01A

Letting June 12, 2026

Notice to Bidders, Specifications and Proposal

Illinois Department of Transportation

Springfield, Illinois 62764

Contract No. LO034
Logan County Airport
Lincoln, Illinois
Logan County
Illinois Project No. AAA-5006
SBG Project No. N/A

(Printed by authority of the State of Illinois)

Illinois Department of Transportation

NOTICE TO BIDDERS

1. **TIME AND PLACE OF OPENING BIDS.** Electronic bids are to be submitted to the electronic bidding system (iCX-Integrated Contractors Exchange). All bids must be submitted to the iCX system prior to 12:00 p.m. on June 12, 2026, 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. LO034
   Logan County Airport
   Lincoln, Illinois
   Logan County
   Illinois Project No. AAA-5006
   SBG Project No. N/A

   Replace Airport Perimeter Fencing, Phase 1

   For engineering information, please contact Lindsay Hausman, P.E. of Hanson Professional Services, Inc. at 217.747.9314 .

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 (Adopted April 1, 2012), 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 0.0%.

7. **SPECIFICATIONS AND DRAWINGS.** The work shall be done in accordance with the Illinois Standard Specifications for Construction of Airports (Adopted April 1, 2012), the Special Provisions dated April 24, 2026, and the Construction Plans dated April 17, 2026 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 Base Bid: 51 calendar days; Additive Alternate #1: 4 additional 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. **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

Gia Biagi,
Secretary

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
EEO

Effective: July 21, 1978
Revised: November 18, 1980

The requirements of the following provisions written for federally-assisted construction contracts, including all goals and timetables and affirmative action steps, shall also apply to all State-funded construction contracts awarded by the Illinois Department of Transportation.

Notice of Requirement for Affirmative Action to Ensure
Equal Employment Opportunity (Executive Order 11246)

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:

APPENDIX A

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 contact or subcontract.

Area Covered (Statewide)

Goals for Women apply nationwide.

GOAL	Goal (percent)
Female Utilization	6.9

APPENDIX B

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.

Economic Area	Goal (percent)
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 -	19.6
	IL - Cook, DuPage, Kane, Lake, McHenry, Will	
	3740 Kankakee, IL -	9.1
	IL - Kankakee	
	Non-SMSA Counties	18.4
	IL - Bureau, DeKalb, Grundy, Iroquois, Kendall, LaSalle, Livingston, Putnam	
	IN - Jasper, Laporte, Newton, Pulaski, Starke	
084	Champaign - Urbana, IL:	
	SMSA Counties:	
	1400 Champaign - Urbana - Rantoul, IL -	7.8
	IL - Champaign	
	Non-SMSA Counties -	4.8
	IL - Coles, Cumberland, Douglas, Edgar, Ford, Piatt, Vermilion	
085	Springfield - Decatur, IL:	
	SMSA Counties:	
	2040 Decatur, IL -	7.6
	IL - Macon	
	7880 Springfield, IL -	4.5
	IL - Menard, Sangamon	
	Non-SMSA Counties	4.0
	IL - Cass, Christian, Dewitt, Logan, Morgan, Moultrie, Scott, Shelby	
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 -	2.5
	IL - McLean	
	6120 Peoria, IL -	4.4
	IL - Peoria, Tazewell, Woodford	
	Non-SMSA Counties -	3.3
	IL - Fulton, Knox, McDonough, Marshall, Mason, Schuyler, Stark, Warren	
088	Rockford, IL:	
	SMSA Counties:	
	6880 Rockford, IL -	6.3
	IL - Boone, Winnebago	
	Non-SMSA Counties -	4.6
	IL - Lee, Ogle, Stephenson	
098	Dubuque, IA:	
	Non-SMSA Counties -	0.5
	IL - JoDaviess	
	IA - Atlamakee, Clayton, Delaware, Jackson, Winnesheik	
	WI - Crawford, Grant, Lafayette	
099	Davenport, Rock Island, Moline, IA - IL:	
	SMSA Counties:	
	1960 Davenport, Rock Island, Moline, IA - IL -	4.6
	IL - Henry, Rock Island	
	IA - Scott	
	Non-SMSA Counties -	3.4
	IL - Carroll, Hancock, Henderson, Mercer, Whiteside	
	IA - Clinton, DesMoines, Henry, Lee, Louisa, Muscatine	
	MO - Clark	

107	St. Louis, MO:	
	SMSA Counties:	
	7040 St. Louis, MO - IL -	14.7
	IL - Clinton, Madison, Monroe, St. Clair	
	MO - Franklin, Jefferson, St. Charles,	
	St. Louis, St. Louis City	
	Non-SMSA Counties -	11.4
	IL - Alexander, Bond, Calhoun, Clay,	
	Effingham, Fayette, Franklin, Greene,	
	Jackson, Jasper, Jefferson, Jersey,	
	Johnson, Macoupin, Marion, Montgomery,	
	Perry, Pulaski, Randolph, Richland,	
	Union, Washington, Wayne, Williamson	
	MO - Bollinger, Butler, Cape Girardeau,	
	Carter, Crawford, Dent, Gasconade,	
	Iron, Lincoln, Madison, Maries,	
	Mississippi, Montgomery, Perry,	
	Phelps, Reynolds, Ripley, St. Francois,	
	St. Genevieve, Scott, Stoddard, Warren,	
	Washington, Wayne	

These goals are applicable to all 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 nonfederally involved construction.

The Contractor's compliance with Executive Order 11246 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 provisions and specifications set forth in its federally assisted contracts, and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. 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 11246 and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

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

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the entire State of Illinois for the goal set forth in APPENDIX A and the county or counties in which the work is located for the goals set forth in APPENDIX B.

STANDARD FEDERAL EQUAL EMPLOYMENT
OPPORTUNITY CONSTRUCTION CONTRACT
SPECIFICATIONS (EXECUTIVE ORDER 11246)

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, United States 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:
      (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
      (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
      (iii) 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
      (iv) 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 must 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 p 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 geographical areas 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 toward 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 nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must 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 on-site 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 as 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 therefor, along with whatever additional actions the Contractors 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 woman 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 agreements; 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 Foreman, 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 of other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

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

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

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

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

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

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

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

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

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a 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 specified 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 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 numbers, 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 his 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).

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES
NONFEDERAL-AID CONTRACTS

Effective: March 20, 1969
Revised: January 1, 1994

1. General

   a. The requirements set forth herein shall constitute the specific affirmative action requirements under this contract and supplement the non- discrimination requirements contained elsewhere in this proposal.

   b. The Contractor shall work with the Illinois Department of Transportation (IDOT) in carrying out Equal Employment Opportunity (EEO) obligations and in reviews of activities under the contract.

   c. The Contractor, and all subcontractors holding subcontracts (not including material suppliers) of $10,000 or more, shall comply with the following minimum specific requirement activities of EEO. The Contractor shall include these requirements in every subcontract of $10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

2. Equal Employment Opportunity Policy

   The Contractor shall accept as operating policy the following statement which is designed to further the provision of EEO to all persons, and to promote the full realization of equal employment opportunity through a positive continuing program: "It is the policy of this Company to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age, or disability. Such action shall include: 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, pre-apprenticeship, and/or on-the-job training."

3. Equal Employment Opportunity Officer

   The Contractor shall designate and make known to IDOT contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active Contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

4. Dissemination of Policy

   a. All members of the Contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the Contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

      (1) Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the Contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

      (2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the Contractor's EEO obligations within thirty days following their reporting for duty with the Contractor.

      (3) All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the Contractor's procedures for locating and hiring minority and female employees.

   b. In order to make the Contractor's EEO policy known to all employees, prospective employees, and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the Contractor shall take the following actions:

      (1) Notices and posters setting forth the Contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

      (2) The Contractor's EEO policy and the procedures to implement such policy shall be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

5. Recruitment

   a. When advertising for employees, the Contractor shall include in all advertisements for employees the notation: "An Equal Opportunity Employer". All such advertisements shall be published in newspapers, or other publications, having a large circulation among minority groups in the area from which the project work force would normally be derived.

   b. The Contractor shall, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority and female applicants, including, but not limited to, State employment

agencies, schools, colleges and minority and female organizations. To meet this requirement, the Contractor shall, identify sources of potential minority and female employees, and establish with such identified sources procedures whereby minority and female applicants may be referred to the Contractor for employment consideration. In the event the Contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he/she is expected to observe the provisions of that agreement to the extent that the system permits the Contractor's compliance with EEO contract provisions.

c. The Contractor shall encourage present employees to refer minority and female applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority and female applicants shall be discussed with employees.

6. Personnel Actions

Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, will be taken without regard to race, color, religion, sex, national origin, age, or disability. The following procedures shall be followed:

a. The Contractor shall conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The Contractor shall periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The Contractor shall periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Contractor shall promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The Contractor shall promptly investigate all complaints of alleged discrimination made to the Contractor in connection with the obligations under this contract, shall attempt to resolve such complaints, and shall take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the Contractor shall inform every complainant of all of the avenues of appeal.

7. Training and Promotion

a. The Contractor shall assist in locating, qualifying and increasing the skills of minority and female employees and applicants for employment.

b. Consistent with the Contractor's work force requirements and as permissible under Federal and State regulations, the Contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance.

c. The Contractor shall advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The Contractor shall periodically review the training and promotion potential of minority and female employees and shall encourage eligible employees to apply for such training and promotion.

8. Unions

If the Contractor relies in whole or in part upon unions as a source of employees, the Contractor shall use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minorities and females within the unions, and to effect referrals by such unions of minority and female employees. Actions by the Contractor, either directly or through a Contractor's association acting as agent, shall include the procedures set forth below:

a. The Contractor shall use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority and female employees for membership in the unions and increasing the skills of minority and female and employees so that they may qualify for higher paying employment.

b. The Contractor shall use best efforts to incorporate an EEO clause into each union agreement to the end that such union shall be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age, or disability.

c. The Contractor is to obtain information as to the referral practices and policies of the labor union, except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the Contractor, the Contractor shall so certify to IDOT and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the Contractor with a reasonable flow of minority and female referrals within the time limit set forth in the collective bargaining agreement, the Contractor shall, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and females. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the Contractor has a collective bargaining agreement providing for exclusive referral failed to refer minorities or female employees). In the event the union referral practice prevents the Contractor from meeting the obligations pursuant to these Special Provisions, such Contractor shall immediately notify IDOT.

9. Selection of Subcontractors, Procurement of Materials, and Leasing of Equipment

The Contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The Contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR Part 23, shall have equal opportunity to compete for and perform subcontracts which the Contractor enters into pursuant to this contract. The Contractor shall use best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority and female representation among their employees. Contractors shall obtain lists of DBE construction firms from IDOT personnel.

c. The Contractor shall use his/her best efforts to ensure subcontractor compliance with their EEO obligations.

10. Records and Reports

The Contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of IDOT.

a. The records kept by the Contractor shall document the following:

(1) the number of minorities, non-minorities and females employed in each work classification on the project;

(2) the progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and females;

(3) the progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) the progress and efforts being made in securing the services of DBE subcontractors, or subcontractors with meaningful minority and female representation among their employees.

b. The Contractor shall submit to IDOT a monthly report every month for the duration of the project, indicating the number of minority, non-minority and female employees currently engaged in each work classification required by contract work and the number of hours worked. This information is to be reported on Form SBE-956. If on-the-job training is being required by special provision, the Contractor will be required to collect and report training data.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
REQUIRED PROVISIONS – STATE CONTRACTS

Effective: April 1 1965
Revised: January 1, 2017

I. SELECTION OF LABOR

The Contractor shall comply with all Illinois statutes pertaining to the selection of labor.

EMPLOYMENT OF ILLINOIS WORKERS DURING PERIODS OF
EXCESSIVE UNEMPLOYMENT

Whenever there is a period of excessive unemployment in Illinois, which is defined herein as any month immediately following two consecutive calendar months during which the level of unemployment in the State of Illinois has exceeded five percent as measured by the United States Bureau of Labor Statistics in its monthly publication of employment and unemployment figures, the Contractor shall employ at least 90 percent Illinois laborers. "Illinois laborer" means any person who has resided in Illinois for at least 30 days and intends to become or remain an Illinois resident.

Other laborers may be used when Illinois laborers as defined herein are not available, or are incapable of performing the particular type of work involved, if so certified by the Contractor and approved by the Engineer. The Contractor may place no more than three of his/her regularly employed non-resident executive and technical experts, who do not qualify as Illinois laborers, to do work encompassed by this Contract during period of excessive unemployment.

This provision applies to all labor, whether skilled, semi-skilled, or unskilled, whether manual or non-manual.

II. 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.

III. SUBLETTING OR ASSIGNING THE CONTRACT

1. The Contractor shall perform with his/her own organization contract work amounting to not less than 51 percent of the original total contract price, except that any items designated by the State as "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" so performed may be deducted from the original total contract price before computing the amount of work required to be performed by the Contractor with his/her own organization.

   a. "His/her own organization" shall be construed to include only worker employed and paid directly by the Contractor and equipment owned or rented by him/her, with or without operators.

   b. "Specialty Items" shall be construed to be limited to work that requires specialized knowledge, craftsmanship or equipment not ordinarily available in contracting organizations qualified to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. In addition to the 51 percent requirement set forth in paragraph 1 above, the Contractor shall furnish (a) a competent superintendent or foreman who is employed by him/her, who has full authority to direct performance of the work in accordance with the contract requirements, and who is in charge of all construction operations (regardless of who performs the work), and (b) such other of his/her own organizational capability and responsibility (supervision, management, and engineering services) as the State highway department contracting officer determines is necessary to assure the performance of the contract.

3. The Contractor shall not sublet, sell, transfer, assign or otherwise dispose of the contract or contracts or any portion thereof, or of his/her right, title or interest therein, without written consent of the Engineer. In case such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform with the Contractor's own organization, work amounting to not less than 51 percent of the total contract cost, except that any items designated in the contract as "specialty items" may be performed by subcontract and the cost of any such specialty items so performed by subcontract may be deducted from the total cost before computing the amount of work required to be performed by the Contractor with his/her own organization. Materials purchased or produced by the Contractor must be incorporated into the project by the Contractor's own organization if their cost is to be applied to the 50 percent requirement.

   No subcontracts, or transfer of contract, shall in any case release the Contractor of his/her liability under the contract and bonds. All transactions of the Engineer shall be with the Contractor. The Contractor shall have representative on the job at all times when either contract or subcontract work is being performed.

   All requests to subcontract shall contain a certification that the subcontract agreement exists in writing and physically contains the required Federal and State Equal Employment Opportunity provisions and Labor compliance provisions, including the contract minimum wage requirements. The Contractor shall permit Department or Federal representatives to examine the subcontract agreements upon notice.

4. Any items that have been selected as "Specialty Items" for the contract are listed as such in the Special Provisions, bid schedule, or elsewhere in the contract documents.

5. No portion of the contract shall be sublet, assigned or otherwise disposed of, except with the written consent of the State highway department contracting officer, or his/her authorized representative, and such consent when given shall not be construed to relieve the Contractor of any responsibility for the fulfillment of the contract. Request for permission to sublet, assign or otherwise dispose of any portion of the contract shall be in writing and accompanied by (a) a showing that the organization which will perform the work is particularly experienced and equipped for such work, and (b) an assurance by the Contractor that the labor standards provisions set forth in this contract shall apply to labor performed on all work encompassed by the request.

IV. COMPLIANCE WITH THE PREVAILING WAGE ACT

1. Prevailing Wages. All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. If the Department of Labor revises the wage rates, the Contractor will not be allowed additional compensation on account of said revisions. Current wage rate information shall be obtained by visiting the Department of Labor website at https://labor.illinois.gov. It is the responsibility of the Contractor to review the rates applicable to the work of this contract at regular intervals in order to insure the timely payment of current rates. Provision of this information to the Contractor by means of the Department of Labor website satisfies the notification of revisions by the Department to the Contractor pursuant to the Act, and the Contractor agrees that no additional notice is required.

2. Payroll Records. The Contractor and each subcontractor shall make and keep, for a period of five years from the later of the date of final payment under the contract or completion of the contract, records of the wages paid to his/her workers. The payroll records shall include the worker's name, the worker's address, the worker's telephone number when available, the worker's social security number, the worker's classification or classifications, the worker's gross and net wages paid in each pay period, the worker's number of hours worked each day, and the worker's starting and ending times of work each day. However, any Contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employer and one or more labor organization must additionally submit the worker's hourly wage rate, the worker's hourly overtime wage rate, the worker's hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable. Upon seven business days' notice, these records shall be available at a location within the State, during reasonable hours, for inspection by the Department or the Department of Labor; and Federal, State, or local law enforcement agencies and prosecutors.

3. **SUBMISSION OF PAYROLL RECORDS – STATE CONTRACT (BDE)**

   Effective: April 1, 2021
   Revised: April 1, 2026

   Submission of Payroll Records. The Contractor and each subcontractor shall, no later than the 15th day of each calendar month, file a certified payroll for the immediately preceding month to the Illinois Department of Labor (IDOL) through the Certified Transcript of Payroll Portal in compliance with the State Prevailing Wage Act (820 ILCS 130). The portal can be found on the IDOL website at https://labor.illinois.gov. Payrolls shall be submitted in the format prescribed by the IDOL.

In addition to filing certified payroll(s) with the IDOL, the Contractor and each subcontractor shall certify and submit payroll records to the Department each week from the start to the completion of their respective work, except that full social security numbers shall not be included on weekly submittals. Instead, the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted. The submittals shall be made using LCPtracker Pro software. The software is web-based and can be accessed at https://lcptracker.com/. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate option ("No Work", "Suspended", or "Complete") selected.

4. Employee Interviews. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor.

V. NONSEGREGATED FACILITIES

(Applicable to State Financed Construction Contracts and related subcontracts exceeding $10,000 which are not exempt from the Equal Opportunity clause).

By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement, as appropriate, the bidder, construction Contractor, subcontractor, or material supplier, as appropriate, certifies that (s)he does not maintain or provide for his/her employees any segregated facilities at any of his/her establishments, and that (s)he does not permit his/her employees to perform their services at any location, under his/her control, where segregated facilities are maintained. (S)He certifies further that (s)he will not maintain or provide for his/her employees any segregated facilities at any of his/her establishments, and that (s)he will not permit his/her employees to perform their services at any location, under his/her control, where segregated facilities are maintained. (S)He agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, 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 which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. (S)He agrees that (except where he/she has obtained identical certifications from proposed subcontractors and material suppliers for specific time periods), he/she will obtain identical certifications from proposed subcontractors or material suppliers prior to the award of subcontracts or the consummation of material supply agreements, exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause, and that (s)he will retain such certifications in his/her files.

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.

STATE OF ILLINOIS

SPECIAL PROVISIONS

The following Special Provisions supplement the "Standard Specifications for Construction of Airports," adopted April 1, 2012, and the Special Provisions included herein which apply to and govern the airport improvement of: Replace Airport Perimeter Fencing, Phase 1 at Logan County, Contract LO034, and in case of conflict with any part or parts of said Specifications, the said Special Provisions shall take precedence and shall govern.

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 **Base Bid: 51 calendar days; Additive Alternate #1: 4 additional 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.

CONSTRUCTION AIR QUALITY – DIESEL VEHICLE EMISSIONS CONTROL (BDE)
Effective: April 1, 2009
Revised: January 2, 2012

Diesel Vehicle Emissions Control. The reduction of construction air emissions shall be accomplished by using cleaner burning diesel fuel. The term "equipment" refers to any and all diesel fuel powered devices rated at 50 hp and above, to be used on the project site in excess of seven calendar days over the course of the construction period on the project site (including any "rental" equipment).

All equipment on the jobsite, with engine ratings of 50 hp and above, shall be required to: use Ultra Low Sulfur Diesel fuel (ULSD) exclusively (15 ppm sulfur content or less).

Diesel powered equipment in non-compliance will not be allowed to be used on the project site, and is also subject to a notice of non-compliance as outlined below.

The Contractor shall certify that only ULSD will be used in all jobsite equipment. The certification shall be presented to the Department prior to the commencement of the work.

If any diesel powered equipment is found to be in non-compliance with any portion of this specification, the Engineer will issue the Contractor a notice of non-compliance and identify an appropriate period of time, as outlined below under environmental deficiency deduction, in which to bring the equipment into compliance or remove it from the project site.

Any costs associated with bringing any diesel powered equipment into compliance with these diesel vehicle emissions controls 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. The Contractor's compliance with this notice and any associated regulations shall also not be grounds for a claim.

Environmental Deficiency Deduction. When the Engineer is notified, or determines that an environmental control deficiency exists, he/she will notify the Contractor in writing, and direct the Contractor to correct the deficiency within a specified time period. The specified time-period, which begins upon Contractor notification, will be from 1/2 hour to 24 hours long, based on the urgency of the situation and the nature of the deficiency. The Engineer shall be the sole judge regarding the time period.

The deficiency will be based on lack of repair, maintenance and diesel vehicle emissions control.

If the Contractor fails to correct the deficiency within the specified time frame, a daily monetary deduction will be imposed for each calendar day or fraction thereof the deficiency continues to exist. The calendar day(s) will begin when the time period for correction is exceeded and end with the Engineer's written acceptance of the correction. The daily monetary deduction will be $1,000.00 for each deficiency identified.

If a Contractor or subcontractor accumulates three environmental deficiency deductions in a contract period, the Contractor will be shutdown until the deficiency is corrected. Such a shutdown will not be grounds for any extension of contract time, waiver of penalties, or be grounds for any claim.

CONSTRUCTION AIR QUALITY – IDLING RESTRICTION (BDE)
Effective: April 1, 2009

Idling Restrictions. The Contractor shall establish truck-staging areas for all diesel powered vehicles that are waiting to load or unload material at the jobsite. Staging areas shall be located where the diesel emissions from the equipment will have a minimum impact on adjacent sensitive receptors. The Department will review the selection of staging areas, whether within or outside the existing highway right-of-way, to avoid locations near sensitive areas

or populations to the extent possible. Sensitive receptors include, but are not limited to, hospitals, schools, residences, motels, hotels, daycare facilities, elderly housing and convalescent facilities. Diesel powered engines shall also be located as far away as possible from fresh air intakes, air conditioners, and windows. The Engineer will approve staging areas before implementation.

Diesel powered vehicle operators may not cause or allow the motor vehicle, when it is not in motion, to idle for more than a total of 10 minutes within any 60 minute period, except under any of the following circumstances:

1) The motor vehicle has a gross vehicle weight rating of less than 8000 lb (3630 kg).
2) The motor vehicle idles while forced to remain motionless because of on-highway traffic, an official traffic control device or signal, or at the direction of a law enforcement official.
3) The motor vehicle idles when operating defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency.
4) A police, fire, ambulance, public safety, other emergency or law enforcement motor vehicle, or any motor vehicle used in an emergency capacity, idles while in an emergency or training mode and not for the convenience of the vehicle operator.
5) The primary propulsion engine idles for maintenance, servicing, repairing, or diagnostic purposes if idling is necessary for such activity.
6) A motor vehicle idles as part of a government inspection to verify that all equipment is in good working order, provided idling is required as part of the inspection.
7) When idling of the motor vehicle is required to operate auxiliary equipment to accomplish the intended use of the vehicle (such as loading, unloading, mixing, or processing cargo; controlling cargo temperature; construction operations, lumbering operations; oil or gas well servicing; or farming operations), provided that this exemption does not apply when the vehicle is idling solely for cabin comfort or to operate non-essential equipment such as air conditioning, heating, microwave ovens, or televisions.
8) When the motor vehicle idles due to mechanical difficulties over which the operator has no control.
9) The outdoor temperature is less than 32 °F (0 °C) or greater than 80 °F (26 °C).

When the outdoor temperature is greater than or equal to 32 °F (0 °C) or less than or equal to 80 °F (26 °C), a person who operates a motor vehicle operating on diesel fuel shall not cause or allow the motor vehicle to idle for a period greater than 30 minutes in any 60 minute period while waiting to weigh, load, or unload cargo or freight, unless the vehicle is in a line of vehicles that regularly and periodically moves forward.

The above requirements do not prohibit the operation of an auxiliary power unit or generator set as an alternative to idling the main engine of a motor vehicle operating on diesel fuel.

Environmental Deficiency Deduction. When the Engineer is notified, or determines that an environmental control deficiency exists based on non-compliance with the idling restrictions, he/she will notify the Contractor, and direct the Contractor to correct the deficiency.

If the Contractor fails to correct the deficiency a monetary deduction will be imposed. The monetary deduction will be $1,000.00 for each deficiency identified.

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 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).

ILLINOIS WORKS APPRENTICESHIP INITIATIVE – STATE FUNDED CONTRACTS (BDE)
Effective: June 2, 2021
Revised: April 2, 2024

Illinois Works Jobs Program Act (30 ILCS 559/20-1 et seq.). For contracts having an awarded contract value of $500,000 or more, the Contractor shall comply with the Illinois Works Apprenticeship Initiative (30 ILCS 559/20-20 to 20-25) and all applicable administrative rules. The goal of the Illinois Apprenticeship Works Initiative is that apprentices will perform either 10% of the total labor hours actually worked in each prevailing wage classification or 10% of the estimated labor hours in each prevailing wage classification, whichever is less. Of this goal, at least 50% of the labor hours of each

prevailing wage classification performed by apprentices shall be performed by graduates of the Illinois Works Pre-Apprenticeship Program, the Illinois Climate Works Pre-Apprenticeship Program, or the Highway Construction Careers Training Program.

The Contractor may seek from the Department of Commerce and Economic Opportunity (DCEO) a waiver or reduction of this goal in certain circumstances pursuant to 30 ILCS 559/20-20(b). The Contractor shall ensure compliance during the term of the contract and will be required to report on and certify its compliance. An apprentice use plan, apprentice hours, and a compliance certification shall be submitted to the Engineer on forms provided by the Department and/or DCEO.

SPECIAL PROVISION FOR SUBMISSION OF BIDDERS LIST INFORMATION (BDE)
Effective: January 2, 2025
Revised: March 2, 2025

In accordance with 49 CFR 26.11(c) all DBE and non-DBEs who bid as prime contractors and subcontractors shall provide bidders list information, including all DBE and non-DBE firms from whom the bidder has received a quote or bid to work as a subcontractor, whether or not the bidder has relied upon that bid in placing its bid as the prime contractor.

The bidders list information shall be submitted with the bid using the link provided within the “Integrated Contractor Exchange (iCX)” application of the Department’s “EBids System”.

REVISIONS TO THE ILLINOIS PREVAILING WAGE RATES

The Prevailing rates of wages are included in this Contract proposal. The rates have been ascertained and certified by the Illinois Department of Labor for the locality in which the work is to be performed and for each craft or type of work or mechanic needed to execute the work of the Contract. As required by Prevailing Wage Act (820 ILCS 130/0.01, et seq.) and this Proposal, not less than the rates of wages ascertained by the Illinois Department of Labor and as revised during the performance of a Contract shall be paid to all laborers, workers and mechanics performing work under the Contract. Post the scale of wages in a prominent and easily accessible place at the site of work.

If the Illinois Department of Labor revises the prevailing rates of wages to be paid as listed in the specification of rates, the contractor shall post the revised rates of wages and shall pay not less than the revised rates of wages. Current wage rate information shall be obtained by visiting the Illinois Department of Labor web site at https://labor.illinois.gov/laws-rules/conmed/prevailing-wage-rates.html or by calling 312-793-2814. It is the responsibility of the contractor to review the rates applicable to the work of the contract at regular intervals in order to insure the timely payment of current rates. Provision of this information to the contractor by means of the Illinois Department of Labor web site satisfies the notification of revisions by the Department to the contractor pursuant to the Act, and the contractor agrees that no additional notice is required. The contractor shall notify each of its subcontractors of the revised rates of wages.

01A LO034

SECTION III

Logan County Airport,
Lincoln, Illinois
Replace Airport Perimeter Fencing, Phase 1

Illinois Project No.: AAA-5006

COVERING ELECTRICAL DESIGN
LICENSED PROFESSIONAL ENGINEER
KEVIN N. LIGHTFOOT
062-047643
STATE OF ILLINOIS

DATE: 4/17/2026
EXPIRES: 11/30/2027

Prepared by:

HANSON®

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886

LICENSED PROFESSIONAL ENGINEER
LINDSAY DENET HAUSMAN
062-059464
STATE OF ILLINOIS

Exp. 11/30/27

100% Documents
April 17, 2026

Letting Date: June 12, 2026

INDEX OF SPECIAL PROVISIONS

GENERAL

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

Replace Airport Perimeter Fencing, Phase 1

This Project is to replace a portion of the perimeter fence at Logan County Airport including, among other incidental work, the following items:

- Placement of temporary erosion control measures.
- Removal of Class E Fence and Gates.
- Installation of Proposed Class E Fence and Gates.

GOVERNING SPECIFICATIONS AND RULES AND REGULATIONS

The Illinois Standard Specifications for Construction of Airports, State of Illinois Department of Transportation, Division of Aeronautics, adopted April 1, 2012, as revised (Standard Specifications), shall govern the Project except as otherwise revised or noted in these Special Provisions dated September 12, 2025. All references to IDOT Specifications refer to Standard Specifications for Road and Bridge Construction, Illinois Department of Transportation, adopted January 1, 2022, as revised. Resolution of conflicts with any part or parts of said Specifications shall be in accordance with Section 50-03 of the Standard Specifications.

ILLINOIS DEPARTMENT OF TRANSPORTATION, DIVISION OF AERONAUTICS

MANUALS, POLICY MEMORANDUMS, AND GUIDES

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

Manuals

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

Policy Memorandums

No.	Title	Modified By Special Provisions
18-08.2	Acceptance Procedure for Finely Divided Minerals Used in Portland Cement Concrete and Other Applications	No
96-1	Item 610, Structural Portland Cement Concrete: Job Mix Formula Approval and Production Testing	No
2001-1	Requirements for Cold Weather Concreting	No

Worksheets

Title	Modified By Special Provisions
Cold Weather Concreting Plan	No

It is the Bidder's and Contractor's responsibility to review and incorporate into their bid and work, the requirements contained in these Manuals, Policy Memorandums and Guides. Copies of each applicable manual, policy memorandum, and guide can be found on the Illinois Department of Transportation, Division of Aeronautics webpage.

DIVISION I

GENERAL PROVISIONS

SECTION 10

DEFINITION OF TERMS

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

SECTION 20

ADVERTISEMENT, BIDDING, AWARD, AND CONTRACT EXECUTION

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

SECTION 40

SCOPE OF WORK

Revise Section 40 of the Standard Specifications as follows:

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

"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. The Contractor shall maintain a copy of FAA advisory circular 150/5370-2, current issue, at the project site at all times.

"Prior to the issuance of a construction notice-to-proceed (NTP) by the Illinois Division of Aeronautics, the Contractor shall prepare and submit a safety plan compliance document (SPCD) in accordance with FAA advisory circular 150/5370-2G, paragraph 2.4.2, or equivalent section in subsequent/current issues. The SPCD shall be reviewed and approved by the Airport manager, who will then submit the document to the Illinois Division of Aeronautics for their approval prior to notice to proceed.

"To minimize disruptions to Airport operations, construction operations must be controlled throughout the project's duration, and work must be completed expeditiously. A construction phasing plan detailing the sequencing of the Contractor's work throughout the project is included in the plans. The Contractor shall provide his written acceptance of the project construction safety and phasing plan at the pre-construction conference. Any and all changes to the construction safety and phasing plan that may be requested by the Contractor must be approved by the project engineer and the Airport Owner. It shall be the Contractor's responsibility to provide sufficient advance notice of any proposed phasing change to permit consideration and approval by the project engineer and the Airport Owner. The Contractor shall not be entitled to any extra compensation nor extension to the contract time because of a phasing change request nor for any time necessary in receiving the required approvals. The Contractor shall expedite work at those phases when active runways, taxiways, hangar access, aprons, roadways or parking lots must be closed, to minimize the length of time that Airport operations are restricted.

"At the pre-construction conference, the Contractor shall provide a "Contractor coordination plan" that coordinates his work with the work of his subcontractors and the work of other Contractors of other on-going Airport projects.

"The Contractor shall remain within the construction limits shown on the plans. The Contractor shall furnish measures to prevent equipment and personnel from operating outside these limits.

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

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

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

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

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

- All employees of the Contractor shall park their personal vehicles in the designated equipment parking and storage area. Each person or vehicle entering the Contractor area shall do so in accordance with the policies and procedures of the Airport Owner. The Contractor will transport the workers from the parking areas to the work area. Only Contractor vehicles will be allowed outside of the proposed equipment storage and parking areas.
- Should any Contractor personnel be identified as noncompliant with any vehicle driving safety requirements in this project safety plan or in the Airport vehicle operations regulations, such drivers shall be penalized by rescission of their on-Airport driving privileges, and their access to the construction limit area when operating vehicles shall be revoked.
- The Contractor will be required to be in contact with Airport management, through the Resident Engineer, prior to and during work outside the construction limit area and inside the Airport Operations Area. This will keep the Contractor in contact with Airport personnel and enable the Airport personnel to immediately contact the Contractor in case of an aeronautical emergency that would require action by the Contractor and/or his personnel.

"The Contractor shall remain within the construction limits line shown in the plans. When outside these limits, all Contractor activities shall remain more than 125 feet from the centerline and 200 feet from the end of active runway 3-21 and 14-32. For work near taxiways and aprons, the Contractor's personnel and equipment must remain at least 44.5 feet from centerline of active category I taxiways, 65.5 feet from active category II taxiways, and ten (10) feet from active aprons. When construction operations must be conducted within these separations, the pavement must be closed to aircraft activity by the Contractor by providing temporary barricades as shown in the plans, and in the case of runway pavements, closed runway markers. When haul vehicles are permitted to cross active airfield pavements, the Contractor will provide positive control of construction vehicles using radio-equipped flaggers. Contractor shall establish and maintain radio contact with Logan County Airport UNICOM (122.8 MHz). All Contractor's equipment used in active airport operations areas shall be equipped with a FAA-standard flag, as referenced in FAA AC 150/5370-2, current issue. Aircraft shall have the right-of-way.

"The project includes short duration closure of the taxilane pavement in the hangar area. These closures will be approved through the FAA prior to construction. The project does not include the closing of any other runway, taxiway, or apron pavements at any time during the project. Should the Contractor request, and the Airport Owner agree to any pavement closing, the following shall apply:

- Such closing shall have been prior approved through the submittal and approval of a revised construction safety and phasing plan.

- For runways, the Contractor shall, at his expense, place and maintain the runway closure markers furnished by the Airport Owner, as detailed in the plans.
- To minimize disruption to aircraft operations associated with the runway closure, construction work must be completed expeditiously. Runway closings shall only be permitted by prior authorization of the Resident Engineer and the Airport Owner, and in accordance with the revised construction safety and phasing plan.
- The Contractor, at his expense, shall furnish, place, maintain, relocate, and remove temporary barricades on airfield runways, taxiways, and other pavements surfaces as shown and detailed in the construction plans, or as directed by the Resident Engineer.
- When the runway is to be closed, the Airport Owner will de-energize Airport/runway NAVAIDS, and airfield lighting power and control circuits when required by the Contractor's activities. The Contractor shall not proceed with further work until after the required changes to the Airport power and control circuits have been made by the Airport Owner.

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

“Open trenches, excavations and stockpiled material at the construction site shall be delineated with the use of barricades during hours of restricted visibility and/or darkness. No open trenches shall be allowed within the Runway Safety Area (RSA) or the Taxiway Safety Area (TSA) when the runway or taxiway is open to air traffic (including overnight). The RSA is defined as 75 feet from the centerline and 300 feet from the end of runway 3-21, and 60 feet from the centerline and 240 feet from the end of runway 14-32. The TSA is measured at 24.5 feet from the category I taxiway centerline, 39.5 feet from the category II taxiway centerline, and 59 feet from the category III taxiway centerline. No vertical drop of greater than 3-inches in height from pavement edge to earth grade or earth grade to earth grade within the RSA or TSA will be permitted when the runway or taxiway is open to air traffic. The contractor will have steel plates on-site to allow for the rapid covering of trenches or earth drops in the event of unexpected work stoppages for weather or airport emergencies.

“When not in use and during nonworking hours, Contractor's equipment shall be parked within the Contractor's equipment storage and parking areas. The equipment storage and parking areas are to be located as shown on the construction safety and phasing plan. The Contractor will be responsible for maintaining the construction entrance in good condition. The cost of maintaining the construction entrance is to be incidental to the contract. The Contractor shall protect all existing pavement edges from damage from construction equipment and haul vehicles.

“Before reopening temporarily closed aprons or roadways, the Contractor shall inspect and clean, as necessary, the pavement to assure that no materials or objects that may damage aircraft or vehicles remain. Any required cleaning shall be to the satisfaction of the Resident Engineer and Airport Owner and is incidental to the contract.

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

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

“At no time shall the Contractor conduct any activities or operate or park equipment so as to obstruct active part 77 Airport imaginary surfaces.

- All work shall be limited to those areas within the construction limit line shown on the construction safety and phasing plan, including all men, equipment, and materials/haul vehicles.
- Start of any work shall be previously notified and prior approved by the Resident Engineer and the Airport Owner.

"The Contractor is responsible for restoration of the work area prior to beginning work at a new location.

"The Contractor shall provide 72 hours prior notice of any outages or shutdowns to the Owner and the agency owning the affected utility. The Contractor shall provide any temporary connections or other measures as may be required to maintain service as may be required by the owning agency at no cost to the Owner.

"All notes and details shown on the construction safety and phasing plan are applicable to this project.

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

SECTION 50

CONTROL OF WORK

Revise Section 50 of the Standard Specifications as follows:

50-12 LOAD RESTRICTIONS. Add the following:

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

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

"The Contractor shall erect and maintain directional and informational signs for the Contractor=s access routes at the existing construction entrance and for the Contractor=s route within the Airport, as noted on the Plans, or as directed by the Resident Engineer. This work is included in Item 150530, Traffic Maintenance, of these Special Provisions."

SECTION 60

CONTROL OF MATERIALS

Revise Section 60 of the Standard Specifications as follows:

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

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

SECTION 70

LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

Revise Section 70 of the Standard Specifications as follows:

70-10 BARRICADES, WARNING SIGNS AND HAZARD MARKINGS. Add the following:

"The Contractor shall also meet the requirements of the Standard Specifications and Special Provisions, dated April 17, 2026, contained in Paragraph 40-5, Maintenance of Traffic, and Item 150530, Traffic Maintenance."

SECTION 80

PROSECUTION AND PROGRESS

Revise Section 80 of the Standard Specifications as follows:

80-05 LIMITATIONS OF OPERATIONS. Add the following:

"The Contractor shall also meet the requirements of the Standard Specifications and Special Provisions, dated April 17, 2026, contained in Paragraph 40-5, Maintenance of Traffic, and Item 150530, Traffic Maintenance."

SECTION 90

MEASUREMENT AND PAYMENT

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

DIVISION II

PAVING CONSTRUCTION DETAILS

EARTHWORK

ITEM 150510

ENGINEER'S FIELD OFFICE

Revise Item 150510 of the Standard Specifications as follows:

CONSTRUCTION METHODS

150 2.1 Add the following to the first Paragraph:

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

Omit Item B.

Omit Item E.

Omit Item H.

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

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

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

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

Omit Item K.

Omit Item M.

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

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

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

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

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

BASIS OF PAYMENT

150 3.1 Revise this Section to read:

"The building fully equipped as specified herein will be paid for at the Contract unit price per lump sum for Engineer's Field Office. This price shall include all utility costs and shall reflect the salvage value of the building, equipment, and furniture, which become the property of the Contractor after release by the Resident Engineer.

"Payment will be made under:

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

ITEM 150520

MOBILIZATION

This Item shall be provided in accordance with Section 150520 of the Standard Specifications.

Payment will be made under:

Item AR150520 Mobilization - per lump sum.

ITEM 150530

TRAFFIC MAINTENANCE

DESCRIPTION

150530 1.1 DESCRIPTION. This work shall consist of the furnishing, installation, maintenance, relocation, and removal of work zone traffic control and protection, and will be in accordance to the Plans, Plan details, and the guidelines specified in FAA Advisory Circular 150/5370-2 (current issue). The item shall also include the provision of: sweepers for pavement cleaning, flaggers and radio equipment for traffic control, and provision, set-up, operation, maintenance, and removal of lighted runway closure markers, as shown in the Phasing Plan and as specified in the Special Provisions.

The Contractor shall be responsible for the proper location, installation, and arrangement of all traffic control devices as shown in the Plans.

All traffic control devices used for the maintenance of traffic, as detailed on the Plans, shall be reflectorized prior to installation and cleaned as specified by the Resident Engineer. When directed by the Resident Engineer, the Contractor shall remove all traffic control devices which were furnished, installed, or maintained by Contractor under this contract. All traffic control devices shall remain in place until specific authorization for relocation or removal is received from the Resident Engineer. The Contractor shall be responsible for replacement of any devices that are supplied by others and damaged by the Contractor's and/or Subcontractor's workforce during relocation or construction operation.

The Contractor will notify the Resident Engineer in writing three (3) calendar days prior to any activities that will disrupt runway, taxiway and/or apron traffic; a three day notice will be required for road closures and lane closures.

MATERIALS

150530 2.1 MATERIALS. Materials shall be according to the following:

- FAA Advisory Circular 150/5370-2 (current issue), Operational Safety on Airports During Construction.
- Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, adopted January 1, 2022, as updated.

CONSTRUCTION METHODS

150530 3.1 GENERAL. All work zone traffic control and protection shall be according to: the Construction Phasing Plan and the Plan details; FAA Advisory Circular 150/5370-2 (current issue), Operational Safety on Airports During Construction, and; Highway Standards (latest issue), as published by the Illinois Department of Transportation.

The traffic control shown on the Plans represents the minimum required combination of traffic control devices needed for a particular construction operation. Conditions created by the Contractor's operation which are not covered by the Plans shall be delineated by devices as directed by the Engineer at no additional cost to the Project.

The Construction Phasing Plan represents one suggested alternative for the construction sequencing and method of handling traffic. Revisions or modifications of the traffic control shall have the Engineer's written approval. Any deviation from the proposed plan shall be approved in writing by the Engineer before implementation.

The traffic control should remain in place only as long as needed and shall be removed when directed by the Resident Engineer. All existing pavement markings to be temporarily removed in accordance with FAA Advisory Circular 150/5370-2 (current issue), Operational Safety on Airports During Construction may “black-out” those markings, to be restored at the end of the project, using a black paint compatible with the existing and proposed paint composition.

At the pre-construction conference, the Contractor shall furnish the name and telephone number of the individual in the Contractor's employ who is to be responsible, 24 hours a day, for the installation and maintenance of traffic control for the Project. When the actual installation and maintenance are to be accomplished by a subcontractor, consent shall be requested of the Resident Engineer at the time of the preconstruction conference. This shall not relieve the Contractor of furnishing a responsible individual in the Contractor's direct employ. The Resident Engineer will provide the Contractor with the name of its representative who will be responsible for administration of the traffic control.

Removal, relocation, maintenance and inspection of traffic control devices, as required by the Contractor's activities, shall be included in the item and not measured separately for payment.

METHOD OF MEASUREMENT

150530 4.1 Traffic control and protection required under Traffic Maintenance will be measured for payment on a lump sum basis. Where the Contractor's operations result in daily changing, or two or more work areas each of which requires traffic control according to one of the above standards, each work area installation will not be paid for separately, but shall be included in the lump sum price for Traffic Maintenance.

BASIS OF PAYMENT

150530 5.1 Traffic control and protection will be paid for at the Contract lump sum price for Traffic Maintenance. This unit price shall be full compensation for furnishing all labor, materials, tools, equipment and incidentals, including that for relocation, removal and maintenance of the materials, and necessary to complete the item as specified.

Payment will be made under:

Item AR150530 Traffic Maintenance - per lump sum.

ITEM 156000

EROSION CONTROL

Revise Item 156000 of the Standard Specifications as follows:

MATERIALS

156 2.1 SILT FENCE. Delete this Section and replace with the following:

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

BASIS OF PAYMENT

Add:

"Payment will be made under:

"Item AR156510 Silt Fence - per linear foot."

FLEXIBLE BASE COURSES

ITEM 209

CRUSHED AGGREGATE BASE COURSE

Revise Item 209 of the Standard Specifications as follows:

209-1.1 DESCRIPTION. Add the following:

"The Crushed Aggregate Base Course shall be placed upon a prepared subgrade in lifts of limited thickness as required in the Standard Specifications and to the total uniform compacted thicknesses shown in the Plans. **In accordance with Section 209-3.2, the material used in this item shall be pugmilled with water at a central mixing plant or traveling plant and placed at the material's optimum moisture content."**

MATERIALS

209-2.1 CRUSHED COARSE AGGREGATE. Add the following:

"The **Gradation B column in Table 1**, Requirements for Gradation of Aggregate, shall be used."

CONSTRUCTION METHODS

209-3.4 FINISHING AND COMPACTING. Revise this section as follows:

Add the following after the first paragraph:

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

Add the following after the third paragraph:

"The Contractor shall furnish the Resident Engineer with the size and type of straightedge required to check the pavement components as directed in the various sections of the specifications."

METHOD OF MEASUREMENT

209-4.1 Delete this Section. Section 209-4.2 of the Standard Specifications shall be used.

209-4.3 Delete this Section.

BASIS OF PAYMENT

209-5.1 Add the following:

"Payment will be made under:

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

ITEM 401900

REMOVE BITUMINOUS PAVEMENT

Revise Item 401900 of the Standard Specifications as follows:

DESCRIPTION

401900-1.1 Revise the second Paragraph as follows:

"Within the limits shown in the Plans or as directed by the Resident Engineer, the Contractor shall remove all of the existing bituminous concrete pavement. No separate measurements will be made for various HMA thicknesses that may be encountered. Existing Crushed Aggregate Base Course removal that may be required shall be included in this item."

CONSTRUCTION METHODS

401900-2.1 Add the following to the first Paragraph:

"Sawcutting under this item shall be incidental to Item 401900."

Add the following to the second Paragraph:

"Material removed shall include all of the existing bituminous concrete and aggregate as required."

Add the following as a fifth Paragraph:

"The Contractor may use a power-operated mechanical scarifier, roto-mill, planing machine, grinder or other device to remove the asphalt surface in the area for Remove Pavement. However, this milling and disposal shall not be separately measured for payment, but shall be included in the Contract unit price for Remove Bituminous Pavement."

BASIS OF PAYMENT

401900-4.1 Add the following:

"Payment will be made under:

"Item AR401900 Remove Bituminous Pavement - per square yard."

RIGID PAVEMENT

ITEM 501605

PORTLAND CEMENT CONCRETE SIDEWALK

501605-1.1 This item shall consist of Portland Cement concrete sidewalk constructed on a prepared subgrade, at the locations shown in the Plans. The concrete thickness shall be five (5) inches, as shown in the Plans.

MATERIALS AND EQUIPMENT

501605-2.1 MATERIALS. Concrete materials shall meet the requirements of Item 610, Structural Portland Cement Concrete. Preformed fiber joint filler shall meet the requirements of Section 1051 of the IDOT Specifications, Standard Specifications for Road and Bridge Construction, Illinois Department of Transportation, adopted January 1, 2022, as revised. Hot-poured joint sealer shall be ASTM D 6690, Type II, Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.

501605-2.2 EQUIPMENT. Equipment shall meet the requirements of Section 424.03 of the IDOT Specifications, Standard Specifications for Road and Bridge Construction, Illinois Department of Transportation, adopted January 1, 2022, as revised.

CONSTRUCTION REQUIREMENTS

501605-3.1 The construction shall be completed as shown in the details and notes shown in the Plans and in accordance with Sections 424.04 through 424.11 of the IDOT Specifications, Standard Specifications for Road and Bridge Construction, Illinois Department of Transportation, adopted January 1, 2022, as revised.

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

METHOD OF MEASUREMENT

501605-4.1 Portland Cement concrete sidewalk will be measured for payment in place, and the area computed in square feet. Joint filler and sealant shall not be measured separately for payment but shall be incidental to the Contract unit price for sidewalk.

BASIS OF PAYMENT

501605-5.1 This work will be paid for at the Contract unit price per square foot for Portland Cement Sidewalk of the thickness specified, which price shall be full compensation for furnishing all labor, materials, tools, equipment, and incidentals, including all required expansion joints, sawed or tooled joint sealing, special texturing, and variable height edge treatment at sidewalk aprons and accessibility ramps, necessary to complete the item as specified.

Payment will be made under:

Item AR501605 5" PCC Sidewalk - per square foot.

DIVISION III

ITEM AR162

CHAIN LINK FENCES

(Class E Fence)

DESCRIPTION

162-1.1 Add the following:

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

MATERIALS

162-2.2 BARBED WIRE. Omit this section. Barbed wire shall NOT be included.

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

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

"Fence materials shall meet the specified requirements for 6-foot and 8-foot chain-link fence based upon the details shown in the Construction Plans for the various heights specified.

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

Add:

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

Add:

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

CONSTRUCTION METHODS

162-3.1 CLEARING FENCE LINE. Add the following:

"All new fence shall be placed along a level, smooth, finished grade. The Contractor shall correct any irregularities in the ground's surface prior to installation of the fence. This grading shall be furnished in accordance with Item 152; however, separate payment will not be made, as this work shall be incidental to Fence Installation, Item 162."

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

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

162-3.6 ELECTRICAL GROUNDS. Add the following:

"Continuous fence shall be grounded at intervals not exceeding 500 feet. There shall be a ground within 100 feet of gates in each section of the fence adjacent to the gate. Fence under a power line shall be grounded by three grounds; one directly under the crossing and one on each side 25 feet to 50 feet away. A single ground shall be located directly under each telephone wire or cable crossing. The counterpoise ground shall be used only where it is impossible to drive a ground rod. The ground wire shall be connected to the fabric and tension wire with UL listed fence fabric ground clamps; Burndy Catalog number FFGC6, Harger Catalog Number FGC6, or approved equal. Grounding connectors shall be sized and suitable for the respective application. Connections to ground rods shall be with UL listed compression type grounding connectors suitable for direct burial in earth or exothermic weld type connectors, Cadweld by Pentair Erico Products, Inc., Thermoweld by Continental Industries, Inc., Ultraweld by Harger, or approved equal. Exothermic weld connections shall be installed in conformance with the respective manufacturer's directions using molds suitable for each respective application. Ground rods for fencing applications shall be 5/8-in. diameter by 8 feet long (minimum), UL-listed, Copper-clad. The ground wire used to bond the fence fabric and tension wire to the ground rod shall be #6 AWG bare solid Copper conductor.

The items furnished and installed in providing the specified grounding shall not be measured separately for payment, but shall be included in the Contract unit price for fencing."

162-3.9 EXISTING FENCE CONNECTIONS. Add the following:

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

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

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

Add:

162-3.13 LOCATE EXISTING UTILITIES. The location, size, and type of material of existing underground and/or aboveground utilities that may be indicated on the Plans are not represented as being accurate,

sufficient or complete. Neither the Owner nor the Engineer assumes any responsibility 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 shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract. All utility cables and lines shall be located by the respective utility.

Contact JULIE (Joint Utility Location Information for Excavators) for utility information, phone: 1-800-892-0123. Contact the FAA (Federal Aviation Administration) for assistance in locating FAA cables and utilities. Location of FAA power, control, and communication cables shall be coordinated with and/or located by the FAA. Also, contact Airport Director/Manager and Airport Personnel for assistance in locating underground Airport cables and/or utilities. Also, coordinate work with all aboveground utilities. Payment for locating and marking underground utilities and cables will not be paid for separately, but shall be considered incidental to the respective work item for which it is required.

METHOD OF MEASUREMENT

162-4.2 Delete this Section.

162-4.3 Delete this Section.

162-4.4 Delete this Section.

162-4.5 Delete this Section.

BASIS OF PAYMENT

162-5.2 Delete this Section.

162-5.3 Delete this Section.

162-5.4 Delete this Section.

162-5.5 Delete this Section.

Add:

Payment will be made under:

Item AR162505 Class E Fence 5’ – per linear foot

Item AS162505 Class E Fence 5’ – per linear foot

Item AR162604 Class E Gate – 4’ – per each

Item AR162605 Class E Gate – 5’ – per each

Item AR162624 Class E Gate – 24’ – per each

Item AR162630 Class E Gate – 30’ – per each

Item AR162900 Remove Class E Fence – per linear foot

Item AS162900 Remove Class E Fence – per linear foot

Item AR162910 Remove Class E Gate – per each.

DIVISION VI

LIGHTING INSTALLATION

ITEM 108

INSTALLATION OF UNDERGROUND CABLE FOR AIRPORTS

DESCRIPTION

108-1.1. Add the following to this section:

"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.

The installation (including but not limited to plowing, trenching, directional-boring, or installing in ducts or raceways) of cable and/or cable in unit duct associated with each electric slide gate installation will be considered incidental to the contract unit price of the respective electric gate installation and no additional compensation will be allowed.

This item also includes removal of existing cable installed in ducts, conduits, junction structures, handholes, manholes, and/or other raceways as shown on the Plans and Specified herein."

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 150/5340-30 (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 SPECIFCATIONS 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. 150/5370-2 (current issue in effect) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.

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. OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures.

L. UL Standard 44 – Thermoset-Insulated Wires and Cables.

M. UL Standard 83 – Thermoplastic-Insulated Wires and Cables.

N. 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.** Shop drawings shall include the following information:

A. 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.

B. Indicate the pay item number for each respective cable and/or conductor.

C. 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.

D. 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. All conductors shall be Copper."

108-2.2 CABLE. Revise this section to read as follows:

"Power Cable (600V and Below). All power wiring, 600V and below, shall be the type, size, and number of conductors as noted on the Plans.

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

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

XHHW Wire – Cable shall comply with UL Standard 44, ICEA S-95-658/NEMA WC70, and Federal Specification A-A-59544. Conductors shall be Class B-stranded, annealed, uncoated Copper per UL Standard 44. Insulation shall be rated for 600-Volts. Insulation shall be cross-linked polyethylene complying with the physical and electrical requirements of UL Standard 44 for Type XHHW-2. Cable shall be UL-listed and marked XHHW-2. XHHW wire may be used in place of THWN wire for all applications. **Conductor insulation shall be color coded as noted below.**

Control Cable for Gate Operators: Control wiring for the gate operator system shall be as detailed on the Plans, as specified herein, and as recommended by the respective gate operator manufacturer's representative and shall conform to the applicable sections of National Electrical Code. Contractor shall furnish and install the type, size, number, and quantity of control wiring to provide a complete and operational system for each respective gate operator.

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

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

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

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

All below grade splices shall be installed in splice cans, handholes, or manholes. Splice cans shall be L-867, Class IA, Size B (12-inch diameter), 24-inch deep, with 1/2-inch thick, galvanized steel cover and stainless-steel bolts. Larger size splice cans shall be provided, as applicable, for specific equipment applications or manufacturer's recommendations, and/or where detailed on the Plans. Splice cans located in areas subject to heavy aircraft or vehicle loading shall be L-868 type. The Engineer shall approve all splice locations before work commences. The furnishing and installing of splice cans for new homerun cables shall be incidental to the respective cable pay item, and no additional compensation will be allowed."

108-2.5 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 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."

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). Where the facility is not equipped with lockout/tagout equipment, the respective personnel will be responsible for providing the appropriate lockout/tagout equipment. Failure to shut down and lockout the circuit presents a dangerous hazard for personnel working on the system. Compliance with Lockout/Tagout Procedures and all other safety procedures and requirements are the responsibility of the respective personnel working at the facility.

Electrical Contractors shall be qualified to perform the respective electrical work. Contractor shall furnish and install all equipment and materials necessary for complete and operational installation, as specified herein, and as shown on the Plans. The complete installation and wiring shall be done in a neat, workmanlike manner. All electrical work shall comply with the requirements of the NFPA 70 – National Electrical Code (NEC), most current issue in force, and all other applicable local codes, laws, ordinances, and requirements in force. Electrical equipment 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/listing (or other third-party listing), and/or the manufacturer's warranty of a device will not be permitted.

Verify respective circuits and power sources prior to removing, disconnecting, relocating, installing, connecting, or working on the respective airfield lighting system, gate operator, security system, or other device. Identify each respective circuit prior to performing work on that circuit. Examine the site to determine the extent of the work. Contractor shall field verify existing site conditions.

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 hand 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 tests shall be familiar with, and qualified to work on 5000 volt airfield lighting series circuits, constant current regulators and associated airport electrical vault equipment. Please understand that airfield lighting series circuits are dangerous and only qualified personnel should be permitted to work on them and safety procedures need to be followed. NFPA 70 - National Electrical Code defines a Qualified Person as "***One who has the skills and knowledge related to the construction and operation of the electrical equipment and installations and has revied safety training to recognize and avoid the hazards involved."*** NFPA 70E Standard for Electrical Safety in the Workplace defines a Qualified Person as ***"One who has demonstrated skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training to identify the hazards and reduce the associated risk."*** OSHA (Occupational Safety and Health Administration), Part Number 1910 Occupational Safety and Health Standards, Subpart S, Electrical, Standard Number 1910.399 defines Qualified person as follows: ***"Qualified person. One who has received training in and has demonstrated skills and knowledge in the construction and operation of electric equipment and installations and the hazards involved."*** Safety of personnel is the top priority. Follow safety procedures for all work. Only qualified and experienced personnel should be permitted to work on airfield lighting series circuits.

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.

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

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. 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."

108-3.5 SPLICING. Add the following:

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

There shall be no splices between series lighting circuit isolation transformers. In the event that a series lighting circuit cable is cut between isolation transformers, the entire length of cable between these isolation transformers shall be replaced.

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

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

Add the following:

108-3.12 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 whatsoever in respect to the accuracy, completeness, or sufficiency of the information. There is no guarantee, either expressed or implied, that the locations, size, and type of material of existing underground utilities indicated are representative of those to be encountered in the construction. It shall be the Contractor's responsibility to determine the actual location of all such facilities, including service connections to underground utilities. Prior to construction, the Contractor shall notify the utility companies of his operational plans, and shall obtain, from the respective utility companies, detailed information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment, where required. In the event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner's Representative and/or the Resident Engineer/Resident Technician shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract.

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

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, to comply with 2023 National Electrical Code 300.3 "Conductors", (C) "Conductors of Different Systems", (2) "Over 1000 Volts ac, 1500 Volts dc, Nominal", and 2023 NEC 305.4 "Conductors of Different Systems". This is also required by "Airport Lighting Engineering Regional Supplement" issued by Great Lakes Region. 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 SEPARATION OF COMMUNICATION CIRCUITS AND POWER WIRING. Communication circuits shall not be installed in the same raceway, conduit, duct, or handhole with power circuits.

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

METHOD OF MEASUREMENT

Add the following:

108-4.3. The quantity of power cable, control cable, communication cable, and/or other cables and conductors installed in conduit, duct, raceway, installed as direct bury, and/or other installations associated with the gate operator systems will not be measured for payment. This shall be incidental to the respective item for which it is installed or the respective electric gate installation. This shall be incidental to the respective electric gate installation and shall include furnishing all materials and for all preparation, assembly, and installation of these materials; for all sawing and pavement removal; and for all excavation and backfilling with aggregate backfill, earth backfill and concrete; for all cable and conduit interface work to handholes/manholes/junction structures including coring of handholes/manholes; and for all labor, equipment, tools, and incidentals necessary to complete the installation."

This shall include all cable and conductor removals.

All lockout/tagout procedures to ensure and maintain safety of personnel will be considered incidental to the respective item of work for which it applies, and no additional compensation will be allowed.

Removal of existing cable to accommodate new work will be considered incidental to the respective item of work for which it applies, and no additional compensation will be allowed.

All grounding electrode conductors, grounding wires, ground rods, ground rod couplers, exothermic weld connections, splices, interface, testing, and incidentals associated with the with the gate operator systems installations will be considered incidental to the respective item of work for which it applies, and no additional compensation will be allowed."

BASIS OF PAYMENT

Add the following:

108-5.2. Payment for power cable, control cable, communication cable, and/or other cables and conductors installed in conduit, duct, raceway, installed as direct bury, and/or other installations associated with the gate operator systems will not be measured for payment and shall be incidental to the respective item for which it is installed, and no additional compensation will be made.

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."

Add the following:

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. NFPA 2638645-1 National Fire Protection Association

J. UL Standard 6 – Rigid Metal Conduit.

K. UL Standard 514B – Conduit, Tubing and Cable Fittings.

L. UL Standard 651 – Schedule 40 and 80 Rigid PVC Conduit.

M. 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.** Shop drawings shall include the following information:

A. 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.

B. Indicate the pay item number for each respective conduit or duct.

C. Shop drawings shall include conduit and/or duct cut sheets with type, size, specifications, UL listing, manufacturer, and catalog or part number.

D. Provide certification that the respective steel conduits used on this project are manufactured in the United States of America from 100 percent domestic steel to comply with the Steel Products Procurement Act (30 ILCS 565).

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. Plastic 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.

C. Plastic duct for direct burial applications shall be PVC Schedule 40 (minimum wall thickness) duct, High-Density Polyethylene (HDPE) Schedule 40 (minimum wall thickness) duct, or HDPE SDR 13.5 (minimum wall thickness) duct, and suitable for direct burial in earth.

D. Where Galvanized Rigid Steel Conduit is noted to be installed on the Plans, plastic conduit will not be permitted as an alternative conduit or duct.

110-2.2 STEEL CONDUIT. Replace this section with the following:

"Rigid Steel Conduit and fittings shall be hot-dipped, galvanized, UL-listed, and produced in accordance with UL Standard 6 – Rigid Metal Conduit and ANSI C80.1 – Rigid Steel Conduit, Zinc Coated. Couplings, connectors, and fittings for rigid steel conduit shall be threaded, galvanized steel or galvanized, malleable iron, specifically designed and manufactured for the purpose. Fittings shall conform to ANSI C80.4 – Fittings Rigid Metal Conduit and EMT and UL 514B – Conduit, Tubing, and Cable Fittings. Set screw type fittings are not acceptable. Steel used to manufacture conduits shall be 100 percent domestic steel. Contractor shall provide certification that the respective steel conduits used on this project are manufactured in the United States of America from 100 percent domestic steel to comply with the Steel Products Procurement Act (30 ILCS 565).

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.

Provide NEMA 4, 4X hubs for all conduit entries into NEMA 4, 4X equipment enclosures to maintain the NEMA 4, 4X rating of the respective enclosure. Hubs for use with NEMA 4X stainless steel enclosures shall be NEMA 4X stainless steel hubs."

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.

C. Conduits for concrete encasement shall be Schedule 40 PVC, UL-listed or ETL listed rated for 90°C cable, conforming to NEMA Standard TC-2 and UL 651, listed suitable for concrete encasement or Schedule 40 (minimum) HDPE conduit, UL-listed, conforming to NEMA Standard TC-7 and UL 651B and listed suitable for concrete encasement.

D. Conduits for directional boring shall be Schedule 40 PVC or Schedule 80 PVC conduit, UL-listed or ETL 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 or ETL 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.**

E. Conduits for direct burial in earth shall be PVC Schedule 40 (minimum wall thickness), UL-listed or ETL 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."

110-2.4 SPLIT CONDUIT. Add the following to this section:

"NON-METALLIC SPLIT DUCT. Non-metallic spilt duct shall be used to extend existing duct that contains cables and/or for protection of existing cables as detailed on the Plans. Non-metallic split duct shall be Schedule 40 PVC designed for use with power and control cable applications. Non-metallic split duct shall be suitable for direct burial in earth and concrete encasement and exhibit superior impact strength. Joints shall be sealed with corrosion-resistant tape and heavy-duty plastic straps as recommended by the split duct manufacturer for the application. Split duct sleeve couplings, duct sweeps, fittings, and accessories shall be by the same manufacturer to assure system integrity. Non-metallic split duct shall be manufactured by Prime Conduit, Inc., Carlon Electrical Products, Cantex Inc., or approved equal. Install split duct as detailed on the Plans and in conformance with manufacturer's recommendations for the respective application. Provide

adapters, couplings, and fittings to accommodate interface to existing duct or conduit. Where split duct is to be concrete-encased, confirm it is suitable for the respective application with the manufacturer."

CONSTRUCTION METHODS

110-3.1 GENERAL. Add to this section:

"The proposed conduits and ducts shall be constructed at the locations and in accordance with the details shown on the Construction Plans. Ducts shall be installed 18 in. minimum below grade. Ducts located in area subject to farming shall be 42 in. minimum below grade. Direct bury ducts to located under pavements shall be installed 30 in. minimum below finished grade. Where detailed on the Plans or where required to avoid obstructions, ducts shall be buried deeper. Where concrete-encased duct interfaces to directional-bored duct at a pavement crossing, the concrete encasement shall be installed up to the respective pavement edge. Where concrete-encased duct interfaces to an electrical handhole or manhole, the concrete encasement shall be installed up to the respective handhole or manhole. Provide bushings or bells at conduit terminations in electrical handholes or manholes.

Underground ducts installed by directional-boring method shall be installed in a manner that will not damage any existing underground utilities, and shall not disturb or damage the respective pavement or roadway surface. Ducts shall be directional-bored at the locations shown on the Construction Plans. The ducts will be bored at a minimum depth of 24 in. below the bottom of the pavement it is being bored under. Ducts installed under paved areas and roadways shall extend a minimum of 10 ft. beyond the respective pavement or roadway surface unless detailed otherwise on the Plans. A pull wire will be left in the conduit if it is to be left vacant. The ends of the conduit will be sealed with approved plugs.

Ducts indicated to be installed by direct burial method may be installed by plowing or directional boring where the respective duct is rated suitable for the respective installation method.

The Contractor will determine if there is a conflict between the installation of the proposed electrical ducts and any existing utilities. He will make all necessary adjustments in depth of installation to avoid any and all proposed underground improvements.

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.

Contractor shall coordinate work and any power outages with the Airport Manager and the Resident Engineer/Resident Technician. Any shutdown of existing systems shall be scheduled with and approved by the Airport Manager prior to shutdown. Once shut down, the circuits shall be labeled as such to prevent accidental energizing of the respective circuits. All personnel shall follow U.S. Department of Labor Occupational Safety & Health Administration (OSHA) 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures including, but not limited to, 29 CFR section 1910.147 The Control of Hazardous Energy (lockout/tagout). Where the facility is not equipped with lockout/tagout equipment, the respective personnel will be responsible for providing the appropriate lockout/tagout equipment. Failure to shut down and lockout the circuit presents a dangerous hazard for

personnel working on the system. Compliance with Lockout/Tagout Procedures and all other safety procedures and requirements are the responsibility of the respective personnel working at the facility.

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

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

All temporary installations shall comply with National Electrical Code Article 590 – "Temporary Installations." The Contractor shall 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 218.3 "Lighting and Visual NAVAIDs".

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 Engineer. All trench settlement shall be corrected for a period of one year. Restoration, grading, and seeding of areas disturbed during the installation of the proposed ducts will be incidental to the respective pay item for which the duct is installed. The fertilizing and seeding will be completed in accordance with Items 901 and 908, but will be incidental to the respective pay item for which the duct is installed.

Any and all disturbed pavement areas will be restored to original or better condition. Restoration of pavement areas disturbed during the installation of the proposed ducts will be incidental to the respective pay item for which the duct is installed."

Add 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 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.

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 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, Cantex Spacers for Duct, or approved equal. Confirm catalog numbers with the manufacturer for the respective application.

110-3.10 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, to comply with 2023 National Electrical Code 300.3 "Conductors", (C) "Conductors of Different Systems", (2) "Over 1000 Volts ac, 1500 Volts dc, Nominal", and 2023 NEC 305.4 "Conductors of Different Systems". This is also required by "Airport Lighting Engineering Regional Supplement" issued by Great Lakes Region. 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 and/or duct for the electric slide gates and/or gate operator(s) shall not be measured for payment. This shall be incidental to the respective electric gate installation and shall include furnishing all materials and for all preparation, assembly, and installation of these materials; for all sawing and pavement removal; and for all excavation and backfilling with aggregate backfill, earth backfill and concrete; for all duct interface work to handholes/manholes including coring of handholes/manholes; and for all labor, equipment, tools, and incidentals necessary to complete the installation.

The labor associated with relocation, interface to, and/or adjustment of existing conduits will be considered incidental to the work for which it is required, and no additional compensation will be allowed.

All lockout/tagout procedures to ensure and maintain safety of personnel will be considered incidental to the respective item of work for which it applies, and no additional compensation will be allowed."

BASIS OF PAYMENT

Add the following:

"110-5.2. Payment for the furnishing and installation of conduit and/or duct for the electric slide gates and/or gate operator(s) shall not be measured for payment and shall be incidental to the respective electric gate installation and no additional compensation will be made. For each respective electric gate installation, all costs for furnishing all materials and for all preparation, assembly, and installation of these materials; for all sawing and pavement removal; for all duct interface work to handholes/manholes including coring of handholes/manholes; for all boring and equipment; for all excavation and backfilling with aggregate backfill, earth backfill, and concrete; and for all labor,

equipment, tools, and incidentals necessary to complete this item is considered incidental to the item of work for which the duct is being installed."

END OF ITEM 110

ITEM 162700

ELECTRICAL SLIDING GATES

DESCRIPTION

162700-1.1 This item shall consist of furnishing and installing an electric slide gate **(5 feet in height with a clear opening as detailed herein for the respective gate)** in accordance with these Specifications and at the locations shown on the Construction Plans. This item will include all labor, equipment, and materials required to put the proposed electric slide gate in proper working order. This item shall also include furnishing and installing disconnects, surge arresters/protectors, conduits, ducts, wire, grounding, and all other electrical equipment and materials as detailed on the Construction Plans and specified herein.

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

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

A. New slide gate with operating hardware, gate operator, heater, controller, and detector amplifiers.

B. The gate shall be a keypad access control unit entry/free exit gate.

C. The gate shall have an automatic closing feature activated by an adjustable timer. Safety loops shall be provided at both sides of the gate to delay the closing of the gate in the event that it detects that the vehicle has not yet passed through the gate. The inner loop shall also provide automatic opening to exit upon detection of a vehicle.

D. Provide ten (10) remote control transmitter units for each gate for automatic gate operation. Coordinate frequencies with the Airport Director.

E. Power for the gate operator shall be from a 120/240 VAC, 1 phase, 3 wire power source as detailed on the Plans.

F. Controls, safety devices, and associated control wiring shall be in accordance with the respective gate operator and/or equipment manufacturer's recommendations and as detailed herein.

G. Include surge protection on the gate operator and associated control systems.

H. Contractor shall examine the existing facility to determine the extent of the work.

I. Contractor shall confirm and verify part numbers for respective materials and equipment to ensure they are correct and suitable for the respective application.

J. **Engage a factory trained and authorized service representative to provide commissioning, start-up, testing, adjustments, calibration and checkout for each electrically operated gate. Test reports from the factory trained and authorized service representative shall be provided for each gate.**

162700-1.2 REFERENCES. 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. ASTM Specification B3 - Standard Specification for Soft or Annealed Copper Wire.

D. ASTM Specification B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft.

E. ASTM F 1184-05 Standard Specification for Industrial and Commercial Horizontal Slide Gates.

F. ASTM F1043 Standard Specification for Strength and Protective Coatings on Steel Industrial Chain Link Fence Framework.

G. ASTM F2200 Standard for Automated Vehicular Gate Construction.

H. FAA AC No. 150/5370-2G (current issue in effect) “OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION”.

I. Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Adopted April 1, 2016.

J. NEMA TC-2 – Electrical Plastic Tubing and Conduit.

K. NEMA TC-3 – Fittings Rigid PVC Conduit and Tubing.

L. NFPA 70 – National Electrical Code (most current issue in force).

M. NFPA 70E – Standard for Electrical Safety in the Workplace.

N. OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures.

O. UL Standard 6 – Rigid Metal Conduit.

P. UL Standard 44 - Thermoset-Insulated Wires and Cables.

Q. UL Standard 83 - Thermoplastic-Insulated Wires and Cables.

R. UL 325, (Fourth Edition), Standard for Safety for Door, Drapery, Gate, Louver and Window Operators and Systems.

S. UL Standard 514B – Conduit, Tubing and Cable Fittings

T. UL Standard 651 – Schedule 40 and 80 Rigid PVC Conduit.

162700-1.3 SHOP DRAWINGS. The Contractor shall furnish shop drawings for approval before ordering material and equipment for the following system components. Shop drawings are required for the electric gate. **Note shop drawings that are submitted that do not include all the following listed requirements will be rejected and will require resubmittal. Contractor shall use the following as a check list and shall verify all information noted below is included with the respective electric gate shop drawing prior to submitting the shop drawing for review. Shop drawings shall be clear and legible. Copies that are illegible will be rejected. Separate shop drawings shall be prepared for each electric gate.** Shop drawings shall include the following information:

A. 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.

B. **Any steel used in any materials under this item shall be from steel made in the United States and meet the requirements of (30 ILCS 565/) Illinois Steel Products Procurement Act; a manufacturer's certification of domestic source must be furnished.**

C. Cut sheets and specifications for the cantilever slide gate.

D. Cut sheets and specifications for the gate operator. Include manufacturer's name, address, phone number, gate operator model number, gate operator UL listing or ETL listing, gate load capability and drive rail force requirements, traveling speed, housing data, input voltage, motor horsepower rating, full load amperage requirements, manufacturer's recommended wiring requirements, and respective options, (heater option, audible beeper option, etc.).

E. Cut sheets and specifications for the keypad access control station.

F. Include information, specs, and cut sheets for the surge suppressor included with the gate operator.

G. Provide data sheets for the detector amplifiers with manufacturer's name and model number. (Note these might be part of the gate operator)

H. Provide data sheets on the loop/lead-in cables.

I. Provide cut sheets, information, voltage rating, amperage rating, fuse size, and manufacturer catalog number, and options for the 30 Amp, 2-pole, 240 VAC, UL listed heavy duty safety switch in a NEMA 4X stainless steel enclosure that is for each gate operator.

J. Provide cut sheets for the Control Panel Enclosure/Junction Box.

K. Provide cut sheets for all types of conduit used with the electric gate (for example galvanized rigid steel conduit, Schedule 80 PVC conduit, and UL listed liquid tight flexible metal conduit). Include certification that steel conduits are made with 100 percent domestic steel.

L. Provide shop drawing with cut sheets for the respective power circuit conductors and control circuit conductors.

M. Provide cut sheets with manufacturer's name, catalog number, dimensions, material, and UL listing for each type and size of ground rod used with the electric gate installation. Include certification of 100% domestic steel for ground rods.

N. All steel used in the manufacturer of gate posts and gate materials shall be 100% domestic steel. Contractor shall provide certification that the respective steel used in the manufacture of gate posts and gate materials on this project is manufactured from 100 percent domestic steel.

O. Concrete mix design, per Item 610.

EQUIPMENT AND MATERIALS

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

162700-2.2 GATE. Gate shall be suitable for the respective application and in accordance with the respective gate manufacturer's recommendation for the respective application. Gate construction shall comply with ASTM F 1184-05 for Type II - Cantilever Slide, Class 2 – steel frame and aluminum frame gates using internal rollers. Metal pipe and tubing used in the gate construction shall be Aluminum complying with ASTM F1043 for materials and protective coatings. The gate shall conform to ASTM F2200 Standard for Automated Vehicular Gate Construction. The gate shall be metal framed manufactured of Aluminum, with cross bracing, and covered with chain link fence fabric, sliding-gate, cantilever-type, capable of spanning the prescribed clear opening, **5 feet** in height and have an enclosed roller assembly to be protected from freezing rain and snow. Gate shall have double tracks supported by gate posts on each side of the gate (interior and exterior). The gate frame shall be supported from the tracks by four, self-aligning, 4-wheeled, sealed lubricant, ball-bearing truck assemblies.

The gate shall be covered with chain link fence fabric; 2-in. diamond mesh steel wire, interwoven, minimum 9-gauge thick, top selvage knuckle end closed, bottom selvage twisted tight barbed or knuckle end closed.

Fence fabric, posts, braces, fittings, sleeves, bands, clips, rail ends, tension bars, fasteners, and additional miscellaneous fittings shall be galvanized steel.

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

162700-2.3 GATE OPERATOR. The operator shall be complete with electric motor and factory-prewired motor controls, gear reduction unit, solenoid operated brake, clutch, and remote-control operation. The gate must be closed and locked when not in use. A gate is considered locked when it is equipped with an electric opening or closing device that, when closed, prevents the gate from being opened by hand. During power outages, the lock must fail in the locked position. Provide hand-operated disconnect or mechanism for automatically engaging a sprocket chain operator and releasing brake for emergency manual operation. Include interlock device to automatically prevent motor from operating when emergency sprocket is engaged. The operator shall be equipped with a minimum 1.0 horsepower

electric motor (larger motors will be required where recommended by the respective gate operator manufacturer for the respective size and type of gate) capable of operating a 33 foot (clear opening)/50 foot (overall length) cantilever gate weighing up to 1,700 pounds with a gate speed of approximately 1 foot per second, to close the prescribed opening. Gate operator shall be properly sized and compatible with the respective gate. The operator shall consist of the motor starter and all relays required from the operation outlined herein. The operator and components shall be factory assembled and wired so as to require only field connections of the keypad access control unit, loops, system power supply, and any other associated controls.

The operator housing shall be fully enclosed, NEMA 3R, weather-resistant, hinged, lockable, 16-gauge (minimum) steel enclosure with a corrosion resistant, powder-coated paint finish. Appropriate time delays shall be incorporated for safe gate operation. Gate shall close automatically after an extensive adjustable delay period, unless manually disabled. Include audible beeper on the gate operator for indication of gate activation and movement. Gate operator shall be equipped with a heater to allow operation within a temperature range of minus 40 degrees Fahrenheit to 149 degrees Fahrenheit ambient temperature, in rain, snow, sun, and high humidity. The gate operator shall be UL 325, (Fourth Edition) listed and suitable for Class III and Class IV applications. The gate operator shall include UL 325 entrapment protection sensors Type A - Inherent entrapment sensing system and Type E - inherent audio alarm to warn personnel of gate activation to comply with the requirements of UL 325 for a Class III usage application. The proposed operator shall be a Linear OSCO Model HSLG-111 (115 VAC single phase unit), Linear OSCO Model HSLG-121 (230 VAC single phase unit), Chamberlain Lift-Master Model SL595, or approved equal. Confirm proper model number and voltage codes with the manufacturer.

Supply voltage for the gate operator will be 120/240 VAC, 1 phase, 3-wire with ground.

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

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

The gate operator foundation shall be a minimum of 48 in. depth, to the dimensions recommended by the manufacturer. The foundation shall be constructed of Class SI concrete. Anchor bolts shall be per the gate operator manufacturer's requirements. The concrete must have strength of 3,500 psi after 14 days.

162700-2.4 KEYPAD ACCESS CONTROL UNIT. Keypad access control unit shall be capable of accepting up to 100 different 4-digit codes. Input operating voltage shall be 12 to 24 VAC or VDC (and/or compatible with the respective gate operator control voltage). Keypad access control unit shall be suitable for outdoor installation with a weatherproof housing and operating temperature range of -15 degrees F to

+160 degrees F. Contractor shall ensure compatibility between the gate operator control voltages, the keypad access control unit input voltage and output contact ratings, and the respective control interface. Contractor shall include interfacing relays and/or transformers as applicable. Keypad access control unit shall be surface mount housing with appropriate adapters and hardware to install on a gooseneck type pedestal. **The keypad and pedestal shall be powder-coated, finish in black.** The keypad access control unit shall be constructed as detailed on the Construction Plans and in accordance to the manufacturer's Specifications. Keypad access control unit shall be American Access Systems, Inc., Advantage DKE 26-100L, Summit Access Control S-XL-660, or approved equal.

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

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

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

162700-2.6 SECONDARY SAFETY DEVICES. The gate operator shall include UL 325 entrapment protection sensors, Type B1 – photoelectric eye system, and Type E - inherent audio alarm to warn personnel of gate activation to comply with the requirements of UL 325 for a Class III usage application. Each gate and operator system shall include an entrapment protection Type B1 non-contact sensor/photoelectric eye safety device to stop the gate and/or prevent it from closing if an obstruction is detected in the path of the gate. Photoelectric eye system shall include a transmitter and receiver pair with operating range corresponding to the respective gate length, suitable for outdoor installation and operation over a temperature range of -40° F to +150 °F. These devices shall be UL approved to maintain the UL listing and/or ETL listing (confirming compliance with UL 325) of the respective gate operator system and shall be as recommended by the respective gate operator manufacturer's representative. Contractor shall include all power and control wiring, conduits, ducts, support hardware, mounting posts, control panel enclosure, interface connections, etc. as required to provide a complete and operational system.

162700-2.7 POWER SOURCE. Power for the gate operator shall be from a 120/240 VAC, 1 phase, 3 wire panelboard located as detailed on the Plans. Power to each gate operator shall be 120/240 VAC, 1

phase, 3 wire with ground or 120 VAC, 1 phase, 2 wire with ground. Note where the respective gate operator system requires a voltage system other than 120/240 VAC, 1 phase, 3 wire with ground, the Contractor shall be responsible to furnish and install the respective transformers and/or additional feeder cable conductors to accommodate the required voltage system. The power cable feeder circuit shall be sized in accordance with the gate operator manufacturer recommendations, and in accordance with the National Electrical Code. Take into account voltage drop for the respective cable length/run for the power source to the gate operator and increase cable sizes to maintain a voltage drop of 5% or less, or in accordance with the gate operator manufacturer's recommendations. Include an equipment ground wire with the feeder circuit of the same size as the phase conductors. The Contractor will be responsible for providing all necessary material for the installation of electrical power and control wiring from the power source to the gate operator, from the gate operator to the keypad station, and from the gate operator to the detector loops. It will also be the Contractor's responsibility to locate, identify and protect all existing utilities. Any damage to these utilities will be immediately repaired at the Contractor's own expense.

162700-2.8 POWER WIRING. Power wiring, 600-Volt and below for use with the gate operator, shall be the type, size, and number of conductors as noted on the Plans. Cable shall also conform to the requirements of Item 108 Installation of underground Cable for Airports.

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

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

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

D. Grounding electrode conductors, bonding jumpers, and/or equipment ground wires shall be the size and type, as detailed on the Plans.

162700-2.9 CONTROL WIRING. Control wiring for the gate operator system shall be as detailed on the Plans, as specified herein, and as recommended by the respective gate operator manufacturer's representative and shall conform to the applicable sections of National Electrical Code. Contractor shall furnish and install the type, size, number, and quantity of control wiring to provide a complete and operational system for the respective gate operator. Control wires between devices shall be Copper, Type THWN, No. 14 minimum, or as recommended by the respective equipment manufacturer, color coded and

tagged with wire markers for easy identification. The control wiring between the keypad access control unit and the gate operator shall include a #12 AWG THWN or XHHW copper with green colored insulation equipment ground wire.

Induction loop feed wires shall be Copper, No. 14 AWG minimum, Twin-Twisted-Shielded, meeting the State of Illinois, Department of Transportation, specifications and all the requirements of manufacturer of the respective Detector Amplifier furnished. Detector loop wires shall conform to the requirements Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Section 1079 DETECTOR LOOP.

One (1.0) inch Galvanized Rigid Steel conduit will be required for all control wires from outside the pavement area to the operator, from the keypad access control unit to the operator, and from the operator to the detector loops. All metal conduits entering the gate operator shall be bonded to the frame of the gate operator.

162700-2.10 REMOTE RECEIVER. The Contractor shall provide a remote receiver for each gate operator. Remote receiver shall have frequency as specified by the Airport Director/Manager. Remote receiver shall have proper shielding to eliminate potential problems caused by stray radio frequency interference or noise. Remote receiver shall be high quality and capable of being activated by the respective transmitter at a distance of up to 100 feet. The Contractor is responsible to provide a properly operating receiver and transmitter pair for each gate operator. Antenna for receiver shall be mounted above the fence to ensure proper operation by remote transmitter from a distance of up to 100 feet. Include all support and mounting hardware for antenna.

162700-2.11 REMOTE TRANSMITTERS. The Contractor shall provide with the remote receiver, 10 remote transmitters for each gate for use by Airport or other authorized personnel. Remote transmitter shall be high quality and capable of activating the respective receiver at a distance of up to 100 feet. Coordinate programming of frequency with the Airport Manager.

162700-2.12 CIRCUIT BREAKERS. Circuit breakers for the gate operator feeder circuit, and any other required circuits, shall have voltage ratings, amperage trip ratings, amp interrupting ratings, and number of poles as detailed on the Plans. Circuit breakers to be installed in an existing panelboard shall be bolt-on type, compatible with the respective panelboard and manufactured by the same manufacturer as the panelboard. Circuit breakers to be installed in an existing load center shall be plug-on type, compatible with the respective load center and manufactured by the same manufacturer as the load center. Where circuit breakers manufactured by the same manufacturer as the respective panelboard or load center are not readily available, a circuit breaker by a different manufacturer will be acceptable.

162700-2.13 SAFETY SWITCHES. Furnish and install a safety switch for the respective gate operator as detailed on the Plans and specified herein. Safety switches shall be heavy duty, UL-listed, with amperage, voltage, number of poles, and type (fusible or not fusible), and accessories as detailed on the Plans. Safety switches shall be pad lockable in the off position. Include ground lugs or grounding kits with all safety switches. Safety switches located outdoors, or in damp areas shall be in NEMA 4X stainless steel enclosures. Safety switches located in hazardous classified areas shall be UL-listed or FM approved as suitable for the respective location. Safety switches shall be as manufactured by Square D, Eaton Cutler-Hammer, or approved equivalent.

162700-2.13 FUSES. Fuses shall be Class RK5, UL listed with 100,000 Amp (minimum) interrupting rating at the respective voltage system. Fuses shall be properly sized and suitable for the respective equipment in accordance with the respective equipment manufacturer's recommendations and/or in accordance with

the requirements of National Electrical Code for the respective motor/equipment. Fuses shall be manufactured by Bussmann, Littlefuse, or approved equal. Furnish two additional fuses of each size and type used on the project, for use as spares.

162700-2.14 GALVANIZED RIGID STEEL CONDUIT. Galvanized rigid steel conduit (GRSC) shall be heavy wall hot dipped galvanized steel pipe bearing the UL label and conforming to UL-6 and ANSI Specification C80.1. Couplings, connectors, and fittings for rigid steel conduit shall be threaded galvanized steel or galvanized malleable iron specifically designed and manufactured for the purpose. All fittings shall be threaded type. Fittings shall conform to ANSI C80.4. Set screw type fittings are not acceptable. Steel used to manufacture conduits shall be 100 percent domestic steel. Contractor shall provide certification that the respective steel conduits used on this project are manufactured from 100 percent domestic steel.

162700-2.15 LIQUID TIGHT FLEXIBLE METAL CONDUIT. Liquid-tight, flexible metal conduit shall consist of polyvinyl jacket over flexible, hot-dip, galvanized steel tubing. The flexible conduit shall be completely sealed from liquids, dust, dirt, and fumes and be resistant to oil, gasoline, grease, and abrasion. Jacket shall also be sunlight-resistant. Liquid-tight, flexible metal conduit shall be UL-listed, suitable for use as a grounding conductor, and comply with Article 350 of the NEC. **Liquid-tight, flexible metal conduit and associated fittings shall be UL-listed to meet the requirements of NEC 350.6.** Liquid-tight flexible metal conduit shall be Anaconda Sealtite Type UA as manufactured by Anamet Electrical Inc., Liquatite Type LA as manufactured by Electri-Flex Company, Liquid-Tuff Type LFMC as manufactured by Atkore International AFC Cable Systems, or approved equal. Do not install liquid-tight, flexible metal conduit that is not UL listed. Confirm liquid-tight, flexible metal conduit bears the UL label prior to installation.

162700-2.16 SCHEDULE 40 and 80 PVC CONDUIT. Schedule 40 PVC and Schedule 80 PVC conduit shall comply with Item 110 and the following: Conduit shall be Schedule 40 PVC, UL-listed or ETL listed, rated for 90°C cable-conforming to NEMA Standard TC-2 and UL 651. Fittings shall conform to NEMA Standard TC-3 and UL 514B. Conduits shall be suitable for underground applications encased in concrete or direct burial, and suitable for exposed applications aboveground.

162700-2.17 JUNCTION AND PULL BOXES. Unless otherwise noted on the Plans, all junction boxes shall be 16-gauge minimum construction. Surface mounted exterior junction and pull boxes located in non-hazardous, non-classified areas, shall be NEMA 4X stainless steel. Flush-mounted exterior boxes located in non-hazardous, non-classified areas, in floors, walkways, and walls shall be NEMA 4, cast aluminum, Crouse-Hinds, Hubbell-Killark, or approved equal, and shall be supplied with asphalt paint applied to all surfaces imbedded in concrete. All junction and pull boxes installed in classified hazardous areas (Class 1, Division 1 or 2, Group D) shall be NEMA 7 and shall comply with applicable provisions of the NEC including, but not limited to, Articles 500 and 501. Junction and pull boxes shall be sized as required for conductors and splices and per 2020 NEC Article 314. Boxes shall be UL-listed. Special boxes made to suit conditions shall be used to accommodate the respective application or where required by National Electrical Code even though they might not be indicated on the drawings.

162700-2.18 GROUND RODS. Ground rods for electrical installations shall be **3/4-inch diameter by 10-foot long**, UL-listed, Copper clad with 10-mil minimum Copper coating. Ground rods for fence grounding shall be 5/8-inch diameter by 8-foot long, UL-listed, Copper clad with 10-mil minimum Copper coating. Steel used to manufacture ground rods shall be 100 percent domestic steel.

162700-2.19 LEGEND PLATES. Legend plates shall be required for all safety switches, individual circuit breakers, disconnects, etc. Legend plates shall be provided to identify the equipment controlled, the power

source, the voltage system, and the function of each device. Legend plates shall be weatherproof and abrasion resistant phenolic material. Lettering shall be black letters on a white background, unless otherwise noted.

162700-2.20 SIGNAGE. The gate shall include signage as detailed on the Plans. Note: UL requires that all installations must have warning signs placed in plain view on both sides of the gate to warn pedestrians of the dangers of motorized gate systems. Furnish and install warning signs at gate exterior face and interior face noting "WARNING – MOVING GATE CAN CAUSE SERIOUS INJURY OR DEATH". Signage shall be secured to the gate with corrosion resistant metal connectors. Additional signage shall be provided as detailed on the Plans and/or as specified herein.

162700-2.21 CONCRETE. Concrete for use with the gate installation and/or associated equipment shall conform to Item 610 Portland Cement Concrete of the Standard Specifications for Construction of Airports.

CONSTRUCTION METHODS

162700-3.1 CONTRACTOR QUALIFICATIONS. The contractor shall have a minimum of 5 years related experience installing electric driveway gates. The Contractor or his respective subcontractor personnel shall be a factory trained and authorized service representative in regard to the electric gate operator and control systems. The respective gate operator system authorized service representative must have attended training and obtained certification directly from the gate operator manufacturer or his designated representative.

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

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

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

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

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

utilities. Prior to construction, the Contractor shall notify the utility companies of his operational plans and shall obtain from the respective utility companies detailed information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment where required. In the event an unexpected utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner's Representative and/or the Resident Engineer/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.

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

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

162700-3.9 CLEAN UP. The Contractor shall remove from the Owner's property and from all public and private property, all temporary structures, rubbish, and waste materials resulting from his operation or caused by his employees, and shall remove all surplus materials, leaving the site smooth, clean, and true to line and grade.

162700-3.10 WARRANTY PERIOD: Neither the final certificate of payment nor any provision in the contract, not partial or entire use of the improvements embraced in this contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the contract, or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay any damage to other work resulting there from which shall appear within a period of twelve (12) months from the date of final acceptance of the work. The Owner shall give notice of defective materials and work with reasonable promptness. The warranty applies to equipment furnished, as well as to all other work and materials. **The gate operator shall include a 5-year limited warranty against all defects in materials or workmanship. Defective material shall be replaced with the same or comparable materials furnished by the gate operator manufacturer, at no cost to the Owner.**

162700-3.11 ELECTRIC SLIDE GATE CONSTRUCTION. The Contractor shall install the electric slide gate as detailed on the Construction Plans and in accordance with the manufacturer's directions. The Contractor will be responsible for the construction of any and all concrete bases for the proposed gate operator and Keypad access control unit.

162700-3.12 GATE CONTROL EQUIPMENT. Installation of all electrical equipment and all gate control equipment shall be in conformance with the requirements of the NFPA 70- National Electrical Code (NEC) most

current issue in force, the respective equipment manufacturer's directions, and in strict accordance with the requirements of all local authorities having jurisdiction. **All control power transformers, power supplies, receptacles, loop detector amplifiers, secondary safety device equipment, and any other associated controls shall be installed either inside the gate operator control panel or inside a separate NEMA 4 stainless steel control panel enclosure. Where the control equipment is to be installed inside the gate operator control panel the Contractor shall coordinate this with the gate operator manufacturer and the respective gate operator equipment supplier. Locating these controls outside of gate operator control panel but within the gate operator housing will not meet this requirement.** All keypad access control unit stations, push button stations, operators, and controllers shall be grounded to prevent shock. All concrete work required, and the respective locations for the installation of the controller/operator, keypad access control unit, and induction loops, control panel, etc. shall be coordinated with the manufacturer's shop drawings, installation instructions, and the Resident Engineer/Resident Technician.

162700-3.13 INSTALLATION OF DETECTOR LOOPS: New loop detector wiring shall be as specified by the manufacturer furnishing the detector amplifiers. The induction loops shall be equipped with appropriate equipment to operate properly for large trucks and not activate closure of the gate onto vehicles parked in the gate opening. Induction loops shall be installed in saw-cut grooves created by the Contractor in the road surface; such grooves of length, width, and depth as required by the manufacturer of the loop control equipment. Loop detector wiring shall be installed in accordance with the respective gate operator and/or loop detector manufacturer instructions. Contractor shall saw cut approximately 6" minimum depth at the pavement edge such that the conduit for the loop detector lead-in wiring will not be less than 6" below grade at the interface point to the pavement. Loop wires shall be held in place in the bituminous/concrete pavement by completely backfilling and covering slot with a sealer rated suitable for the respective application. Sealer shall conform to the requirements Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Section 1079 DETECTOR LOOP. The gate will also include loop detectors with a free exit feature. Two loops (one exterior and one interior) shall be provided. The exterior loop shall serve as an "obstruction/safety" loop. The interior loop gate shall also serve as an "obstruction/safety" loop and additionally serve as a "free exit" loop for automatic opening to exit upon detection of a vehicle. Contractor shall coordinate and select controls and wiring in accordance with the respective gate operator representative recommendations. Contractor shall verify the selected loop detectors are suitable for the respective gate installation. Contractor shall include interfacing relays, transformers, power supplies, receptacles, control devices, and power and control wiring, as applicable.

162700-3.14 PROTECTIVE ELECTRICAL GROUND: Continuous fence shall be grounded at intervals not exceeding 500 feet. There shall be a ground within 100 feet of gates in each section of the fence adjacent to the gate. Fence under a power line shall be grounded by three grounds; one directly under the crossing and one on each side 25 feet to 50 feet away. A single ground shall be located directly under each telephone wire or cable crossing. The counterpoise ground shall be used only where it is impossible to drive a ground rod. The ground wire shall be connected to the fabric and tension wire with UL listed fence fabric ground clamps; Burndy Catalog number FFGC6, Harger Catalog Number FGC6, or approved equal. Grounding connectors shall be sized and suitable for the respective application. Connections to ground rods shall be with UL listed grounding connectors suitable for direct burial in earth or exothermic weld type connectors, Cadweld by Pentair Erico Products, Inc., Thermoweld by Continental Industries, Inc., Ultraweld by Harger, or approved equal. Exothermic weld connections shall be installed in conformance with the respective manufacturer's directions using molds suitable for each respective application. Ground rods for fencing applications shall be 5/8-in. diameter by 8 feet long (minimum), UL-listed, Copper-clad. The ground wire used to bond the fence fabric and tension wire to the ground rod shall be #6 AWG bare solid Copper conductor.

162700-3.15 ELECTRICAL GENERAL. The Contractor shall furnish and install all electrical materials necessary for complete and operational installation of the gate operator, as stipulated in the respective item and as shown on the Plans. The complete installation and wiring shall be done in a neat, workmanlike manner. All electrical work shall comply with the requirements of the NFPA 70-National Electrical Code (NEC) most current issue in force, the respective equipment manufacturer's directions, and all other applicable local codes, laws, ordinances, and requirements in force. Electrical equipment shall be installed in conformance with the respective manufacturer's directions and recommendations for the respective application. Any installations which void the UL listing, 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. The Contractor should examine the proposed site to evaluate the complexity of the work.

B. Keep a copy of the latest National Electrical Code in force on site at all times during construction for use as a reference. Contractor shall keep a copy of the Plans, Special Provision Specifications including any addenda, and copies of any change orders on site at all times during construction.

C. Verify and coordinate work and any power outages to buildings and facilities located on the airport with the Airport Director/Manager and/or the respective building personnel. Any shutdown of existing systems shall be scheduled with and approved by the Airport Director/Manager prior to shutdown. Once shut down, the circuits shall be labeled as such to prevent accidental energizing of the respective circuits. All personnel shall follow OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures, including, but not limited to, 29 CFR Section 1910.147 The Control of Hazardous Energy (lockout/tagout). Where the facility is not equipped with lockout/tagout equipment, the respective personnel will be responsible for providing the appropriate lockout/tagout equipment. Failure to shut down and lockout the circuit presents a dangerous hazard for personnel working on the system. Compliance with Lockout/Tagout Procedures and all other safety procedures and requirements are the responsibility of the respective personnel working at the facility.

D. In the event a conflict is determined with respect to the manufacturer installation instructions, NEC, and/or the Contract Documents, contact the Project Engineer for further directions or clarifications.

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

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

G. Contractor shall confirm that the power to each gate operator rated for 240 VAC, single-phase is 240 VAC, single-phase, 2-wire with ground and that each phase to ground is 120 VAC. Contractor shall confirm that the power to each gate operator rated for 208 VAC, single-phase is 208 VAC, single-phase, 2-wire with ground and that each phase to ground is 120 VAC. Where shown on the Plans or where required to accommodate control power a neutral conductor shall be included with the power circuit to provide 120/240 VAC or 120/208 VAC single-phase, 3-wire with ground, or 120 VAC single phase, 2-wire with ground to power the gate operator and associated control systems. **Do not connect a high leg of a 240/120 VAC, 3-phase, 4-wire system to a gate operator that is rated for 240 VAC, single-phase power.**

H. Splices in conductors will be allowed only within the specified junction boxes or splice cans. Only splices between loop lead-in wires and the Twin-Twisted-Shielded conductors are approved. Circuit conductors for power wiring shall be continuous from source of power to connected device (from the respective panelboard or load center to the safety switch at the gate operator).

I. The Contractor shall be responsible for furnishing and setting all anchor bolts required to install his equipment.

J. Where concrete mounting pads are required for equipment mounting, the Contractor shall furnish all concreting and form work necessary to complete the installation.

K. Where electrical equipment is located on damp or wet walls or locations as directed, it shall be "stand-off" mounted ½ in. from the wall in a manner so that the rear of the equipment is freely exposed to the surrounding air. The Resident Engineer/Resident Technician shall approve the method of mounting before equipment is mounted.

162700-3.16 INSTALLATION OF BRANCH CIRCUIT BREAKERS: Install circuit breakers in panelboards and/or load centers in conformance with the respective manufacturer's directions. Connect only one wire/cable to each breaker terminal. Load centers and panelboards shall be thoroughly inspected for physical damage, proper alignment, anchorage, and grounding. Inspections shall be made for proper installation and tightness of connections for circuit breakers. Load centers and/or panelboards shall be thoroughly tested after installation and connection to respective loads. Update circuit directory to identify the respective device fed by each new circuit breaker.

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

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

A. Conduit(s) under pavement shall be pushed or bored where possible to avoid damage to the respective pavement.

B. Conduit size and fill requirements shall comply with Appendix C, conduit fill tables, of the NEC. It should be noted these are minimum requirements and larger conduit sizes or smaller fill requirements shall be used whenever specified or detailed on the drawings.

C. Liquid-tight flexible conduit shall be provided as a connection between each motor junction box (or any other piece of equipment subject to movement or vibration) and the rigid conduit system.

D. Ream conduits only after threads are cut. Cut joints square to butt solidly into couplings. Where necessary to join two pieces of conduit, and it is impossible to use standard couplings, use 3-piece malleable iron conduit coupling. The use of running thread is prohibited. This applies to all rigid conduit installations, underground or otherwise.

E. Make all joints in steel underground conduit watertight with approved joint compound. Temporarily plug conduit openings to exclude water, concrete, or any foreign materials during construction. Clean conduit runs before pulling in conductors.

F. A run of conduit between outlet and outlet, between fitting and fitting, or between outlet and fitting shall not contain more than the equivalent of four quarter bends, including bends immediately at an outlet or fitting.

G. Where conduits enter a box or fitting, provide a steel locknut and an insulated metallic bushing. Use this method to terminate conduit in panels, pull boxes, safety switches, etc.

H. Provide NEMA four hubs for all conduit entries into enclosures rated NEMA 4, 4X to maintain NEMA 4, 4X rating.

I. Do not run conduit below or adjacent to water piping.

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

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

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

A. All products associated with the grounding system shall be UL-listed and labeled.

B. All bolted or mechanical connections shall be coated with a corrosion preventative/conductive grease and lubricant suitable for electrical connections and grounding connections, before joining; Sanchem Inc. "NO-OX-ID "A-Special" compound, Burndy Penetrox E, or approved equal.

C. Metallic surfaces to be joined shall be prepared by the removal of all non-conductive material, per 2020 National Electrical Code Article 250-12.

D. Raceway fittings shall be made up tight to provide a permanent low impedance path for all circuits. Metal conduit terminations in enclosures shall be bonded to the enclosure with UL listed fittings suitable for grounding. Provide grounding bushings with bonding jumpers (from bushing to the respective ground connection/enclosure frame) for all metal conduits entering service equipment (meter bases, CT cabinet, service disconnects, service panelboards, main service breaker enclosure, etc.). Provide grounding bushings with bonding jumpers for all metal conduits entering an enclosure through concentric or eccentric knockouts that are punched or otherwise formed so as to impair the electrical connection to ground. Standard locknuts or bushings shall not be the sole means for bonding where a conduit enters an enclosure through a concentric or eccentric knockout.

E. Furnish and install ground rods at all locations where shown on the Plans or specified herein. Ground rods for electrical installations shall be 3/4 inch diameter, **10 feet long,** UL-listed, Copper clad with 10-mil minimum Copper coating. Where detailed on the Plans and/or where necessary to accommodate soil conditions longer ground rods or additional ground rods shall be provided. Ground rods for fence grounding shall be 5/8 inch diameter, 8-feet long (minimum), UL-listed, Copper clad with 10-mil minimum Copper coating. Top of ground rods for electrical installations shall be a minimum of 12 inches below finish grade unless otherwise noted on the Plans. Top of ground rods for fencing applications (non-electrical installations) shall be a minimum of 6 inches below finish grade unless otherwise noted on the Plans. Ground rods shall be spaced as detailed on the Plans and in no case spaced less than one rod length apart. All connections to ground rods and/or ground rings shall be made with exothermic weld type connectors, Cadweld by Pentair Erico Products, 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 or at buried grounding electrode conductors. Grounding electrode conductors shall be bare stranded Copper sized as detailed on the Plans. In addition to the grounding work described herein and shown on the Plans, the Contractor shall test the made electrode ground system with an instrument specifically designed for testing ground systems. If ground resistance exceeds 25 Ohms, first check to make sure the earth ground resistance tester is properly calibrated, the batteries are in good working order, and the tester is being properly used in accordance with the manufacturer's instructions. If ground resistance still exceeds 25 Ohms, then check to make sure connections are good and secure, and correct where applicable. If ground resistance still exceeds 25 Ohms, furnish and install a second ground rod of the same size or longer than the first ground rod (located at least one rod length apart) and connect to the first ground rod with a minimum #6 AWG bare copper grounding electrode conductor. Contact the Project Engineer of Record; Kevin Lightfoot for further directions, where applicable. Copies of ground system test results shall be furnished to the Resident Engineer and the Project Engineer of Record.

F. All connections, located above grade, between the different types of grounding conductors shall be made using UL-listed double compression crimp type connectors or UL-listed bolted ground connectors. For ground connections to enclosures, cases and frames of electrical equipment not supplied with ground lugs the Contractor shall drill required holes for mounting a bolted ground

connector. All bolted ground connectors shall be Burndy, Dossert Corporation, ILSCO Corporation, Penn-Union Corporation, Thomas and Betts, or approved equal. Tighten connections to comply with tightening torques in UL Standard 486A to assure permanent and effective grounding.

G. All metal equipment enclosures, conduits, cabinets, boxes, receptacles, motors, etc. shall be bonded to the respective grounding system. Provide grounding bushings at all conduits entering service entrance equipment (meter bases, service disconnects, service panelboards, etc.) and distribution panels or load centers and ground wire from bushing to ground bus in the respective service entrance equipment or distribution panel.

H. The equipment ground wire from equipment shall not be smaller than allowed by 2020 NEC Table 250-122 "Minimum Size Conductors or Grounding Raceway and Equipment." When conductors are adjusted in size to compensate for voltage drop, equipment-grounding conductors shall be adjusted proportionately according to circular mil area. All equipment ground wires shall be Copper either bare or insulated green in color. Where the equipment grounding conductors are insulated, they shall be identified by the color green and shall be the same insulation type as the phase conductors.

I. Bond the main electrical service neutral to ground at the main service disconnect. Bond the service neutral to ground at one location only per the National Electrical Code. A grounding connection shall not be made to any neutral circuit conductor on the load side of the service disconnecting means, except as permitted by 2020 NEC 250-24.

J. All exterior metal conduit, where not electrically continuous because of manholes, handholes, non-metallic junction boxes, etc., shall be bonded to all other metal conduit in the respective duct run, and at each end, with a Copper bonding jumper sized in conformance with 2020 NEC 250-102. Where metal conduits terminate in an enclosure (such as a motor control center, switchboard, etc.) where there is not electrical continuity with the conduit and the respective enclosure, provide a bonding jumper from the respective enclosure ground bus to the conduit sized per 2020 NEC 250-102.

K. Install grounding electrode conductors and/or individual ground conductors in **Schedule 80 PVC** conduit. Where grounding electrode conductors or individual ground conductors are run in PVC conduit, Do Not completely encircle conduit with ferrous and/or magnetic materials. Use non-metallic reinforced fiberglass strut support. Where metal conduit clamps are installed, use nylon bolts, nuts, washers and spacers to interrupt a complete metallic path from encircling the conduit.

L. Individual ground conductors and/or grounding electrode conductors shall not be run in metallic conduit and shall not be encircled by metallic clamps. If local codes dictate that grounding conductors must be run in metal conduit or raceway, then the conduit or raceway must be bonded to the grounding conductor at both ends with a bonding jumper sized in accordance with the NEC 250.64(E). All such installations requiring individual grounding conduits to be run in metal conduit or raceway shall be verified and reviewed with the Project Engineer. This does not apply to AC equipment ground wires run with AC circuits.

M. Grounding work affecting operations at a facility shall be coordinated with the Owner's Representative and to minimize downtime to existing systems. Contractor shall coordinate work and any power outages with the Owner's Representative. Any shutdown of existing systems shall be scheduled with and approved by the Owner's Representative prior to shutdown. All

power systems (AC or DC) shall have provisions to lockout and tagout any circuit to help ensure the circuit is safe to work on for protection of personnel. 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). Where a facility does not have lockout/tagout kits the Contractor shall provide adequate quantities of lockout/tagout kits suitable for use with the respective equipment. Where existing electrical equipment does not have features for lockout/tagout the Contractor will be responsible to provide the appropriate lockout/tagout equipment and measures to ensure the safety of personnel. All padlocks for use with lockout/tagout procedures shall have a different key. Provide lockout hasps to accommodate multiple padlocks where multiple people are working on the same system. Include lockout tags for each piece of equipment requiring servicing and shutdown. Compliance with Lockout/Tagout Procedures and all other safety procedures and requirements are the responsibility of the respective personnel working at the facility.

N. Never remove, alter, or attempt to repair conductors or conduit systems providing grounding or electrical bonding for any electrical equipment until all power is removed from the equipment. Warn all personnel of the ungrounded condition of the equipment. Display appropriate warning signs, such as danger tags, to warn personnel of the possible hazards.

O. Grounding work and modifications shall not be performed during a thunderstorm or when a thunderstorm is predicted in the area.

P. Per NFPA 70E Standard for Electrical Safety in the Workplace it defines Electrically Safe Work Condition as "*A state in which an electrical conductor or circuit part has been disconnected from energized parts, locked/tagged in accordance with established standards, tested to verify the absence of voltage, and, if necessary, temporarily grounded for personnel protection."* Prior to conducting tests or working on equipment, verify equipment enclosures and frames have a good and secure ground connection for safety of personnel.

Q. Where a conflict is determined with respect to grounding requirements per manufacturer installation instructions, National Electrical Code, and/or the Contract Documents, contact the Owner's Representative or the Project Engineer for further directions. Safety of personnel is the top priority.

162700-3.20 TESTING: The Contractor shall make at his own expense any tests of equipment, wiring, or insulation deemed necessary by any inspection department or by the Owner's Representative and/or Resident

Engineer/Resident Technician and shall provide all apparatus, meters, materials, and labor required to make such tests. **Contractor shall engage a factory authorized service technician to provide start-up, testing, adjustments, calibration and checkout for each electrically operated gate. This shall be scheduled while the contractor is still on-site and be coordinated such that all of the gates for the project are commissioned on a single site visit to reduce costs. All tests shall be conducted in the presence of the Owner and the Resident Engineer/Resident Technician.**

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

A. That all power and control circuits are continuous and free from short circuits.

B. That all circuits are free from unspecified grounds.

C. That the insulation resistance to ground of all ungrounded conductors of multiple circuits is not less than 50 megohms.

D. That all circuits are properly connected in accordance with applicable wiring diagrams.

E. Test and adjust gate operator, controls, safety devices/features, hardware, and other operable components. Confirm that all circuits operate properly.

F. Verify ground rod is installed at electric gate operator in accordance with the manufacturer requirements.

G. Verify metal conduits terminated at gate operator are bonded to the gate operator housing.

H. Verify ground rods are installed at each side of the gate.

I. Verify card reader/keypad station includes a ground wire to it. Record size and type.

J. Verify Operation and Maintenance Manuals were furnished with equipment.

K. Verify the gate is level.

L. Release the gate operator braking mechanism and open and close the gate to confirm smooth and free operation over the full length of travel.

M. Verify the proximity sensor and the trip plate are installed properly and do not have an interference.

N. Verify the gate operator beeper works properly and activates at upon gate operation.

O. Interrupt power to the gate operator and confirm that the gate does not open upon restoration of power. The gate operator shall not activate for a power interruption as it does for a keypad or card reader signal input.

P. Test gate and verify proper operation.

Q. Check operation of safety loops. Does gate remain open if vehicle stays on the exit loop?

R. Check operation of free exit.

S. Check to see if gate stops if an obstruction is detected.

T. Confirm remote transmitters were furnished and operational, (where applicable).

U. Train the designated owner's personnel on procedures for operation, starting, stopping, troubleshooting, servicing, programming, and maintaining equipment.

V. All tests shall be recorded, stating the test results, date, and field conditions.

METHOD OF MEASUREMENT

162700-4.1 The quantity of this item to be furnished and installed shall be measured for payment as a unit price per each for the electric slide gate and shall include all materials, equipment, support structures, foundations, detector loops, cable, wiring, conduits, ducts, raceways, directional boring, grounding, labor, coordination, tools, connections, restoration, and other incidentals as required to perform the specified work and testing the units for satisfactory operation. The quantity of power wiring and conduit from the respective power source to the gate operator and all other wiring associated with the gate operator system shall be incidental to Item AR162722 Electric Gate – 22', (or other electric gate installation), and no additional compensation will be made. The quantity of conduit and/or duct, including directional boring for the gate operator system shall be incidental to Item AR162722 Electric Gate – 22', (or other electric gate installation), and no additional compensation will be made.

All interface to existing fencing and gates and the associated materials, equipment, tools, and incidentals necessary to furnish and install the respective electric slide gate will be considered incidental to the respective Electric Slide Gate, and no additional compensation will be made.

All relocations of fencing and gates and the associated materials, equipment, tools, and incidentals necessary to furnish and install the respective electric slide gate will be considered incidental to the respective Electric Slide Gate, and no additional compensation will be made.

All new slide gates and the associated materials will be considered incidental to the respective Electric Slide Gate, and no additional compensation will be made.

All grounding work and the associated materials as detailed on the Plans and as specified herein will be considered incidental to the respective Electric Slide Gate, and no additional compensation will be made.

The quantity of power wiring and conduit from the respective power source to the gate operator and all other wiring associated with the gate operator system shall be incidental to the respective Electric Slide Gate, and no additional compensation will be made.

The quantity of conduit and/or duct, including directional boring for the gate operator system shall be incidental to respective Electric Slide Gate, and no additional compensation will be made.

All lockout/tagout procedures to ensure and maintain safety of personnel will be considered incidental to the respective item of work for which it applies, and no additional compensation will be allowed."

BASIS OF PAYMENT

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

Payment will be made under:

Item AR162722 Electric Gate – 22’ – per each

END OF ITEM AR162700

AR162908

REMOVE ELECTRIC GATE

DESCRIPTION

162908-1.1 This item of work shall consist of the removal of electric slide gates shown on the Construction Plans to be removed. This item will include removal of the associated gate operators, card readers, control stations, concrete footings/foundations, bollards, conduits, wiring, handholes, safety switches, and other miscellaneous fittings associated with the gate to be removed. The gates, gate operators, card readers, and safety switches shall be turned over to the Airport.

162908-1.2 REFERENCES. Note: where FAA Advisory Circulars are referenced, they shall be the current issue or issues in effect.

A. FAA AC No. 150/5370-2G (current issue in effect) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.

B. NFPA 70E – Standard for Electrical Safety in the Workplace

C. OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures.

CONSTRUCTION METHODS

162908-2.1 The Contractor will remove the gates, gate operators, card readers, control stations, concrete footings/foundations, bollards, conduits, wiring, handholes, safety switches and other miscellaneous fittings associated with the gate to be removed. The existing power and control cables from the power source to the existing gate operators will be removed from the conduits. Contractor shall remove and dispose of the gate posts, bollards and foundations off of the Airport site in a legal manner. The gates, gate operators, card readers, and safety switches shall be turned over to the Airport and delivered to a storage area located on the Airport. In the event that the Airport does not want the respective items, the Contractor shall dispose of those items, off the Airport site in a legal manner.

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

B. Contractor shall coordinate work and any power outages to buildings located on the airport with the Airport Director/Manager and/or the respective building personnel. Any shutdown of existing systems shall be scheduled with and approved by the Airport Director/Manager prior to shutdown. Once shut down, the circuits shall be labeled as such to prevent accidental energizing of the respective circuits. All personnel shall follow OSHA 29 CFR Part 1910 Occupational Safety and Health Standards for electrical safety and lockout/tagout procedures, including, but not limited to, 29 CFR Section 1910.147 The Control of Hazardous Energy (lockout/tagout). Where the facility is not equipped with lockout/tagout equipment, the respective personnel will be responsible for providing the appropriate lockout/tagout equipment. Failure to shut down and lockout the circuit presents a dangerous hazard for personnel working on the system. Compliance with Lockout/Tagout Procedures and all other safety procedures and requirements are the responsibility of the respective personnel working at the facility.

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

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

E. Power for each respective electric slide gate system shall be disconnected at the respective power source prior to removing, disconnecting, or working on the respective electric slide gate system. Contractor shall field verify to confirm the respective power source for each electric slide gate system.

F. Coordinate removal of existing gates with the Airport Director/Manager and/or respective Maintenance Staff and to maintain security of the Airport facilities.

G. The existing gate operators and access control units/keypad stations/ard readers shall be removed and turned over to the Airport Authority. Prior to the electric gate removals, the Contractor shall confirm all associated equipment to be turned over to the Airport with the Airport Director and/or the Resident Engineer. Providing the equipment is to be turned over to the Airport, care is to be taken by the Contractor not to damage the equipment while removing it. The Contractor will deliver the equipment to the storage area on the Airport selected by the Airport Director. Providing the Airport does not accept the equipment, the Contractor will dispose of it.

H. The cable shall be disconnected from the distribution panel at the respective power source. Cable shall be removed where accessible and when under grade abandoned. Contractor may remove cable that is scheduled to be abandoned and shall have the salvage rights to that cable. Removal of existing cables shall be at no additional cost to the Contract.

I. **Earth Areas:** Where there are posts or foundations in existing earth, the Contractor will furnish earth material to fill the holes left from the fence removal. The earth material furnished shall conform to Item 905 “Topsoil.” The holes will be filled and compacted to prevent future settlement. Any disturbed area of gate removal, except farming areas, will be seeded in accordance with the Specifications.

J. **Paved Areas:** Where there are posts or foundations in existing pavement, the Contractor will furnish Portland Cement Concrete in accordance with Item 610 to fill the holes left from the removal. The holes will be filled to within six (6) inches of the adjacent surface with aggregate material conforming to Item 209 and compacted to prevent future settlement.

162908-2.2 LOCATING EXISTING UNDERGROUND UTILITIES AND CABLES. The location, size, and type of material of existing underground and/or aboveground utilities indicated on the Plans are not represented as being accurate, sufficient, or complete. Neither the Owner nor the Engineer assumes any responsibility whatever in respect to the accuracy, completeness, or sufficiency of the information. There is no guarantee, either expressed or implied, that the locations, size, and type of material of existing underground utilities indicated are representative of those to be encountered in the construction. It shall be the Contractor’s responsibility to determine the actual location of all such facilities, including service connections to underground utilities. Prior to construction, the Contractor shall notify the utility companies of his operational plans, and shall obtain, from the respective utility companies, detailed information and assistance relative to the location of their facilities and the working schedule of the companies for removal or adjustment, where required. In the event an unexpected

utility interference is encountered during construction, the Contractor shall immediately notify the utility company of jurisdiction. The Owner's Representative and/or the Resident Engineer shall also be immediately notified. Any damage to such mains and services shall be restored to service at once and paid for by the Contractor at no additional cost to the Contract.

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

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

METHOD OF MEASUREMENT

162908-3.1 The quantity of electric gate removal to be paid for shall be the number of gates removed, turned over to the Airport or disposed of, and accepted by the Resident Engineer/Resident Technician. All gate and fencing removal work and all labor, equipment, tools, clean up, disposal, and incidentals necessary to remove the fencing, gate, operator, operator foundation, bollards, card reader/keypad access control unit, support structures, safety switches, existing wiring, and associated items as shown on the Plans will be considered incidental to the respective gate removal, and no additional compensation will be made.

All lockout/tagout procedures to ensure and maintain safety of personnel will be considered incidental to the respective item of work for which it applies, and no additional compensation will be allowed.

BASIS OF PAVEMENT

162908-4.1 This work will be paid for at the contract unit bid price per each for Remove Electric Gate. Said price and payment shall constitute full compensation for removing the gate, turning the equipment and materials over to the Airport or disposing of the removed materials, making repairs to the damaged pavement, placing the respective fill materials, as described above, in the holes left from the removal, seeding all disturbed turf areas, and for furnishing all materials, labor, equipment, and incidentals necessary to complete this item of work.

Payment will be made under:

Item AR162908 – Remove Electric Gate – per each.

END OF ITEM AR162908

Illinois Department of Transportation

Division of Aeronautics

Project Documentation and Testing Requirements

Airport: Logan County
Ill. Proj. No. : AAA-5006-01
A.I.P. Proj. No.: N/A
Replace Airport Perimeter Fencing - Phase 1

The following is a list of each pay item and its required materials documentation and testing for the above referenced project. Except for ongoing testing on items such as mixtures and embankment, the Resident Engineer shall obtain the required documentation and review it for specification compliance--BEFORE-- allowing the material to be incorporated into the project. ADHERANCE TO THE BUY AMERICAN ACT FOR ALL MANUFACTURED PRODUCTS AND EVIDENCE OF SUCH IS REQUIRED ON ALL A.I.P.-FUNDED PROJECTS. Documentation that indicates materials that do not comply with the requirements of the contract shall be rejected for use in the project. (DONT WAIT UNTIL THE END OF THE PROJECT TO SUBMIT THIS INFORMATION!) Note: Pay Items shall not be reported for payment until the check box, R.E. initials, and date(s) are filled in for the applicable pay item code number that is reported for payment. When the final quantity for a given pay item is reported for payment, a copy of the page of this report that has the applicable code number on it shall be sent to the Illinois Division of Aeronautics, Construction Materials Section with the required documentation attached to it. CONTRACTOR'S NOTE: M-5 report is a field assignment report to be completed solely by the R.E.

Project Number: AAA-5006-01

			Quantity	
			Awarded	Final
☐	AR150510	ENGINEER'S FIELD OFFICE	1 L.S.	_____

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

			Quantity	
			Awarded	Final
☐	AR150520	MOBILIZATION	1 L.S.	_____

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

		Quantity Awarded	Final
☐ **AR150530**	**TRAFFIC MAINTENANCE**	**1 L.S.**	_____

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

		Quantity Awarded	Final
☐ **AR156510**	**SILT FENCE**	**192 L.F.**	_____

1.) M-5

2.) Manufacturer's cert. w/testing data

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

		Quantity Awarded	Final
☐ **AR162505**	**CLASS E FENCE 5'**	**2380 L.F.**	_____

1.) M-5 for fence fabric

2.) Manufacturer's certification for the fence fabric with evidence of 100% domestic materials and assembly

3.) M-5 for the line posts

4.) Manufacturer's certification for the line posts with evidence of 100% domestic materials and assembly

5.) M-5 for the terminal posts

6.) Manufacturer's Certification for the terminal posts with evidence of 100% domestic materials and assembly

7.) M-5 for the top rail or brace rail

8.) Manufacturer's certification for the rail with evidence of 100% domestic materials and

9.) M-5 for barbed wire (if required)

10.) Manufacturer's certification for barbed wire with evidence of 100% domestic materials and assembly

11.) M-5 for the tension wire

12.) Manufacturer's certification for the tension wire with evidence of 100% domestic materials and assembly

13.) Item 610 mix design approved in accordance with PM 96-1

14.) Concrete Test Results per Policy Memo 96-1

15.) Manufacturer's Certification for ground rods, miscellaneous fittings & hardware and evidence of 100% domestic materials and assembly

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

	Quantity Awarded	Final
☐ **AR162604 CLASS E GATE-4'**	**4 EA**	_____

1.) M-5 for the gate

2.) Fabricator's or Producer's certification for the gate with evidence of 100% domestic materials and assembly

3.) M-5 for the gate posts

4.) Manufacturer's certification for the gate posts with evidence of 100% domestic materials and assembly

5.) Item 610 mix design approved in accordance with PM 96-1

6.) Concrete Test Results per Policy Memo 96-1

7.) Manufacturer's Certification for ground rods, miscellaneous fittings & hardware and evidence of 100% domestic materials and assembly

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

	Quantity Awarded	Final
☐ **AR162605 CLASS E GATE-5'**	**1 EA**	_____

1.) M-5 for the gate

2.) Fabricator's or Producer's certification for the gate with evidence of 100% domestic materials and assembly

3.) M-5 for the gate posts

4.) Manufacturer's certification for the gate posts with evidence of 100% domestic materials and assembly

5.) Item 610 mix design approved in accordance with PM 96-1

6.) Concrete Test Results per Policy Memo 96-1

7.) Manufacturer's Certification for ground rods, miscellaneous fittings & hardware and evidence of 100% domestic materials and assembly

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

	Quantity Awarded	Final
☐ **AR162624 CLASS E GATE - 24'**	**1 EA**	_____

1.) M-5 for the gate

2.) Fabricator's or Producer's certification for the gate with evidence of 100% domestic materials and assembly

3.) M-5 for the gate posts

4.) Manufacturer's certification for the gate posts with evidence of 100% domestic materials and assembly

5.) Item 610 mix design approved in accordance with PM 96-1

6.) Concrete Test Results per Policy Memo 96-1

7.) Manufacturer's Certification for ground rods, miscellaneous fittings & hardware and evidence of 100% domestic materials and assembly

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

	Quantity Awarded	Final
☐ **AR162630 CLASS E GATE - 30'**	**1 EA**	_____

1.) M-5 for the gate

2.) Fabricator's or Producer's certification for the gate with evidence of 100% domestic materials and assembly

3.) M-5 for the gate posts

4.) Manufacturer's certification for the gate posts with evidence of 100% domestic materials and assembly

5.) Item 610 mix design approved in accordance with PM 96-1

6.) Concrete Test Results per Policy Memo 96-1

7.) Manufacturer's Certification for ground rods, miscellaneous fittings & hardware and evidence of 100% domestic materials and assembly

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

		Quantity Awarded	Final
☐ **AR162722**	**ELECTRIC GATE - 22'**	**1 EA**	_____

1.) M-5 for the gate

2.) Fabricator's or Producer's certification for the gate with evidence of 100% domestic materials and assembly

3.) M-5 for the gate posts

4.) Manufacturer's certification for the gate posts with evidence of 100% domestic materials and assembly

5.) Approved shop drawings for all components of the gate operator with evidence of 100% domestic materials and assembly

6.) Item 610 mix design approved in accordance with PM 96-1

7.) Concrete Test Results per Policy Memo 96-1

8.) Manufacturer's Certification for ground rods, miscellaneous fittings & hardware

9.) Evidence of 100% domestic materials and assembly for ground rods, miscellaneous fittings & hardware

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

		Quantity Awarded	Final
☐ **AR162900**	**REMOVE CLASS E FENCE**	**2340 L.F.**	_____

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

		Quantity Awarded	Final
☐ **AR162908**	**REMOVE ELECTRIC GATE**	**1 EA**	_____

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

		Quantity Awarded	Final
☐ **AR162910**	**REMOVE CLASS E GATE**	**9 EA**	_____

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

		Quantity Awarded	Final
☐ **AR209606**	**CRUSHED AGG. BASE COURSE - 6"**	**17 S.Y.**	_____

1.) M-5 for aggregate

2.) Proctor

3.) Compaction Test Reports (AER M-17 or equivilant)

4.) Gradation Analysis (one per 10000 tons) per ASTM C136, ASTM C117 Test Procedures

A.) Proctor: (ASTM D698, standard proctor or D1557, modified proctor) 1/aggregate/source

B.) Compaction Tests: (ASTM D1556, ASTM D2167, or ASTM D2922)

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

		Quantity Awarded	Final
☐ **AR401900**	**REMOVE BITUMINOUS PAVEMENT**	**17 S.Y.**	_____

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

		Quantity Awarded	Final
☐ **AR501605**	**5" PCC SIDEWALK**	**150 S.F.**	_____

1.) Testing and Documentation according to Policy Memorandum 96-1

2.) M-5 for welded wire fabric, if specified

3.) Manufacturer's Certification and evidence of 100% domestic steel for welded wire fabric, if specified (producer must be on IDOT certifed producer list)

4.) I.D.A. pre-approved concrete mix design

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

		Quantity Awarded	Final
☐ **AS162505**	**CLASS E FENCE 5'**	**503 L.F.**	_____

1.) M-5 for fence fabric

2.) Manufacturer's certification for the fence fabric with evidence of 100% domestic materials and assembly

3.) M-5 for the line posts

4.) Manufacturer's certification for the line posts with evidence of 100% domestic materials and assembly

5.) M-5 for the terminal posts

6.) Manufacturer's Certification for the terminal posts with evidence of 100% domestic materials and assembly

7.) M-5 for the top rail or brace rail

8.) Manufacturer's certification for the rail with evidence of 100% domestic materials and

9.) M-5 for barbed wire (if required)

10.) Manufacturer's certification for barbed wire with evidence of 100% domestic materials and assembly

11.) M-5 for the tension wire

12.) Manufacturer's certification for the tension wire with evidence of 100% domestic materials and assembly

13.) Item 610 mix design approved in accordance with PM 96-1

14.) Concrete Test Results per Policy Memo 96-1

15.) Manufacturer's Certification for ground rods, miscellaneous fittings & hardware and evidence of 100% domestic materials and assembly

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____

Project Number: AAA-5006-01

		Quantity Awarded	Final
☐ **AS162900**	**REMOVE CLASS E FENCE**	**503 L F**	_____

Received, reviewed, and accepted by: Resident Engineer (initials)_____
Date Received:_____