoration of concrete pavement will be completed in accordance with Item 610 for sidewalks and concrete pavement, but will be incidental to the respective pay item for which the duct is installed.”

Add the following:

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/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.

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/Resident Technician at the Contractor’s expense. The Resident Engineer/Resident Technician and Owner shall be notified immediately if any cables are damaged.

Contractor is responsible for the repairs of any utilities, lines, and/or cables damaged as a result of his operations.

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.

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

Add the following:

110-4.3. The quantity of conduit to be paid for shall be the number of lineal feet of ducts of the particular type installed and measured in-place, complete, and accepted by the Resident Engineer/Resident Technician. Conduits, conduit nipples, conduit couplings, and other conduit fittings included with splice cans, junction structures, Navaid installations, base mounted airfield light fixtures, and/or taxi signs, will be considered incidental to the respective item for which they are installed and no additional measurement will be made.

All cable and duct removals associated with airfield lighting removals, relocations, and /or cable or duct replacements will be considered incidental to the associated work and no additional compensation will be allowed.”

BASIS OF PAYMENT

110-5.1 Add the following:

“Payment will be made at the contract unit price per each type and size of conduit, completed and accepted. This price shall be full compensation 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 excavation and backfilling with aggregate backfill, earth backfill, and concrete; and for all labor, coordination, equipment, tools, and incidentals necessary to complete this Item. Removal and replacement of bituminous pavement or concrete pavement will be considered incidental to the respective pay item for which the duct is installed.”

Payment will be made under:

Item AR110013	3” Directional Bore - per linear foot
Item AR110504	4-Way Concrete Encased Duct - per linear foot

END OF ITEM 110

ITEM 115 ELECTRICAL MANHOLES AND JUNCTION STRUCTURES

DESCRIPTION

115-1.1. This item of work shall consist of electrical manholes and junction structures (handholes and splice cans) in accordance with this Specification and as detailed on the Construction Plans. This item shall include the installation of each electrical manhole and/or junction structures with all associated excavation, backfilling, sheeting and bracing, concrete, reinforcing steel, ladders, appurtenances, testing, dewatering and restoration of surfaces to the satisfaction of the Resident Engineer/Resident Technician.

115-1.2 SHOP DRAWINGS. The Contractor shall furnish shop drawings for approval before ordering equipment and/or materials. Shop drawings are required for each type of electrical manhole and junction structure to be used on the project. **Shop drawings shall be clear and legible. Copies that are illegible will be rejected.** The preferred shop drawing submittal format shall be electronic (PDF) copies. Shop drawings shall include the following information:

- A. **Certification of compliance with the AIP (Airport Improvement Program) Buy American Preferences for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Do not submit NAFTA (North American Free Trade Agreement) 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 AIP Buy American Preferences requirements.**
- 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. The data submitted shall be sufficient, in the opinion of the Engineer, to determine compliance with the plans and specifications. The Engineer reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes, specified in this document.
- D. Precast concrete handholes and manholes must be on IDOT (Illinois Department of Transportation) List of Certified Precast Concrete Producers. Provide information on respective precast concrete producer for precast manholes and drawings for respective handholes.
- E. Provide cut sheets with part number and specification for each handhole and manhole frame and lid. Include certification that the respective handhole frame and lid is made in the United States of America.

- F. Provide certification that the respective pre-cast handholes and manholes are manufactured in the United States of America.

MATERIALS

115-2.1. GENERAL

- A. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when so requested by the Engineer.
- B. Manufacturer's certifications shall not relieve the Contractor of the Contractor's responsibility to provide materials in accordance with these specifications and acceptable to the Engineer. Materials supplied and/or installed that do not materially comply with these specifications shall be removed, when directed by the Engineer and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.
- C. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from the date of final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

115-2.2 CONCRETE STRUCTURES. Provide precast concrete structures where shown on the Plans. Precast units shall have mortar or bitumastic sealer placed between all joints to make them watertight. Openings or knockouts shall be provided in the structure as detailed on the Plans and as applicable to interface to the respective duct system. Threaded inserts and pulling eyes shall be cast in as shown.

If the Contractor chooses to propose a different structural design, signed and sealed shop drawings, design calculations, and other information requested by the Engineer shall be submitted by the Contractor to allow for a full evaluation by the Engineer.

- A. Electrical Handholes. Each electrical handhole shall be constructed in accordance with the details as shown on the Construction Plans. The handholes shall be provided with extra heavy duty frame and lid suitable for 100,000 pound loading, with spring assist hatch, hinged with hold open safety device, Neenah Foundry Company R-3498-P2S Spring-Assist Hatch, East Jordan Iron Works 8096 Spring-Assist Hatch, or an approved equal. Lids for the handholes containing high voltage airfield lighting cables shall include lettering labeled "**DANGER HIGH VOLTAGE KEEP OUT 5000 VOLTS**" to comply with NEC Article 300.45 "Warning Signs" and NEC Article 314.30(D) "Covers". Lids for the handholes containing low voltage cables (600 Volts and below) shall include lettering labeled "**LOW-VOLTAGE**". Coordinate lettering with manufacturer. Precast electrical handholes shall be manufactured by a concrete electrical handhole producer on the Illinois Department of Transportation approved list of certified precast concrete producers. Electrical handholes will be paid for under Item AR115610 Electrical Handhole per each.

B. 4' x 4' x 4' Airport Manholes. 4' x 4' x 4' airport manholes shall be constructed in accordance with the details as shown on the Construction Plans. These manholes shall be for use on the airfield. The manhole shall be provided with extra heavy-duty airport manhole frame and lid capable of withstanding minimum 100,000-pound loads as called for in FAA Advisory Circular 150/5320-6F Appendix B, (Previous Issue FAA Advisory Circular 150/5320-6E Appendix 3), NEENAH Foundry Company R-3492-A Airport Manhole Frame and Lid, East Jordan Iron Works Catalog Number 1895 Airport Manhole Frame and Cover, or an approved equal. Lids for the manholes containing high voltage airfield lighting cables shall include lettering labeled "**DANGER HIGH VOLTAGE KEEP OUT 5000 VOLTS**" to comply with NEC Article 300.45 "Warning Signs" and NEC Article 314.30(D) "Covers". Lids for the manholes containing low voltage cables (600 Volts and below) shall include lettering labeled "**LOW-VOLTAGE**". 4' x 4' x 4' airport manholes shall be manufactured by a concrete electrical manhole producer on the Illinois Department of Transportation approved list of certified precast concrete producers. 4' x 4' x 4' airport manholes will be paid for under Item AR115710 Electrical Manhole per each.

115-2.3 JUNCTION CANS. Junction Cans shall be L-867 Class 1 (non-load bearing) or L-868 Class 1 (load bearing) cans encased in concrete. The cans shall have a galvanized steel blank cover, gasket, and stainless steel hardware. Covers shall be 3/8" thickness for L-867 and 3/4" thickness for L-868. Include internal and external ground straps on each splice can.

115-2.4 CABLE TRAYS. Cable racks shall be as detailed on the Plans.

CONSTRUCTION METHODS

115-3.1. Electrical handholes and manholes shall be constructed in accordance with the details as shown on the Construction Plans. At electrical handholes and manholes, identify and label each cable with respect to its origin and the system or device served. Coordinate conduit and duct interface with the handhole and/or manhole installation. Field cut openings for conduits and ducts according to the respective handhole and/or manhole manufacturer's recommendations. Core drill and/or cut wall of handhole and/or manhole with a tool designed for the material to be cut and suitable for the respective application. Size holes for termination fittings to be used and seal around penetrations after fittings are installed.

115-3.2 UNCLASSIFIED EXCAVATION. It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Damage to utility lines, through lack of care in excavating, shall be repaired or replaced to the satisfaction of the Resident Engineer/Resident Technician without additional expense to the Owner.

The Contractor shall perform excavation for structures and structure footings. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown.

All excavation shall be unclassified and shall be considered incidental to the respective handhole and/or manhole structure pay item of which it is a component part. Dewatering necessary for manhole structure installation, erosion and turbidity control, in accordance with Federal, State, and Local requirements is incidental to its respective pay item. The cost of all

excavation regardless of type of material encountered, shall be included in the unit price bid for the respective manhole structure pay item.

Boulders, logs and all other objectionable material encountered in excavation shall be removed. All rock and other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped or serrated, as directed by the Resident Engineer/Resident Technician. All seams, crevices, disintegrated rock and thin strata shall be removed. When concrete is to rest on a surface other than rock, special care shall be taken not to disturb the bottom of the excavation. Excavation to final grade shall not be made until just before the concrete or reinforcing is to be placed.

The Contractor shall provide all bracing, sheeting and shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheeting and shoring shall be included in the unit price bid for the structure.

Unless otherwise provided, bracing, sheeting and shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall be effected in a manner that will not disturb or mar finished masonry. The cost of removal shall be included in the unit price bid for the structure.

After each excavation is completed, the Contractor shall notify the Resident Engineer/Resident Technician. Structures shall be placed after the Resident Engineer/Resident Technician has approved the depth of the excavation and the suitability of the foundation material.

Prior to installation the Contractor shall provide a minimum of 6 in of sand or a material approved by the Resident Engineer/Resident Technician as a suitable base to receive the structure. The base material shall be compacted and graded level and at proper elevation to receive the structure in proper relation to the conduit grade or ground cover requirements, as indicated on the Plans.

115-3.2 CONCRETE STRUCTURES. Concrete structures shall be built on prepared foundations conforming to the dimensions and form indicated on the plans. The concrete and construction methods shall conform to the requirements specified in Item 610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the Engineer before the concrete is placed.

115-3.3 PRECAST UNIT INSTALLATIONS. Precast units shall be installed plumb and true. Joints shall be made watertight by use of sealant at each tongue-and-groove joint and at roof of manhole. Excess sealant shall be removed and severe surface projections on exterior of neck shall be removed.

115-3.4 PLACEMENT AND TREATMENT OF CASTINGS, FRAMES AND FITTINGS. All castings, frames and fittings shall be placed in the positions indicated on the Plans or as directed by the Resident Engineer/Resident Technician and shall be set true to line and to correct elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place and position before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

Field connections shall be made with bolts, unless indicated otherwise. Welding will not be permitted unless shown otherwise on the approved shop drawings and written permission is

granted by the casting manufacturer. Erection equipment shall be suitable and safe for the workman. Errors in shop fabrication or deformation resulting from handling and transportation that prevent the proper assembly and fitting of parts shall be reported immediately to the Resident Engineer/Resident Technician and approval of the method of correction shall be obtained. Approved corrections shall be made at Contractor's expense.

Anchor bolts and anchors shall be properly located and built into connection work. Bolts and anchors shall be preset by the use of templates or such other methods as may be required to locate the anchors and anchor bolts accurately.

Pulling-in irons shall be located opposite all conduit entrances into structures to provide a strong, convenient attachment for pulling-in blocks when installing cables. Pulling-in irons shall be set directly into the concrete walls of the structure.

115-3.5 INSTALLATION OF LADDERS. [Not used]

115-3.6 REMOVAL OF SHEETING AND BRACING. In general, all sheeting and bracing used to support the sides of trenches or other open excavations shall be withdrawn as the trenches or other open excavations are being refilled. That portion of the sheeting extending below the top of a structure shall be withdrawn, unless otherwise directed, before more than 6 inches (150 mm) of material is placed above the top of the structure and before any bracing is removed. Voids left by the sheeting shall be carefully refilled with selected material and rammed tight with tools especially adapted for the purpose or otherwise as may be approved.

The Resident Engineer/Resident Technician may order the Contractor to delay the removal of sheeting and bracing if, in his judgment, the installed work has not attained the necessary strength to permit placing of backfill.

115-3.7 BACKFILLING. After a structure has been completed, the area around it shall be backfilled in horizontal layers not to exceed 6 inches (150 mm) in thickness. Each layer shall be deposited all around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the Resident Engineer/Resident Technician.

Backfill shall not be placed against any structure until permission is given by the Resident Engineer/Resident Technician. In the case of concrete, such permission shall not be given until tests made by the laboratory under supervision of the Engineer establish that the concrete has attained sufficient strength to provide a factor of safety against damage or strain in withstanding any pressure created by the backfill or the methods used in placing it.

Where required, the Resident Engineer/Resident Technician may direct the Contractor to add, at his own expense, sufficient water during compaction to assure a complete consolidation of the backfill. The Contractor shall be responsible for all damage or injury done to conduits, duct banks, structures, property or persons due to improper placing or compacting of backfill.

115-3.8 CONNECTION OF DUCT BANKS. To relieve stress of joint between concrete-encased duct banks and structure walls, reinforcement rods shall be placed in the structure wall and shall be formed and tied into duct bank reinforcement at the time the duct bank is installed.

115-3.9 RESTORATION. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site. The Contractor shall restore all disturbed areas

equivalent to or better than their original condition. All sodding, seeding, mulching grading and restoration shall be considered incidental to the respective pay item and shall be in accordance with Item 901 Seeding and Item 908 Mulching. The Contractor shall grade around structures as required to provide positive drainage away from the structure. Areas with special surface treatment, such as roads, sidewalks, or other paved areas shall have backfill compacted to match surrounding areas, and surfaces shall be repaired using materials comparable to original materials. After all work is completed, the Contractor shall remove all tools and other equipment, leaving the entire site free, clear and in good condition.

115-3.10 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/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.

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/Resident Technician at the Contractor's expense. The Resident Engineer/Resident Technician and Owner shall be notified immediately if any cables are damaged.

Due to the quantities of existing utilities and lines in the proposed areas of work, the Contractor will need to carefully excavate to expose and protect these utilities and lines prior to installing manholes, handholes, and/or junction structures and the associated trenches for the proposed conduits, ducts, and raceway system.

Contractor is responsible for the repairs of any utilities, lines, and/or cables damaged as a result of his operations.

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.

115-3.11 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

115-4.1. Electrical manholes, handholes and junction structures shall be measured by each unit completed in place and accepted by the Resident Engineer/Resident Technician. The following additional items are specifically included in each unit.

- All required excavation,
- Sheeting and bracing
- All required backfilling with on-site materials
- Restoration of all surfaces and finished grading, sodding
- All required connections
- Slack cable required to perform cable splices outside of the respective junction structures, handholes, or manholes.
- Dewatering if required
- Temporary cables and connections
- Ground rod testing
- All coring and labor associated with conduit, duct, cable in unit duct, and/or cable entries
- Locating existing utilities, lines, and cables in the respective areas of work
- All coordination with the respective Airport staff, site personnel, and/or FAA personnel

BASIS OF PAYMENT

115-5.1. Payment will be made at the contract unit price bid for each electrical manhole, handhole, and/or junction structure completed and in place. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling, and placing of the materials; for locating existing utilities, lines, and cables in the respective areas of work; for all coring and labor associated with conduit, duct, cable in unit duct, and/or cable entries; for all coordination with the respective Airport and/or FAA personnel; for furnishing and installation of appurtenances and connections to duct banks and other structures as may be required to complete the item as shown on the plans and for all labor, equipment, tools and incidentals necessary to complete the structure.

Payment will be made under:

Special Provisions
RECONSTRUCT TAXIWAY B
Coles County Memorial Airport

Illinois Project No.: MTO-4752
Block Grant Project No.: 3-17-SBGP-159

Item AR115610 Electrical Handhole - per each
Item AR115710 Electrical Manhole - per each

END OF ITEM 115

ITEM 125 INSTALLATION OF AIRPORT LIGHTING SYSTEMS

DESCRIPTION

125-1.1. Revise this paragraph to read as follows:

“This Item of work shall consist of furnishing and installing and/or relocation of airfield lights, taxi guidance signs, taxi guidance sign panels, and/or splice cans at the locations shown on the Construction Plans and in accordance with the details shown on the Plans. This Item of work shall also include the removal of airfield lights, taxi guidance signs and/or electrical junction structures/splice cans. This Item of work shall consist of furnishing and installing base-and stake-mounted airfield lights, taxiway lights, and splice cans at the locations shown on the Construction Plans and in accordance with the details shown on the Plans. Also included in this Item will be the testing of the installation and all incidentals necessary to place the lighting systems into operation, completed, and to the satisfaction of the Resident Engineer/Resident Technician.”

125-1.6 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. FAA AC No. 150/5340-26C (current issue in effect) “Maintenance of Airport Visual Aid Facilities”.
- D. FAA AC No. 150/5340-30 (current issue in effect) “DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS
- E. FAA AC No. 150/5345-42 (current issues in effect) “Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories”.
- F. FAA AC No. 150/5345-46 (current issue in effect) “SPECIFICATION FOR RUNWAY AND TAXIWAY LIGHT FIXTURES”
- G. FAA AC No. 150/5345-47 (current issue in effect) “SPECIFICATION FOR SERIES TO SERIES ISOLATION TRANSFORMERS FOR AIRPORT LIGHTING SYSTEMS”.
- H. 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).
- I. FAA AC No. 150/5370-2 (current issue in effect) “OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.
- J. FAA Engineering Brief No. 67D Light Sources Other Than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures.

- 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. UL Standard 6 – Rigid Metal Conduit.
- O. UL Standard 514B – Conduit, Tubing and Cable Fittings.

125-1.7 SHOP DRAWINGS. The Contractor shall furnish shop drawings for approval before ordering equipment and/or materials. Shop drawings are required for airfield lighting equipment and materials to be used on the project. **Shop drawings shall be clear and legible. Copies that are illegible will be rejected.** The preferred shop drawing submittal format shall be electronic (PDF) copies. Shop drawings shall include the following information:

- A. **Certification of compliance with the AIP (Airport Improvement Program) Buy American Preferences for all materials and equipment. Do not submit ARRA (American Recovery and Reinvestment Act) certification as a substitute for certification of compliance with the AIP Buy American Preferences. Do not submit NAFTA (North American Free Trade Agreement) 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 AIP 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. See the FAA website at:**

https://www.faa.gov/airports/aip/buy_american/media/nationwide-buy-american-waivers-issued.pdf for a list of Nationwide Buy American Waivers Issued by the FAA.

- 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. Illinois Department of Transportation Division of Aeronautics requires the following: ***“Under the FAA Buy American Preference, the contractor is required to submit certification that assures only domestic steel, domestic materials and domestic manufactured products are used. The Buy American statement must come from the producer, not the supplier. Producer verification must state that the items are produced in the***

United States and are made from 100% domestic materials. Statements that solely refer to the “Buy American Act” or “ARRA” or any federal purchasing act other than Title 49 United States Code (USC), Section 50101 will be rejected. Producers may use the Illinois Department of Transportation Domestic Material Compliance Certification Form AER 25 to satisfy this requirement.”

- D. Cut sheets with part number and specifications for each airfield light fixture. Include cut sheets with part numbers and dimensions for mounting stakes, base cans, cover plates, transformers, and associated components for each light airfield fixture.
- E. Cut sheets with part number and specifications for each taxi sign replacement panel.
- F. Cut sheets with part number and specifications for L-868 extension rings for use with in-pavement light fixture adjustments.
- G. Concrete mix design.
- H. Provide cut sheets with manufacturer’s name, catalog number, dimensions, material and UL listing for each type and size ground rod. Include certification of 100% domestic steel for ground rods. Include cut sheets for exothermic weld connections, ground lugs, and ground wire.
- I. Provide cut sheets for all types of conduit used with the airfield light fixtures (for example galvanized rigid steel conduit). Include certification that steel conduits are made with 100 percent domestic steel.

EQUIPMENT AND MATERIALS

125-2.1 GENERAL. Add the following to this section:

- “ D. The proposed taxiway lights shall be Type L 861T(L), with LED type illumination and blue lenses. All lights shall have an overall height of 24 in. All of the above lights shall be manufactured in accordance to FAA Specification AC No. 150/5345-46 (current issue in effect) and shall be FAA approved and in compliance with the Airport Improvement Program Buy American Preference Requirements. Medium Intensity Airfield Lights with LED (Light Emitting Diode) illumination shall also conform to the applicable requirements of FAA Engineering Brief No. 67D Light Sources Other Than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures.
- E. Where non-metallic light fixtures or plastic couplings are proposed the Contractor will be responsible to furnish all grounding connectors, bonding jumpers, pipe grounding clamps, and accessories to maintain continuity of the ground path for the required light base ground.
- F. The concrete used in the construction of these Items shall be in accordance with Item 610 Structural Portland Cement Concrete.”

125-2.4 CONDUIT. Add the following to this section:

“Rigid Steel Conduit and fittings shall be hot-dipped, galvanized, UL-listed, 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. Set screw type fittings are not acceptable. Galvanized rigid steel conduit shall be manufactured in the United States of America produced from 100 percent domestic steel.”

125-2.7 ISOLATION TRANSFORMERS. Add the following to this section:

“Series circuit isolation transformers for the runway or taxiway edge lights and taxi guidance signs shall be manufactured to FAA Specification AC 150/5345-47 (current issue in effect), and shall be FAA-approved (ETL/Intertek Testing Services - Certified). Series circuit transformer shall be properly sized for the respective runway or taxiway edge lights and shall be as recommended by the respective runway or taxiway edge lights manufacturer. Confirm proper transformer selection and sizing with the respective runway or taxiway edge lights manufacturer, and the respective taxi guidance sign manufacturer.”

125-2.8 LIGHT CANS. Add the following to this section:

“Each light base can, transformer can, and/or splice can shall include internal and external ground lugs. Cans shall be the size and depth as detailed on the Plans. L-867 splice cans shall have galvanized steel covers, 3/8 in. thick, with stainless steel bolts. Lids for splice cans containing high voltage airfield lighting cables shall include minimum 1/2-inch high lettering labeled “**DANGER HIGH VOLTAGE KEEP OUT**” to comply with National Electrical Code Article 300.45 “Warning Signs” and National Electrical Code Article 314.71(E) “Suitable Covers”. This will need to be coordinated with the splice can manufacturer. Lids for splice cans containing low voltage cables (rated 600 Volts and below) will be acceptable to use blank covers.”

125-2.11 AIRFIELD SIGNS. Add the following to this section:

“The proposed taxi guidance signs shall conform to Advisory Circular 150/5345-44 (current issue in effect) and be FAA-approved for Type L-858(L) Taxiway and Runway Signs. The signs shall be Size 1, 18-in. sign face with a 12-in. legend; Style 2, powered from a 4.8 to 6.6 amp series lighting circuit; Class 2, for operation from -40°F to 131°F; Mode 2, to withstand wind loads of 200 M.P.H., base-mounted, double-sided, as specified on the Plans.

The signs shall read as described on the Construction Plans. The proposed taxi guidance signs shall have LED (Light Emitting Diode) type illumination. The proposed taxi guidance signs shall be Type L-858-Y(L) direction, destination, and boundary signs (black legend on yellow background); Type L-858-R(L) mandatory instruction sign (black outline on outside edge of white legend on red background); and Type L-858-L(L) location sign (yellow legend and border on black background).

Taxi Guidance Signs with LED (Light Emitting Diode) illumination shall conform to the applicable requirements of FAA Engineering Brief No. 67D Light Sources Other Than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures.

The proposed taxi guidance sign replacement sign panels shall conform to 150/5345-44 (respective issue in force as identified in AC 150/5345-53D, AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM Appendix 3 Addendum) and be FAA-approved. Existing lighted

taxi guidance signs in the respective work areas on the Airport are Standard Signs Inc., Lumacurve. To maintain the ETL-Intertek FAA approval rating of these respective signs, the replacement panels shall be furnished by the Original Equipment Manufacturer; Standard Signs Inc., Lumacurve. Sign panels that void the ETL-Intertek FAA approval rating of these respective signs will not be acceptable. Contractor shall field verify existing signs to determine size and legends for replacement panels. Contractor shall confirm the replacement panels are correct in color, description, and not damaged. Any unacceptable sign panel shall be returned to the manufacturer to be replaced.

The concrete used in the construction of these Items shall be in accordance with Item 610.”

Add the following:

“125-2.14 IDENTIFICATION TAGS. Identification tags shall be attached to each new fixture and sign. Where shown on the Plans provide new identification tags for existing fixtures. The tag shall be of the type and with the lettering shown on the Plans. The cost of furnishing and installing these tags shall be included in the unit price for the fixtures or signs and no additional compensation will be allowed.

125-2.15 ANTI-SEIZE COMPOUND. Prior to installing the proposed airfield lights, the Contractor will apply an oxide-inhibiting, anti-seizing compound to all screws, nuts, breakable coupling, and all places where metal comes into contact with metal.

125-2.16 STAINLESS STEEL BOLTS. All base plate-mounting bolts and stake-mounting bolts shall be stainless steel.

125-2.17 GROUND RODS. **Ground rods shall be 3/4-inch diameter by 10-foot long UL listed Copper clad with 10 mils (minimum) Copper coating.** Ground rods shall be manufactured in the United States of America from 100 percent domestic steel to comply with the requirements of the Airport Improvement Program Buy American Preferences requirements and the Steel Products Procurement Act.

125-2.18 REINFORCING STEEL. Reinforcing steel shall conform to the requirements of ASTM A-615 Grade 60 or ASTM A-706, Grade 60. Welded wire fabric shall conform to the requirements of AASHTO M55, ASTM A-82, ASTM A-185, or ASTM A-1064. Reinforcing steel shall be manufactured in the United States of America from 100 percent Domestic steel to comply with the requirements of the Airport Improvement Program Buy American Preferences requirements and the Steel Products Procurement Act.

125-2.19 L-868 LIGHT BASE EXTENSIONS. Light base extensions for the existing in-pavement runway lights scheduled to be adjusted, shall be FAA Type L-868 load bearing light base extensions that are compatible with the respective in-pavement light fixtures and light bases. Height of the extensions shall accommodate the respective pavement work. Based on field data and records the existing in-pavement runway lights on Runway 11-29 at Coles County Airport are understood to have Size B L-868 light bases. Contractor shall field verify existing site conditions and light bases.”

CONSTRUCTION METHODS

125-3.1 GENERAL. Add the following to this section:

“The Contractor shall furnish and install all equipment and electrical materials necessary for complete and operational installation of the airfield lighting systems as shown on the Plans and detailed herein. 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 the applicable Federal Aviation Administration standards, orders, and advisory circulars. Equipment and materials 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. Keep all work, power outages, and/or shut down of existing systems coordinated 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).
- B. Examine the site to determine the extent of the work. Contractor shall field verify existing site conditions.
- C. Verify respective circuits and power sources prior to removing, disconnecting, relocating, installing, connecting, or working on the respective airfield lighting, taxi sign, NAVAID, or other device. Identify each respective circuit prior to performing work on that circuit.
- D. Install taxi guidance signs and other airfield lighting devices in accordance with the details shown on the Construction Plans.
- E. New 1/C #8 AWG FAA L-824 5,000 Volt cable shall be furnished and installed in duct or unit duct as detailed on the Plans. The cable will be paid for under Item 108. Provide sufficient slack cable at each splice/transformer can to perform cable splices outside of the can.
- F. Locate existing underground utilities, cables and lines. 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/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. Also coordinate work with all aboveground utilities.
- G. Identify, secure, and place any above ground temporary wiring in conduit to prevent electrocution and fire ignition sources in conformance with the requirements of FAA AC 150/5370-2G, Part 2.18.3 "Lighting and Visual NAVAIDs". All temporary installations shall comply with National Electrical Code Article 590 – "Temporary Installations."
 - H. Grounding work and modifications shall not be performed during a thunderstorm or when a thunderstorm is predicted in the area. Grounding for airfield lights and taxi signs shall be as detailed on the Plans and as specified herein.
 - I. Homerun cables for a respective circuit that are installed in conduit or duct shall be run together in the same raceway or duct.
 - J. The respective personnel performing airfield lighting work, vault work, and/or test shall be familiar with, and qualified to work on 5000 volt airfield lighting series circuits, constant current regulators and associated airport electrical vault equipment.
 - K. FAA requires that every airfield lighting cable splicer shall be qualified in making cable splices and terminations on cables rated at and/or above 5000 Volts AC and shall have a minimum of three (3) years continuous experience in terminating/splicing medium voltage cable.
 - L. Obey and comply with the applicable requirements of NFPA 70E – Standard for Electrical Safety in the Workplace.
 - M. Other construction projects might be in progress on the Airport at the same time as this project. The Contractor will be required to cooperate with all other contractors and the Airport Manager in the coordination of the work.
 - N. The Contractor shall comply with the requirements of FAA AC No. 150/5370-2 (current issue in effect) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
 - O. In the event a conflict is determined with respect to manufacturer installation instructions, National Electrical Code, and/or the Contract Documents, contact the Project Engineer for further direction.
 - P. Signs designated for removal shall be removed in their entirety. The Contractor shall remove the existing signs, and/or electrical junction structures/splice cans including mounting stakes, bases, foundations, and transformers. The electrical wire will be disconnected from each sign and placed underground at a minimum depth of 18-in.

- If the Contractor elects to salvage the cable within the circuit of the signs to be removed, shown in the Construction Plans as cable to be abandoned, any cost associated with removal of the cable shall be considered incidental to the Contract and no additional compensation will be allowed. The existing signs and transformers shall be turned over to the Airport Manager. Any materials not salvaged by the Airport, shall be disposed of off the airport site, in a legal manner, at the Contractor's own expense. The concrete foundations shall be removed and earth material will be placed in the hole made from the foundation removal. The disturbed area shall be seeded and mulched in accordance with Item 901 and 908. The seeding and mulching will be considered as an incidental item to the light removal and no additional compensation will be allowed.
- Q. Existing cables and ducts associated with airfield lighting and taxi sign removals, relocations, and/or cable or duct replacements shall be disconnected, removed, and disposed of off the site at no additional cost to the Contract. All cable and duct removal associated with airfield lighting and taxi sign removals, relocations, and/or cable and duct replacements will be considered incidental to the associated work and no additional compensation will be allowed. Contractor may remove abandoned cables at no additional cost to the Contract and shall have the salvage rights to abandoned cables.
- R. Obtaining the required borrow material from an offsite borrow, placing the borrow material, grading, seeding, and mulching the disturbed areas will be considered as an Incidental Item to the proposed/relocated lights, splice cans, and/or removal/relocation work and no additional compensation will be allowed.
- S. Requirements of FAA AC 150/5340-30J, Paragraph 1.6 it notes *“Do not use the high voltage series lighting circuit to power devices that are not certified per AC 150/5345-53, Airport Lighting Equipment Certification Program, listed in Appendix 3, Addendum. Using non-certified devices can result in a poor system power factor resulting in unexpected constant current regulator (CCR) shutdowns and lighting circuit start-up problems.”*
- T. When a respective runway is closed the runway lighting and Navaids for that runway shall be shut off. Keep respective Navaids active during times when respective runway is open. Navaids receiving maintenance shall be shut off until operating properly.
- U. Per the requirements of FAA AC 150/5340-26C, Chapter 3, Section 3.6.6 Use of Original Equipment Manufacturer (OEM) Part, it notes the following: *“The use of non-OEM parts or lamps in FAA approved equipment is strongly discouraged. The FAA has strict specifications for approval of all airport lighting equipment and use of non-OEM parts or lamps in such equipment or systems can render the equipment to be functionally non-FAA approved. This could possibly lead to serious liability consequences in case of an aircraft incident at an airport following these practices. In the case of runway and taxiway lighting fixtures, the use of a generic, non-approved lamp can render the photometric output of the fixture out of specification and adversely affect the safety of low visibility operations.”*
- V. The proposed and/or relocated Runway/Taxiway lights, Taxi Guidance Signs and other airfield lighting devices shall be installed in accordance with the details shown

- on the Construction Plans and in accordance with the applicable FAA advisory circulars. Tolerances given in the FAA advisory circulars and on the Plans shall not be exceeded. Where no tolerance is given, no deviation is permitted. Items not installed in accordance with the FAA advisory circulars, and the plans shall be replaced by and at the cost of the Contractor.
- W. The proposed splice cans shall be constructed at the locations shown on the Construction Plans and in accordance with the details shown on the Construction Plans. Provide sufficient slack cable at each splice can to perform cable splices outside of the can.
- X. The existing airfield lights and/or electrical junction structures/splice cans designated for removal shall be removed in their entirety. The Contractor shall remove the existing lights, and/or electrical junction structures/splice cans including mounting stakes, bases, foundations, and transformers. The electrical wire will be disconnected from each light and removed up to the respective light or other fixture that is designated to remain. Abandoned cables associated with a light fixture removal or relocation shall also be removed. If the Contractor elects to salvage the cable within the circuit of the lights to be removed, shown in the Construction Plans as cable to be abandoned, any cost associated with removal of the cable shall be considered incidental to the Contract and no additional compensation will be allowed. The existing lights, transformers, and mounting stakes shall be turned over to the Airport Manager. Any materials not salvaged by the Airport, shall be disposed of off the airport site, in a legal manner, at the Contractor's own expense. The concrete base mounted lights and/or foundations shall be removed and earth material will be placed in the hole made from the base and/or foundation removal. The disturbed area shall be seeded and mulched in accordance with Item 901 and 908. The seeding and mulching will be considered as an incidental item to the light removal and no additional compensation will be allowed.
- Y. The existing airfield lights designated for relocation will require the Contractor to remove the designated lights in a manner as not to damage them. The Contractor will need to field verify the existing site conditions. Concrete and/or dirt shall be removed from the mounting stakes, and the Contractor will relocate them to the locations shown on the Construction Plans. Where an existing base mounted light is designated for relocation as a stake mounted light, provide a mounting stake and associated hardware to relocate the light fixture as a stake mounted unit. The existing light base shall be removed and disposed of and will be considered incidental to the relocation of the light. Components of the medium-intensity light will be relocated in their current condition. Any damage, beyond what is documented and confirmed by the Resident Engineer/Resident Technician, to the existing lighting system will be repaired/replaced at the Contractor's expense. Ground rods shall be provided for each relocated light fixture as detailed on the Plans and as specified herein. The Contractor will need to field verify the existing site conditions. The Contractor will install new 1/C #8 5KV UG cable-in-unit duct or conduit from the respective light on either side of the relocated light in order to place the relocated light into the lighting circuit. The cable will be paid for under Item 108.
- Z. The taxi guidance signs designated to be relocated shall be relocated, adjusted, and/or installed in accordance with the details shown on the Construction Plans. The existing taxi guidance signs designated for relocation will require the Contractor to

remove the designated signs in a manner as not to damage them. The Contractor will need to field verify the existing site conditions. The signs shall be stored in a secure location to prevent them from damage, until they are ready for installation at the new location. Any damage, beyond what is documented and confirmed by the Resident Engineer/Resident Technician, to the existing taxi guidance signs will be repaired/replaced at the Contractor's expense. The existing sign foundations shall be removed and disposed of off the Airport site in a legal manner. New foundations with transformer base cans shall be provided for the relocated taxi guidance signs as detailed on the Plans. New FAA approved series isolation transformers sized in accordance with the respective sign manufacturer's recommendation shall be provided for each relocated sign. Ground rods shall be provided for each relocated sign as detailed on the Plans and as specified herein.

AA. Taxi guidance sign replacement panels shall be installed in accordance with the respective sign manufacturer's instructions and as detailed on the Plans. Existing sign panels to remain shall be adjusted and/or relocated as applicable to provide the correct sign display as detailed on the Plans. Existing sign panels to be removed and replaced shall be turned over to the Airport.

BB. A slack of three (3') feet, minimum, plus depth of base can (if applicable), shall be provided in the primary cable at each transformer/connector termination. At stake-mounted lights, the slack shall be loosely coiled immediately below the isolation transformer. There shall be no additional payment for cable slack and therefore the quantity of proposed cable slack has not been included in the respective cable pay items.

CC. Provisions shall be made for the temporary wiring of the affected circuits to insure that the Airport will maintain all runway and taxiway lighting capabilities for active runways and taxiways. All temporary wiring will be considered incidental to the associated work for which it is necessary and no additional compensation will be allowed.

Add the following:

125-3.4 IDENTIFICATION NUMBERS. The Contractor will place updated light identification number tags on all of the proposed and/or relocated airfield lights and taxi guidance signs as detailed on the Plans. Existing light identification number tags may be reused and/or relocated for relocated and existing airfield light fixtures. The Contractor will furnish and install NEW light identification number tags on as applicable to accommodate airfield lighting and signs associated with circuit changes, upgrades, relocation, replacements, and/or adjustments. The correct light identification numbers are shown on the Construction Plans. The cost to provide and install the identification number tags will be considered as an incidental item to the new and/or relocated airfield lights and no additional compensation will be allowed.

125-3.5 GROUNDING FOR AIRFIELD LIGHTS. Furnish and install a ground rod at each L-867 transformer base/light can, at each stake-mounted light fixture, and at each taxi guidance sign. Grounding for Runway Lights, Taxiway Lights, and Lighted Taxi Guidance Signs shall be as detailed on the Plans and as specified herein. A ground rod must be installed at each light fixture and taxi guidance sign. The purpose of the light base ground is to provide a degree of

protection for maintenance personnel from possible contact with an energized light base or mounting stake that may result from a shorted power cable or isolation transformer. A light base ground shall be installed at each transformer base/light can associated with runway lights, taxiway lights, and lighted taxi guidance signs. A light base ground shall also be installed at each stake-mounted light fixture. A light base ground shall be installed and connected to the metal frame of each taxi guidance sign as detailed on the Plans and in accordance with the respective taxi guidance sign manufacturer recommendations. The light base ground shall be a #6 AWG bare copper conductor bonded to the ground lug on the respective L-867 transformer base/light can or mounting stake and a **3/4-inch diameter by 10-feet long (minimum)**, UL-listed, copper-clad ground rod. Connections to ground lugs on the L-867 transformer base/light can or mounting stake shall be with a UL-listed grounding connector. Connections to ground rods shall be made with 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, as required for each respective application. Bolted connections will not be permitted at ground rods. Top of ground rods shall be buried 12 in. minimum below grade, unless noted deeper on the Plans. **For each airfield light fixture and taxi guidance sign the Contractor shall test the made electrode ground system with an instrument specifically designed for testing ground systems. Test results shall be recorded for each airfield light fixture, each taxi guidance sign installation, and each splice can. If ground resistance exceeds 25 Ohms, contact the Project Engineer for further direction.** Also refer to EOR-047643 for additional information on grounding requirements where applicable. Copies of ground system test results shall be furnished to the Resident Engineer/Resident Technician and the Project Engineer.

For base mounted light fixtures the light fixtures must be bonded to the light base internal ground lug via a #6 AWG stranded copper wire rated for 600 Volts with Green XHHW, THWN-2, or other suitable insulation, bare stranded conductor, or a braided ground strap of equivalent current rating. The bonding conductor length must be sufficient to allow the removal of the light fixture from the light base for routine maintenance. See the light fixture manufacturer's instructions for proper methods of a attaching a bonding wire to the fixture.

125-3.6 GROUNDING FOR SPLICE CANS. Grounding for splice cans shall be as detailed on the Plans and as specified herein. Furnish and install a minimum of at least one 3/4-inch diameter by 10 feet long ground rod at each L-867 splice can. Contractor shall test the ground rod and where the resistance is exceeds 25 Ohms a second ground rod shall be furnished and installed not less than one rod length apart and connected to the first ground rod with a #6 AWG minimum copper grounding electrode conductor. Ground rods for splice cans shall be 3/4-inch diameter, 10 feet long, UL-listed, copper-clad with 10 mils minimum copper coating.

125-3.7 ADJUSTMENT OF IN-PAVEMENT RUNWAY LIGHTS. Existing in-pavement runway lights shall be protected from damage due to the associated pavement work. The existing in-pavement runway lights shall be disconnected and removed prior to the respective pavement work. Power for each respective lighting system shall be disconnected at the respective power source prior to removal or adjustment of the respective light fixtures. Contractor shall field verify to confirm the respective power source for each respective lighting system. A 3/4-inch thick L-868 cover plate shall be installed temporarily on the existing base during the pavement work. The existing runway lights shall be stored in a secure location to prevent them from damage, until they are ready for installation on the adjusted base. Any damage, beyond what is documented and confirmed by the Resident Engineer/Resident Technician, to the existing runway lights will be repaired/replaced at the Contractor's expense. After the runway has been

prepared for new pavement, an L-868 extension shall be added to the existing in-pavement light base to accommodate the new finished pavement. Contractor shall select an extension of a height to match the surrounding pavement for the respective runway light fixture. The in-pavement runway light adjustment shall be constructed as detailed on the Plans. Any damage to the existing concrete light base or other underground improvements associated with the in-pavement light that might occur during the pavement will be repaired and/or replaced at the Contractor's own expense.

125-3.8 TESTING AIRFIELD LIGHTING SYSTEMS. Prior to beginning any excavations, airfield lighting modifications, cable installation or any other activities that might possibly affect airfield lighting, all existing series circuit cables shall be Megger tested with an insulation resistance tester and recorded at the vault. All existing series circuit cable loops shall have the resistance measured with an Ohmmeter and recorded for each circuit at the vault. Each constant current regulator shall be tested with results recorded. Copies of test results shall be provided to the Resident Engineer/Technician and the respective Project Engineer within 5 business days of conducting the tests.

After airfield lighting modifications, additions, and/or upgrades have been completed, series circuit cables shall be Megger tested with an insulation resistance tester and recorded at the vault. All series circuit cable loops shall have the resistance measured with an Ohmmeter and recorded for each circuit at the vault. Each constant current regulator shall be tested with results recorded. Copies of test results shall be provided to the Resident Engineer/Technician and the respective Project Engineer within 5 business days of conducting the tests.

The Contractor is responsible to employ qualified personnel that are capable of properly conducting the required tests to the satisfaction of the Project Engineer. Tests that provide unsatisfactory results shall be reviewed to determine the possible cause of unsatisfactory results, corrections shall be made, and the tests shall be conducted again.

See Appendix A – “Constant Current Regulator and Cable Testing Forms” for additional information on testing requirements for airfield lighting systems. All testing will be considered incidental to the respective work items and no additional compensation will be allowed.

METHOD OF MEASUREMENT

125-4.1 Add the following:

“Ground resistance tests for the made electrode ground system at each airfield light fixture will be considered incidental to the respective airfield light fixture and no additional compensation will be allowed.

Testing the airfield lighting systems and the associated constant current regulator tests and cable tests will be considered incidental to the Contract and no additional compensation will be allowed.

All temporary wiring will be considered incidental to the associated work for which it is necessary and no additional compensation will be allowed.

All cable and duct removals associated with airfield lighting removals, relocations, and /or cable or duct replacements will be considered incidental to the associated work and no additional compensation will be allowed.

The quantity of airfield light fixtures to be relocated will be paid for at the contract unit price per each for relocation of the respective airfield light. The removal of airfield lights designated to be relocated will be considered incidental to the relocation of the respective airfield light and no additional compensation will be allowed. Replacement of any damaged base cans, fixtures, or other items necessary for a complete installation with new items, as directed by the Resident Engineer/Resident Technician, shall be considered incidental to the relocation of the respective airfield light and no additional compensation will be allowed. New ground rods to be furnished and installed with each airfield light relocation will be considered incidental to the relocation of the respective airfield light and no additional compensation will be allowed.

Spare parts for the airport visual aid/airfield lighting system will be considered incidental to the respective airfield lighting system pay items and no additional compensation will be allowed.

The quantity of taxi guidance signs to be paid for under this item shall be the number of each type installed as completed units in place, ready for operation, and accepted by the Resident Engineer. The transformer can associated with the taxi guidance sign and slack cable to perform cable connections outside of the transformer can, will be considered incidental to the respective taxi guidance sign and no additional compensation will be allowed. Ground resistance tests for the made electrode ground system at each taxi guidance sign will be considered incidental to the respective taxi guidance sign and no additional compensation will be allowed.

The quantity of taxi sign panel replacements to be paid for shall be the number of each size panel that is removed and replaced with new sign panel as detailed on the Plans, installed as completed units in place, ready for operation, and accepted by the Engineer.

The quantity of taxi guidance signs to be relocated to be paid for under this item shall be at the contract unit price per each for removal and relocation of a taxi guidance sign as a completed unit in place, ready of operation, and accepted by the Resident Engineer. This price and payment shall constitute full compensation for field verification of existing site conditions and power sources, disconnecting the respective power sources, removing the respective sign with associated mounting hardware, bases, foundations, and transformers; for disposal of the existing foundation; for relocation and reinstallation of the sign, including a new foundation, transformer base, ground rod, ground wire and connectors; connection and/or reconnecting the electrical cables at the relocated sign, interfacing the existing electrical and duct systems; for backfilling and restoration; for furnishing all earth material; and for furnishing all coordination, labor, tools, equipment, testing and incidentals necessary to complete this item of work. The transformer can associated with the sign and slack cable to perform cable connections outside of the transformer can, will be considered incidental to the respective sign relocation and no additional compensation will be allowed.

Conduits, conduit nipples, conduit couplings, and other conduit fittings included with splice cans, junction structures, NAVAID installations, base mounted airfield light fixtures, and/or taxi signs, will be considered incidental to the respective item for which they are installed and no additional compensation will be made.

Ground rods, grounding electrode conductors, connections, and associated grounding work included with airfield lights, taxi guidance signs, and/or splice cans will be considered incidental to the respective item for which they are installed and no additional compensation will be made.

Payment will be made at the contract price for each complete splice can installed in place by the Contractor and accepted by the Resident Engineer/Resident Technician. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials; and for all excavation, backfilling, and restoration; and for all labor, testing, equipment, tools, and incidentals necessary to complete this item.

The quantity of adjusted lights to be paid for under this item shall be the number of each type adjusted and installed as completed units in place, ready for operation, and accepted by the Resident Engineer/Resident Technician.”

BASIS OF PAYMENT

125-5.1 Add the following:

““Payment will be made at the contract price for each complete airfield light fixture, taxi guidance sign, and/or splice can installed in place by the Contractor and accepted by the Resident Engineer/Resident Technician. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials; and for all excavation, backfilling, and restoration; and for all labor, testing, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

Item AR125416	MITL – Base Mounted - LED – per each
Item AR125442	Taxi Guidance Sign, 2 Character – per each
Item AR125446	Taxi Guidance Sign, 6 Character – per each
Item AR125932	Replace Sign Panel – per each
Item AR125943	Adjust Inpavement Light – per Each
Item AR125961	Relocate Stake Mounted Light – per each
Item AR125964	Relocate Taxi Guidance Sign – per each

END OF ITEM 125

APPENDIX A

Constant Current Regulator and
Cable Testing Forms

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Engineering Firm Hanson Professional Services Inc.
Airport Name Coles County Memorial Airport
Project Phase 2: Reconstruct Taxiway B
Illinois Project MTO-4679
Hanson Project 19A0001C
Date _____

TESTING FORMS

___ Megger test and record Taxiway Circuit Number 1 (**Taxiway C-South**) series circuit cable loop at the vault.

___ Taxiway Circuit Number 1 (**Taxiway C-South**) series circuit cable loop shall have the resistance tested and recorded at the vault.

___ Megger test and record Taxiway Circuit Number 2 (**Taxiway "A-West"**) series circuit cable loop at the vault.

___ Taxiway Circuit Number 2 (**Taxiway "A-West"**) series circuit cable loop shall have the resistance tested and recorded at the vault.

___ Megger test and record Taxiway Circuit Number 3 (**Taxiway "A-East"**) series circuit cable loop at the vault.

___ Taxiway Circuit Number 3 (**Taxiway "A-East"**) series circuit cable loop shall have the resistance tested and recorded at the vault.

___ Megger test and record Taxiway Circuit Number 3A (**Taxiway "D"**) series circuit cable loop at the vault.

___ Taxiway Circuit Number 3A (**Taxiway "D"**) series circuit cable loop shall have the resistance tested and recorded at the vault.

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TESTING FORMS

___ Megger test and record Taxiway Circuit Number 5 (**Taxiway “C-North”**) side series circuit cable loop at the vault.

___ Taxiway Circuit Number 5 (**Taxiway “C-North”**) series circuit cable loop shall have the resistance tested and recorded at the vault.

___ Megger test and record Taxiway Circuit Number 6 (**Taxiway “B-West”**) series circuit cable loop at the vault.

___ Taxiway Circuit Number 6 (**Taxiway “B-West”**) series circuit cable loop shall have the resistance tested and recorded at the vault.

___ Megger test and record Taxiway Circuit Number 7 (**Taxiway “B-East”**) series circuit cable loop at the vault.

___ Taxiway Circuit Number 7 (**Taxiway “B-East”**) series circuit cable loop shall have the resistance tested and recorded at the vault.

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TESTING FORMS

___ Prior to beginning airfield lighting removals, test **Runway 11-29 CCR** by Manual Control and record input and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B1	Phase A:	
	Phase B:	
B2	Phase A:	
	Phase B:	
B3	Phase A:	
	Phase B:	
B4	Phase A:	
	Phase B:	
B5	Phase A:	
	Phase B:	

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TESTING FORMS

___ Prior to beginning airfield lighting removals, test **Runway 11-29 CCR** in remote mode by Photocell and L-854 Radio Control and record input and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B3	Phase A:	
	Phase B:	
B4	Phase A:	
	Phase B:	
B5	Phase A:	
	Phase B:	

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TESTING FORMS

__ Test Runway 11-29 CCR transfer procedure from Normal Runway CCR to Backup CCR.

__ Prior to beginning airfield lighting removals, test **Backup Runway 11-29 CCR** by Manual Control and record input and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B1	Phase A:	
	Phase B:	
B2	Phase A:	
	Phase B:	
B3	Phase A:	
	Phase B:	
B4	Phase A:	
	Phase B:	
B5	Phase A:	
	Phase B:	

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TESTING FORMS

___ Prior to beginning airfield lighting removals, test **Backup Runway 11-29 CCR** in remote mode by Photocell and L-854 Radio Control and record input and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B3	Phase A:	
	Phase B:	
B4	Phase A:	
	Phase B:	
B5	Phase A:	
	Phase B:	

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TESTING FORMS

___ Prior to beginning airfield lighting removals, test **Runway 6-24 CCR** by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ Prior to beginning airfield lighting removals, test **Runway 6-24 CCR** in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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TESTING FORMS

___ Prior to beginning airfield lighting removals, test **CCR #3, Taxiway B-East; Circuit #7**, by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ Prior to beginning airfield lighting removals, test **CCR #3, Taxiway B-East; Circuit #7**, in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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TESTING FORMS

___ Prior to beginning airfield lighting removals, test **CCR #4, Taxiway C; (Taxiway C-South Circuit #1 and Taxiway C-North Circuit #5)** by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ Prior to beginning airfield lighting removals, test **CCR #4, Taxiway C; (Taxiway C-South Circuit #1 and Taxiway C-North Circuit #5)** in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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Airport Name Coles County Memorial Airport
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TESTING FORMS

___ Prior to beginning airfield lighting removals, test **CCR #5, Taxiway D; Circuit #3A**, by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ Prior to beginning airfield lighting removals, test **CCR #5, Taxiway D; Circuit #3A**, in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

Engineering Firm Hanson Professional Services Inc.
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TESTING FORMS

___ Prior to beginning airfield lighting removals, test **CCR #6, Taxiway A-East; Circuit #3**, by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ Prior to beginning airfield lighting removals, test **CCR #6, Taxiway A-East; Circuit #3**, in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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TESTING FORMS

___ Prior to beginning airfield lighting removals, test **CCR #7, Taxiway B-West; Circuit #6**, by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ Prior to beginning airfield lighting removals, test **CCR #7, Taxiway B-West; Circuit #6**, in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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TESTING FORMS

___ Prior to beginning airfield lighting removals, test **CCR #8, Taxiway A-West; Circuit #2**, by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ Prior to beginning airfield lighting removals, test **CCR #8, Taxiway A-West; Circuit #2**, in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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TESTING FORMS

___ Megger test and record Taxiway Circuit Number 5 (**Taxiway “C-North”**) side series circuit cable loop at the vault.

___ Taxiway Circuit Number 5 (**Taxiway “C-North”**) series circuit cable loop shall have the resistance tested and recorded at the vault.

___ Megger test and record Taxiway Circuit Number 6 (**Taxiway “B-West”**) series circuit cable loop at the vault.

___ Taxiway Circuit Number 6 (**Taxiway “B-West”**) series circuit cable loop shall have the resistance tested and recorded at the vault.

___ Megger test and record Taxiway Circuit Number 7 (**Taxiway “B-East”**) series circuit cable loop at the vault.

___ Taxiway Circuit Number 7 (**Taxiway “B-East”**) series circuit cable loop shall have the resistance tested and recorded at the vault.

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TESTING FORMS

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **Runway 11-29 CCR** by Manual Control and record input and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B1	Phase A:	
	Phase B:	
B2	Phase A:	
	Phase B:	
B3	Phase A:	
	Phase B:	
B4	Phase A:	
	Phase B:	
B5	Phase A:	
	Phase B:	

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TESTING FORMS

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **Runway 11-29 CCR** in remote mode by Photocell and L-854 Radio Control and record input and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B3	Phase A:	
	Phase B:	
B4	Phase A:	
	Phase B:	
B5	Phase A:	
	Phase B:	

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TESTING FORMS

___ Test Runway 11-29 CCR transfer procedure from Normal Runway CCR to Backup CCR.

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **Backup Runway 11-29 CCR** by Manual Control and record input and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B1	Phase A:	
	Phase B:	
B2	Phase A:	
	Phase B:	
B3	Phase A:	
	Phase B:	
B4	Phase A:	
	Phase B:	
B5	Phase A:	
	Phase B:	

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___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **Backup Runway 11-29 CCR** in remote mode by Photocell and L-854 Radio Control and record input and output amperage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT
B3	Phase A:	
	Phase B:	
B4	Phase A:	
	Phase B:	
B5	Phase A:	
	Phase B:	

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TESTING FORMS

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **Runway 6-24 CCR** by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **Runway 6-24 CCR** in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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TESTING FORMS

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **CCR #3, Taxiway B-East; Circuit #7**, by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **CCR #3, Taxiway B-East; Circuit #7** in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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TESTING FORMS

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **CCR #4, Taxiway C; (Taxiway C-South Circuit #1 and Taxiway C-North Circuit #5)** by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **CCR #4, Taxiway C; (Taxiway C-South Circuit #1 and Taxiway C-North Circuit #5)** in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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TESTING FORMS

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **CCR #5, Taxiway D; Circuit #3A**, by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **CCR #5, Taxiway D; Circuit #3A**, in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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TESTING FORMS

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **CCR #6, Taxiway A-East; Circuit #3**, by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **CCR #6, Taxiway A-East; Circuit #3**, in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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TESTING FORMS

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **CCR #7, Taxiway B-West; Circuit #6**, by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **CCR #7, Taxiway B-West; Circuit #6**, in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

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TESTING FORMS

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **CCR #8, Taxiway A-West; Circuit #2**, by Manual Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

___ After airfield lighting modifications, additions, and/or upgrades have been completed, test **CCR #8, Taxiway A-West; Circuit #2**, in remote mode by L-854 Radio Control and record input amperage, output amperage, and output voltage at each step.

STEP	INPUT CURRENT	OUTPUT CURRENT	OUTPUT VOLTS
B10	Phase A:		
	Phase B:		
B30	Phase A:		
	Phase B:		
B100	Phase A:		
	Phase B:		

APPENDIX B

IDA Policy Memorandum Number 96-1, Item 610,
Structural Portland Cement Concrete: Job Mix
Formulation Approval & Production Testing

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State of Illinois
Department of Transportation
Division of Aeronautics

POLICY MEMORANDUM

April 1, 2010

Springfield

Number 96-1

TO: CONSULTING ENGINEERS

SUBJECT: ITEM 610, STRUCTURAL PORTLAND CEMENT CONCRETE:
JOB MIX FORMULA APPROVAL & PRODUCTION TESTING.

- I. This policy memorandum addresses the Job Mix Formula (JMF) approval process and production testing requirements when Item 610 is specified for an airport construction contract.
- II. PROCESS
 - a. The contractor may submit a mix design with recent substantiating test data or he may submit a mix design generated by the Illinois Division of Highways with recent substantiating test data for approval consideration. The mix design should be submitted to the Resident Engineer.
 - b. The Resident Engineer should verify that each component of the proposed mix meets the requirements set forth under Item 610 of the *Standard Specifications for Construction of Airports* and/or the contract special provisions.
 - c. The mix design should also indicate the following information:
 1. The name, address, and producer/supplier number for the concrete.
 2. The source, producer/supplier number, gradation, quality, and SSD weight for the proposed coarse and fine aggregates.
 3. The source, producer/supplier number, type, and weight of the proposed flyash and/or cement.
 4. The source, producer/supplier number, dosage rate or dosage of all admixtures.
 - d. After completion of Items b and c above, the mix with substantiating test data shall be forwarded to the Division of Aeronautics for approval. Once the mix has been approved, the production testing shall be at the rate in Section III as specified herein.

III. PRODUCTION TESTING

- a. One set of cylinders or beams, depending on the strength specified, shall be cast for acceptance testing for each day the mix is used. In addition, at least one slump and one air test shall be conducted for each day the mix is used. If more than 100 c.y. of the mix is placed in a given day, additional tests at a frequency of 1 per 100 c.y. shall be taken for strength, slump, and air. The concrete shall have a maximum slump of three inches (3") and minimum slump of one inch (1") when tested in accordance with ASTM C-143. The air content of the concrete shall be between 5% and 8% by volume. At no time shall the temperature of the concrete exceed 90 degrees Fahrenheit.
- b. If the total proposed amount of Item 610 Structural Portland Cement Concrete as calculated by the Resident Engineer is less than 50 c.y. for the entire project, the following shall apply:
 - The Resident Engineer shall provide calculations of the quantity of Item 610 to the Division of Aeronautics.
 - One set of cylinders or beams, depending on the strength specified, shall be cast for acceptance testing.
 - One air content and one slump test shall be taken for acceptance testing.
 - The concrete shall have a maximum slump of three inches (3") and minimum of one inch (1") when tested in accordance with ASTM C-143. The air content of the concrete shall be between 5% and 8% by volume. At no time shall the temperature of the concrete exceed 90 degrees Fahrenheit.
- c. The Resident Engineer shall collect actual batch weight tickets for every batch of Item 610 concrete used for the project. The actual batch weight tickets shall be kept with the project records and shall be available upon request of the Department of Transportation.

Steven J. Long, P.E.
Acting Chief Engineer

Supersedes Policy Memorandum 96-1 dated January 1, 2004

APPENDIX C

IDA Policy Memorandum Number 97-2
Pavement Marking Paint Acceptance

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State of Illinois
Department of Transportation
Division of Aeronautics

POLICY MEMORANDUM

January 1, 2004

Springfield, Illinois

Number 97-2

TO: CONSULTING ENGINEERS

SUBJECT: PAVEMENT MARKING PAINT ACCEPTANCE

I. SCOPE

The purpose of this policy memorandum is to define the procedure for acceptance of pavement marking paint.

II. RESIDENT ENGINEER'S DUTIES

The Resident Engineer shall follow the acceptance procedure outlined as follows:

- A. Require the painting contractor to furnish the name of the paint manufacturer and the batch number proposed for use prior to beginning work. Notify the I.D.A. Materials Certification Engineer when this information is available.
- B. Require the manufacturer's certification before painting begins. Check the certification for compliance to the contract specifications.
 1. The certification shall be issued from the manufacturer and shall include the specification and the batch number.
 2. The paint containers shall have the manufacturer's name, the specification and the batch number matching the certification.
- C. If no batch number is indicated on the certification or containers, sample the paint according to the procedure for the corresponding paint type.
- D. If the I.D.A. Engineer of Materials indicates that batch number has not been previously sampled and tested, sample the paint according to the procedure for the corresponding paint type. The Division of Aeronautics will provide paint cans upon request by the Resident Engineer. Samples will only be taken in new epoxy lined cans so that the paint will not be contaminated. It is important to seal the sample container immediately with a tight cover to prevent the loss of volatile solvents.

Mark the sample cans with the paint color, manufacturer's name, and batch number. The paint samples and manufacturer's certification shall be placed in the mail within 24 hours after sampling. Address the samples to the Materials Certification Engineer at:

Illinois Department of Transportation
Division of Aeronautics
One Langhorne Bond Drive
Springfield, Illinois 62707

Sampling Procedures for Each Paint Type:

1. Waterborne or Solvent Base Paints
 - a. Take the paint sample from the spray nozzle when the contractor begins marking. A sample consists of two one-pint cans taken per batch number.
 - b. Be sure to indicate to the contractor that acceptance of material is based upon a passing test of the paint material.

2. Epoxy Paint
 - a. Take separate one-pint samples of each paint component prior to marking. Before drawing samples, the contents of each component's container must be thoroughly mixed to make certain that any settled portion is fully dispersed. **Do not combine the two components or sample from the spray nozzle.**
 - b. Be sure to indicate to the contractor that acceptance of material is based upon a passing test of the paint material.

III. TESTING

The paint will be tested for acceptance by the IDOT Bureau of Materials and Physical Research for conformance to the contract specifications.

Steven J. Long, P.E.
Acting Chief Engineer

Supersedes policy memorandum 97-2 dated February 27, 2002