INVITATION FOR BID (IFB)

UNIVERSITY OF CENTRAL MISSOURI
LEARNING TO A GREATER DEGREE

TO:	**IFB NO:**	**9756**
	TITLE:	**Runway Remarking**
	ISSUE DATE:	**May 1, 2015**
	BUYER of RECORD:	**Roderick M. Woolen**
	PHONE:	**(660) 543-4542**
	EMAIL:	**rwoolen@ucmo.edu**

SEALED BID MUST BE RECEIVED NO LATER THAN:
DATE: Wednesday, May 27, 2015
TIME: 2:00 p.m. CDST

RETURN BID TO:	**University of Central Missouri (UCM)** **Procurement and Materials Management** **Building A, Room 116** **415 East Clark Street** **Warrensburg, MO 64093**

Prospective bidders are hereby invited to submit their bid to provide all labor, equipment, tools and operations necessary for the Runway Remarking as per the specifications in this Invitation for Bid (IFB).

PRE-BID & SITE INSPECTION: **All prospective bidders are required to attend the mandatory pre-bid conference** held on Tuesday, May 12, 2015 at 10:00AM at the Procurement Office Conference Room 113, 415 East Clark Street, Building A Warrensburg, MO 64093.

QUESTIONS: **Last date to submit questions is 10:00AM on Monday, May 18, 2015. Email or fax questions to 660-543-8345, attention Buyer of Record.**

COMPLETION DATES: **Eight (8) calendar day(s) from the date of the Notice-to-Proceed.**

IMPORTANT: **Bid may not be accepted if the number is not designated on the outside of the envelope. Any and all communication from bidders regarding specifications, requirements, competitive procurement process, etc., must be directed to the buyer as indicated on the first page of the solicitation**

document. Communication made with parties outside of Procurement may result in your solicitation response being disqualified.

BID OPENING: **All prospective bidders may attend the bid opening held on Wednesday, May 27, 2015 at 2:00PM at the Procurement Office Conference Room 111, 415 East Clark Street, Building A, Warrensburg, MO 64093.**

AWARD: **Requirements over $200K requires UCM Board of Governors approval.**

CONTRACT DOCUMENTS AND SPECIFICATIONS

Schedule I

Runway Remarking

MoDOT Project No. AIR 156-019A

Skyhaven Airport

Sponsored By:
University of Central Missouri
Federal Aviation Administration
MoDOT

Issued for Bid
May 1, 2015

JVIATION®
931 Wildwood Drive, Suite 101
Jefferson City, MO 65109
Main 573.636.3200
Fax 573.636.3201
JVIATION.COM

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REQUEST FOR BIDS/INVITATION FOR BIDS

Skyhaven Airport
Warrensburg, Missouri
State Block Grant Project No. AIR 156-019A

Sealed bids will be received until 2:00 p.m. CDST, Wednesday, May 27, 2015, and then publicly opened and read by the University of Central Missouri, at the University of Central Missouri (UCM), Procurement and Materials Management, Building A, Room 111, 415 East Clark Street, Warrensburg, MO 64093, for furnishing all labor, materials and equipment and performing all work necessary to: Runway Remarking.

A complete set of Specifications and Contract Documents can be downloaded from the University of Central Missouri's bid site (http://www.ucmo.edu/procurement/invite.cfm), beginning on May 1, 2015. In order to submit a responsive bid as a Prime Contractor and to receive all necessary addendum(s) for this project, you must be on the Planholder's List. To view all planholder documents (contract documents, plans and addendums) you must fill out the online form located at (http://www.ucmo.edu/surveys/?formID=2343). By filling out and submitting this form, you agree to be publicly listed on the bid site with your contact information as a planholder for all projects requested. It is the planholder's responsibility to review the site for addendums and changes before submitting their proposal.

* Note: Plan ahead when submitting the online request form and allow up to 2 business days for approval and access to projects.

A mandatory prebid conference will be held on Tuesday, May 12, 2015, at the Procurement Office Conference Room 113, Building A, 415 East Clark Street, Warrensburg, MO 64093, at 10:00 a.m.

Each proposal must be accompanied by a bid guaranty in the amount of five (5) percent of the total amount of the bid. The bid guaranty may be by bid bond made payable to University of Central Missouri.

Bids may be held by University of Central Missouri for a period not to exceed 60 calendar days from the date of the bid opening for the purpose of evaluating bids prior to award of contract.

The right is reserved, as University of Central Missouri may require, to reject any bid and also the right to reject all bids.

Construction for this project will take place during the Summer 2015.

In accordance with the Missouri Prevailing Wage Law, the Contractor will be required to comply with the wage and labor requirements and to pay minimum wages in accordance with the schedule of wage rates established by the Missouri Division of Labor Standards.

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BID DOCUMENTS & TECHNICAL SPECIFICATIONS

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SECTION 1
NOTICE TO BIDDERS

Skyhaven Airport
Warrensburg, Missouri
Project No. AIR 156-019A

Sealed bids subject to the conditions and provisions presented herein will be received until 2:00 p.m. CDST, Wednesday, May 27, 2015, and then publicly opened and read by the University of Central Missouri (UCM), Procurement and Materials Management, Building A, Room 111, 415 East Clark Street, Warrensburg, MO 64093, for furnishing all labor, materials, equipment and performing all work necessary for the Runway Remarking project.

A complete set of Specifications and Contract Documents can be downloaded from the University of Central Missouri's bid site (http://www.ucmo.edu/procurement/invite.cfm), beginning on May 1, 2015. In order to submit a responsive bid as a Prime Contractor and to receive all necessary addendum(s) for this project, you must be on the Planholder's List. To view all planholder documents (contract documents, plans and addendums) you must fill out the online form located at (http://www.ucmo.edu/surveys/?formID=2343). By filling out and submitting this form, you agree to be publicly listed on the bid site with your contact information as a planholder for all projects requested. It is the planholder's responsibility to review the site for addendums and changes before submitting their proposal.

Procurement Office Contact:
Roderick Woolen
Rwoolen@ucmo.edu
(606) 543-4542

* Note: Plan ahead when submitting the online request form and allow up to 2 business days for approval and access to projects.

A mandatory pre-bid conference will be held on Tuesday, May 12, 2015, at 10:00 a.m. in the Procurement Office Conference Room 113, Building A, 415 East Clark Street, Warrensburg, MO 64093 for the purpose of clarifying any questions or comments pertaining to the plans and specifications.

Contract Work Items. This project will involve the following work items and estimated quantities. Prospective bidders are hereby advised that the quantities indicated herein are approximate and are subject to change.

Item	Description	Unit	Schedule I
MO-100a	Mobilization	LS	1
MO-620a	Permanent Airport Pavement Markings (White)	SF	3,698
MO-620b	Permanent Airport Pavement Marking (Yellow)	SF	909
MO-620c	Permanent Airport Pavement Marking (Black)	SF	1,877
MO-620d	Pavement Marking Removal	SF	4,459
MO-623a	Pavement Friction Sealcoat Surface Treatment	SY	1,590

Item	Description	Unit	Schedule I
MO-125a	Remove Existing Non-Lit Guidance Sign	EA	7
MO-125b	Install New Non-Lit Guidance Sign	EA	12

Contract Time. The owner has established a contract perform time of 8 calendar day(s) from the date of the Notice-to-Proceed. All project work shall be substantially completed within the stated timeframe. This project is subject to liquidated damages as prescribed in the project manual.

Bid Security. No bid will be considered unless accompanied by a bid bond secured by an approved surety or sureties, payable to the Warrensburg, for not less than five (5) percent of the total amount of the bid.

Bonding Requirements. The successful bidder will be required to furnish separate performance and payment bonds each in an amount equal to 100% of the contract price at the time of contract execution.

Award of Contract. The Owner intends to award a contract resulting from this solicitation to the lowest, responsive, responsible bidder, whose offer, conforming to the solicitation, will be most advantageous to, and in the best interest of, the Owner, cost or price and other factors considered.

a. In addition to other factors, bid offers will be evaluated on the basis of advantages and disadvantages to the Owner that might result from offers received.

b. The Owner reserves the right to reject any or all proposals and to waive informalities and/or irregularities in the bid offer. Bids may be held by the owner for a period not to exceed 90 calendar days from the date of the bid opening for the purpose of conducting the bid evaluation.

c. Total bid will be evaluated and awarded as follows: It is the Owner's intent to award this bid based on the **TOTAL BASE BID FOR ALL ITEMS, split awards will not be made.**

d. The Owner will determine which Schedules and/or Bid Alternates will be awarded based on the received bid prices and available funding. The project award will be based on the low bid sum of the Schedules and Bid Alternates awarded by the Owner. Not all Schedules and/or Bid Alternates may be awarded. A combination of Schedules and Bid Alternates may be awarded, including only a single Schedule. The numbering of the Schedules or Bid Alternates does not necessarily indicate the order of award.

Award of contract is contingent upon the owner receiving State-funding assistance under the State Aviation Trust Fund.

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

State Wage Requirements –The contractor will be required to comply with the wage and labor requirements and pay minimum wages in accordance with the schedule of wage rates established by the Missouri Division of Labor Standards included in the Supplementary Provisions.

Additional Provisions: Modification to the project documents may only be made by written addendum by the Owner or Owner's authorized Representative.

The proposal must be made on the forms provided within the bound project manual. Bidders must supply all required information prior to the time of bid opening.

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SECTION 2
INSTRUCTIONS TO BIDDERS

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The following forms are to be completed and returned with the bidders sealed bid:

- Bid Bond in the amount of 5%
- Proposal Forms - pages B-1 through B-13
- Contractors Qualifications – included in Proposal Form

This is a Prevailing Wage Project. (Refer to the attached wage order)

- Missouri Division of Labor Standards - Annual Wage Order #21 (Johnson County)

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INSTRUCTIONS TO BIDDERS

1. PRE-BID CONFERENCE

1.1 All prospective bidders are invited to attend the pre-bid conference to be held on Tuesday**,** May 12, 2015, at 10:00 a.m. in the Procurement Office Conference Room 113, Building A, 415 East Clark Street, Warrensburg, MO 64093 for the purpose of clarifying any questions or comments pertaining to the plans and specifications.

2. BIDDERS' OBLIGATION

2.1 Bidders must carefully examine the entire site of the work and shall make all reasonable and necessary investigations to inform themselves thoroughly as to the facilities available as well as to all the difficulties involved in the completion of all work in accordance with the specifications and the plans. Bidders are also required to examine all maps, plans and data mentioned in the specifications. No plea of ignorance concerning observable existing conditions or difficulties that may be encountered in the execution of the work under this contract will be accepted as a excuse for any failure or omission on the part of the contractor to fulfill in every detail all of the requirements of the contract, nor accepted as a basis for any claims for extra compensation.

2.2 Under no circumstances will a contractor give his plans and specifications to another contractor. Any bid received from a contractor whose name does not appear on the list of bidders having been mailed and/or paid for the plans and specifications will be subject to rejection.

3. INTERPRETATIONS/SUBSTITUTIONS

3.1 No oral interpretations will be made to any bidder as to the meaning of the plans and specifications or the acceptability of alternate products, materials, form or type of construction. **Every request for interpretation or substitution shall be made in writing and submitted with all supporting documents by no later than 10:00 a.m. CDST on Monday, May 18, 2015.** The request shall be sent directly to the Buyer of Record (whose name appears on the first page of this Invitation for Bid), University of Central Missouri, Procurement Office, Warrensburg, MO, 64093 or it may be emailed or faxed to the Buyer's attention at 660-543-8345. Every interpretation made to a bidder will be in the form of an addendum and will be sent as promptly as practicable to all persons to whom plans and specifications have been issued. All such addenda shall become part of the contract documents.

4. BIDS AND BIDDING PROCEDURE

4.1 The bid procedure is a two-step submittal process over a 24 hour period. Bidders shall submit all first submission forms and accompanying documents by the stated time or their bid will be rejected for being non-responsive. If the second submission is not received within the 24 hours of bid opening, the entire bid will be rejected for being

non-responsive. See the list below and the "Table of Contents" for when bid forms are to be submitted.

4.1.1 Depending on the specific project requirements, the following lists of bid forms and times when they are due:

4.1.1.1 First Submittal – due before stated date and time of bid opening.

4.1.1.1.1 Proposal Form
4.1.1.1.2 Bid Bond

4.1.1.2 Second Submittal – due within 24 hours of stated date and time of bid opening:

4.1.1.2.1 DBE Subcontractor Certifications
4.1.1.2.3 List of Subcontractors

4.2 All bids shall be submitted without modification or reservation on the bid form with each space properly filled. Bids not on this form will be rejected.

4.3 All bids shall be accompanied by a bid bond, executed by the bidder and a duly authorized surety company, certified check, cashier's check or bank draft made payable to University of Central Missouri, in the amount of five percent (5%) of the greatest amount bid including all alternates. Failure of the bidder to submit the full amount required shall be sufficient cause to reject his bid. The bidder agrees that the proceeds of the check, draft or bond shall become the property of the Owner if for any reason the bidder withdraws his bid after closing or if on notification of award refuses or is unable to execute tendered contract, provide an acceptable performance and payment bond, provide evidence of required insurance coverage and provide required copies of affirmative action plans within fourteen (14) consecutive calendar days after such tender.

4.4 The check or draft submitted by the successful bidder will be returned after the receipt of an acceptable performance and payment bond and execution of formal contract. Checks or drafts of all other bidders will be returned within a reasonable time after it is determined that the bid represented by same will receive no further consideration by Owner. Bid bonds will only be returned upon request.

5. SIGNING OF BIDS

5.1 Bids from a partnership shall be signed in the firm name by at least one partner or in the firm name by Attorney-in-fact. If signed by Attorney-in-fact there shall be attached to the bid a Power of Attorney evidencing authority to sign the bid, dated and executed by all partners of the firm.

5.2 Bids from a corporation shall have the correct corporate name thereon and the signature of an authorized officer of the corporation manually written. Title of office held by the person signing for the corporation shall appear, along with typed name of said individual. Corporate license number shall be provided and, if a corporation

organized in a state other than Missouri, a certificate of Authority to do business in the State of Missouri shall be attached.

5.3 The Contractor understands and agrees that by signing the (IFB/RFP/RFQ or Contract), they certify the following:

5.3.1 The contractor shall only utilize personnel authorized to work in the United States in accordance with applicable federal and state laws. This includes but is not limited to the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) and INA Section 274A and Section 285.530, Revised Statutes of Missouri.

5.3.2 If the contractor is found to be in violation of this requirement or the applicable laws of the state, federal and local laws regulations, and if the State of Missouri has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States, the state shall have the right to cancel the contract immediately without penalty or recourse and suspend or debar the contractor from doing business with the state.

5.3.3 The contractor agrees to fully cooperate with any audit or investigation from federal, state or local law enforcement agencies.

6. RECEIVING BIDS

6.1 Bids are to be presented in sealed envelopes, which shall be plainly marked with project title, bid number, bid date and bid time and delivered to the place specified on the first page of this Invitation for Bid. Bidders shall be responsible for actual delivery of bids during business hours, and it shall not be sufficient to show that a bid was dispatched in time to be received before scheduled closing time for receipt of bid.

6.2 Bidders are cautioned to allow ample time for transmittal of bids by mail or otherwise. If bid is mailed, bidder should secure correct information relative to the probable time of arrival and distribution of mail at the place where bid is to be received, and make due allowance for possible delays.

6.3 Bidder's attention is directed to the fact that no bid will be accepted or considered if delivered after the specified time for receiving bids.

6.4 No telephonic, telegraphic, electronic mail, facsimile (FAX), or similar bid transmissions will be accepted or allowed.

6.5 The Owner reserves the right to waive informalities in bids and reject any or all bids.

7. MODIFICATIONS AND WITHDRAWAL OF BID

7.1 Bidder may withdraw his bid at any time prior to scheduled closing time for receipt of bid, but no bidder may withdraw his bid after the scheduled closing time for receipt of bids.

7.2 Modifications or corrections of previously submitted bids may only be submitted by letter or telegram. Modifications or corrections must be clearly marked with bid date, project name and bid number and received by the Owner prior to scheduled closing time for receipt of bids in accordance with the following provisions:

7.2.1 To maintain bid confidentiality and insure assignment to the proper bid, any such written request must be contained in a sealed envelope which is plainly marked "Modification of bid on (project title, bid number and bid date)".

7.2.2 Telegrams must be received in written form prior to the bid opening time. Since telegrams cannot be marked as in item 7.2.1, the modification or correction instructions should be written to protect the confidential nature of the bid. For example: "Decrease Base Bid amount by $5,250", not "Change Base Bid to $104,750". The telegram must identify the project name and bid number and the bidder.

7.2.3 No request for modifications or correction of previously submitted bids will be accepted by facsimile (FAX) transmission.

8. STATEMENT OF BIDDER'S QUALIFICATIONS

8.1 Each bidder must submit as part of his bid, the Contractor's Qualifications form which is a part of this Invitation for Bid. The Owner shall have the right to take such steps as it deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner such additional information and data for this purpose as he may request. The right is reserved to reject any bid where an investigation or consideration of the information submitted by such bidder does not satisfy the Owner that the bidder is qualified to carry out properly the terms of the contract documents.

9. AWARD OF CONTRACT

9.1 The Owner reserves the right to reject any and/or all bids and further to waive all informalities in bidding when deemed in the best interest of the Owner.

9.1.1 All awards are contingent upon the availability of sufficient funding to complete the project, and/or Board of Governor's approval.

9.2 The Owner reserves the right to let other contracts in connection with the work, including but not by way of limitation, contracts for the furnishing and installation of furniture, equipment, machines, appliances and other apparatus.

9.3 In awarding the contract the Owner may take into consideration the bidder's skill, facilities, capacity, experience, responsibility, previous work record, financial standing, success in achieving the DBE participation goal, where applicable; and, the necessity of prompt and efficient completion of work herein described. Inability of any bidder to meet the requirements mentioned above may be cause for rejection of his bid. However, no contract will be awarded to any individual, partnership or corporation, who has had a contract with the State of Missouri declared in default within the preceding twelve months.

9.4 No bid shall be considered binding upon the Owner until the written contract has been properly executed, a satisfactory bond has been furnished, evidence of required insurance coverage has been received and appropriate affirmative action plan submitted. Failure to execute and return the contract and associated documents within the prescribed period of time shall be treated, at the option of the Owner, as a breach of bidder's obligation and the Owner shall be under no further obligation to bidder.

9.5 If the successful bidder is doing business in the State of Missouri under a fictitious name, he shall furnish to Owner, attached to the Bid Form, a properly certified copy of the certificate of Registration of Fictitious Name from the State of Missouri, and such certificate shall remain on file with the Owner. No contract will be awarded by the Owner until such certificate is furnished by the bidder.

9.6 Any successful bidder which is a corporation organized in a state other than Missouri shall furnish to the Owner, attached to the Bid Form, a properly certified copy of its current Certificate of Authority to do business in the State of Missouri, such certificate to remain on file with the Owner. No contract will be awarded by the Owner unless such certificate is furnished by the bidder.

9.7 Any successful bidder which is a corporation organized in the State of Missouri shall furnish at its own cost to the Owner, if requested, a Certificate of Good Standing issued by the Secretary of State, such certificate to remain on file with the Owner.

10. CONTRACT SECURITY

10.1 The successful bidder shall furnish a performance/payment bond as as included in this project manual on a condition prior to the Owner executing the contract and issuing a notice to proceed.

11. LIST OF SUBCONTRACTORS

11.1 Each bidder should submit as part of his bid, (or within 72 hours of bid opening) a list of subcontractors to be used in performing the work. The list must specify the name and address of the single designated subcontractor for each category of work listed in the Bid Form. If work within a category will be performed by more than one subcontractor, the bidder must provide the name and address of each subcontractor and specify the exact portion of the work to be done by each. If acceptance/non-acceptance of alternates will affect the designation of a subcontractor, the bidder must provide that information for each affected category.

11.2 Failure to list the bidder's firm, or a subcontractor for each category of work identified on the Bid Form or the listing of more than one subcontractor for any category without designating the portion of work to be performed by each may result in rejection of the bid. If the bidder intends to perform any of the designated subcontract work with the use of his own employees, the bid shall make the fact clear, by listing his own firm for the subject category.

12. DISADVANTAGED BUSINESS ENTERPRISE (DBE)

It is the policy of MoDOT and the city to practice nondiscrimination based on race, color, sex or national origin in the award or performance of this contract. All firms qualifying under this solicitation are encouraged to submit bids/proposals.

A DBE contract goal of **0 percent** has been established for this contract.

13. EXEMPTION OF MISSOURI SALES/USE TAX

13.1 This project shall be bid without State sales and/or use tax included in the bid price. The Owner is a political subdivision of the State of Missouri and is exempt from the sales tax on purchases paid for out of its funds pursuant to Section 144.062 RSMO.

13.2 The Owner will provide a Missouri Project Exemption Certificate and a Missouri Tax Exemption Letter to the Contractor who will be purchasing tangible personal property for use in this project.

13.2.1 The Contractor shall furnish a completed copy of the exemption certificate, along with a copy of the Missouri Tax Exemption Letter, to all subcontractors, and any contractors or subcontractors purchasing materials shall present copies of such documents to all material suppliers as authorization to purchase, on behalf of the Owner, all tangible personal property and materials to be incorporated or consumed in the construction of this project and no other on a tax exempt basis. A copy of each certificate must be retained by the purchaser for a period of five years.

14. STATUTORY PREFERENCE

14.1 By virtue of statutory authority a preference will be given to Missouri labor and to products of mines, forests and quarries of the State of Missouri when they are found in marketable quantities in the state, and all such materials shall be of the best quality and suitable character that can be obtained at reasonable market prices, all as provided for in Section 8.280, Missouri Revised Statutes 1978 and Cumulative Supplements.

14.2 Furthermore, pursuant to Section 34.076 RSMo 1984 Cumulative Supplements, a preference shall be given to those persons doing business as Missouri firms, corporations, or individuals, or which maintain Missouri offices or places of business, when the quality of performance promised is equal or better and the price quoted is the same or less. In addition, in order for a nondomiciliary bidder to be successful, his bid must be that same percentage lower than a domiciliary Missouri bidder's bid, as would be required for a Missouri bidder to successfully bid in the nondomiciliary's state.

15. FEDERAL PROVISIONS

15.1 Goals for Minority and Female Participation – Executive Order 11246 and 41 CFR Part 60:

The Bidder’s attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth within the supplementary provisions.

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:

Timetables
Goals for minority participation for each trade: 12.7 %
Goals for female participation in each trade: 6.9%.

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

15.2 Additional Provisions: Modification to the project documents may only be made by written addendum by the Owner or Owner’s authorized Representative.

The proposal must be made on the forms provided within the bound project manual. Bidders must supply all required information prior to the time of bid opening.

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SECTION 3
GENERAL PROVISIONS INDEX TO

GENERAL PROVISIONS

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SECTION 10
DEFINITION OF TERMS

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

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

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

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

10-04 AIRPORT IMPROVEMENT PROGRAM (AIP). A grant-in-aid program, administered by the Federal Aviation Administration (FAA).

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

10-06 AIRPORT. Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; and airport buildings and facilities located in any of these areas, and includes a heliport.

10-07 ASTM INTERNATIONAL (ASTM). Formerly known as the American Society for Testing and Materials (ASTM).

10-08 AWARD. The Owner's notice to the successful bidder of the acceptance of the submitted bid.

10-09 BIDDER. Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.

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

10-11 CALENDAR DAY. Every day shown on the calendar.

10-12 CHANGE ORDER. A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for the work affected by such changes. The work, covered by a change order, must be within the scope of the contract.

10-13 CONTRACT. The written agreement covering the work to be performed. The awarded contract shall include, but is not limited to: Advertisement, Contract Form, Proposal, Performance Bond, Payment Bond, any required insurance certificates, Specifications, Plans, and any addenda issued to bidders.

10-14 CONTRACT ITEM (PAY ITEM). A specific unit of work for which a price is provided in the contract.

10-15 CONTRACT TIME. The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.

10-16 CONTRACTOR. The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.

10-17 CONTRACTOR'S LABORATORY. The Contractor's quality control organization in accordance with the Contractor Quality Control Program.

10-18 CONSTRUCTION SAFETY AND PHASING PLAN (CSPP). The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.

10-19 DRAINAGE SYSTEM. The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.

10-20 ENGINEER. The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering inspection of the contract work and acting directly or through an authorized representative.

10-21 EQUIPMENT. All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the work.

10-22 EXTRA WORK. An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified.

10-23 FAA. The Federal Aviation Administration of the U.S. Department of Transportation. When used to designate a person, FAA shall mean the Administrator or his or her duly authorized representative.

10-24 FEDERAL SPECIFICATIONS. The Federal Specifications and Standards, Commercial Item Descriptions, and supplements, amendments, and indices thereto are prepared and issued by the General Services Administration of the Federal Government.

10-25 FORCE ACCOUNT. Force account work is planning, engineering, or construction work done by the Sponsor's employees.

10-26 INSPECTOR. An authorized representative of the Engineer assigned to make all necessary inspections and/or tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.

10-27 INTENTION OF TERMS. Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer, subject in each case to the final determination of the Owner.

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

10-28 LABORATORY. The official testing laboratories of the Owner or such other laboratories as may be designated by the Engineer. Also referred to as "Engineer's Laboratory" or "quality assurance laboratory."

10-29 LIGHTING. A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.

10-30 MAJOR AND MINOR CONTRACT ITEMS. A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items.

10-31 MATERIALS. Any substance specified for use in the construction of the contract work.

10-32 NOTICE TO PROCEED (NTP). A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.

10-33 OWNER. The term "Owner" shall mean the party of the first part or the contracting agency signatory to the contract. Where the term "Owner" is capitalized in this document, it shall mean airport Sponsor only.

10-34 PASSENGER FACILITY CHARGE (PFC). Per 14 CFR Part 158 and 49 USC § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls."

10-35 PAVEMENT. The combined surface course, base course, and subbase course, if any, considered as a single unit.

10-36 PAYMENT BOND. The approved form of security furnished by the Contractor and his or her surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work.

10-37 PERFORMANCE BOND. The approved form of security furnished by the Contractor and his or her surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.

10-38 PLANS. The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications.

10-39 PROJECT. The agreed scope of work for accomplishing specific airport development with respect to a particular airport.

10-40 PROPOSAL. The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.

10-41 PROPOSAL GUARANTY. The security furnished with a proposal to guarantee that the bidder will enter into a contract if his or her proposal is accepted by the Owner.

10-42 RUNWAY. The area on the airport prepared for the landing and takeoff of aircraft.

10-43 SPECIFICATIONS. A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.

10-44 SPONSOR. A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.

10-45 STRUCTURES. Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; flexible and rigid pavements; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.

10-46 SUBGRADE. The soil that forms the pavement foundation.

10-47 SUPERINTENDENT. The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the Engineer, and who shall supervise and direct the construction.

10-48 SUPPLEMENTAL AGREEMENT. A written agreement between the Contractor and the Owner covering (1) work that would increase or decrease the total amount of the awarded contract, or any major contract item, by more than 25%, such increased or decreased work being within the scope of the originally awarded contract; or (2) work that is not within the scope of the originally awarded contract.

10-49 SURETY. The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.

10-50 TAXIWAY. For the purpose of this document, the term taxiway means the portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.

10-51 WORK. The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.

10-52 WORKING DAY. A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.

END OF SECTION 10

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SECTION 20
PROPOSAL REQUIREMENTS AND CONDITIONS

20-01 Advertisement (Notice to Bidders). This project has been advertised on the following dates:

May 1, 2015

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

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

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

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

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

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

a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.

b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.

c. Documented record of Contractor default under previous contracts with the Owner.

d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-05 INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as hereinafter provided in the subsection 40-02 titled ALTERATION OF WORK AND QUANTITIES of Section 40 without in any way invalidating the unit bid prices.

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

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

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

20-08 RESPONSIVE AND RESPONSIBLE BIDDER. A responsive bid conforms to all significant terms and conditions contained in the Sponsor's invitation for bid. It is the Sponsor's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 49 CFR § 18.36(b)(8). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

20-09 IRREGULAR PROPOSALS. Proposals shall be considered irregular for the following reasons:

a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.

b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.

c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.

d. If the proposal contains unit prices that are obviously unbalanced.

e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.

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

20-10 BID GUARANTEE. Each separate proposal shall be accompanied by a certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such check, or collateral, shall be made payable to the Owner.

20-11 DELIVERY OF PROPOSAL. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-12 WITHDRAWAL OR REVISION OF PROPOSALS. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing or by [fax][email] before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-13 PUBLIC OPENING OF PROPOSALS. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-14 DISQUALIFICATION OF BIDDERS. A bidder shall be considered disqualified for any of the following reasons:

a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.

c. If the bidder is considered to be in "default" for any reason specified in the subsection 20-04 titled ISSUANCE OF PROPOSAL FORMS of this section.

END OF SECTION 20

SECTION 30
AWARD AND EXECUTION OF CONTRACT

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

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

a. If the proposal is irregular as specified in the subsection 20-09 titled IRREGULAR PROPOSALS of Section 20.

b. If the bidder is disqualified for any of the reasons specified in the subsection 20-14 titled DISQUALIFICATION OF BIDDERS of Section 20.

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

30-02 AWARD OF CONTRACT. The award of a contract, if it is to be awarded, shall be made within 60 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

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

30-03 CANCELLATION OF AWARD. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with the subsection titled 30-07 APPROVAL OF CONTRACT of this section.

30-04 RETURN OF PROPOSAL GUARANTY. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the subsection 30-01 titled CONSIDERATION OF PROPOSALS of this section. Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in the subsection 30-05 titled REQUIREMENTS OF CONTRACT BONDS of this section.

30-05 REQUIREMENTS OF CONTRACT BONDS. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of

all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 EXECUTION OF CONTRACT. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in the subsection 30-05 titled REQUIREMENTS OF CONTRACT BONDS of this section, within 30 calendar days from the date mailed or otherwise delivered to the successful bidder.

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

30-08 FAILURE TO EXECUTE CONTRACT. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the 30 calendar day period specified in the subsection 30-06 titled EXECUTION OF CONTRACT of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidation of damages to the Owner.

END OF SECTION 30

SECTION 40
SCOPE OF WORK

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

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

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

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

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

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

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with the subsection 90-04 titled PAYMENT FOR OMITTED ITEMS of Section 90.

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

When determined by the Engineer to be in the Owner's best interest, the Engineer may order the Contractor to proceed with Extra Work as provided in the subsection 90-05 titled PAYMENT FOR EXTRA WORK of Section 90. Extra Work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a Supplemental Agreement as defined in the subsection 10-48 titled SUPPLEMENTAL AGREEMENT of Section 10.

Any claim for payment of Extra Work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-05 MAINTENANCE OF TRAFFIC. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration.

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to his or her own operations and the operations of all subcontractors as specified in the subsection 80-04 titled LIMITATION OF OPERATIONS of Section 80. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in the subsection 70-15 titled CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS in Section 70.

b. With respect to his or her own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire- rescue equipment, or maintenance vehicles at the airport.

c. When the contract requires the maintenance of vehicular traffic on an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The Contractor shall be responsible for the repair of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (http://mutcd.fhwa.dot.gov/), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways. Unless otherwise specified herein, the Contractor will not be required to furnish snow removal for such existing road, street, or highway.

The Contractor shall make his/her own estimate of all labor, materials, equipment, and incidentals necessary for providing the maintenance of aircraft and vehicular traffic as specified in this subsection.

The cost of maintaining the aircraft and vehicular traffic specified in this subsection shall not be measured or paid for directly, but shall be included in the various contract items.

40-06 REMOVAL OF EXISTING STRUCTURES. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Engineer shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the Engineer in accordance with the provisions of the contract.

Except as provided in the subsection 40-07 titled RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK of this section, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.

40-07 RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be either embankment or waste, the Contractor may at his or her option either:

a. Use such material in another contract item, providing such use is approved by the Engineer and is in conformance with the contract specifications applicable to such use; or,

b. Remove such material from the site, upon written approval of the Engineer; or

c. Use such material for the Contractor's own temporary construction on site; or,

d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the Engineer's approval in advance of such use.

Should the Engineer approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at his or her own expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the Engineer approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of his or her exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-09 (NOT USED)

40-09 FINAL CLEANING UP. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of such property owner.

END OF SECTION 40

SECTION 50
CONTROL OF WORK

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

The Engineer does not have the authority to accept pavements that do not conform to FAA specification requirements.

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

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

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

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

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

The Engineer will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

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

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the Engineer for an interpretation and decision, and such decision shall be final.

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

See Division 4 for the Project Special Provisions

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

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

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

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

Each Contractor involved shall assume all liability, financial or otherwise, in connection with his or her contract and shall protect and save harmless the Owner from any and all damages or claims that

may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange his or her work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join his or her work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-06 CONSTRUCTION LAYOUT AND STAKES. The Engineer shall establish horizontal and vertical control only. The Contractor must establish all layout required for the construction of the work. Such stakes and markings as the Engineer may set for either their own or the Contractor's guidance shall be preserved by the Contractor. In case of negligence on the part of the Contractor, or their employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing the same may be deducted from subsequent estimates due the Contractor at the discretion of the Engineer.

The Contractor will be required to furnish all lines, grades and measurements from the control points necessary for the proper execution and control of the work contracted for under these specifications.

The Contractor must give copies of survey notes to the Engineer for each area of construction and for each placement of material as specified to allow the Engineer to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. All surveys must be provided to the Engineer prior to commencing work items that will cover or disturb the survey staking as set by the Contractor's surveyor. Survey(s) and notes shall be provided in the following format(s): ASCE. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

The contractor must give daily copies of survey point files and notes to the Engineer for each area of construction and for each placement of material as specified. All survey must be provided in an electronic format approved by the Engineer. This will allow the Engineer to make periodic checks for conformance with plan grades, alignments, and grade tolerances required by the applicable material specifications, and expedite the reviews of grades for quality acceptance. All surveys must be provided to the Engineer prior to commencing work items that will cover or disturb the survey staking as set by the Contractor's surveyor. Surveys and survey notes must be on local coordinate system shown on the plans, based on plan stations and offsets and plan vertical control, and provided in an electronic format approved by the Engineer.

In the case of error, on the part of the Contractor, their surveyor, employees, or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Sponsor.

All required survey for grade verification for quality acceptance shall be performed by a State Licensed Land Surveyor.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses. The cost shall be included in the price of the bid for the various items of the Contract.

Construction Staking and Layout includes but is not limited to:

a. Clearing and Grubbing perimeter staking

b. Rough Grade slope stakes at 100-foot (30-m) stations

c. Drainage Swales slope stakes and flow line blue tops at 50-foot (15-m) stations

d. Subgrade blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

(1) Runway – minimum five (5) per station

(2) Taxiways – minimum three (3) per station

(3) Holding apron areas – minimum three (3) per station

(4) Roadways – minimum three (3) per station

e. Base Course blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

(1) Runway – minimum five (5) per station

(2) Taxiways – minimum three (3) per station

(3) Holding apron areas – minimum three (3) per station

f. Pavement areas:

(1) Edge of Pavement hubs and tacks (for stringline by Contractor) at 100-foot (30-m) stations.

(2) Between Lifts at 25-foot (7.5-m) stations for the following section locations:

(a) Runways – each paving lane width
(b) Taxiways – each paving lane width
(c) Holding areas – each paving lane width

(3) After finish paving operations at 50-foot (15-m) stations:

(a) All paved areas – Edge of each paving lane prior to next paving lot

(4) Shoulder and safety area blue tops at 50-foot (15-m) stations and at all break points with maximum of 50-foot (15-m) offsets.

g. Fence lines at 100-foot (30-m) stations minimum.

h. Electrical and Communications System locations, lines and grades including but not limited to duct runs, connections, fixtures, signs, lights, Visual Approach Slope Indicators (VASIs), Precision Approach Path Indicators (PAPIs), Runway End Identifier Lighting (REIL), Wind Cones, Distance Markers (signs), pull boxes and manholes.

i. Drain lines, cut stakes and alignment on 25-foot (7.5-m) stations, inlet and manholes.

j. Painting and Striping layout (pinned with 1.5 inch PK nails) marked for paint Contractor. (All nails shall be removed after painting).

k. Laser, or other automatic control devices, shall be checked with temporary control point or grade hub at a minimum of once per 400 feet (120 m) per pass (that is, paving lane).

The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor.

l. Required verification/as-built survey shall be provided electronically in an Engineer approved format and shall include Point Number, Northing, Easting, Elevation, and Description (PNEZD, comma delimited format).

m. The Contractor shall provide verification survey to the Engineer for all locations where proposed construction will tie into any existing structures and pavements. This survey shall be used for verification of existing conditions and shall be submitted prior to commencing construction activities in the areas of the existing infrastructure. This survey shall be considered incidental to construction operations and shall be provided by the Contractor at no additional cost to the sponsor. Work in these areas shall not be allowed to commence until this survey verification has been supplied by the Contractor to the Engineer and the Engineer has provided acceptance, based on a timely review of the verification survey.

n. In addition to all required utility locates, the Contractor shall be required to verify the elevations of all utility crossings before commencing construction operations. For example, before the Contractor begins work on a proposed storm drain, the elevation, both top and bottom, of ALL utilities that cross the proposed pipe shall be verified and provided to the Engineer. This verification shall be considered incidental to construction operations and shall be provided by the Contractor at no additional cost to the sponsor. Work in these areas shall not be allowed to commence until these utility verifications have been supplied by the Contractor to the Engineer and the Engineer has provided acceptance, based on a timely review of the verification survey.

o. Areas where excavations or embankments are to be constructed, the Contractor shall provide verification survey of the initial and final conditions for use in the determination of final earthwork quantities for payment. The Contractor shall furnish the initial survey before construction operations commence and the final survey after construction operations have concluded to the Engineer for quantity determination. In pavement areas, the final surface shall be the top of approved subgrade. Surveys shall provide sufficient shots to accurately represent both initial and final surfaces. If Engineer determines that the submitted survey is deficient in accurately detailing surveyed surfaces, the Contractor shall perform additional survey to the satisfaction of the Engineer. All survey shall be considered incidental to construction operations and shall be provided by the Contractor at no additional cost to the sponsor. Should the Contractor fail to provide these

initial and final surveys to the Engineer, the existing and proposed design surfaces that are shown in the plans shall be used for quantity determination.

Additional stakes or markings shall be required at an interval to clearly define grades for sub-grade and all material lifts required for the pavement structure including all subbases, bases, and pavements. Additional staking and controls shall be placed as needed for construction to meet the design as required by the specifications or shown on the drawings. In addition to locations stated above, staking for layout and survey for grade verifications shall be provided at locations of all spot elevations when provided for in the plans.

On all pavement lifts and milled surfaces, Contractor shall spray paint on the pavement surfaces fill depths to final surface grades so the Engineer can visually verify pavement grades and thicknesses. Fill locations shall match all spot elevations and staking and layout locations discussed in this section.

Controls and stakes disturbed or suspect of having been disturbed shall be checked and/or reset as directed by the Engineer without additional cost to the Owner.

Establishment of Survey Control for Construction

a. Utilization of a State Licensed Land Surveyor is required.

b. Horizontal closure accuracy of at least 1:40,000 is required.

c. Vertical loop closure of at least 0.03 foot per mile is required. NAVD-88 Vertical Datum must be utilized where available. It is strongly recommended that a digital level be utilized in obtaining vertical loop closure.

d. The construction survey must use the same primary control as used for the Design Survey.

e. Prior to performing the initial survey, prepare a methodology statement, complete with survey equipment to be utilized and with information as to the accuracy of the equipment. The methodology statement is to be submitted to the project manager for review and approval.

f. Secondary control monuments shall have a minimum foundation depth of 6 feet. Elevations shall be set on secondary control using the NGS style 3D monument set for project primary control. Utility locates are required prior to installing secondary control monuments.

g. Contractor must verify his internal secondary control monuments a minimum of once per month by looping back into primary control.

50-07 AUTOMATICALLY CONTROLLED EQUIPMENT. Whenever batching or mixing plant equipment is required to be operated automatically under the contract and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for a period 48 hours following the breakdown or malfunction, provided this method of operations will produce results which conform to all other requirements of the contract.

50-08 AUTHORITY AND DUTIES OF INSPECTORS. Inspectors shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are

not authorized to revoke, alter, or waive any provision of the contract. Inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

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

50-09 INSPECTION OF THE WORK. All materials and each part or detail of the work shall be subject to inspection by the Engineer. The Engineer shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

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

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

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

50-10 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the Engineer as provided in the subsection 50-02 titled CONFORMITY WITH PLANS AND SPECIFICATIONS of this section.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of the subsection 70-14 titled CONTRACTOR'S RESPONSIBILITY FOR WORK of Section 70.

No removal work made under provision of this subsection shall be done without lines and grades having been established by the Engineer. Work done contrary to the instructions of the Engineer, work done beyond the lines shown on the plans or as established by the Engineer, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

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

50-11 LOAD RESTRICTIONS. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

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

Contractor shall examine the existing pavements that will be used for hauling of material and equipment, and determine the pavements ability to withstand Contractor operations without causing damage to the pavement. Any damage caused by the contractor shall be repaired by the Contractor to the approval of the Engineer and at no additional cost to the Sponsor.

50-12 MAINTENANCE DURING CONSTRUCTION. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

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

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

50-13 FAILURE TO MAINTAIN THE WORK. Should the Contractor at any time fail to maintain the work as provided in the subsection 50-12 titled MAINTENANCE DURING CONSTRUCTION of this section, the Engineer shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

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

50-14 PARTIAL ACCEPTANCE. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the Engineer to make final inspection of that unit. If the Engineer finds upon inspection that the unit has been satisfactorily completed in compliance

with the contract, the Engineer may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

50-15 FINAL ACCEPTANCE. Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The Engineer shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

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

50-16 CLAIMS FOR ADJUSTMENT AND DISPUTES. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the Engineer in writing of his or her intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the Engineer is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the Engineer has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the Engineer who will present it to the Owner for consideration in accordance with local laws or ordinances.

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

END OF SECTION 50

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SECTION 60
CONTROL OF MATERIALS

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

In order to expedite the inspection and testing of materials, the Contractor shall furnish complete statements to the Engineer as to the origin, composition, and manufacture of all materials to be used in the work. Statement of origin should clearly address compliance with Buy American Provisions of Contract. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

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

The Contractor shall furnish airport lighting equipment that conforms to the requirements of cited materials specifications. In addition, where an FAA specification for airport lighting equipment is cited in the plans or specifications, the Contractor shall furnish such equipment that is:

B. Listed in advisory circular (AC) 150/5345-53, Airport Lighting Equipment Certification Program, and Addendum that is in effect on the date of advertisement; and,

C. Produced by the manufacturer as listed in the Addendum cited above for the certified equipment part number.

The following airport lighting equipment is required for this contract and is to be furnished by the Contractor in accordance with the requirements of this subsection:

60-02 SAMPLES, TESTS, AND CITED SPECIFICATIONS. Unless otherwise designated, all materials used in the work shall be inspected, tested, and approved by the Engineer before incorporation in the work. Any work in which untested materials are used without approval or written permission of the Engineer shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), Federal Specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids, will be made by and at the expense of the Engineer.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel, including the Contractor's representative at his or her request. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the Engineer. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the

work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the Engineer.

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

A legible, handwritten copy of all test data shall be given to the Engineer daily, along with printed reports, in an electronic spreadsheet file, on a weekly basis.

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

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

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

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

a. Conformance to the specified performance, testing, quality or dimensional requirements; and,

b. Suitability of the material or assembly for the use intended in the contract work.

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

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

60-04 PLANT INSPECTION. The Engineer or his or her authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified

manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the Engineer conduct plant inspections, the following conditions shall exist:

a. The Engineer shall have the cooperation and assistance of the Contractor and the producer with whom the Engineer has contracted for materials.

b. The Engineer shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.

c. If required by the Engineer, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The Engineer shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-05 ENGINEER'S FIELD OFFICE. An Engineer's Field Office will not be required for this project.

60-06 STORAGE OF MATERIALS. Materials shall be so stored as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the Engineer. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the Engineer. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the Engineer a copy of the property Owner's permission.

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

60-07 UNACCEPTABLE MATERIALS. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the Engineer.

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

60-08 OWNER FURNISHED MATERIALS. The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

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

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

END OF SECTION 60

SECTION 70
LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

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

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

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

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

Owner (Utility or Other Facility)	Location (See Plan Sheet No.)	Person to Contact (Name, Title, Address and Phone)
Skyhaven Airport	Runway 36 PAPI	Denis Godfrey Airport Manager (660) 543-4460
Airport NAVAIDS	Runway 18 PAPI	FAA Airway Facilities

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

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra

work by the Engineer, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 SANITARY, HEALTH, AND SAFETY PROVISIONS. The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his or her employees as may be necessary to comply with the requirements of the state and local Board of Health, or of other bodies or tribunals having jurisdiction.

Attention is directed to Federal, state, and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to his or her health or safety.

70-06 PUBLIC CONVENIENCE AND SAFETY. The Contractor shall control his or her operations and those of his or her subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to his or her own operations and those of his or her subcontractors and all suppliers in accordance with the subsection 40-05 titled MAINTENANCE OF TRAFFIC of Section 40 hereinbefore specified and shall limit such operations for the convenience and safety of the traveling public as specified in the subsection 80-04 titled LIMITATION OF OPERATIONS of Section 80 hereinafter.

70-07 BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS. The Contractor shall furnish, erect, and maintain all barricades, warning signs, and markings for hazards necessary to protect the public and the work. When used during periods of darkness, such barricades, warning signs, and hazard markings shall be suitably illuminated. Unless otherwise specified, barricades, warning signs, and markings for hazards that are in the air operations area (AOAs) shall be a maximum of 18 inches (0.5 m) high. Unless otherwise specified, barricades shall be spaced not more than 4 feet (1.2 m) apart. Barricades, warning signs, and markings shall be paid for under subsection 40-05.

For vehicular and pedestrian traffic, the Contractor shall furnish, erect, and maintain barricades, warning signs, lights and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices.

When the work requires closing an air operations area of the airport or portion of such area, the Contractor shall furnish, erect, and maintain temporary markings and associated lighting conforming to the requirements of advisory circular (AC) 150/5340-1, Standards for Airport Markings.

The Contractor shall furnish, erect, and maintain markings and associated lighting of open trenches, excavations, temporary stock piles, and the Contractor's parked construction equipment that may be hazardous to the operation of emergency fire-rescue or maintenance vehicles on the airport in reasonable conformance to AC 150/5370-2, Operational Safety on Airports During Construction.

The Contractor shall identify each motorized vehicle or piece of construction equipment in reasonable conformance to AC 150/5370-2.

The Contractor shall furnish and erect all barricades, warning signs, and markings for hazards prior to commencing work that requires such erection and shall maintain the barricades, warning signs, and markings for hazards until their removal is directed by the Engineer.

Open-flame type lights shall not be permitted.

70-08 USE OF EXPLOSIVES. When the use of explosives is necessary for the execution of the work, the Contractor shall exercise the utmost care not to endanger life or property, including new work. The Contractor shall be responsible for all damage resulting from the use of explosives.

All explosives shall be stored in a secure manner in compliance with all laws and ordinances, and all such storage places shall be clearly marked. Where no local laws or ordinances apply, storage shall be provided satisfactory to the Engineer and, in general, not closer than 1,000 feet (300 m) from the work or from any building, road, or other place of human occupancy.

The Contractor shall notify each property Owner and public utility company having structures or facilities in proximity to the site of the work of his or her intention to use explosives. Such notice shall be given sufficiently in advance to enable them to take such steps as they may deem necessary to protect their property from injury.

The use of electrical blasting caps shall not be permitted on or within 1,000 feet (300 m) of the airport property.

70-9 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer has witnessed or otherwise referenced their location and shall not move them until directed.

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

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

70-10 RESPONSIBILITY FOR DAMAGE CLAIMS. The Contractor shall indemnify and save harmless the Engineer and the Owner and their officers, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue

of his or her contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, his or her surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

70-11 THIRD PARTY BENEFICIARY CLAUSE. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-12 OPENING SECTIONS OF THE WORK TO TRAFFIC. Should it be necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work shall be specified herein and indicated on the plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified. The Contractor shall make his or her own estimate of the difficulties involved in arranging the work to permit such beneficial occupancy by the Owner as described below:

Phase or Description	Required Date or Sequence of Owner's Beneficial Occupancy	Work Shown on Plan Sheet
Refer to the Phasing Plans of the Construction Drawings.		

Upon completion of any portion of the work listed above, such portion shall be accepted by the Owner in accordance with the subsection 50-14 titled PARTIAL ACCEPTANCE of Section 50.

No portion of the work may be opened by the Contractor for public use until ordered by the Engineer in writing. Should it become necessary to open a portion of the work to public traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the Engineer, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at his or her expense.

The Contractor shall make his or her own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

Contractor shall be required to conform to safety standards contained in AC 150/5370-2 (see Special Provisions).

Contractor shall refer to the approved Construction Safety Phasing Plan (CSPP) to identify barricade requirements and other safety requirements prior to opening up sections of work to traffic.

70-13 CONTRACTOR'S RESPONSIBILITY FOR WORK. Until the Engineer's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with the subsection 50-14 titled PARTIAL ACCEPTANCE of Section 50, the

Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

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

70-14 CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS. As provided in the subsection 70-04 titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section, the Contractor shall cooperate with the Owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and the Owners are indicated as follows:

Utility Service or Facility	Person to Contract (Name, Title, Address, & Phone)	Owner's Emergency Contact (Phone)
This project will not require any disturbance to any underground utilities.		

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

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of his or her plan of operations. Such notification shall be in writing addressed to THE PERSON TO CONTACT as provided in this subsection and subsection 70-04 titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section. A copy of each notification shall be given to the Engineer.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

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

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

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

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

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or his or her surety.

70-14.1 FAA FACILITIES AND CABLE RUNS. The Contractor is hereby advised that the construction limits of the project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the execution of the project work, shall comply with the following:

a. The Contractor shall permit FAA maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA owned facilities.

b. The Contractor shall provide notice to the FAA Air Traffic Organization (ATO)/Technical Operations/System Support Center (SSC) Point-of-Contact through the airport Manager a minimum of seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.

c. If execution of the project work requires a facility outage, the Contractor shall contact the FAA Point-of-Contact a minimum of 72 hours prior to the time of the required outage.

d. Any damage to FAA cables, access roads, or FAA facilities during construction caused by the Contractor's equipment or personnel whether by negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA facilities to FAA

requirements. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA.

e. If the project work requires the cutting or splicing of FAA owned cables, the FAA Point-of-Contact shall be contacted a minimum of 72 hours prior to the time the cable work commences. The FAA reserves the right to have a FAA representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA specifications and require approval by the FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA, the Contractor shall furnish and install a sufficient length of new cable that eliminates the need for any splice.]

70-15 FURNISHING RIGHTS-OF-WAY. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-16 PERSONAL LIABILITY OF PUBLIC OFFICIALS. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, his or her authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-17 NO WAIVER OF LEGAL RIGHTS. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or his or her surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill his or her obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

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

70-18 ENVIRONMENTAL PROTECTION. The Contractor shall comply with all Federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-19 ARCHAEOLOGICAL AND HISTORICAL FINDINGS. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during his or her operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the Engineer. The Engineer will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in the subsection 40-04 titled EXTRA WORK of Section 40 and the subsection 90-05 titled PAYMENT FOR EXTRA WORK of Section 90. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of Section 80.

END OF SECTION 70

SECTION 80
EXECUTION AND PROGRESS

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

The Contractor shall provide copies of all subcontracts to the Engineer. The Contractor shall perform, with his organization, an amount of work equal to at least 50 percent of the total contract cost.

Should the Contractor elect to assign his or her contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

80-02 NOTICE TO PROCEED. The notice to proceed shall state the date on which it is expected the Contractor will begin the construction and from which date contract time will be charged. The Contractor shall begin the work to be performed under the contract within 10 days of the date set by the Engineer in the written notice to proceed, but in any event, the Contractor shall notify the Engineer at least 24 or 48 hours in advance of the time actual construction operations will begin.

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

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

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

80-04 LIMITATION OF OPERATIONS. The Contractor shall control his or her operations and the operations of his or her subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct his or her operations within an AOA of the airport, the work shall be coordinated with airport operations (through the Engineer) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the Engineer and until the necessary temporary marking and associated lighting is in place as provided in the subsection 70-08 titled BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS of Section 70.

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

AOA	Time Periods for Closure	Type of Communications Required	Control Authority
Refer to the Safety Plan of the Construction Drawings			Airport Manager

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

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

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

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

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

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

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

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the Engineer.

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

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

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

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

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

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

If it should become necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work

performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

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

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

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

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

(1) No time shall be charged for days on which the Contractor is unable to proceed with the principal item of work under construction at the time for at least six (6) hours with the normal work force employed on such principal item. Should the normal work force be on a double-shift, 12 hours shall be used. Should the normal work force be on a triple-shift, 18 hours shall apply. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the principal item of work under construction or temporary suspension of the entire work which have been ordered by the Owner for reasons not the fault of the Contractor, shall not be charged against the contract time.

(2) The Engineer will not make charges against the contract time prior to the effective date of the notice to proceed.

(3) The Engineer will begin charges against the contract time on the first working day after the effective date of the notice to proceed.

(4) The Engineer will not make charges against the contract time after the date of final acceptance as defined in the subsection 50-15 titled FINAL ACCEPTANCE of Section 50.

(5) The Contractor will be allowed one (1) week in which to file a written protest setting forth his or her objections to the Engineer's weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor.

The contract time (stated in the proposal) is based on the originally estimated quantities as described in the subsection 20-05 titled INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES of Section 20. Should the satisfactory completion of the contract require performance of work in greater quantities than those estimated in the proposal, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in contract time shall not

consider either the cost of work or the extension of contract time that has been covered by change order or supplemental agreement and shall be made at the time of final payment.

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

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

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

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

80-08 FAILURE TO COMPLETE ON TIME. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this Section) the sum specified in the contract and proposal as liquidated damages will be deducted from any money due or to become due the Contractor or his or her surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

Schedule	Liquidated Damages Cost	Allowed Construction Time
Schedule I	$750/calendar day(s)	8 Calendar Days

The maximum construction time allowed for overall project is **8 calendar day(s)**.

Please see Sheets G004 to G007 of the Construction Drawings for more information on the scheduling/sequencing of work on Schedules I.

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

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

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

b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or

c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or

d. Discontinues the execution of the work, or

e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or

f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or

g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or

h. Makes an assignment for the benefit of creditors, or

i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

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

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

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such

expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

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

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

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

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

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

80-11 WORK AREA, STORAGE AREA AND SEQUENCE OF OPERATIONS. The Contractor shall obtain approval from the Engineer prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate his or her work in such a manner as to ensure safety and a minimum of hindrance to flight operations. All Contractor equipment and material stockpiles shall be stored a minimum of 125 feet from the centerline of an active runway. No equipment will be allowed to park within the approach area of an active runway at any time. No equipment shall be within 60 feet of an active runway at any time.

END OF SECTION 80

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SECTION 90
MEASUREMENT AND PAYMENT

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

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

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

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

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

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

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

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

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

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

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

Bituminous materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts or ASTM D633 for tars.

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

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

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

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

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

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

Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered by the Engineer in connection with force account work will be measured as agreed in the change order or supplemental agreement authorizing such force account work as provided in the subsection 90-05 titled PAYMENT FOR EXTRA WORK of this section.

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

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

Scales shall be accurate within 1/2% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the inspector before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed one-tenth of 1% of the nominal rated capacity of the scale, but not less than 1 pound (454 grams). The use of spring balances will not be permitted.

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

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

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

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

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

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

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

90-02 SCOPE OF PAYMENT. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of the subsection 70-18 titled NO WAIVER OF LEGAL RIGHTS of Section 70.

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

90-03 COMPENSATION FOR ALTERED QUANTITIES. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in the subsection 40-02 titled ALTERATION OF WORK AND QUANTITIES of Section 40 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from his or her unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-04 PAYMENT FOR OMITTED ITEMS. As specified in the subsection 40-03 titled OMITTED ITEMS of Section 40, the Engineer shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

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

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

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

90-05 PAYMENT FOR EXTRA WORK. Extra work, performed in accordance with the subsection 40-04 titled EXTRA WORK of Section 40, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work.

90-06 PARTIAL PAYMENTS. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the Engineer, of the value of the work performed and materials complete 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 subsection 90-07 titled PAYMENT FOR MATERIALS ON HAND of this section.

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

The Contractor is required to pay all subcontractors for satisfactory performance of their contracts, or satisfactory performance of incremental portions thereof, no later than 30 days after the Contractor has received from Owner a partial payment covering such subcontractor's performance. The Contractor shall ensure prompt and full payment of retainage to the subcontractor within 30 days following release of such retainage by Owner. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented for final acceptance as required by the Owner. When the Owner has made an incremental acceptance of a portion of a prime contract, which includes a final acceptance of work performed by a subcontractor, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

From the total of the amount determined to be payable on a partial payment, 10 percent of such total amount will be deducted and retained by the Owner until the final payment is made, except as may be provided (at the Contractor's option) in the subsection 90-08 titled PAYMENT OF WITHHELD FUNDS of this section. The balance 90 percent of the amount payable, less all previous payments, shall be certified for payment. Should the Contractor exercise his or her option, as provided in the subsection 90-08 titled PAYMENT OF WITHHELD FUNDS of this section, no such percent retainage shall be deducted.

When at least 95% of the work has been completed, the Engineer shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done.

The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

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

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in the subsection 90-09 titled ACCEPTANCE AND FINAL PAYMENT of this section.

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

90-07 PAYMENT FOR MATERIALS ON HAND. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

a. The material has been stored or stockpiled in a manner acceptable to the Engineer at or on an approved site.

b. The Contractor has furnished the Engineer with acceptable evidence of the quantity and quality of such stored or stockpiled materials.

c. The Contractor has furnished the Engineer with satisfactory evidence that the material and transportation costs have been paid.

d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled.

e. The Contractor has furnished the Owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of his or her responsibility for furnishing

and placing such materials in accordance with the requirements of the contract, plans, and specifications.

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

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

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

90-08 PAYMENT OF WITHHELD FUNDS. At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in subsection 90-06 PARTIAL PAYMENTS, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:

a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.

b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.

c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.

d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 ACCEPTANCE AND FINAL PAYMENT. When the contract work has been accepted in accordance with the requirements of the subsection 50-15 titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the Engineer shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the Engineer's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the Engineer's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with the subsection 50-16 titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 50.

After the Contractor has approved, or approved under protest, the Engineer's final estimate, and after the Engineer's receipt of the project closeout documentation required in subsection 90-11 Project Closeout, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of the subsection 50- 16 titled CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 50 or under

the provisions of this subsection, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

90-10 CONSTRUCTION WARRANTY.

a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of one year from the date of final acceptance of the work. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes possession. However, this will not relieve the Contractor from corrective items required by the final acceptance of the project work.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner real or personal property, when that damage is the result of:

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished by the Contractor.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

e. The Owner will notify the Contractor, in writing, within seven (7) days after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within 14 days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) Enforce all warranties for the benefit of the Owner.

h. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

90-11 PROJECT CLOSEOUT. Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the Engineer approves the Contractor's final submittal. The Contractor shall:

a. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations.

b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.

c. Complete final cleanup in accordance with subsection 40-08, FINAL CLEANUP.

d. Complete all punch list items identified during the Final Inspection.

e. Provide complete release of all claims for labor and material arising out of the Contract.

f. Provide an executed Certification Regarding Settlement of Claims for release of all claims for labor and material arising out of the Contract. Form is available on the MoDOT Aviation website.

g. Provide a certification letter attesting to the actual work performed by the Disadvantaged Business Enterprise (DBE) firm and the amount paid the firm, upon completion of the individual DBE firm's work. This certification shall be signed by both the prime contractor and the DBE firm. A sample certification letter is available on the MoDOT Aviation website.

h. When applicable per state requirements, return copies of sales tax completion forms.

i. Manufacturer's certifications for all items incorporated in the work.

j. All required record drawings, as-built drawings or as-constructed drawings.

k. Project Operation and Maintenance (O&M) Manual.

l. Security for Construction Warranty.

m. Equipment commissioning documentation submitted, if required.

After the final inspection has been completed, a Notice of Contractor's Final Settlement will be issued for publication in accordance with applicable state, local, and federal requirements. Contractor is required to submit on company letterhead and signed by supervisor or company officer the following:

a. Affidavit that all wages, material purchases, and subcontractors have been paid in full.

b. List of all subcontractors used on the project with final dollar value of subcontracts and DBE subcontractors identified.

c. All test results in format required by the FAA. All tests results must be approved and accepted by the FAA before the Engineer is authorized to release any retainage amounts.

Final payment will not be authorized until these items have been completed.

END OF SECTION 90

SECTION 100
CONTRACTOR QUALITY CONTROL PROGRAM

100-01 GENERAL. When the specification requires a Contractor Quality Control Program, the Contractor shall establish, provide, and maintain an effective Quality Control Program that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The intent of this section is to enable the Contractor to establish a necessary level of control that will:

a. Adequately provide for the production of acceptable quality materials.

b. Provide sufficient information to assure both the Contractor and the Engineer that the specification requirements can be met.

c. Allow the Contractor as much latitude as possible to develop his or her own standard of control.

The Contractor shall be prepared to discuss and present, at the preconstruction conference, their understanding of the quality control requirements. The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the Quality Control Program has been reviewed and accepted by the Engineer. No partial payment will be made for materials subject to specific quality control requirements until the Quality Control Program has been reviewed.

The quality control requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the acceptance testing requirements. Acceptance testing requirements are the responsibility of the Contractor.

100-02 DESCRIPTION OF PROGRAM.

a. General description. The Contractor shall establish a Quality Control Program to perform quality control inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. This Quality Control Program shall ensure conformance to applicable specifications and plans with respect to materials, workmanship, construction, finish, and functional performance. The Quality Control Program shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of quality control.

b. Quality Control Program. The Contractor shall describe the Quality Control Program in a written document that shall be reviewed and approved by the Engineer prior to the start of any

production, construction, or off-site fabrication. The written Quality Control Program shall be submitted to the Engineer for review and approval at least five calendar days before the preconstruction conference. The Contractor's Quality Plan and Quality Control testing laboratory must be approved in writing by the Engineer prior to the Notice to Proceed (NTP).

The Quality Control Program shall be organized to address, as a minimum, the following items:

a. Quality control organization

b. Project progress schedule

c. Submittals schedule

d. Inspection requirements

e. Quality control testing plan

f. Documentation of quality control activities

g. Requirements for corrective action when quality control and/or acceptance criteria are not met

The Contractor is encouraged to add any additional elements to the Quality Control Program that is deemed necessary to adequately control all production and/or construction processes required by this contract.

100-03 QUALITY CONTROL ORGANIZATION. The Contractor Quality Control Program shall be implemented by the establishment of a separate quality control organization. An organizational chart shall be developed to show all quality control personnel and how these personnel integrate with other management/production and construction functions and personnel.

The organizational chart shall identify all quality control staff by name and function, and shall indicate the total staff required to implement all elements of the Quality Control Program, including inspection and testing for each item of work. If necessary, different technicians can be used for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the Quality Control Program, the personnel assigned shall be subject to the qualification requirements of paragraph 100-03a and 100-03b. The organizational chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

The quality control organization shall, as a minimum, consist of the following personnel:

a. Program Administrator. The Program Administrator shall be a full-time employee of the Contractor, or a consultant engaged by the Contractor. The Program Administrator shall have a minimum of five (5) years of experience in airport and/or highway construction and shall have had prior quality control experience on a project of comparable size and scope as the contract.

Additional qualifications for the Program Administrator shall include at least one of the following requirements:

(1) Professional Engineer with one (1) year of airport paving experience.
(2) Engineer-in-training with two (2) years of airport paving experience.

(3) An individual with three (3) years of highway and/or airport paving experience, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.

(4) Construction materials technician certified at Level III by the National Institute for Certification in Engineering Technologies (NICET).

(5) Highway materials technician certified at Level III by NICET.

(6) Highway construction technician certified at Level III by NICET.

(7) A NICET certified engineering technician in Civil Engineering Technology with five (5) years of highway and/or airport paving experience.

The Program Administrator shall have full authority to institute any and all actions necessary for the successful implementation of the Quality Control Program to ensure compliance with the contract plans and technical specifications. The Program Administrator shall report directly to a responsible officer of the construction firm. The Program Administrator may supervise the Quality Control Program on more than one project provided that person can be at the job site within two (2) hours after being notified of a problem.

b. Quality control technicians. A sufficient number of quality control technicians necessary to adequately implement the Quality Control Program shall be provided. These personnel shall be either Engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II or higher construction materials technician or highway construction technician and shall have a minimum of two (2) years of experience in their area of expertise.

The quality control technicians shall report directly to the Program Administrator and shall perform the following functions:

(1) Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by subsection 100-06.

(2) Performance of all quality control tests as required by the technical specifications and subsection 100-07.

(3) Performance of density tests for the Engineer when required by the technical specifications.

Certification at an equivalent level, by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

c. Staffing levels. The Contractor shall provide sufficient qualified quality control personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace

of work activity. The Quality Control Program shall state where different technicians will be required for different work elements.

100-04 PROJECT PROGRESS SCHEDULE. The Contractor shall submit a coordinated construction schedule for all work activities. The schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified in the contract. As a minimum, it shall provide information on the sequence of work activities, milestone dates, and activity duration.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a twice monthly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

100-05 SUBMITTALS SCHEDULE. The Contractor shall submit a detailed listing of all submittals (for example, mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include:

a. Specification item number

b. Item description

c. Description of submittal

d. Specification paragraph requiring submittal

e. Scheduled date of submittal

100-06 INSPECTION REQUIREMENTS. Quality control inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by subsection 100-07.

Inspections shall be performed daily to ensure continuing compliance with contract requirements until completion of the particular feature of work. These shall include the following minimum requirements:

a. During plant operation for material production, quality control test results and periodic inspections shall be used to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment used in proportioning and mixing shall be inspected to ensure its proper operating condition. The Quality Control Program shall detail how these and other quality control functions will be accomplished and used.

b. During field operations, quality control test results and periodic inspections shall be used to ensure the quality of all materials and workmanship. All equipment used in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and tolerances specified. The Program shall document how these and other quality control functions will be accomplished and used.

100-07 QUALITY CONTROL TESTING PLAN. As a part of the overall Quality Control Program, the Contractor shall implement a quality control testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification Item, as well as any additional quality control tests that the Contractor deems necessary to adequately control production and/or construction processes.

The testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

a. Specification item number (for example, P-401)

b. Item description (for example, Plant Mix Bituminous Pavements)

c. Test type (for example, gradation, grade, asphalt content)

d. Test standard (for example, ASTM or American Association of State Highway and Transportation Officials (AASHTO) test number, as applicable)

e. Test frequency (for example, as required by technical specifications or minimum frequency when requirements are not stated)

f. Responsibility (for example, plant technician)

g. Control requirements (for example, target, permissible deviations)

The testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D3665. The Engineer shall be provided the opportunity to witness quality control sampling and testing.

All quality control test results shall be documented by the Contractor as required by subsection 100-08.

100-08 DOCUMENTATION. The Contractor shall maintain current quality control records of all inspections and tests performed. These records shall include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the Engineer daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the Contractor's Program Administrator.

Specific Contractor quality control records required for the contract shall include, but are not necessarily limited to, the following records:

a. Daily inspection reports. Each Contractor quality control technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations. These

technician's daily reports shall provide factual evidence that continuous quality control inspections have been performed and shall, as a minimum, include the following:

(1) Technical specification item number and description
(2) Compliance with approved submittals
(3) Proper storage of materials and equipment
(4) Proper operation of all equipment
(5) Adherence to plans and technical specifications
(6) Review of quality control tests
(7) Safety inspection.

The daily inspection reports shall identify inspections conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible quality control technician and the Program Administrator. The Engineer shall be provided at least one copy of each daily inspection report on the work day following the day of record.

b. Daily test reports. The Contractor shall be responsible for establishing a system that will record all quality control test results. Daily test reports shall document the following information:

(1) Technical specification item number and description
(2) Test designation
(3) Location
(4) Date of test
(5) Control requirements
(6) Test results
(7) Causes for rejection
(8) Recommended remedial actions
(9) Retests

Test results from each day's work period shall be submitted to the Engineer prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical quality control charts. The daily test reports shall be signed by the responsible quality control technician and the Program Administrator.

100-09 CORRECTIVE ACTION REQUIREMENTS. The Quality Control Program shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the Quality Control Program as a whole, and for individual items of work contained in the technical specifications.

The Quality Control Program shall detail how the results of quality control inspections and tests will be used for determining the need for corrective action and shall contain clear sets of rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and use statistical quality control charts for individual quality control tests. The requirements for corrective action shall be linked to the control charts.

100-10 SURVEILLANCE BY THE ENGINEER. All items of material and equipment shall be subject to surveillance by the Engineer at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate quality control system in conformance with the requirements detailed here and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to surveillance by the Engineer at the site for the same purpose.

Surveillance by the Engineer does not relieve the Contractor of performing quality control inspections of either on-site or off-site Contractor's or subcontractor's work.

100-11 NONCOMPLIANCE.

a. The Engineer will notify the Contractor of any noncompliance with any of the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Any notice, when delivered by the Engineer or his or her authorized representative to the Contractor or his or her authorized representative at the site of the work, shall be considered sufficient notice.

b. In cases where quality control activities do not comply with either the Contractor Quality Control Program or the contract provisions, or where the Contractor fails to properly operate and maintain an effective Quality Control Program, as determined by the Engineer, the Engineer may:

(1) Order the Contractor to replace ineffective or unqualified quality control personnel or subcontractors.

(2) Order the Contractor to stop operations until appropriate corrective actions are taken.

END OF SECTION 100

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SECTION 105
MOBILIZATION

105-1 DESCRIPTION. This item shall consist of the preparatory work and operations, including, but not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various items on the project site.

105-1.1 POSTED NOTICES. Prior to commencement of construction activities the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and State Wage Rates from the Project Manual and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-2 METHOD OF MEASUREMENT. Partial payments for mobilization will be made once each month as the work progresses. Provided all requirements of applicable General and Special Provisions have been accomplished to the satisfaction of the Engineer, partial payments will be made as follows:

a. When 5 percent of the original contract amount is earned, 20 percent of the amount bid for this item will be paid, not to exceed 2 percent of the original contract amount.

b. When 20 percent of the original contract amount is earned, 50 percent of the amount bid for this item, less all-previous payments, will be paid, not to exceed 5 percent of the original contract amount.

c. When 35 percent of the original contract amount is earned, 60 percent of the amount bid for this item, less all-previous payments, will be paid, not to exceed 6 percent of the original contract amount.

d. When 75 percent of the original contract amount is earned, the amount bid for this item, less all-previous payments, will be paid, not to exceed 10 percent of the original contract amount.

e. When 90 percent of the original contract amount is earned, the amount in excess of 10 percent of the original contract amount, less all previous payments, will be paid.

For the purpose of the Specification that term "original contract amount" as used above shall mean the amount of the award for the construction items on this contract not including the amount bid for mobilization. Payments for materials on hand will not be included as a percent of original contract amount earned until said materials on hand have been incorporated into the work and accepted and paid for as contract items. For multiple schedule projects, the above "original contract amount" shall be interpreted by schedule.

This price shall extend to the general contractor and to any and all subcontractors. No additional payment will be made to any bid item to compensate the Contractor or subcontractor for loss of profits attributed to mobilization costs.

105-3 BASIS FOR PAYMENT

105-3.1 Payment shall be at the contract unit price of lump sum for "Mobilization". That price shall be full compensation for all labor, equipment, and supplies needed to complete the item.

Payment will be made under:

Item MO-100a	Mobilization – per lump sum

END OF SECTION 105

SECTION 4
SUPPLEMENTARY PROVISIONS

PART A
STATE PROVISIONS

1. CIVIL RIGHTS ACT OF 1964, TITLE VI ASSURANCES (Reference: 49 CFR Part 21)
2. CIVIL RIGHTS – GENERAL (Reference: 49 USC § 47123)
3. OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (Reference 20 CFR Part 1910)
4. EXECUTIVE ORDER 94-03
5. CERTIFICATION REGARDING ANTI-COLLUSION
6. CERTIFICATION REGARDING MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT
7. PROMPT PAYMENT (Reference: Mo. Revised Statutes, Chapter 34, Section 34.057)

1. CIVIL RIGHTS ACT OF 1964, TITLE VI ASSURANCES

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

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

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

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

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

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

a. Withholding of payments to the contractor under the contract until the contractor complies, and/or
b. Cancellation, termination, or suspension of the contract, in whole or in part.

1.1(f) Incorporation of Provisions. The contractor will include the provisions of paragraphs 1.1(a) through 1.1(f) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation

Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

1.2 Title VI List of Pertinent Nondiscrimination Authorities. During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq*., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);

- 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);

- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);

- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;

- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);

- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);

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

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

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

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

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

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

References: 49 CFR Part 21; AC 150/5100-15

2. GENERAL CIVIL RIGHTS PROVISIONS

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

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

This provision also obligates the tenant/concessionaire/lessee or its transferee for the period during which Federal assistance is extended to the airport through the Airport Improvement Program, except where Federal assistance is to provide, or is in the form of personal property; real property or interest therein; structures or improvements thereon.

In these cases the provision obligates the party or any transferee for the longer of the following periods:

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

(b) the period during which the airport sponsor or any transferee retains ownership or possession of the property.

In the case of contractors, this provision binds the contractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

References: 49 USC § 47123

3. OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

22.1 All contracts and subcontracts that result from this solicitation incorporate the following provisions by reference, with the same force and effect as if given in full text. The contractor has full responsibility to monitor compliance to the referenced statute or regulation. The contractor must address any claims or disputes that pertain to a referenced requirement directly with the Federal Agency with enforcement responsibilities.

Requirement	Federal Agency with Enforcement Responsibilities
Occupational Safety and Health Act of 1970 (20 CFR Part 1910)	U.S. Department of Labor – Occupational Safety and Health Administration

Reference 20 CFR part 1910

4. EXECUTIVE ORDER 94-03

The Contractor shall comply with all the provisions of Executive Order 94-03, issued by the Honorable Mel Carnahan, Governor of Missouri, on the fourteenth (14th) day of January 1994, which executive order is incorporated herein by reference and is made a part of this contract. This Executive Order which promulgates a Code of Fair Practices in regard to nondiscrimination, is incorporated herein by reference and made a part of this Contract. This Executive Order prohibits discriminatory practices by the state, the contractor or its subcontractors based on race, color, religion, national origin, sex, age, disability, or veteran status.

5. CERTIFICATION REGARDING ANTI-COLLUSION

In accordance with 23 USC #112 the bidder hereby states, under penalty of perjury, that they have not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this contract.

6. CERTIFICATION REGARDING MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT

The bidder's attention is directed to sections 34.350 et seq RSMo Supp 2005 which required all manufactured goods or commodities used or supplied in the performance of this contract or any subcontract to be manufactured, assembled or produced in the United States. Sections 34.350 et seq RSMo Supp 2005 does not apply if the total bid is less than One Thousand Dollars (1,000.00).

Section 34.355 RSMo Supp 2005 requires the vendor or bidder to certify their compliance with section 34.353 RSMo Supp 2005 and, if applicable, section 34.359 RSMo Supp 2005 at the time of the bidding and prior to payment. Failure to comply with section 34.353 RSMo 2005 during performance of the contract and to provide certification of compliance prior to payment will result in nonpayment for those goods or commodities.

The bidder certifies that all the specified goods or products for which this bid was solicited are manufactured, assembled or produced in the United States, and more than one line of the specified goods or products are manufactured, assembled or produced in the United States. If there are any exceptions, the bidder shall list them below:

_____

_____

_____

For any specified goods or products which are manufactured, assembled or produced in the United States and for which only one line are manufactured, assembled or produced in the United States, the bidder shall indicate the specified goods or products.

Item Number(s)	Item number(s)
_____	_____
_____	_____
_____	_____

(use additional sheets if necessary)

For any other exceptions noted, the bidder shall indicate the specified goods or products which are manufactured, assembled or produced in a country other than the "United States" as defined in section 34.350.2(2) RSMo Supp 2005 and: (a) list the country, other than the United States, where each good or product you propose to furnish is manufactured, assembled or produced; (b) check box(es) at left of the applicable paragraph(s).

Item Number(s)	Location Where Item Manufactured, Assembled or Produced
_____	_____
_____	_____
_____	_____

(use additional sheets if necessary)

The specified goods or products cannot be manufactured, assembled or produced in the United States in sufficient quantities or in time to meet the contract specifications. Item number(s)

_____

_____

_____

(use additional sheets if necessary)

The specified goods or products are treated as manufactured, assembled or produced in the United States under an existing treaty, law, agreement or regulation of the United States regarding export-import restrictions and international trade. Item number(s)

_____

_____

_____

(use additional sheets if necessary)

The bidder hereby certifies that the above information is true and correct and further certifies that this bid complies with all the provisions of sections 34.350 et seq RSMo Supp 2005.

3. PROMPT PAYMENT

MoDOT and the city require all contractors to pay all subcontractors and suppliers for satisfactory performance of services in compliance with the prompt payment statute, Mo. Revised Statutes, Chapter 34, Section 34.057 (included below). MoDOT and the city also requires the prompt, as defined in Section 34.057, return of all retainage held on all subcontractors after the subcontractor's work is satisfactorily completed, as MoDOT and the city personnel may ultimately determine (if necessary).

Missouri Revised Statutes

Chapter 34
State Purchasing and Printing
Section 34.057

August 28, 2009

Public works contracts--prompt payment by public owner to contractor--prompt payment by contractor to subcontractor-- progress payments--retainage--late payment charges--withholding of payments.

34.057. 1. Unless contrary to any federal funding requirements or unless funds from a state grant are not timely received by the contracting public municipality but notwithstanding any other law to the contrary, all public works contracts made and awarded by the appropriate officer, board or agency of the state or of a political subdivision of the state or of any district therein, including any municipality, county and any board referred to as the public owner, for construction, reconstruction or alteration of any public works project, shall provide for prompt payment by the public owner to the contractor and prompt payment by the contractor to the subcontractor and material supplier in accordance with the following:

(1) A public owner shall make progress payments to the contractor on at least a monthly basis as the work progresses, or, on a lump sum basis according to the terms of the lump sum contract. Except in the case of lump sum contracts, payments shall be based upon estimates prepared at least monthly of work performed and material delivered, as determined by the project architect or engineer. Retainage withheld on public works projects shall not exceed five percent of the value of the contract or subcontract unless the public owner and the architect or engineer determine that a higher rate of retainage is required to ensure performance of the contract. Retainage, however, shall not exceed ten percent of the value of the contract or subcontract. Except as provided in subsection 4 of this section, the public owner shall pay the contractor the amount due, less a retainage not to exceed ten percent, within thirty days following the latter of the following:

(a) The date of delivery of materials or construction services purchased;

(b) The date, as designated by the public owner, upon which the invoice is duly delivered to the person or place designated by the public owner; or

(c) In those instances in which the contractor approves the public owner's estimate, the date upon which such notice of approval is duly delivered to the person or place designated by the public owner;

(2) Payments shall be considered received within the context of this section when they are duly posted with the United States Postal Service or other agreed upon delivery service or when they are hand-delivered to an authorized person or place as agreed to by the contracting parties;

(3) If, in the discretion of the owner and the project architect or engineer and the contractor, it is determined that a subcontractor's performance has been completed and the subcontractor can be released prior to substantial completion of the public works contract without risk to the public owner, the contractor shall request such adjustment in retainage, if any, from the public owner as

necessary to enable the contractor to pay the subcontractor in full. The public owner may reduce or eliminate retainage on any contract payment if, in the public owner's opinion, the work is proceeding satisfactorily. If retainage is released and there are any remaining minor items to be completed, an amount equal to two hundred percent of the value of each item as determined by the public owner's duly authorized representative shall be withheld until such item or items are completed;

(4) The public owner shall pay the retainage, less any offsets or deductions authorized in the contract or otherwise authorized by law, to the contractor after substantial completion of the contract work and acceptance by the public owner's authorized contract representative, or as may otherwise be provided by the contract specifications for state highway, road or bridge projects administered by the state highways and transportation commission. Such payment shall be made within thirty days after acceptance, and the invoice and all other appropriate documentation and certifications in complete and acceptable form are provided, as may be required by the contract documents. If at that time there are any remaining minor items to be completed, an amount equal to two hundred percent of the value of each item as determined by the public owner's representative shall be withheld until such items are completed;

(5) All estimates or invoices for supplies and services purchased, approved and processed, or final payments, shall be paid promptly and shall be subject to late payment charges provided in this section. Except as provided in subsection 4 of this section, if the contractor has not been paid within thirty days as set forth in subdivision (1) of subsection 1 of this section, the contracting agency shall pay the contractor, in addition to the payment due him, interest at the rate of one and one-half percent per month calculated from the expiration of the thirty-day period until fully paid;

(6) When a contractor receives any payment, the contractor shall pay each subcontractor and material supplier in proportion to the work completed by each subcontractor and material supplier his application less any retention not to exceed ten percent. If the contractor receives less than the full payment due under the public construction contract, the contractor shall be obligated to disburse on a pro rata basis those funds received, with the contractor, subcontractors and material suppliers each receiving a prorated portion based on the amount of payment. When, however, the public owner does not release the full payment due under the contract because there are specific areas of work or materials he is rejecting or because he has otherwise determined such areas are not suitable for payment then those specific subcontractors or suppliers involved shall not be paid for that portion of the work rejected or deemed not suitable for payment and all other subcontractors and suppliers shall be paid in full;

(7) If the contractor, without reasonable cause, fails to make any payment to his subcontractors and material suppliers within fifteen days after receipt of payment under the public construction contract, the contractor shall pay to his subcontractors and material suppliers, in addition to the payment due them, interest in the amount of one and one-half percent per month, calculated from the expiration of the fifteen-day period until fully paid. This subdivision 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;

(8) The public owner shall make final payment of all moneys owed to the contractor, less any offsets or deductions authorized in the contract or otherwise authorized by law, within thirty days of the due date. Final payment shall be considered due upon the earliest of the following events:

(a) Completion of the project and filing with the owner of all required documentation and certifications, in complete and acceptable form, in accordance with the terms and conditions of the contract;

(b) The project is certified by the architect or engineer authorized to make such certification on behalf of the owner as having been completed, including the filing of all documentation and certifications required by the contract, in complete and acceptable form; or

(c) The project is certified by the contracting authority as having been completed, including the filing of all documentation and certifications required by the contract, in complete and acceptable form.

2. Nothing in this section shall prevent the contractor or subcontractor, at the time of application or certification to the public owner or contractor, from withholding such applications or certifications to the owner or contractor for payment to the subcontractor or material supplier. Amounts intended to be withheld shall not be included in such applications or certifications to the public owner or contractor. Reasons for withholding such applications or certifications shall include, but not be limited to, the following: unsatisfactory job progress; defective construction work or material not remedied; disputed work; failure to comply with other material provisions of the contract; third party claims filed or reasonable evidence that a claim will be filed; failure of the subcontractor to make timely payments for labor, equipment and materials; damage to a contractor or another subcontractor or material supplier; reasonable evidence that the contract can not be completed for the unpaid balance of the subcontract sum or a reasonable amount for retention, not to exceed the initial percentage retained by the owner.

3. Should the contractor determine, after application or certification has been made and after payment has been received from the public owner, or after payment has been received by a contractor based upon the public owner's estimate of materials in place and work performed as provided by contract, that all or a portion of the moneys needs to be withheld from a specific subcontractor or material supplier for any of the reasons enumerated in this section, and such moneys are withheld from such subcontractor or material supplier, then such undistributed amounts shall be specifically identified in writing and deducted from the next application or certification made to the public owner or from the next estimate by the public owner of payment due the contractor, until a resolution of the matter has been achieved. Disputes shall be resolved in accordance with the terms of the contract documents. Upon such resolution the amounts withheld by the contractor from the subcontractor or material supplier shall be included in the next application or certification made to the public owner or the next estimate by the public owner and shall be paid promptly in accordance with the provisions of this section. This subsection shall also apply to applications or certifications made by subcontractors or material suppliers to the contractor and throughout the various tiers of the contracting chain.

4. The contracts which provide for payments to the contractor based upon the public owner's estimate of materials in place and work performed rather than applications or certifications submitted by the contractor, the public owner shall pay the contractor within thirty days following the date upon which the estimate is required by contract to be completed by the public owner, the amount due less a retainage not to exceed five percent. All such estimates by the public owner shall be paid promptly and shall be subject to late payment charges as provided in this subsection. After the thirtieth day following the date upon which the estimate is required by contract to be completed by the public owner, the contracting agency shall pay the contractor, in

addition to the payment due him, interest at a rate of one and one-half percent per month calculated from the expiration of the thirty-day period until fully paid.

5. Nothing in this section shall prevent the owner from withholding payment or final payment from the contractor, or a subcontractor or material supplier. Reasons for withholding payment or final payment shall include, but not be limited to, the following: liquidated damages; unsatisfactory job progress; defective construction work or material not remedied; disputed work; failure to comply with any material provision of the contract; third party claims filed or reasonable evidence that a claim will be filed; failure to make timely payments for labor, equipment or materials; damage to a contractor, subcontractor or material supplier; reasonable evidence that a subcontractor or material supplier cannot be fully compensated under its contract with the contractor for the unpaid balance of the contract sum; or citation by the enforcing authority for acts of the contractor or subcontractor which do not comply with any material provision of the contract and which result in a violation of any federal, state or local law, regulation or ordinance applicable to that project causing additional costs or damages to the owner.

6. Notwithstanding any other provisions in this section to the contrary, no late payment interest shall be due and owing for payments which are withheld in good faith for reasonable cause pursuant to subsections 2 and 5 of this section. If it is determined by a court of competent jurisdiction that a payment which was withheld pursuant to subsections 2 and 5 of this section was not withheld in good faith for reasonable cause, the court may impose interest at the rate of one and one-half percent per month calculated from the date of the invoice and may, in its discretion, award reasonable attorney fees to the prevailing party. In any civil action or part of a civil action brought pursuant to this section, if a court determines after a hearing for such purpose that the cause was initiated, or a defense was asserted, or a motion was filed, or any proceeding therein was done frivolously and in bad faith, the court shall require the party who initiated such cause, asserted such defense, filed such motion, or caused such proceeding to be had to pay the other party named in such action the amount of the costs attributable thereto and reasonable expenses incurred by such party, including reasonable attorney fees.

(L. 1990 S.B. 808 & 672 § 1)

(2004) Act contemplates a contract between the parties to such a cause of action and provides for such action against a public owner only by the contractor, not a subcontractor or supplier. Mays-Maune & Associates v. Werner Brothers, 139 S.W.3d 201 (Mo.App. E.D.).

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PART B
LOCAL PROVISIONS

1. HAUL ROADS:

The Contractor shall obtain approval from the Engineer prior to establishing haul roads within the airport property. Once established, the haul roads shall be utilized for all equipment traffic, and the equipment shall not be allowed to stray or wander away from the established routes. The haul roads shall be the responsibility of the Contractor and shall be maintained and kept in good order at all times. Water, when required, shall be applied at the locations and in the amounts necessary to minimize dust and dirt in the air operations area. Haul roads across any active runway or taxiway shall be kept clean and in good order at all times. The Contractor shall repair any damage caused by the movement of equipment on any of the haul roads, whether in designated or undesignated areas. After completion of the project, the Contractor shall be required to re-grade any unpaved portions of the haul road and to reseed the area with local native grasses to match the existing conditions of the area. The performance of any work as specified by this provision, including watering, maintenance, and repair of the haul roads, shall not be measured and paid for directly, but shall be considered as necessary and incidental to the work.

Establishment of haul roads off of Airport property shall be the sole responsibility of the Contractor.

2. AIRPORT SECURITY:

The Contractor will be required to submit to the airport prior to the commencement of construction, evidence in the form of a certification letter that all of their employees who will have unescorted access to the AOA have been checked for employment, security, and criminal history for the last ten years. The letter will also certify that these employees meet all security regulations as required by the Sponsor's security program.

During the course of the construction operations, the Contractor will be allowed to utilize a maximum of two (2) airport access "Security Gates" as entrance to the construction site. This gate and the associated haul roads shall be designated by the Engineer. The Contractor shall be required to keep this gate guarded and closed during construction hours. The gate may be opened only for authorized vehicle traffic flow. At such times as this gate is not guarded, it shall be closed and securely locked. The Contractor will be required to obtain an "airport security" permit from the Office of the Airport Manager for all vehicles and personnel used on the construction project. Said permit shall hold the Contractor responsible for all vehicles and personnel on the airport property other than those that have individual authorization. All authorized vehicles and construction equipment must display a three foot by three foot flag with international orange and white 12 inch squares displayed in full view above the vehicles. Passengers in any authorized vehicles shall be the responsibility of the Contractor. The "gate guard" shall allow no unauthorized vehicle or person to enter the "air operations" side of the airport without the above stipulated "security clearance." The Contractor and the Contractor's "security gate guard" shall be held duly responsible to uphold the above security stipulations at all times during the progress of the construction project. No deviations from these security measures shall be allowed at any time. There shall be a $1,000.00 penalty for each deviation from these security provisions.

3. RADIO COMMUNICATIONS:

The Contractor's superintendent and flagman shall be required to monitor transceiver radios tuned to the 123 MH_z frequency at all times. Radios shall be supplied by the Contractor. Such radios shall be used to obtain proper clearance in regard to the movement of equipment, trucks, etc., on the airport. Further, any unusual occurrences in the flight pattern of approaching or departing aircraft shall be acknowledged by all concerned so that operation of the airport and the construction work can be safely carried on at all times.

4. WORK SCHEDULE:

Immediately after the award of contract, the Contractor shall file with the Engineer a time chart or schedule of proposed progress, a plan of construction and proposed detailed methods of carrying out the work, including a full statement of equipment and equipment layout for the job.

The Sponsor reserves the right to request changes in the sequence of project schedules if such change is required in the interest of safety or airport operation.

5. CONTRACTOR'S QUALITY CONTROL PROGRAM:

The contractor and their chosen testing laboratory shall submit a quality control plan submitted and approved prior to the Notice to Proceed (NTP). The quality control plan should contain the following items:

a. Names of testing laboratories and consulting engineer firms with quality control responsibilities on the project, together with a description of the services to be provided.

b. Procedures for the testing laboratories to meet the requirements of the applicable ASTM, AASHTO or other standards referenced in the contract specifications.

c. Qualifications of engineering supervision and construction inspection personnel.

d. A listing of all tests required by the contract specifications, including the type and frequency of tests to be taken, the method of sampling, the applicable test standard, and the acceptance criteria or tolerance permitted for each type of test.

e. Procedures for ensuring that the tests are taken in accordance with the program, that they are documented daily, that the proper corrective actions, where necessary, are undertaken, and that the quantity of materials used is adequate.

6. SEQUENCE OF WORK:

The Contractor will be required to accomplish the work items according to the schedule of construction as submitted to the Engineer following the award of the contract. Prior to closing any taxiways or apron area, they shall be marked in conformance with the FAA Advisory Circular 150/5340-1 latest edition. This shall consist of placing barricades and flashers on each taxiway and closed runway crosses on the effected runways. Flashers must

be well anchored so they do not blow over from jet blasts or strong winds. Closed taxiway, apron area, and other airfield markings and maintenance of these items are considered a necessity and an incidental part of the work, and no separate measurement or payment will be made. The Contractor shall consider the costs and distribute them to the various bid items.

The Contractor shall not allow men or equipment within **60** feet of any runway centerline or within **25** feet of the centerline of any taxiway, nor shall he permit materials to be stored or stocked within **125** feet of any runway centerline or within **45** feet of the centerline of any taxiway during the entire period of this project without first obtaining approval of the Engineer. When the Contractor's operations require the closing of any runway or taxiway, the Contractor shall mark said runway or taxiway in accordance with the plans and specifications at no additional cost to the Sponsor.

Prior to construction on any taxiway or runway, the Contractor shall, upon approval by the Engineer, close the taxiway or runway and begin work. The Contractor shall be responsible for clearly marking and defining the closed taxiways or runways by use of warning lights, barricades, flags and closed taxiway or runway markings in conformance with FAA Advisory Circular 150/5370-2 latest edition. The Contractor shall be responsible for maintaining these barricades and keeping them clearly visible at all times.

The Sponsor shall meet with the Contractor immediately after the award of the contract to work up the sequence of work for the project.

7. CLOSURE OF AIR OPERATIONS AREAS:

Barricades are considered a necessary and incidental part of the work and no separate measurement or payment will be made therefore. The Contractor shall consider the costs and distribute them to the various bid items.

8. ACCIDENT PREVENTION:

Precautions shall be exercised at all times for the protection of persons (including employees) and property, and that the safety provisions of applicable laws and of applicable building construction codes shall be observed, and that machinery, equipment, and explosives shall be guarded and all hazards shall be eliminated in accordance with the safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable law.

9. EXISTING UNDERGROUND CABLES:

The FAA shall attempt to locate all of their underground cables that are located in the vicinity of the work areas, prior to construction in the area. The Contractor shall attempt to locate the Sponsor's and all other public underground cables prior to construction. Damage to the underground cables through negligence on the part of the Contractor will require replacement by the Contractor at no cost to the Sponsor. Any splicing or replacing of damaged cable shall meet current FAA specifications.

10. UTILITIES:

Any utilities required by the Contractor for the prosecution of the work shall be paid for by said Contractor.

11. INSURANCE:

The Contractor shall procure and maintain for the duration of the contract issued a policy or policies of insurance for the protection both the Contractor and the Owner and their respective officers, officials, agents, consultants and employees. The Owner requires certification of insurance coverage from the Contractor prior to commencing work. All insurance policies shall include an endorsement that adds the University as an additional insured.

Contractor shall provide and maintain during the life of the contract and until final acceptance of the work, insurance acceptable to the Owner which will afford protection and coverage in accordance with the requirements set forth below.

Workmen's Compensation Insurance: Workmen's Compensation Insurance for all of his employees at the site of the project, and, in case any work is sublet, Contractor shall require any and/or all subcontractor(s) similarly to provide Workmen's Compensation Insurance for all his employees unless such employees are covered by the protection afforded by Contractor. In case any class of employees engaged in hazardous work under this contract at the site of the project is not covered under the Workmen's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide Employer's Liability Insurance. Contractors shall provide coverage under the "Occupational Disease Act" of the State of Missouri, in addition to the above requirements, if the operations of the Contractor or any subcontractor are applicable thereunder. Workmen's Compensation Insurance shall comply in all respects with the requirements of the Statutes of the State of Missouri.

Public Liability and Property Damage Insurance: Public Liability and Property Damage Insurance in comprehensive general liability form as shall protect Contractor and any subcontractor performing work covered by this contract from claims for damages for personal injury, including wrongful death, and from claims for property damage which may arise from the operations under the contract including all trucks and automobiles used, whether owned or not, and whether such operations be by the Contractor or any subcontractor or by anyone directly employed by either of them. The amount of insurance shall not be less than the following:

1. Public Liability and Property Damage -

Bodily injury:	
each person	$1,000,000
aggregate	$2,000,000
Property damage:	
each accident	$2,000,000
aggregate	$2,000,000

2. Automobile Public Liability and Property Damage -

Bodily injury:	
each person	$1,000,000
aggregate	$2,000,000
Property damage:	
each accident	$1,000,000

Such policy or policies shall by proper endorsement cover any liability of Contractor under the indemnification provision, Article 22 of these General Conditions.

Insurance Covering Special Hazards: The Public Liability and Property Damage Insurance policy or policies of the Contractor shall provide coverage for special hazards such as operation of material hoists, blasting or other use of explosives, and damage to underground property.

Owner's Protective Liability Insurance: Owner's Protective Liability Insurance for protection of the Owner and the Designer protecting them against the standard hazards, except liability from operation of trucks and automobiles, and with the amount of coverage provided in the Public Liability and Property Damage Insurance of Contractor.

Builder's Risk or Installation Floater Insurance: Insurance upon the work and all materials, equipment, supplies, temporary structures and similar items which may be incident to the performance of the work and located at or adjacent to the site, against loss or damage from fire and such other casualties as are included in extended coverage in broad "All Risk" form, including coverage for Flood and Earthquake, in an amount not less than the replacement cost of the work or the contract price, whichever is greater, with loss payable to Contractor and Owner as their respective interest may appear. Contractor shall maintain sufficient insurance to cover the full value of the work and materials as the work progresses, and shall furnish Owner copies of all endorsements. If Builder's Risk Reporting-Form of Endorsement is used, Contractor shall make all reports as required therein so as to keep in force an amount of insurance which will equal the replacement cost of the work, materials, equipment, supplies, temporary structures, and other property covered thereby; and if, as a result of Contractor's failure to make any such report, the amount of insurance so recoverable shall be less than such replacement cost, Contractor's interest in the proceeds of such insurance, if any, shall be subordinated to Owner's interest to the end that Owner may receive full reimbursement for its loss.

All insurance shall be procured through agencies and be written by insurance companies which are acceptable to and approved by the Owner and shall be obtained and paid for by Contractor.

Within fourteen (14) consecutive calendar days after receipt of the purchase order directing him to do so, the Contractor shall furnish the Office of Purchasing with certificates showing that the Owner is covered by the required insurance and showing the type, amount, class of operations covered, effective dates and dates of expiration of the policies.

Upon receipt of any notice of cancellation or alteration, Contractor shall within five (5) days procure other policies of insurance similar in all respects to the policy or policies about to be canceled or altered. Neither the Contractor nor the Contractor's agents shall perform work on the Owner's property without the minimum insurance set forth herein being fully in

force. There shall be no time extension granted for the Contractor's failure to maintain required insurance coverage.

12. INDEMNIFICATION:

Contractor agrees to indemnify and save harmless Owner and Designer, their agents, servants and employees, from and against any and all liability for damage arising from injuries to persons or damage to property occasioned by any acts or omissions of Contractor, any subcontractors, agents, servants or employees, including any and all expense, legal or otherwise, which may be incurred by Owner or Designer, its agents, servants or employees, in defense of any claim, action or suit, irrespective of any claims that an act, omission or negligence of Owner or Designer, its agents, servants or employees contributed to such injury or damage.

The obligations of the Contractor under this paragraph shall not extend to the liability of the Designer, his agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, design or specifications, or (2) giving of or the failure to give directions or instructions by the Designer, his agents or employees as required by the contract documents provided such giving or failure to give is the primary cause of the injury or damage.

13. SALES AND USE TAXES:

This project shall be bid without State sales and/or use tax included in the bid price. The Owner is a political subdivision of the State of Missouri and is exempt from the sales tax on purchases paid for out of its funds pursuant to Section 144.062 RSMO.

The Owner will provide a Missouri Project Exemption Certificate and a Missouri Tax Exemption Letter to the Contractor who will be purchasing tangible personal property for use in this project.

The Contractor shall furnish a completed copy of the exemption certificate, along with a copy of the Missouri Tax Exemption Letter, to all subcontractors, and any contractors or subcontractors purchasing materials shall present copies of such documents to all material suppliers as authorization to purchase, on behalf of the Owner, all tangible personal property and materials to be incorporated or consumed in the construction of this project and no other on a tax exempt basis. A copy of each certificate must be retained by the purchaser for a period of five years.

14. PERMITS AND COMPLIANCE WITH LAWS:

The Contractor shall procure and pay for all permits, licenses, and bonds necessary for the prosecution of his work, and/or required by Local, State, and Federal regulations and laws, as pertains particularly to permits and transportation of materials and equipment, or other operations which are not a specific requirement of these specifications. The Contractor shall give all notices, pay all fees and taxes, and comply with all Federal, State, and Local laws, ordinances, rules, and regulations, and building and construction codes bearing on the conduct of the work.

15. EXECUTED CONTRACTS:

Each contract shall be executed in five original copies and there shall be executed originals of the Contractor's Performance Bond and Payment Bond in equal number to the executed originals of the contract. Two copies of such executed documents will be retained by University of Central Missouri, one copy shall be delivered to the FAA, and two copies will be delivered to the Contractor. The cost of executing the Contract, bonds and insurance, including all notary fees and incidental expenses are to be paid by the Contractor to whom the contract is awarded.

16. SUBLETTING OR ASSIGNING OF CONTRACTS:

The Contractor shall perform, with his organization, an amount of work equal to at least 50 percent of the total contract cost. No assignment by the Contractor of any principal construction contract or any part thereof or of the funds to be received thereunder by the Contractor will be recognized unless such assignment has received the prior written approval of the Sponsor, which shall be at Sponsor's sole discretion, and the Surety has been given due notice of such assignment and has also consented in writing thereto.

Such written approval of the Sponsor shall not relieve the Contractor of any obligation incurred by him, under the contract, unless otherwise expressly stated in the approval.

The following language must appear in any assignment:

"It is agreed that the funds to be paid to the assignee under this assignment are subject to a prior lien for services rendered or materials supplied for the performance of the work called for in said contract in favor of all persons, firms, or corporations rendering such services or supplying such materials."

17. LIQUIDATED DAMAGES:

It is agreed that the Owner may deduct from the contract price and retain as liquidated damages, and not as penalty or forfeiture, the sum stipulated in the contract for each calendar day after date specified for completion of the project that the entire work is substantially complete.

The term "substantially complete" are used herein shall be construed to mean the completion of the entire work, including the submittal and approval of specified operation manuals, balance reports and parts lists, in strict accord with all requirements of the drawings and specifications except minor items which in the opinion of the Owner will not interfere with complete and satisfactory use of the facilities. However, this does not relieve the Contractor of the requirements concerning final completion and of Article 25, General Guarantee.

Only certification by the Contract Administrator as to substantial completion of the work within the time specified shall be conclusive and binding on the Owner and Contractor for the purpose of determining whether or not liquidated damages shall be assessed under the terms hereof and the sum total amount due.

Liquidated damages or any matter related thereto shall not relieve the Contractor or his surety of any responsibility or obligation under this contract.

If substantial completion has not been given by the date set forth in the contract for final completion, then the Owner, without prejudice to any other rights, claims, or remedies the Owner may have including the right to liquidated damages, may back charge the Contract for all additional expenses incurred by the Owner or the Designer as the result of the extended contract period and through final inspection. Further, each phase of work under the project has additional liquidated damage clauses, as outlined in Section 80-08 FAILURE TO COMPLETE ON TIME.

The Contractor further agrees to pay compensation for the unscheduled employment of the Engineer necessitated by the Contractor 1) working more than ten (10) hours per day, 2) furnishing materials or equipment not in conformance with the Contract Documents necessitating redesign or additional review time by the Engineer, and 3) working beyond the time of completion established in the Notice to Proceed with Construction according to the following hourly rates:

Description	Straight Time
Staff Engineer	$195/hr
Engineer	$140/hr
Associate Engineer	$135/hr
Out of Pocket Cost, material, equipment, supplies, transportation, subsistence	At Cost

Sub-Contractor (Quality Assurance Testing)	Straight Time
Project Engineer	$80/hr
Field Technician	$45/hr
Out of Pocket Cost, material, equipment, supplies, transportation, subsistence	At Cost

Compensation shall be paid by deduction from monthly progress payments and the final payment.

The engineering budget will be analyzed at the end of the project to determine whether any unscheduled employment of the Engineer, during the scheduled contract time, resulted in a cost savings to the Sponsor. If, as a result of working more than (10) ten hours per day, the Contractor completes the project within the scheduled contract time, and if the overtime results in a reduced contract time and cost savings to the Sponsor, no liquidated damages will be assessed for the unscheduled employment of the Engineer during the scheduled contract time. Liquidated damages will be assessed as stipulated for each day the work remains uncompleted beyond the scheduled contract time.

18. ACCEPTANCE TESTING:

Acceptance testing shall be the responsibility of the Contractor.

19. GRADE CONTROL AND SURFACE TOLERANCE:

The Contractor will be required to provide a minimum of one 2-person survey crew on site at all times during the work to assure compliance with Section 100 of the General Provisions and to provide the following at a minimum.

1. Provide all construction staking as required by Section 50 of the General Provisions.

2. Provide continuous straight edging records on a daily basis to the Engineer and under the direct observation/supervision of the Engineer as required. Submit results on forms provided by the Engineer. These will be accepted on a lot basis by the Engineer.

3. Provide daily grade tolerance surveys for completed courses of pavement to assure grade tolerances are being met. All survey data shall be provided in electronic ASCII format (or equivalent as approved by the engineer) and shall include Point Number, Northing, Easting, Elevation, and Description (PNEZD format). All point descriptions shall be coded in accordance with the naming convention specified in the contractor's "Point Description Key Code" as provided to the engineer prior to the beginning of construction.

4. Assist in other verification surveys during roto-milling operations, field design adjustments, and as-built survey work as required at the direction of the Engineer.

20. CONSTRUCTION MANAGEMENT PLAN:

The Contractor and testing firm are required to prepare a Quality Control Program as required under SECTION 100, CONTRACTOR QUALITY CONTROL PROGRAM, of the General provisions. The Contractor shall obtain from the testing laboratory a proposed schedule of material testing submitted on forms provided by the Engineer, an example of which, is included following this specification. The requirements for the quality control program specified under Section 100 shall formulate a portion of the **CONSTRUCTION MANAGEMENT PLAN (CMP)** required under this item.

The Engineer will assemble and submit the CMP. The Contractor must complete sections of the CMP as indicated on the following pages. All sections indicated to be completed by the Contractor must be titled as shown. Other sections will be completed by the Engineer as indicated. The plan will be submitted to the Sponsor and FAA for approval a minimum of 10 days prior to construction. Approval of the CMP must be obtained prior to commencing any paving operations. Changes in the Contractor's personnel, sub-contractor's personnel, testing laboratory's personnel or testing procedures will require revision to the plan. The Contractor is required to submit any changes immediately to the Engineer.

The following outline shall be utilized as a guide for preparation of the CMP. Modifications may be incorporated as approved by the Engineer.

I. Introduction/Summary (Completed by Engineer)

II. Personnel

1. Name of Sponsor representatives who have responsibility and authority for contract administration. (by Engineer)

2. Consulting Engineer and staff showing qualifications, experience and project responsibilities. (by Engineer)

3. Contractor project personnel and responsibilities. (by Contractor)

4. Quality Control Testing Laboratory project personnel and responsibilities. (by Contractor)

5. Acceptance Testing Laboratory project personnel and responsibilities (by Certified Testing Firm)

III. Inspection Procedures and Frequencies (by Contractor) (Refer to Section 100)

IV. Submittal Process (by Contractor) (Refer to Section 100)

V. Quality Control Testing (by Contractor) (Refer to Section 100)

VI. Acceptance Testing (by Certified Testing Firm)

VII. Test Results

1. Quality Control Testing (by Contractor) (Refer to Section 100)

2. Acceptance Testing (by Certified Testing Laboratory)

VIII. Final Test and Quality Control Report (by Contractor)

At the end of the project and prior to final inspection and reduction of contract retainage, the prime contractor shall prepare and submit to the engineer for review and for FAA concurrence a final project summary report. Two bound copies and one loose leaf copy shall be submitted. The report shall include a summary of all tests taken with results, plus a narrative explaining the action taken for all failing tests within the context of the specifications. The Contractor shall correlate required tests shown in the specifications to those accomplished. Copies of all Certificates of Compliance for each material installed shall be included in the section pertaining to that material. Examples of typical Certificates of Compliance are for bituminous material, cement, fly ash, antistripping agent, pavement paint, etc. This summary shall contain all referenced material tests required by the Quality Control Program outlined in Section 100 of these specifications. In addition, it shall summarize all acceptance testing results.

The report shall be bound in booklet form with divisions for each bid item, i.e., excavation, base courses, pavement materials, electrical items, drainage items and any other materials. Each section shall be clearly marked with a divider including the section name and section table of contents. The report must contain a summary of all tests by lot or pay item, highlighted to indicate failed tests and/or reduced pay results, and reference to any approved change order that accepted any out of tolerance material. The individual sections shall begin

with a narrative discussing any failed tests followed by a summary of the testing required and accomplished during the progress of the work. Within each section, the Contractor shall summarize individual test results in the format indicated on the following test summary forms provided by the Engineer. The forms are available in Microsoft Word format upon request. Additional or updated forms may be substituted by the Engineer prior to construction.

Any airfield lighting, electrical fixtures or other equipment used in the project shall have instruction books or factory installation sheets showing exploded views of the assembled parts with trouble shooting tips clearly shown. This information is of the type normally supplied by the manufacturer but must be in a presentable form. Single line wiring diagrams and circuit directories shall also be included in the summary with any recommended maintenance procedures suggested by the supplier or manufacturer.

Contractor is responsible for providing information before Notice to Proceed.

21. INSTRUCTION MANUALS:

At the end of project construction, the Contractor shall provide to the airport three instruction manuals. The manuals shall include as a minimum the following:

1. Names, addresses, and phone numbers of equipment suppliers/manufacturers.

2. Component parts list with manufacturer and part number.

3. Installation manuals.

4. Maintenance and troubleshooting instruction.

5. Operating instructions.

6. Equipment Warranties.

Manuals for each piece of equipment provided shall be separated by dividers. The dividers shall be labeled accordingly. Three ring binders marked with the project schedule(s), date of final inspection, as well as Contractor's electrical subcontractors' names, addresses, and phone numbers.

22. PROJECT CLOSEOUT AND NOTICE OF FINAL SETTLEMENT:

After the final inspection has been completed, a Notice of Contractor's Final Settlement will be issued for publication in accordance with applicable state, local, and federal requirements. Contractor is required to submit on company letterhead and signed by supervisor or company officer the following:

1. Affidavit that all wages, material purchases, and subcontractor's have been paid in full.

2. List of all subcontractors used on the project with final dollar value of subcontracts and

DBE subcontractors identified.

3. All test results in format required by the FAA. All tests results must be approved and accepted by the FAA before the Engineer is authorized to release any retainage amounts.

Final payment will not be authorized until these items have been completed.

23. COMPLIANCE WITH LAWS, PERMITS, REGULATIONS AND INSPECTIONS:

Since the Owner is the State of Missouri, municipal or political subdivision ordinances, zoning ordinances, construction codes and other like ordinances are not applicable to construction on Owner's property, and Contractor will not be required to submit drawings and specifications to any municipal or political subdivision authority, obtain construction permits or any other licenses or permits from or relating to the construction of this project. All permits or licenses required by municipality or political subdivision for operation on property not belonging to Owner shall be obtained by and paid for by Contractor. Each Contractor shall comply with all applicable laws, ordinances, rules and regulations as it is not the intent of the Owner to arbitrarily dismiss the authorities identified above.

The Contractor shall submit to the Owner a list of hazardous materials and/or chemicals which will be brought on the Owner's property while performing the work associated with this project. The list must include the following:

a. the name of the product
b. the name of the manufacturer/distributor

A Materials Safety Data Sheet for each hazardous material/chemical shall be readily available and submitted to the Owner's Hazardous Materials Coordinator upon request.

The Contractor shall remove and dispose of all hazardous waste generated in accordance with all Federal and State regulations.

24. ANTI-KICKBACK:

No official or employee of the Owner or its governing body who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part hereof. No officer, employee, architect, attorney, engineer or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this contract, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

25. PATENTS AND ROYALTIES:

The Contractor shall hold and save the Owner and its officers, agents, servants and employees harmless from liabilities of any nature or kind, including cost and expenses, for, or on account of, any patented or unpatented invention, process, article or appliance manufactured or used in the performance of the contract, including its use by the Owner, unless otherwise specifically stipulated in the contract documents.

If the Contractor uses any design, device or materials covered by letters, patent or copyright, he shall provide for such use by suitable agreement with the owner of such patented or copyrighted design, device or material. It is mutually agreed and understood, without exception, that the contract prices shall include all royalties or costs arising from the use of such design, device or materials, in any way involved in the work. The Contractor and/or his sureties shall indemnify and save harmless the Owner of the project from any and all claims for infringement by reason of the use of such patented or copyrighted design, device or materials or any trademark or copyright in connection with work agreed to be performed under this contract and shall indemnify the Owner for any cost, expense or damage it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

26. SUPERINTENDENCE:

The Contractor shall keep on site, during progress of the work, a competent superintendent satisfactory to the Owner. The superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor. He shall carefully study and compare all drawings, specifications and other instruction and shall, at once, report to the Owner and his representatives any error, inconsistency or omission which he may discover. The superintendent shall not be changed except with the consent of the Owner.

27. WARRANTIES:

Warranties of various items shall be delivered in four (4) copies to the Owner's Representative at the completion of the Project and at least two weeks prior to Contractor's request for final punch list.

28. GENERAL GUARANTEE:

Neither the final certificate of payment nor any provision in the contract documents nor partial use or occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the contract documents or relieve the Contractor or his sureties of liability in respect to any express warranties or responsibility for faulty materials, workmanship or liquidated damages.

The Contractor or his sureties shall remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of one (1) year from the date of final acceptance unless a longer period is otherwise specified or a differing warranty period has been established in the substantial completion certification. The Owner will give notice of observed defects with reasonable promptness.

In case of default on the part of the Contractor in fulfilling this part of the contract, the Owner may correct the work or repair the damage and the cost and expense incurred in such event shall be paid by or recoverable from the Contractor.

Should Contractor be required to perform tests that due to climatic conditions must be delayed, it is understood that such tests will be accomplished by Contractor at the earliest possible date with the provisions of the General Guarantee beginning upon satisfactory completion of said test.

PART C
STATE WAGE RATES

4865

4866 **Intentionally Left Blank**

Missouri
Division of Labor Standards

WAGE AND HOUR SECTION

JEREMIAH W. (JAY) NIXON, Governor

Annual Wage Order No. 21

Section 051

JOHNSON COUNTY

In accordance with Section 290.262 RSMo 2000, within thirty (30) days after a certified copy of this Annual Wage Order has been filed with the Secretary of State as indicated below, any person who may be affected by this Annual Wage Order may object by filing an objection in triplicate with the Labor and Industrial Relations Commission, P.O. Box 599, Jefferson City, MO 65102-0599. Such objections must set forth in writing the specific grounds of objection. Each objection shall certify that a copy has been furnished to the Division of Labor Standards, P.O. Box 449, Jefferson City, MO 65102-0449 pursuant to 8 CSR 20-5.010(1). A certified copy of the Annual Wage Order has been filed with the Secretary of State of Missouri.

Original Signed by
John E. Lindsey, Director
Division of Labor Standards

This Is A True And Accurate Copy Which Was Filed With The Secretary of State: **March 10, 2014**

Last Date Objections May Be Filed: **April 9, 2014**

Prepared by Missouri Department of Labor and Industrial Relations

OCCUPATIONAL TITLE	** Date of Increase	*	Basic Hourly Rates	Over-Time Schedule	Holiday Schedule	Total Fringe Benefits
Asbestos Worker (H & F) Insulator	10/14		$35.24	52	53	$24.48
Boilermaker	6/14		$33.36	57	7	$27.95
Bricklayer and Stone Mason	6/14		$33.50	58	39	$17.75
Carpenter	6/14		$33.88	63	68	$15.05
Cement Mason	6/14		$31.08	65	4	$17.20
Communication Technician			$32.79	47	72	$19.28
Electrician (Inside Wireman)	1/15		$36.14	13	72	$16.26 + 10%
Electrician (Outside-Line Construction\Lineman)			$39.95	125	65	$5.00 + 34.5%
Lineman Operator			$37.27	125	65	$5.00 + 34.5%
Groundman			$26.47	125	65	$5.00 + 34.5%
Elevator Constructor	6/14	a	$42.940	26	54	$28.335
Glazier			$18.70	88	32	$16.40
Ironworker	6/14		$30.50	50	4	$27.35
Laborer (Building):						
General	6/14		$20.36	111	4	$11.12
First Semi-Skilled	6/14		$21.86	111	4	$11.12
Second Semi-Skilled	6/14		$21.86	111	4	$11.12
Lather			USE CARPENTER RATE			
Linoleum Layer and Cutter	6/14		$33.82	46	67	$15.05
Marble Mason	6/14		$33.76	25	4	$14.66
Marbel Finisher	1/15		$23.78	25	4	$9.18
Millwright	6/14		$36.05	63	68	$15.05
Operating Engineer						
Group I	6/14		$37.35	85	4	$15.01
Group II	6/14		$36.54	85	4	$15.01
Group III	6/14		$30.99	85	4	$15.01
Group III-A	6/14		$35.20	85	4	$15.01
Group IV						
Group V	6/14		$32.59	85	4	$15.01
Painter	7/14		$28.13	37	4	$15.42
Pile Driver	6/14		$36.05	63	68	$15.05
Pipe Fitter	8/14		$41.83	2	33	$19.32
Plasterer	6/14		$30.75	68	4	$14.95
Plumber	6/14		$40.24	45	33	$20.09
Roofer \ Waterproofer	6/14		$32.25	95	2	$15.49
Sheet Metal Worker	1/15		$39.28	17	22	$19.40
Sprinkler Fitter - Fire Protection			$31.13	33	19	$18.90
Terrazzo Worker	6/14		$33.76	25	4	$14.66
Terrazzo Finisher	1/15		$23.78	25	4	$9.18
Tile Setter	6/14		$33.76	25	4	$14.66
Tile Finisher	1/15		$23.78	25	4	$9.18
Traffic Control Service Driver			$15.35	48	49	$2.71
Truck Driver-Teamster						
Group I			$30.09	100	4	$10.90
Group II			$30.09	100	4	$10.90
Group III			$30.29	100	4	$10.90
Group IV			$30.29	100	4	$10.90

Fringe Benefit Percentage is of the Basic Hourly Rate

For additional information regarding the application of the Marble Finisher, Terrazzo Finisher and Tile Finisher see the Labor and Industrial Relations Commission Order of June 10, 2014, in the Matter of Objection Nos. 006-121.

**Annual Incremental Increase

OCCUPATIONAL TITLE	** Date of Increase	Basic Hourly Rates	Over-Time Schedule	Holiday Schedule	Total Fringe Benefits

* Welders receive rate prescribed for the occupational title performing operation to which welding is incidental.

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

a - Vacation: Employees over 5 years - 8%; Employees under 5 years - 6%

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FED: Minimum requirement per Fair Labor Standards Act means time and one-half (1 ½) shall be paid for all work in excess of forty (40) hours per work week.

NO. 2: Means the maximum of eight (8) hours shall constitute a day's work beginning at 8:00 a.m. to 12:00 noon, 12:30 p.m. to 4:30 p.m. The maximum work week shall be forty (40) hours beginning Monday at 8:00 a.m. and ending Friday at 4:30 p.m. Because of traffic, parking or other circumstances, the hours of work on any project may be any continuous 8½ hours period (8 hours of work plus 30 minutes for lunch) between 7:00 a.m. and 4:30 p.m. When circumstances warrant and when it is mutually beneficial and agreed to, the Employer may institute a work week consisting of four (4) consecutive ten (10) hour days, between the hours of 7:00 a.m. and 6:00 p.m. Monday through Thursday, with one-half (½) hour allowed for a lunch period each day. Friday may be used as a make-up day. After ten (10) hours in a workday, or forty (40) hours in a workweek, overtime shall be paid at a rate of one and one-half (1½) times the regular rate of pay. Overtime performed Monday through Saturday shall be paid at the rate of one and one-half (1½) times the regular rate of pay. Sundays and recognized holidays shall be paid at the double (2) time rate of pay. Labor Day shall be paid at triple (3) time. Shift work may be performed at the option of the Contractor. However, whenever shift work is performed it must cover a period not less than (5) consecutive working days. The day shift shall work a regular eight (8) hours shift as outlined above. Employees working a second shift shall receive an additional $0.25 above the regular hourly rate and perform seven and one-half (7½) hours work for eight (8) hours pay. Third shift employees shall be paid an additional $0.50 above the regular hourly rate and work seven (7) hours for eight (8) hours pay. In the event a first shift is not required, a second and third shift employee shall receive an additional 15% of the base rate and receive pay for actual hours worked.

NO. 13: Means a regular workday shall consist of eight (8) hours between 8:00 a.m. and 4:30 p.m. Forty (40) hours, within five (5) days -- Monday through Friday inclusive -- shall constitute the regular workweek. The Employer may alter the above stated hours by two (2) hours for an early starting and quitting time only, not to exceed eight (8) hours of work in any one day. When job conditions dictate and as required by the customer, the Employer shall be allowed to establish a four (4) day, ten (10) hour per day work week. This work week is defined as Monday through Thursday, with a Friday make-up day. The normal work day under a ten (10) hour four (4) day work week shall be from 7:00 a.m. to 6:00 p.m., with a one hour starting variance. The make-up day of Friday shall be instituted for specific reasons such as loss of production due to weather and/or holidays. All hours worked in excess of ten (10) hours per day or forty (40) hours per week or hours worked outside the normal work week shall be paid at the applicable overtime rate. The first four (4) hours of overtime after the normal workday, each day Monday through Friday and the first ten (10) hours of overtime on Saturdays shall be paid for at one and one-half (1½) times the regular straight time rate of pay. All other work performed outside of the regularly scheduled working hours and outside of the first ten (10) hours worked on Saturdays shall be paid for at double (2) the regular straight time rate of pay. Sundays and the recognized holidays shall be paid for at double (2) the regular straight time rate of pay, if worked. When so elected by the contractor, multiple shifts of at least five (5) days duration may be worked. When two (2) or three (3) shifts are worked: The first shift (day shift) shall be worked between the hours of 8:00 a.m. and 4:30 p.m. Workmen on the "day shift" shall receive eight (8) hours pay at the regular hourly rate for eight (8) hours work. The second shift (swing shift) shall be worked between the hours of 4:30 p.m. and 12:30 a.m. Workmen on the "swing shift" shall receive eight (8) hours pay at the regular hourly rate plus 10% for seven and one-half (7 ½) hours work. The third shift (graveyard shift) shall be worked between the hours of 12:30 a.m. and 8:00 a.m. Workmen on the "graveyard shift" shall receive eight (8) hours pay at the regular hourly rate plus 15% for seven (7) hours work. A lunch period of thirty (30) minutes shall be allowed on each shift. All overtime work required after the completion of a regular shift shall be paid at one and one-half (1½) times the "shift" hourly rate.

NO. 14: Means eight (8) hours per day shall constitute a day's work. The regular starting time shall be 8:00 a.m., and the regular quitting time shall be 4:30 p.m.; lunch time shall be twelve (12) o'clock noon to 12:30 p.m. The regular starting time may, by mutual consent of employees on the job site, and the employer, be between 7:00 a.m. and 9:00 a.m. with appropriate adjustments made to the regular quitting time and lunch time. All time worked before the regular starting time and after the regular quitting time, Monday through Friday, shall be paid at the rate of time and one-half (1½). Four (4) days at ten (10) hours a day may be worked at straight time. All work commencing with the beginning of the established work day on Saturday shall be paid at the rate of time and one-half (1½). All work commencing with the beginning of the established work day on Sundays and/or Holidays shall be paid at the rate of double (2) time.

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NO. 17: Means the regular working day shall consist of eight (8) hours of labor between 7:00 a.m. and 3:30 p.m. and the regular work week shall consist of five (5) consecutive eight (8) hour days of labor beginning on Monday and ending with Friday of each week. All full-time or part-time labor performed during such hours shall be recognized as regular working hours and paid for at the regular hourly rate. Except as otherwise provided, all work performed outside of regular working hours during the regular work week, shall be at double (2) times the regular rate. Working hours may be varied by two (2) hours. When circumstances warrant and when it is mutually beneficial and agreed to by interested parties, the Employer may institute a work week consisting of four (4) consecutive ten (10) hour days, between the hours of five (5) a.m. and six (6) p.m., Monday through Thursday, with one-half (1/2) hour allowed for a lunch period each day. Friday may be used as a make-up day. The make-up day will be voluntary, and a decision not to work may not be held against the employee. When working four (4) ten (10) hour day's overtime will be paid at the time and one-half (1½) rate for the eleventh (11^{th}) and twelfth (12^{th}) hour, all other work will be paid at the double (2) time rate of pay. The first two (2) hours of overtime, Monday through Friday, and the first eight (8) hours on Saturday shall be at time and one-half (1½) for all work. All other overtime shall be at double (2) time. The first two (2) hours of overtime must be concurrent with the regular work day, two (2) hours prior to or following the regular work day are at time and one-half (1½). The regular workday (as previously defined) on Saturday is paid at time and one-half (1½). Work performed outside of the regular Saturday work day is at double (2) time. All work performed on recognized holidays, or days locally observed as such, and Sundays shall be paid at the double (2) time rate of pay.

NO. 25: Means regular working hours of eight (8) hours shall constitute a working day between the hours of 8:00 a.m. to 4:30 p.m. in a forty (40) hour working week of Monday through Friday. Employment on Saturday, Sunday and legal holidays, and employment before or after the regular working hours shall be considered overtime. Employment on Saturday, Sunday and legal holidays shall be paid for at twice (2) the regular hourly rate. Employment from 4:30 p.m. to 12:00 midnight, Monday through Friday, shall be paid for at one and one-half (1½) times the regular hourly rate. From 12:00 midnight until 8:00 a.m. on any day shall be paid for at twice (2) the regular hourly rate.

NO. 26: Means that the regular working day shall consist of eight (8) hours worked between 6:00 a.m., and 5:00 p.m., five (5) days per week, Monday to Friday, inclusive. Hours of work at each jobsite shall be those established by the general contractor and worked by the majority of trades. (The above working hours may be changed by mutual agreement). Work performed on Construction Work on Saturdays, Sundays and before and after the regular working day on Monday to Friday, inclusive, shall be classified as overtime, and paid for at double (2) the rate of single time. The employer may establish hours worked on a jobsite for a four (4) ten (10) hour day work week at straight time pay for construction work; the regular working day shall consist of ten (10) hours worked consecutively, between 6:00 a.m. and 6:00 p.m., four (4) days per week, Monday to Thursday, inclusive. Any work performed on Friday, Saturday, Sunday and holidays, and before and after the regular working day on Monday to Thursday where a four (4) ten (10) hour day workweek has been established, will be paid at two times (2) the single time rate of pay. The rate of pay for all work performed on holidays shall be at two times (2) the single time rate of pay.

NO. 33: Means the standard work day and week shall be eight (8) consecutive hours of work between the hours of 6:00 a.m. and 6:00 p.m., excluding the lunch period Monday through Friday, or shall conform to the practice on the job site. Four (4) days at ten (10) hours a day may be worked at straight time, Monday through Friday and need not be consecutive. All overtime, except for Sundays and holidays shall be at the rate of time and one-half (1½). Overtime worked on Sundays and holidays shall be at double (2) time.

NO. 37: The Employer may choose, at his discretion, to work five eight hour days or four ten hour days with a Friday make-up day, Monday through Friday at straight time. Overtime shall be paid after eight (8) hours when working "five eights" and after ten hours when working "four tens". All work performed on Sundays and recognized holidays shall be paid for at the rate of double (2) time. All Saturday work shall be paid for at the rate of time and one-half (1½) the regular wage rate. All night work during the regular work week other than the above-mentioned days shall be paid for at the rate of time and one-half (1½) the regular wage scale until midnight and double (2) time after midnight except make-up time will be allowed under the following condition: In the event of inclement weather on exterior projects which prevents working the full regular eight (8) hour day, forty (40) hour work week schedule, a Saturday make-up day can be granted. Then said work on Saturday shall be paid at the straight time rate of pay up to a maximum total of forty (40) hours per week.

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NO. 45: Means eight (8) hours shall constitute a day's work, beginning at 8:00 a.m. and ending at 4:30 p.m. The regular work week shall be forty (40) hours, beginning Monday, 8:00 a.m. and ending at 4:30 p.m. Friday. Because of traffic, parking and other circumstances, the hours of work on any project may begin as early as 6:00 a.m. with eight (8) hours worked between 6:00 a.m. and 4:30 p.m. When circumstances warrant and when it is mutually beneficial and agreed to, the employer may institute a work week consisting of four (4) consecutive ten (10) hour days, between the hours of 7:00 a.m. and 6:00 p.m., Monday through Thursday. Friday may be used as a make-up day. After ten (10) hours in a workday, or forty (40) hours in a workweek, overtime shall be paid at a rate of one and one-half (1½) times the regular rate of pay. All overtime Monday through Saturday shall be paid at the rate of time and one-half (1½) the regular rate of pay. Sunday and recognized holidays shall be paid at double (2) time. Labor Day shall be paid at triple (3) time. Shift work may be performed at the option of the Contractor. However, whenever shift work is performed it must cover a period not less than (5) consecutive working days. The day shift shall work a regular eight (8) hours shift as outlined above. The hourly rate for second shift (seven and one-half hours worked for eight hours paid) shall be twenty-five cents ($0.25) over and above the hourly rate. The hourly rate for third shift (seven hours worked, eight hours paid) shall be fifty cents ($0.50) above the hourly rate. If no first shift is worked, second and third shift employees shall receive an additional fifteen percent (15%) over and above the hourly rate for actual hours worked.

NO. 46: Means the regular work day shall be eight (8) hours from 6:00 a.m. to 6: 30 p.m. Starting time may be between 6:00 a.m. and 10:00 a.m. The regular work week shall be forty (40) hours, beginning between 6:00 a.m. and 10:00 a.m. on Monday and ending between 2:30 p.m. and 6:30 p.m. on Friday. All hours in excess of the regular work day and work week shall be considered overtime. Overtime on days recognized as regular work days and on Saturday shall be paid for at the rate of time and one-half (1½) the regular rate. Sunday and recognized holidays shall be paid for at the rate of double time (2) for time worked. The Employer may establish a work week consisting of four (4) days, Monday through Thursday, each day consisting of ten (10) hours at straight time rate of pay. The 4-10's must run for a period of at least four (4) days.

NO 47: Means a regular workday shall consist of eight (8) hours between 6:00 a.m. and 6:30 p.m. Forty (40) hours, within five (5) days -- Monday through Friday or Tuesday through Saturday inclusive -- shall constitute the regular workweek. The Employer may alter the above stated hours by two (2) hours for an early starting and quitting time only, not to exceed eight (8) hours of work in any one day. The Employer shall be allowed to establish a four (4) day, ten (10) hour per day work week. This work week is defined as Monday through Thursday, with a Friday make-up day. The normal work day under a ten (10) hour four (4) day work week shall be from 7:00 a.m. to 6:00 p.m. All hours worked in excess of ten (10) hours per day or forty (40) hours per week or hours worked outside the normal work week shall be paid at the applicable overtime rate. The first four (4) hours of overtime after the normal workday, each day Monday through Friday and the first ten (10) hours of overtime on Saturdays shall be paid for at one and one-half (1½) times the regular straight time rate of pay. All other work performed outside of the regularly scheduled working hours and outside of the first ten (10) hours worked on Saturdays shall be paid for at double (2) the regular straight time rate of pay. Sundays and the recognized holidays shall be paid for at double (2) the regular straight time rate of pay, if worked. When so elected by the contractor, multiple shifts of at least five (5) days duration may be worked. When two (2) or three (3) shifts are worked: The first shift (day shift) shall be worked between the hours of 8:00 a.m. and 4:30 p.m. Workmen on the "day shift" shall receive eight (8) hours pay at the regular hourly rate for eight (8) hours work. The second shift (swing shift) shall be worked between the hours of 4:30 p.m. and 12:30 a.m. Workmen on the "swing shift" shall receive eight (8) hours pay at the regular hourly rate plus 10% for seven and one-half (7 ½) hours work. The third shift (graveyard shift) shall be worked between the hours of 12:30 a.m. and 8:00 a.m. Workmen on the "graveyard shift" shall receive eight (8) hours pay at the regular hourly rate plus 15% for seven (7) hours work. A lunch period of thirty (30) minutes shall be allowed on each shift. All overtime work required after the completion of a regular shift shall be paid at one and one-half (1½) times the "shift" hourly rate.

NO. 48: Means the regularly scheduled work week shall be five (5) consecutive days, Monday through Friday or Tuesday through Saturday. Eight (8) hours shall constitute a day's work. Starting time shall not be earlier than 7:00 a.m. nor later than 10:00 a.m. Forty (40) hours shall constitute a week's work. Overtime at the rate of time and one-half (1½) will be paid for all work in excess of forty (40) hours in any one work week. On the Monday through Friday schedule, all work performed on Saturday will be time and one-half (1½) unless time has been lost during the week, in which case Saturday will be a make up day to the extent of the lost time. On the Tuesday through Saturday schedule, all work performed on Monday will be time and one-half (1½) unless time has been lost during the week, in which case Monday will be a make-up day to the extent of the lost time. Any work performed on Sunday will be double (2) time. If employees work on any of the recognized holidays, they shall be paid time and one-half (1½) their regular rate of pay for all hours worked.

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NO. 50: Means eight (8) hours constitute a normal day's work Monday through Friday. Any time worked over eight (8) hours will normally be paid at time and one-half (1½) except for exclusions stated in some following additional sentences. The Employer, at his discretion, may start the work day between 6:00 a.m. and 9:00 a.m. Any schedule chosen shall be started at the beginning of the work week (Monday) and used for at least five days. Work may be scheduled on a four (4) days a week (Monday through Thursday) at ten (10) hours a day schedule. If such a schedule is employed, then Friday may be used as a make-up day when time is lost due to inclement weather. Time and one-half (1½) shall be paid for any work in excess of eight (8) hours in any regular work day Monday through Friday unless working 4-10's, then time and one-half (1½) after ten (10) hours. All work performed on Saturday will be time and one-half (1½). Double (2) time shall be paid for all work on Sundays and recognized holidays.

NO. 52: Means the regular workweek shall consist of five (5) eight (8) hour days, Monday through Friday. The regular workday shall consist of an eight (8) hour period, to be worked between the agreed upon starting time, and ending no later than 4:30 p.m. The agreed upon starting time shall be any time between the hours of 6:00 a.m. and 8:00 a.m. The option exists for the employer to use a four (4) day, ten (10) hour work week. Days worked shall be Monday through Thursday or Tuesday through Friday. If the job requires men on duty all five (5) days, then part of the crew may work the first four (4) days and the remainder of the crew may work the last four (4) days. Hours each day shall be from 7:00 a.m. to 5:30 p.m. Interested parties on the project must agree to this clause before it may be used. Once this clause has been put into effect, it shall remain as long as the majority of the Employees on the project and the Employer agree to keep it. The four (4) day clause shall not be used to circumvent a Holiday. Except as otherwise provided, all work performed outside the regular working hours and performed during the regular work week (Monday through Friday) shall be at the following rates of pay:

Holidays-New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, Christmas Day (or days observed as such) shall be recognized as Holidays that shall be paid at two (2) times the regular rate of pay.

Labor Day-No work shall be performed on Labor Day except in special cases of emergency. Rate of pay shall be at three (3) times the regular rate of pay.

Overtime-Work performed outside of the regular work day (the regular work day shall consist of an eight (8) hour period, to be worked between the agreed upon starting time, and ending not later than 4:30 p.m. The agreed upon starting time shall be any time between the hours of 6:00 a.m. and 8:00 a.m., by mutual consent of the interested party's.), shall be:

A. Hours worked Monday through Friday, the first two (2) hours of overtime will be paid at time and one-half (1½). All other overtime will be paid at the double (2) time rate.
B. The first ten (10) hours worked on Saturday will be paid at time and one-half (1½), with all other hours to be paid at the double (2) time rate.
C. Sundays and Holidays (except Labor Day) shall be paid at the double (2) time rate.

NO. 57: Means eight (8) hours per day shall constitute a day's work and forty (40) hours per week, Monday through Friday, shall constitute a week's work. The regular starting time shall be 8:00 a.m. If a second or third shift is used, the regular starting time of the second shift shall be 4:30 p.m. and the regular starting period for the third shift shall be 12:30 a.m. These times may be adjusted by the employer. The day shift shall work a regular eight (8) hours shift as outlined above. Employees working a second shift shall receive an additional $0.25 above the regular hourly rate and perform seven and one-half (7½) hours work for eight (8) hours pay. Third shift employees shall be paid an additional $0.50 above the regular hourly rate and work seven (7) hours for eight (8) hours pay. When circumstances warrant, the Employer may change the regular workweek to four (4) ten-hour days at the regular time rate of pay. All time worked before and after the established workday of eight (8) hours, Monday through Friday, and all time worked on Saturday shall be paid at the rate of time and one-half (1½) except in cases where work is part of an employee's regular Friday shift. All time worked on Sunday and recognized holidays shall be paid at the double (2) time rate of pay except in cases where work is part of an employee's previous day's shift. For all overtime hours worked $26.71 of the fringe benefits portion of the prevailing wage shall be paid at the same overtime rate at which the cash portion of the prevailing wage is to be paid. The remaining $1.24 of the fringe benefit portion of the prevailing wage may be paid at straight time.

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NO. 58: Means eight (8) consecutive hours, between 6:00 a.m. and 5:30 p.m., shall constitute a day's work. Five (5) days work, Monday through Friday, shall constitute a normal work week. Work performed in excess of eight (8) hours per day or eight hours beyond normal starting time for that project excluding lunch Monday through Friday, and all work performed on Saturday, shall be paid for the rate of time and one-half (1½). When Sundays and recognized holidays are worked, the worker(s) shall be paid at the rate of double (2) time. Work may be scheduled on a four (4) days a week (Monday through Thursday) at ten (10) hours a day schedule at straight time. A Friday make-up day is available if time is lost due to inclement weather and at least sixteen (16) hours, but not more than thirty (30) hours, were worked during the week.

NO. 63: Means eight (8) hours shall constitute the regular work day between time that may be advanced or delayed by two (2) hours on either side of 8:00 AM. The Employer may establish a work week consisting of four (4) days, Monday through Thursday, each day consisting of ten (10) hours straight time. The four (4) tens (10s) must run for a period of at least four (4) days, Monday through Thursday. All work on Friday on a four (4) tens (10) project will be paid at the rate of time and one-half (1½). All work performed on Saturday shall be paid at time and one-half (1½). All work performed on Sundays and recognized holidays must be paid at double (2) time. All work performed prior to or after the regular eight (8) hour work day, or ten (10) hour work day, as described above shall be paid at time and one-half (1½) the regular rate.

NO. 65: Means Monday through Sunday shall constitute the work week. Regular starting time shall be 8:00 a.m., with one half hour for lunch between three and one-half (3½) and five (5) hours after starting time. The starting time may be advanced by two (2) hours or delayed one (1) hour by the employer from the regular starting time. All work performed before the advanced starting time and during the half hour lunch shall be paid at the overtime rate of time and one-half (1½). Work performed outside these hours shall be paid at the overtime rate of time and one-half (1½), except as provided otherwise below. All work performed on Sundays or recognized holidays shall be paid at the double (2) time rate. When the start time is delayed past 9:00 a.m., the employee's pay shall start at 9:00 a.m. and all time, after the normal quitting time (5:30 p.m.), shall be paid at the overtime rate. Eight (8) hours shall constitute the work day. All work performed prior to or after the regular eight (8) hour work day, as described above, and all work performed on Saturday shall be paid at time and one-half (1½) the regular rate. In the event that a scheduled eight (8) hour work day is missed (not including recognized holidays) because of inclement weather, then that missed work day may be made up at straight time on the following Saturday. It is recognized that not all employees working on a Saturday make-up day will have worked the same number of hours during the regular work week. It is further recognized that any work after forty (40) hours must be paid at time and one-half (1½). The employer may establish a 4-10's schedule on projects (4 days with 10 hours per day at straight time). In order to use the 4-10's schedule, the employer must schedule the 4-10's for a minimum of one (1) week. If using a 4-10's schedule, a Friday make-up day is allowed.

NO. 68: Means Monday through Sunday shall constitute the work week. Regular starting time shall be 8:00 a.m., with one half hour for lunch between three and one-half and five hours after starting time. The starting time may be advanced or delayed by the employer up to one hour from the regular starting time. All work performed before the advance starting time and during the half hour lunch shall be paid at the overtime rate of time and one-half (1½). Work performed outside these hours shall be paid at the overtime rate of time and one-half (1½), except as provided otherwise below. All work performed on Sundays or holidays shall be paid at the double (2) time rate. Eight (8) hours shall constitute the work day. All work performed prior to or after the regular eight (8) hour work day, as described above, and all work performed on Saturday shall be paid at time and one-half (1½) the regular rate, except as hereinafter described. In the event that a scheduled eight (8) hour work day is missed (not including recognized holidays) because of inclement weather, then that missed work day may be made up at straight time on the Saturday in the week of the pay period. It is recognized that not all employees working on a Saturday make-up day will have worked the same number of hours during the regular work week. It is further recognized that any work after forty (40) hours must be paid at time and one-half (1½). The employer may establish a 4-10's schedule on projects (4 days with 10 hours per day at straight time). In order to use the 4-10's schedule, the employer must schedule the 4-10's for a minimum of one (1) week. If using a 4-10's schedule, a Friday make-up day is allowed.

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NO. 85: Means the work week shall be Monday through Sunday. Eight (8) hours shall constitute a day's work to begin between 6:00 a.m. and 9:00 a.m. and end between 2:30 p.m. to 5:30 p.m. Employees required to work during their lunch period shall receive the overtime rate. Employees shall receive time and one-half (1½) for all time they are required to work prior to their normal starting time or after eight (8) hours or normal quitting time Monday through Friday, or all day on Saturday. If an Employer has started the work week on a five day, eight hours a day schedule, and due to inclement weather misses any time, then he may switch to a nine or ten hours a day schedule, at straight time, for the remainder of that work week in order to make up for the lost time (10-hour make-up day). All work over ten (10) hours a day or over forty (40) hours a week must be paid at time & one-half (1½). Sundays and recognized holidays shall be paid at the double (2) time rate of pay. A contractor may alter the regular work week to four (4) ten (10) hour days at straight time rate of pay. To do this the scheduled 4-10's must be worked at least one full week and the regular workweek shall be Monday through Thursday with Friday being a make-up day at straight time for days missed in the regular workweek due to inclement weather. If 5-8's are being worked, Saturday may be used as a make-up day at straight time if inclement weather prevents work during the normal work week.

NO. 88: Means the regular work week shall consist of five (5) eight (8) hour days, 7:00 a.m. to 3:30 p.m., Monday through Friday, except when the work week is scheduled as a 4-10's week or as a week with start time advanced or delayed as described below. The starting time may be advanced or delayed by one hour on either side of 7:00 a.m. The advanced or delayed starting time must run for a period of at least five (5) days. The Employer may establish a work week consisting of four (4) days, during the regular work week, each day consisting of ten (10) hours at straight time. The 4-10's must run for a period of at least four (4) days. Time and one-half (1½) shall be paid for any work in excess of eight (8) hours in any regular work day Monday through Friday (or ten hours in a 4-10's week), the first eight (8) hours of a Saturday, and it shall be at time and one-half (1½) for the Friday and Saturday following Thanksgiving. Double (2) time shall be paid for the following time worked on Sunday, New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day, as well as any work in excess of eight (8) hours on a Saturday and the Saturday of a three-day weekend (except the Saturday following Thanksgiving).

NO. 95: Means a regular workday shall consist of eight and one-half (8½) hours elapsed time, including one-half hour for lunch. The crew starting times shall be flexible within the period of daylight to 8:00 a.m. Any work performed over ten (10) hours of elapsed time per day including one-half hour for lunch and/or any work performed over forty (40) hours at the straight time rate in one week shall be paid at time and one-half (1½) the straight time rate. Saturday shall be a voluntary make-up day at straight time at the discretion of the contractor and with the consent of the employees. Sunday and recognized holidays shall be paid for at double (2) time.

NO. 100: Means eight (8) hours shall constitute a day's work, and five (5) continuous eight-hour days shall constitute a week's work, Monday through Friday. Time and one-half (1½) the regular hourly rate shall be paid for all work performed in excess of eight (8) hours in any one day or forty (40) hours in any one week. Starting time shall be between 6:00 a.m. and 9:00 a.m. All work over eight (8) hours in a regular 5-day 8-hour schedule shall be at the appropriate overtime rate. All time worked before the regular scheduled starting time shall be paid for at the rate of time and one-half (1½) and shall not apply to regular shift. All time worked after eight (8) hours in any one day or after 5:30 p.m., whichever comes first, shall be paid at the time and one-half (1½) rate. An Employer, at his option, may elect to work four (4) ten (10) hour days, Monday through Thursday, at straight time. All such work must be done at least one week in duration. All work over ten (10) hours in one day or forty (40) hours in a week shall be at the overtime rate. Any employee who is scheduled to work on any regular work day but is prevented from working because of weather conditions, shall be permitted to work on Saturday (Friday if working 4-10's) as a make-up day at the straight time rate of pay. When an employee is required to work on any recognized holiday they shall receive the double (2) time rate for all time that they are required to perform work. All time worked from 12:00 Midnight Saturday to 12:00 Midnight Sunday shall be paid for at the rate of double (2) time on single shift.

REPLACEMENT PAGE
JOHNSON COUNTY
BUILDING CONSTRUCTION OVERTIME SCHEDULE

NO. 111: Means eight (8) hours shall constitute a day's work, Monday to Friday inclusive. All overtime shall be at the rate of time and one-half (1½) except Sundays, and recognized holidays, which shall be paid for at the rate of double (2) time if worked. The work day is to begin between 6:00 a. m. and 9:00 a.m. at the option of the employer. If an employer is prevented from working forty (40) hours, Monday through Friday, or any part thereof by reason of inclement weather (rain or mud), Saturday or any part thereof may be worked as a make-up day at the straight time rate. The regular work week shall start on Monday and end on Friday, except where the employer elects to work Monday through Thursday, ten (10) hours per day. All work over ten (10) hours in a day and forty (40) hours in a week shall be one and one-half (1½) times the regular hourly rate. Work prior to 6:00 a.m. will be paid at the overtime rate. The regular work day shall be either eight (8) or ten (10) hours. Employers working a four (4) ten (10) hour day week schedule will be allowed a Friday or Saturday make-up day provided workmen were prevented from working during the normal work week due to inclement weather or other conditions beyond the control of the employer. Make-up days shall not be utilized for days lost to holidays. If a job can't work forty (40) hours Monday through Thursday because of inclement weather or other conditions beyond the control of the employer, Friday or Saturday may be worked as a make-up day at straight time (if working 4-10's). Saturday may be worked as a make-up day at straight time if working (5-8's). If an employer has started the work week on a five-day, eight-hour schedule, and due to inclement weather misses any time, then he may switch to a nine (9) or (10) hour a day schedule, at straight time, for the remainder of that work week in order to make up the lost time. Employer may not use both the Saturday make-up day and 10-hour make-up day in the same week.

NO. 125: Eight (8) hours of work between the hours of 8:00 a.m. and 4:30 p.m. shall constitute a work day. Forty (40) hours within the five (5) days, Monday through Friday inclusive, shall constitute the work week. Starting time may be adjusted not to exceed two (2) hours. Work performed outside of the aforementioned will be paid at the applicable overtime rate. When starting time has been adjusted, all other provisions concerning the work day shall be adjusted accordingly. The overtime rate of pay shall be one and one-half (1½) times the regular rate of wages, other than on Sundays, holidays and from Midnight until 6:00 a.m., which will be paid at double (2) the straight time rate.

JOHNSON COUNTY
HOLIDAY SCHEDULE – BUILDING CONSTRUCTION

NO. 2: All work performed on New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day, or the days observed as such, shall be paid at the double time rate of pay.

NO. 4: All work done on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas Day shall be paid at the double time rate of pay. If any of the above holidays fall on Sunday, Monday will be observed as the recognized holiday. If any of the above holidays fall on Saturday, Friday will be observed as the recognized holiday.

NO. 7: The following days are assigned days and are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. If a holiday falls on a Saturday, it shall be observed on the preceding Friday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This is applied to protect Labor Day. When a holiday falls during the normal workweek, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week. However, no reimbursement for these eight (8) hours is to be paid to the workman unless worked. If workman are required to work the above enumerated holidays or days observed as such, or on Sunday, they shall receive double (2) the regular rate of pay for such work.

NO. 19: All work done on New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day shall be paid at the double time rate of pay. The employee may take off Friday following Thanksgiving Day. However, the employee shall notify his or her Foreman, General Foreman or Superintendent on the Wednesday preceding Thanksgiving Day. When one of the above holidays falls on Sunday, the following Monday shall be considered a holiday and all work performed on either day shall be at the double (2) time rate. When one of the holidays falls on Saturday, the preceding Friday shall be considered a holiday and all work performed on either day shall be at the double (2) time rate.

NO. 22: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, or days locally observed as such, and Sunday shall be recognized as holidays. If a holiday falls on Saturday, Friday shall be observed; if it falls on Sunday, Monday shall be observed. All work performed on holidays shall be paid at the double (2) time rate of pay.

NO. 32: All work performed for the Friday and Saturday following Thanksgiving shall be paid at the time and one-half (1½) rate of pay. All work performed on Sundays, New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day shall be paid at the double (2) time rate of pay. When one of the above holidays falls on Sunday, the following Monday shall be observed and when one of the above holidays falls on Saturday, the preceding Friday shall be observed.

NO. 33: All work done on New Year's Day, Memorial Day, Fourth of July, Thanksgiving Day and Christmas Day shall be paid at the double time rate of pay. Labor Day shall be paid at the triple (3) time rate of pay. If the holiday falls on Sunday, the following Monday will be observed; if the holiday falls on Saturday, the preceding Friday will be observed.

NO. 39: No work shall be done on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas. Any of these holidays falling on Sunday, the following Monday shall be a holiday, and any of these holidays falling on Saturday, the preceding Friday shall be a holiday.

NO. 49: The following days shall be observed as legal holidays: New Year's Day, Decoration Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day, Employee's birthday and two (2) personal days. The observance of one (1) of the personal days to be limited to the time between December 1 and March 1 of the following year. If any of these holidays fall on Sunday, the following Monday will be observed as the holiday and if any of these holidays fall on Saturday, the preceding Friday will be observed as the holiday. If employees work on any of these holidays they shall be paid time & one-half (1½) their regular rate of pay for all hours worked.

NO. 53: All work done on New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, Christmas Day or days observed as such for these holidays shall be paid at the double (2) time rate of pay. No work shall be performed on Labor Day except in special cases of emergency, and then the rate of pay shall be at three (3) times the regular rate of pay. When a holiday falls on a Sunday, the following Monday shall be observed as the holiday. When a holiday falls on Saturday, the preceding Friday shall be observed as the holiday.

NO. 54: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day shall be paid at the double (2) time rate of pay. When a holiday falls on Saturday, it shall be observed on Friday. When a holiday falls on Sunday, it shall be observed on Monday.

NO. 65: Work performed on New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day, or days celebrated as such, shall be paid at the double time rate of pay. If the holiday falls on Saturday, it will be observed on Friday; if the holiday falls on Sunday, it will be observed on Monday, and shall be paid for at double (2) the regular straight time rate of pay.

NO. 67: All work performed on New Year's Day, Memorial Day, Christmas Day, Fourth of July and Thanksgiving Day, from midnight to midnight, shall be paid for at the rate of double time (2) the basic rate of pay if required to work in addition to any other pay otherwise required hereunder as holiday pay. Positively no work shall be performed on Labor Day. Martin Luther King's Birthday, Veteran's Day, and the day after Thanksgiving Day shall be considered optional holidays, and if the Employer and employees agree that work will be performed on that day, no premium pay will be required. Should any of the above holidays fall on Saturday, the holiday will be observed on Friday. Should any of the above holidays fall on Sunday, the holiday will be observed on Monday.

NO. 68: All work performed on New Year's Day, Decoration Day (Memorial Day), Independence Day (Fourth of July), Labor Day, Thanksgiving Day, Christmas Day, or days observed as such, shall be paid at the rate of double (2) time. When a holiday falls on a Saturday, Friday shall be observed. When a holiday falls on a Sunday, Monday shall be observed. No work shall be performed on the Fourth of July or Labor Day except to save life or property. Where one of the holidays specified falls or is observed during the work week, then all work performed over and above thirty-two (32) hours in that week shall be paid at the rate of time and one-half (1½).

NO. 72: All work performed on New Year's Day, Memorial Day (last Monday in May), Independence Day, Labor Day, Thanksgiving Day and Christmas Day shall be paid for at double (2) the regular straight time rate of pay. Any one of the above listed holidays falling on Sunday shall be observed on the following Monday and paid for at double (2) the regular straight time rate of pay, if worked. Any one of the above listed holidays falling on Saturday shall be observed on the prior Friday and paid for at double (2) the regular straight time rate of pay, if worked. No work shall be performed on Labor Day except in case of emergency.

OCCUPATIONAL TITLE	* Date of Increase	Basic Hourly Rates	Over-Time Schedule	Holiday Schedule	Total Fringe Benefits
Carpenter	6/14	$29.29	7	16	$15.05
Electrician (Outside-Line Construction\Lineman)		$39.95	18	24	$5.00 + 34.5%
Lineman Operator		$37.27	18	24	$5.00 + 34.5%
Lineman - Tree Trimmer		$20.90	31	30	$6.01 + 23.5%
Groundman		$26.47	18	24	$5.00 + 34.5%
Groundman - Tree Trimmer		$16.90	31	30	$6.01 + 23.5%
Laborer					
General Laborer		$23.22	4	18	$12.01
Skilled Laborer		$23.77	4	18	$12.01
Millwright	6/14	$29.29	7	16	$15.05
Operating Engineer					
Group I	6/14	$32.19	5	15	$15.01
Group II	6/14	$31.79	5	15	$15.01
Group III	6/14	$31.79	5	15	$15.01
Group IV	6/14	$29.79	5	15	$15.01
Oiler-Driver	6/14	$29.79	5	15	$15.01
Pile Driver	6/14	$29.29	7	16	$15.05
Traffic Control Service Driver		$15.35	27	26	$2.71
Truck Driver-Teamster					
Group I	6/14	$29.43	12	3	$11.65
Group II	6/14	$29.54	12	3	$11.65
Group III	6/14	$29.58	12	3	$11.65
Group IV	6/14	$29.65	12	3	$11.65

Use Heavy Construction Rates on Highway and Heavy construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(3).

Use Building Construction Rates on Building construction in accordance with the classifications of construction work established in 8 CSR 30-3.040(2).

If a worker is performing work on a heavy construction project within an occupational title that is not listed on the Heavy Construction Rate Sheet, use the rate for that occupational title as shown on the Building Construction Rate sheet.

JOHNSON COUNTY
OVERTIME SCHEDULE - HEAVY CONSTRUCTION

FED: Minimum requirement per Fair Labor Standards Act means time and one-half (1 ½) shall be paid for all work in excess of forty (40) hours per work week.

NO. 4: Means a regular work week shall consist of not more than forty (40) hours of work, Monday through Saturday, and all work performed over and above ten (10) hours per day and forty (40) hours per week shall be paid at the rate of time & one-half (1½). Workers shall receive time and one-half (1½) for all work performed on Sundays and holidays. A work day is to begin between 6:00 a.m. and 9:00 a.m. at the option of the Employer except when inclement weather or other conditions beyond the reasonable control of the Employer prevent work, in which event, the starting time may be delayed, but not later then 12:00 noon. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward a forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid to the worker(s) unless worked.

NO. 5: Means a regular work week shall consist of not more that forty (40) hours work, Monday through Saturday, and all work performed over and above ten (10) hours per day and forty (40) hours per week shall be paid at the rate of time & one-half (1½). Workmen shall receive time and one-half (1½) for all work performed on Sundays and recognized holidays or days observed as such. Double (2) time shall be paid for work on Sunday or recognized holidays when and only if any other craft employees of the same employer at work on that same job site are receiving double (2) time pay for that Sunday or holiday. If a job can't work forty (40) hours, Monday through Saturday, because of inclement weather or other conditions beyond the control of the Employer, Friday and Saturday may be worked as make up days at straight time (if working 4-10's). Saturday may be worked as a make up day at straight time (if working 5-8's). Make up days shall not be utilized for days lost to holidays. A work day is to begin between 6:00 a.m. and 9:00 a.m. at the option of the Employer except when inclement weather or other conditions beyond the reasonable control of the Employer, including requirements of the owner, prevent work. In such event the starting time may be delayed but not later than 12:00 noon. Where one of the holidays falls or is observed during the work week, then all work performed over and above thirty-two (32) hours shall be paid at time & one-half (1½).

NO. 7: Means the regular work week shall start on Monday and end on Friday, except where the Employer elects to work Monday through Thursday, ten (10) hours per day. All work over ten (10) hours in a day or forty (40) hours in a week shall be at the overtime rate of one and one-half (1½) times the regular hourly rate. The regular work day shall be either eight (8) or ten (10) hours. If a job can't work forty (40) hours Monday through Friday because of inclement weather or other conditions beyond the control of the Employer, Friday or Saturday may be worked as a make-up day at straight time (if working 4-10's). Saturday may be worked as a make-up day at straight time (if working 5-8's). Make-up days shall not be utilized for days lost due to holidays. A workday is to begin at the option of the Employer but not later than 11:00 a.m. except when inclement weather, requirements of the owner or other conditions beyond the reasonable control of the Employer prevent work. Except as worked as a make-up day, time on Saturday shall be worked at one and one-half (1½) times the regular rate. Work performed on Sunday shall be paid at two (2) times the regular rate. Work performed on recognized holidays or days observed as such, shall also be paid at the double (2) time rate of pay.

NO. 12: Means a regular work week shall consist of not more than forty (40) hours of work and all work performed over and above ten (10) hours per day and forty (40) hours per week shall be paid at the rate of time & one-half (1½). A workday is to begin between 6:00 a.m. and 9:00 a.m. at the option of the Employer except when inclement weather or other conditions beyond the reasonable control of the Employer, in which event, the starting time may be advanced or delayed. Workers shall receive time and one-half (1½) for all work performed on recognized holidays or days observed as such.

NO: 18: Eight (8) hours of work between the hours of 8:00 a.m. and 4:30 p.m. shall constitute a work day. Forty (40) hours within the five (5) days, Monday through Friday inclusive, shall constitute the work week. Starting time may be adjusted not to exceed two (2) hours. Work performed outside of the aforementioned will be paid at the applicable overtime rate. When starting time has been adjusted, all other provisions concerning the work day shall be adjusted accordingly. The overtime rate of pay shall be one and one-half (1½) times the regular rate of wages, other than on Sundays, holidays and from Midnight until 6:00 a.m., which will be paid at double (2) the straight time rate.

JOHNSON COUNTY
OVERTIME SCHEDULE - HEAVY CONSTRUCTION

NO. 27: Means the regularly scheduled work week shall be five (5) consecutive days, Monday through Friday or Tuesday through Saturday. Eight (8) hours shall constitute a day's work. Starting time shall not be earlier than 7:00 a.m. nor later than 10:00 a.m. Forty (40) hours shall constitute a week's work. Overtime at the rate of time and one-half (1½) will be paid for all work in excess of forty (40) hours in any one work week. On the Monday through Friday schedule, all work performed on Saturday will be time and one-half (1½) unless time has been lost during the week, in which case Saturday will be a make up day to the extent of the lost time. On the Tuesday through Saturday schedule, all work performed on Monday will be time and one-half (1½) unless time has been lost during the week, in which case Monday will be a make-up day to the extent of the lost time. Any work performed on Sunday will be double (2) time. If employees work on any of the recognized holidays, they shall be paid time and one-half (1½) their regular rate of pay for all hours worked.

NO. 31: Means the overtime rate shall be time and one-half the regular rate for work over forty (40) hours per week. Sundays and Holidays shall be paid at double the straight time rate. All employees performing work on affected properties during or following emergencies shall receive the applicable rate of pay for the first sixteen (16) consecutive hours and all hours worked in excess of sixteen (16) consecutive hours shall be paid at double time until broken by an eight (8) hour rest period. Should an employee be called back to work within two hours of his normal quitting time, the previous hours worked shall count toward the above sixteen (16) hour provision.

JOHNSON COUNTY
HOLIDAY SCHEDULE – HEAVY CONSTRUCTION

NO. 3: The following days are recognized as holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on a Sunday, it shall be observed on the following Monday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid to the workmen unless worked. An Employer working a four (4) day, ten (10) hour schedule may use Friday as a make up day when an observed holiday occurs during the work week. Employees have the option to work that make up day. If workmen are required to work the above enumerated holidays, or days observed as such, they shall receive time & one-half (1½) the regular rate of pay for such work.

NO. 15: The following days are recognized as holidays: New Year's Day, Memorial Day, July Fourth, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on Sunday, it shall be observed on the following Monday. If a holiday falls on Saturday, it shall be observed on the preceding Friday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. If workmen are required to work the above enumerated holidays or days observed as such, they shall receive time and one-half (1½) the regular rate of pay for such work. Where one of the holidays specified falls or is observed during the workweek, then all work performed over and above thirty-two (32) hours in that week shall be paid at the rate of time and one-half (1½). Workmen shall receive time and one-half (1 ½) for all work performed on Sundays. Double (2) time shall be paid for work on Sunday or recognized holidays when and only if any other craft employees of the same employer at work on that same job site are receiving double (2) time for that Sunday or holiday.

NO. 16: The following days are recognized as holidays: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day. If a holiday falls on Sunday, it shall be observed on the following Monday. If a holiday falls on Saturday, it shall be observed on the preceding Friday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward the forty (40) hour week; however, no reimbursement for this eight (8) hours is to be paid to the worker unless worked. If workers are required to work the above recognized holidays or days observed as such, they shall receive double (2) the regular rate of pay for such work.

NO. 18: All work performed on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day shall be paid at the time and one-half (1½) rate of pay. If a holiday falls on Sunday, it shall be observed on the following Monday. If a holiday falls on Saturday, it shall be observed on the preceding Friday. No work shall be performed on Labor Day except in case of jeopardy to work under construction. This rule is applied to protect Labor Day. When a holiday falls during the normal work week, Monday through Friday, it shall be counted as eight (8) hours toward a forty (40) hour week; however no reimbursement for this eight (8) hours is to be paid to the working person(s) unless the holiday is worked.

NO. 24: Work performed on New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day, or days celebrated as such, shall be paid at the double time rate of pay. If the holiday falls on Saturday, it will be observed on Friday; if the holiday falls on Sunday, it will be observed on Monday, and shall be paid for at double (2) the regular straight time rate of pay.

NO. 26: The following days shall be observed as legal holidays: New Year's Day, Decoration Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day, Employee's birthday and two (2) personal days. The observance of one (1) of the personal days to be limited to the time between December 1 and March 1 of the following year. If any of these holidays fall on Sunday, the following Monday will be observed as the holiday and if any of these holidays fall on Saturday, the preceding Friday will be observed as the holiday. If employees work on any of these holidays they shall be paid time & one-half (1½) their regular rate of pay for all hours worked.

NO. 30: All work performed on New Year's Day, Decoration Day, Fourth of July, Labor Day, Christmas Day, Thanksgiving Day and Day after Thanksgiving or days celebrated for the same.

TECHNICAL SPECIFICATIONS
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ITEM MO-620 RUNWAY AND TAXIWAY PAINTING

DESCRIPTION

620-1.1 This item shall consist of the painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Engineer.

MATERIALS

620-2.1 MATERIALS ACCEPTANCE. The Contractor shall furnish manufacturer's certified test reports for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. The reports can be used for material acceptance or the Engineer may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the Engineer upon arrival of a shipment of materials to the site.

620-2.2 PAINT. Paint shall be Waterborne in accordance with the requirements as herein specified. Paint shall be furnished in White - 37925, Yellow - 33538 or 33655 and Black - 37038 in accordance with Federal Standard No. 595.

a. WATERBORNE. Paint shall meet the requirements of Federal Specification TT-P-1952E, Type I.

620-2.3 REFLECTIVE MEDIA. Glass beads shall meet the requirements for Federal Specification TT-B-1325D, Type III. Glass beads shall be treated with all compatible agents recommended by the manufacturer of the paint and reflective media to ensure adhesion and embedment.

620-2.4 MATERIALS: The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis. The acrylic resin used for Type III shall be a 100% cross linking acrylic as evidenced by infrared peaks at wavelengths 1568, 1624, and 1672 cm-1 with intensities equal to those produced by an acrylic resin known to be 100% cross linking**.**

CONSTRUCTION METHODS

620-3.1 WEATHER LIMITATIONS. The painting shall be performed only when the surface is dry and when the surface temperature is at least 45 degrees F and rising and the pavement surface temperature is at least 5 degrees F above the dew point. Painting operations shall be discontinued when the surface temperature exceeds the maximum surface temperature recommended by the paint manufacturer and shall only be performed during daylight hours.

620-3.2 EQUIPMENT. Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead-dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless type-marking machine (truck mounted excluded) suitable for application of traffic paint. It shall produce an even and uniform film thickness at the required coverage and shall apply markings of uniform cross sections and clear-cut edges without running or spattering and without over spray.

620-3.3 SURFACE PREPARATION. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other foreign material that would reduce the bond between the paint and the pavement. The area to be painted shall be cleaned by sweeping and blowing or by other methods as required to remove all dirt, laitance, and loose materials without damage to the pavement surface. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the Engineer. Paint shall not be applied to Portland cement concrete pavement until the areas to be painted are clean of curing material. Sandblasting or high-pressure water shall be used to remove curing materials.

The Contractor shall obliterate existing markings as shown on the plans or as directed by the Engineer, by high pressure waterblasting or sandblasting to the satisfaction of the Engineer. Areas designated for removal of existing pavement markings by obliteration are noted on the plans. Paint removal shall not cause excessive damage to the pavement surface. If another method of obliteration is proposed by the Contractor, it shall be demonstrated to be effective, not cause excessive damage, and shall only be used subject to approval by the Engineer.

620-3.4 LAYOUT OF MARKINGS. The proposed markings shall be laid out in advance of the paint application. Glass beads shall be applied to all runway, taxiway, taxilane and apron markings.

620-3.5 APPLICATION. Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by the Engineer.

The edges of the markings shall not vary from a straight line more than 1/2 inch in 50 feet and marking dimensions and spacings shall be within the following tolerances:

Dimension and Spacing	**Tolerance**
36 inches or less	+/- 1/2 inch
Greater than 36 inches to 6 feet	+/- 1 inch
Greater than 6 feet to 60 feet	+/- 2 inches
Greater than 60 feet	+/- 3 inches

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate(s) shown in Table 1. The addition of thinner will not be permitted.

Bituminous pavements sealed with the MO-623 Pavement Friction Sealcoat Surface Treatment, shall break prior to application of the paint as specified below. The Contractor shall satisfy any requirements by either the seal coat or paint manufacturer regarding cure times and paint applications. However, if discoloration is evident, painting shall be discontinued and additional cure time of the sealcoat will may be required. All discolored paint shall be replaced at the contractor's expense.

TABLE 1. APPLICATION RATES FOR PAINT AND GLASS BEADS

Paint Type	Paint Sq ft per gallon, ft^2/gal. (Sq ms per liter, m^2/l)	Glass Beads, Type III, Gradation A Pounds per gallon of paint-lb./gal. (Km per liter of paint-kg/l)
Waterborne (Permanent)	115 ft^2/gal Maximum	10 lb/gal Minimum

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made.

All emptied containers shall be returned to the paint storage area for checking by the Engineer. The containers shall not be removed from the airport or destroyed until authorized by the Engineer.

620-3.6 PROTECTION. After application of the paint, all markings shall be protected from damage until the paint is dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings of paint. The Contractor shall remove from the site all debris, waste, loose or unadhered reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of the Engineer. The Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations.

METHOD OF MEASUREMENT

620-4.1 The quantity of runway, taxiway, taxilane and apron markings and marking removal to be paid for shall be the number of square feet of the item performed in accordance with the specifications and accepted by the Engineer.

BASIS OF PAYMENT

620-5.1 Payment shall be made at the respective contract price per square foot for runway, taxiway, taxilane and apron painting. No direct payment will be made for reflective media. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item MO-620a	Permanent Airport Pavement Marking (White)--per square foot
Item MO-620b	Permanent Airport Pavement Marking (Yellow)--per square foot
Item MO-620c	Permanent Airport Pavement Marking (Black)--per square foot
Item MO-620d	Pavement Marking Removal—per square foot

MATERIAL REQUIREMENTS

Federal Standard 595	Colors used in Government Procurement
Fed. Spec. TT-P-1952E	Paint, Traffic and Airfield Marking, Waterborne
Fed. Spec. TT-B-1325D	Beads (Glass Spheres) Retroreflective

****END OF MO-620****

ITEM MO-623 PAVEMENT FRICTION SEALCOAT SURFACE TREATMENT

DESCRIPTION

623-1.1 This item shall consist of a modified asphalt emulsion designed for sealcoating asphalt pavements. The sealcoat mixture shall be MicroPave, Ultra Seal, or an approved equivalent with sand, properly proportioned, mixed, and spread evenly on the existing wearing course in accordance with these specifications and shall conform to the dimensions shown on the plans or as directed by the Engineer.

MATERIALS

623-2.1 AGGREGATE. The aggregate shall be black beauty sand for runways, and black beauty sand or silica sand for taxiways and aprons, in the quantities as specified below. Gradation limits shall be 20/40 mesh or 30/60 mesh as approved by the Engineer (20/40 mesh is recommended for the runway treatment). Sand shall be clean and free of vegetable matter, dirt, dust, and other deleterious substances. The black beauty aggregate material shall meet the requirements of Table 1.

Mixing quantities of sand – pounds per gallon of asphalt emulsion:

a. Runway – four (4) pounds of black beauty sand.

b. Taxiway and Apron – two (2) pounds of black beauty sand or two (2) pounds of silica sand.

TABLE 1
Properties of Black Beauty Aggregate

Hardness (Mohs Scale)	6 – 7
Bulk Density	75 – 100 pcf
Specific Gravity	2.70 min.
Moisture Content	0.5% max.
Conductivity	25 microSiemens max.
Free Silica	1% max.

623-2.2 ADDITIVE. Micro-lock or approved equivalent shall be added at the rate of 3%. Quantity of additive may be increased up to 5% subject to the direction of the Engineer. Additive is based on acrylonitrile/butadiene latex rubber. Additive must be pre-diluted with an equal volume of water per the manufacturer's recommendation, before adding to the emulsion sealer. (Water must be added to the additive and not vice versa.)

623-2.3 WATER. Water shall be clean and potable without harmful soluble salts and within a temperature range of 60°-80°F.

623-2.4 EMULSION MATERIAL (Contractor's Responsibility). Samples of the emulsion that the contractor proposes to use, together with a statement as to its source, must be submitted and approved by the Engineer before using such material. The contractor shall furnish the Engineer a manufacturer's certified report for each consignment of the emulsion. The test reports shall contain all the data required by the applicable specification. If the contractor applies the material prior to receipt of the test reports, payment for the material shall be withheld until they are received. If the material does not pass the specifications, it shall be replaced at the contractor's expense. The manufacturer's certified report shall not be interpreted as a basis for final acceptance. All such reports shall be subject to verification by testing samples of the emulsion as received for use on the project. A minimum of one sample per coat may be taken from the contractor's application machine subject to the direction of the Engineer.

623-2.5 MATERIAL ACCEPTANCE. Prior to the use of all materials proposed for use during construction, the contractor shall submit to the Engineer, the appropriate material certifications or laboratory tests indicating that the material meets specification requirements.

COMPOSITION

623-3.1 COMPOSITION OF SEALCOAT MIXTURE. At least 10 days prior to placing any mixture on the project, the contractor shall submit a mix design for verification and approval by the Engineer.

No sealcoat for payment shall be placed until the Engineer has approved a mix design in writing. The mix design shall be in effect until modified in writing by the Engineer. When unsatisfactory results or other conditions occur, or should a source of materials be changed, a new job mix formula may be required.

The percent of aggregate passing each sieve shall not vary more than $\pm$ 4.0 percent from the mix design formula. The residual asphalt content shall not vary more than $\pm$ 1.0 percent from the mix design quantity.

623-3.2 MODIFIED SEALCOAT MIXTURE.

Specifications/Physical Properties	Requirements
Solids Content (with 4 lbs. sand per gallon)	62% $\pm$ 2%
Ash Content	40% $\pm$ 7%
Solubility in CS2	48% $\pm$ 2%
Or	
Solubility in trichloroethylene	27% $\pm$ 8%
Specific Gravity	1.16 $\pm$ 0.1
Cone Penetration @77° F. dmm (depth in	385 $\pm$ 45 (ASTM D217)
Polymer/Asphalt Ratio	3% min.

623-3.3 TEST SECTIONS. Test sections shall be placed prior to the start of the sealcoat work in the presence of the Engineer. The areas to be tested will be designated by the Engineer and will be located on the existing pavement. Test strips shall be made by each machine after calibration.

Samples of the sealcoat shall be taken and the mix consistency and proportions verified. The rate of application will also be verified. If any test does not meet specification requirements, additional tests shall be made at the contractor's cost until an acceptable test strip is placed. Test sections that are unacceptable shall be removed at the contractor's expense.

CONSTRUCTION METHODS

623-4.1 WEATHER LIMITATIONS. The sealer material shall not be applied when the weather is rainy or foggy, on extremely humid days (maximum 80%), when the ambient and pavement temperatures are below 60° F and the forecasted low for the next 24 hours is expected to be below 50°F.

623-4.2 EQUIPMENT AND TOOLS. All equipment, tools, and machines used in the performance of this work shall be maintained in satisfactory working order at all times. Descriptive information on the sealcoat mixing and applying equipment to be used shall be submitted to the Engineer for approval not less than 10 days before work starts.

623-4.3. DISTRIBUTORS. Distributors or spray units used for the spray application of the sealcoat shall be self-propelled and capable of uniformly applying 0.15 to 0.55 gallons per square yard (0.69 to 2.5 liters per square meter) of material over the required width of application. Distributors shall be equipped with removable manhole covers, tachometers, pressure gauges, and volume-measuring devices.

The mixing tank shall have a mechanically powered full-sweep mixer with sufficient power to move and homogeneously mix the entire content of the tank. The distributor shall be equipped with a positive placement pump so that a constant pressure can be maintained on the mixture to the spray nozzles.

623-4.4. SEALCOAT MIXING EQUIPMENT. The sealcoat-mixing machine shall be a mixing unit capable of accurately delivering a predetermined proportion of aggregate, water, and modified asphalt emulsion to the mixing changer and of discharging the thoroughly mixed product on a continuous basis. The mixing unit shall be capable of thoroughly blending all ingredients together and discharging the material to the spreader box or applicator device without segregation.

623-4.5. SEALCOAT SPREADING EQUIPMENT. Attached to the mixing machine shall be a mechanical-type squeegee distributor equipped with flexible material in contact with the surface to prevent loss of sealcoat from the spreader box/applicator device. It shall be maintained to prevent loss of sealcoat on varying grades and crown by adjustments to assure uniform spread. There shall be a lateral control device and a flexible strike-off capable of being adjusted to lay the sealcoat at the specified rate of application. The box/applicator device shall be kept clean, and built-up modified asphalt emulsion and aggregate on the box/applicator device shall not be permitted.

623-4.6. AUXILIARY EQUIPMENT. Other tools or equipment such as brushes, hand squeegees, hose equipment, tank trucks, water distributors and flushers. Power blowers, low profile barricades, etc., shall be provided as required.

623-4.7. EQUIPMENT CALIBRATION. Each sealcoat-mixing unit to be used on the project shall be calibrated in the presence of the Engineer prior to construction. Engineer may accept previous calibration documentation covering the exact materials to be used provided the documentation represents tests made during the calendar year. The documentation shall include an individual calibration of each material at various settings, which can be related to the machine's metering devices.

623-4.8. SURFACE PREPARATION. Prior to placing the sealcoat, unsatisfactory areas shall be repaired in accordance with Item MO-601, and the surface shall be cleaned of dust, dirt, or other loose, foreign matter, grease, oil, or any type of objectionable surface film. Air blowers or pressure washing with water will be acceptable except that water flushing will not be permitted in areas where considerable cracks are present in the pavement surface. Embedded dirt and silt shall be removed with steel bristle hand brooms and mud areas shall be thoroughly scraped and pressure washed with clean water. Grease and oil spots shall be scraped with a wire bristle broom and coated with an approved primer in accordance with the manufacturer's recommendation subject to the direction of the Engineer.

All paint and rubber over one foot wide that will affect the bond of the sealcoat shall be removed from the surface of the existing pavement, subject to the direction of the Engineer. Chemicals, high-pressure water, heater scarifier (asphaltic concrete only), or sandblasting may be used. Any method used shall not cause major damage to the pavement. Major damage is defined as changing the properties of the pavement or removing pavement over 1/16 inch deep. If chemicals are used, they shall comply with the state's environmental protection regulations. No material shall be deposited on the runway shoulders. All wastes shall be disposed of in approved areas as directed by the Engineer.

A tack coat shall be applied to excessively weathered surfaces or other areas as directed by the Engineer according to Item MO-603 unless otherwise specified herein, to improve bonding of the sealcoat to the surface. The tack coat shall consist of one (1) part asphalt emulsion (SS-1-H) mixed with four (4) parts clean water or one (1) part MicroPave or approved equivalent mixed with one (1) part clean water volume and shall be applied at the rate of 0.05 to 0.10 gallon per square yard. The tack coat shall be applied at least 2 hours before the sealcoat but within the same day. No direct payment will be made for tack coat under Item MO-623

No direct payment will be made for cleaning and sealing existing joints and cracks under Item MO-623. The quantity for cleaning and sealing existing joints and cracks shall be paid for at the contract unit price provided in Items MO-622 and P-601.

623-4.9 APPLICATION OF SEALCOAT. The seal shall be applied in two (2) thin coats in a coverage range of 0.3 to 0.45 gallons of emulsion per square yard for both coats combined. First coat shall be applied by squeegee at the rate of 0.20 to 0.35 gallon per square yard subject to the conditions of the pavement and direction of the Engineer. Second coat shall be applied by squeegee or spray at the rate of 0.10 to 0.15 gallon per square yard subject to discretion of the Engineer.

HAND SPRAY APPLICATION IS PERMITTED ONLY IN AREAS NOT ACCESSIBLE BY MACHINE SPRAY/SQUEEGEE UNITS.

The surface shall be pre-wet by fogging ahead of the sealcoat spreader/applicator device subject to the direction of the Engineer. (The machine should be equipped with a fog bar to be used for pre-dampening if the pavement temperature exceeds 90° F.) Water used in pre-dampening the surface shall be applied at such a rate that the entire surface is damp with no apparent flowing water in front of the sealcoat spreader/applicator device. The sealcoat mixture shall be of the desired consistency when deposited on the surface, and no additional elements shall be added. Total time of mixing shall not exceed 10 minutes.

A sufficient amount of sealcoat shall be carried in all parts of the spreader/applicator device at all times so that complete coverage of all surface voids and cracks is obtained. Care shall be taken not to overload the spreader/applicator device, which shall move at a slow and uniform rate not to exceed 5 miles per hour. No lumping, balling, or unmixed aggregate shall be permitted. Any oversized aggregate or foreign materials shall be screened from the aggregate prior to delivery to the mixing machine. No segregation of the emulsion and sand aggregate will be permitted. If the aggregate settles to the bottom of the mix, the sealcoat will be removed from the pavement surface. A sufficient amount of sealcoat shall be fed to the surface to keep a full supply against the full width of the squeegee. The mixture shall not be permitted to overflow the front sides of the spreader/applicator device. No excessive breaking of the emulsion will be allowed in the mixing machine. No streaks, such as caused by oversized aggregate, shall be left in the finished pavement.

Adjacent lanes shall be lapped at the edge a minimum of four (4) inches to provide complete sealing of the overlap. All edges shall be feathered with hand squeegees.

Longitudinal joints shall be constructed either when the sealcoat in the previous lane is in a completely liquid or a completely cured condition. Longitudinal construction joints shall be smoothed with squeegees if necessary to obtain a good joint.

The fresh sealcoat application shall be protected by barricades and markers and permitted to cure for at least 24 hours, depending on weather conditions (best drying conditions are temperatures of 70°-80° F, sunlight, relative humidity 50% or lower). Sealcoat shall be tested for trafficability prior to opening for regular uses. Any damage to uncured sealcoat will be repaired at the contractor's expense.

In areas where the spreader/applicator cannot be used, the sealcoat shall be applied by means of a hand squeegee. Any joints or cracks that are not filled by the sealcoat mixture shall be filled by using hand squeegees. No excessive build-up or unsightly appearance shall be permitted on longitudinal or transverse joints. Upon completion of the work, the sealcoat shall not have bare spots, or cracks through which liquids or foreign matter could penetrate to the underlying pavement. The finished surface shall present a uniform and skid-resistant texture satisfactory to the Engineer. All wasted and unused material and all debris shall be removed from the site prior to final acceptance.

METHOD OF MEASUREMENT

622-5.1. The sealcoat coat application shall be measured by the square yard.

BASIS OF PAYMENT

623-6.1. Payment will be made at the contract unit price per square yard for the sealcoat. These prices shall be full compensation for furnishing all materials and for all testing, preparation, mixing, and applying these materials, and for all labor, equipment, tools and incidentals necessary to complete the item.

Payment will be made under:

MO-623a	Pavement Friction Sealcoat Surface Treatment--per square yard

CERTIFICATION/TESTING REQUIREMENTS

ASTM C 88	Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C 128	Specific Gravity and Absorption of Fine Aggregate
ASTM C 131	Resistance to Abrasion of Small Size Course Aggregate by Use of the Los Angeles Machine
ASTM C 136	Sieve or Screen Analysis of Fine and Coarse Aggregates

MATERIAL REQUIREMENTS

ASTM D 977	Emulsified Asphalt
ASTMD 2397	Cationic Emulsified Asphalt
The Asphalt Institute	Table IV-3 Temperature – Volume Corrections Manual MS-6 for Emulsified Asphalt

END OF MO-623

ITEM MO-125 AIRPORT LIGHTING SYSTEMS AND GUIDANCE SIGNS

DESCRIPTION

125-1.1 This item consists of airport lighting systems and signs furnished and installed in accordance with this specification, the referenced specifications, and the applicable Federal Aviation Administration (FAA) Advisory Circulars. The lighting systems and signs shall be installed at the locations and in accordance with the dimensions, design, and details shown on the plans. This item includes the furnishing of all equipment, materials, services, testing, and incidentals necessary to place the systems in operation as completed units to the satisfaction of the Engineer.

Requirements and payments for underground cable from the vault to the AWOS will be measured and paid for separately as specified in Item MO-108 "Underground Power Cable for Airports."

125-1.2 The contractor shall ascertain that all lighting system components furnished by him (including FAA approved equipment) are compatible in all respects with each other and the remainder of the new/existing system. Any non-compatible components furnished by the contractor shall be replaced by him at no additional cost to the airport sponsor with a similar unit, approved by the engineer (different model or different manufacturer) that is compatible with the remainder of the airport lighting system.

125-1.3 Additional details pertaining to a specific system covered in this item are contained in the FAA Advisory Circulars listed below:

CITED FAA SPECIFICATION	EQUIPMENT NAME
AC 150/5345-26	Specification for L-823 Plug and Receptacle, Cable Connectors
AC 150/5345-7	Specification for L-824, Underground Electrical Cables for Lighting Circuits
AC 150/5345-47	Specification for L-830 Isolation Transformers for Airport Lighting Systems
AC 150/5340-30	Design and Installation details for Airport Visual Aids
AC 150-5345-46	Specification for Runway and Taxiway Light Fixtures
AC 150/5345-42	Specification for L-867/L-868 Airport Light Bases, Transformer Housings and Junction Boxes

The Contractor is responsible for using the latest editions of the referenced FAA Advisory Circulars, including any changes, in effect at the time of bidding. The advisory circulars may be obtained free of charge on the internet at the following address:

http://www.faa.gov/airports_airtraffic/airports/resources/advisory_circulars/

EQUIPMENT AND MATERIALS

125-2.1 GENERAL.

a. Airport lighting equipment and materials covered by Federal Aviation Administration (FAA) specifications shall be approved under the Airport Lighting Equipment Certification Program described in Advisory Circular (AC) 150/5345-53, current version.

b. All other equipment and materials covered by other referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification, when requested by the Engineer.

c. Manufacturer's certifications shall not relieve the Contractor of the Contractor's responsibility to provide materials in accordance with these specifications and acceptable to the Engineer. Materials supplied and/or installed that do not materially comply with these specifications shall be removed, when directed by the Engineer and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.

d. All materials and equipment used to construct this item shall be submitted to the Engineer for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be boldly and clearly made with arrows or circles (highlighting is not acceptable). Contractor is solely responsible for delays in project accruing directly or indirectly from late submissions or resubmissions of submittals.

e. The data submitted shall be sufficient, in the opinion of the Engineer, to determine compliance with the plans and specifications. The Contractor's submittals (five (5) copies) shall be neatly bound in a properly sized 3-ring binder, tabbed by specification section. The Engineer reserves the right to reject any and all equipment, materials or procedures, which, in the Engineer's opinion, does not meet the system design and the standards and codes, specified herein.

f. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner. The Contractor shall be responsible to maintain an insulation resistance of 50 megohms minima, (1000V megger) with isolation transformers connected in new circuits and new segments of existing circuits through the end of the contract warranty period.

125-2.2 CONCRETE. The concrete for bases, footings, etc. shall be proportioned, placed, and cured in accordance with MO-610 "Structural Portland Cement Concrete."

125-2.3 CONDUIT. Conduit shall conform to MO 110 "Airport Underground Electrical Duct Banks and Conduits."

125-2.4 TAPE. Electrical tapes shall be Scotch Electrical Tapes – number Scotch 88 (1-1/2" wide) and Scotch 130C linerless rubber splicing tape (2" wide), as manufactured by the Minnesota Mining and Manufacturing Company, or approved equivalent.

125-2.5 CABLE CONNECTIONS. Cable Connections shall conform to MO-108 "Underground Power Cable for Airports".

125-2.6 LIGHT BASES AND TRANSFORMER HOUSINGS. Light bases and transformer housings shall be Type L-867 conforming to the requirements AC 150/5345-42. The sizes of the units and any accessories shall be as shown on the plans.

125-2.7 CABLE. Underground cable shall conform to the requirements of MO-108 "Underground Power Cable for Airports." The size and type of the cable shall be as shown on the plans or per the manufacturer's recommendations.

125-2.8 GUIDANCE SIGNS. The unlighted guidance signs shall be single face Type L-858R (white legend on a red background), Size 1 (18" legend panel with a 12" legend), Style 4 (unlighted), conforming to the requirements of AC 150/5345-44 and as detailed on the plans.

CONSTRUCTION METHODS

125-3.1 GENERAL. The installation and testing details for the systems shall be as specified in the applicable advisory circulars.

125-3.2 INSTALLATION OF CABLE. Underground cable for use between the electrical vault and the AWOS shall be installed as specified in Item MO-108 "Underground Power Cable for Airports." No splices will be allowed in the cable runs except at junction boxes. The minimum cover over the cable shall be 18 inches.

125-3.3 ELECTRICAL CONNECTION. The Contractor shall furnish all labor and materials and shall make complete electrical connections in accordance with the wiring diagram furnished with the plans. The electrical installation shall conform to the requirements of the latest edition of National Fire Protection Association, NFPA-70, National Electric Code.

125-3.4 GROUND CONNECTION AND GROUND ROD. The Contractor shall furnish and install a ground rod, grounding cable, and ground clamps for grounding each junction box as shown on the plans. The ground rod shall be of the type specified in Item MO-108 "Underground Power Cable for Airports and shall be of the length and diameter specified on the plans. The ground rod shall be driven into the ground adjacent to the concrete foundation (minimum distance from foundation of 2 feet) so that the top is at least 6 inches below grade. The grounding cable shall consist of No. 6 AWG minima bare stranded copper wire or larger and shall be firmly attached to the ground rod by exothermic welding per MO-108. The other end of the grounding cable shall be securely attached to the unit with non-corrosive metal and shall be of substantial construction. The resistance to ground shall not exceed 25 ohms.

125-3.5 INSTALLATION OF AIRPORT LIGHTING SYSTEMS.

a. Junction boxes, guidance signs, and accessories shall be installed as shown on the plans or approved shop drawings and in accordance with the applicable FAA advisory circulars. Tolerances given in the FAA advisory circulars and on the plans shall not be exceeded. Where no tolerance is given, no deviation is permitted. Items not installed in accordance with the FAA advisory circulars, and the plans shall be replaced by and at the cost of the Contractor.

b. The Contractor shall assemble units and connect them to the system in accordance with the manufacturer's recommendation and instructions.

125-3.6 DELIVERY, STORAGE AND HANDLING. Materials and equipment should be shipped disassembled to the extent necessary for reasons of: shipping limitations, handling facilities, and to avoid damage during shipment. Materials shall be maintained in new condition. This shall include suitable coverings, indoor storage, etc., to properly protect the equipment and materials.

Any equipment and materials, in the opinion of the Engineer, damaged during construction or storage shall be replaced by and at the cost of the Contractor. Painted and galvanized surfaces that are damaged shall be repaired according to manufacturer's recommendations, to the satisfaction of the Engineer.

METHOD OF MEASUREMENT

125-4.1 The quantity of junction boxes to be paid for under this item shall be the number of each type installed as completed units in place, ready for operation, and accepted by the Engineer.

125-4.2 The quantity of guidance signs to be paid for under this item shall be the number of each installed as completed units in place, ready for operation, and accepted by the Engineer.

BASIS OF PAYMENT

125-5.1 Payment will be made at the contract unit price for each junction box and guidance sign installed by the contractor and accepted by the Engineer. This payment will be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

MO-125a Remove Existing Non-Lit Guidance Sign - per Each

MO-125b Install Non-Lit Guidance Sign – per Each

MATERIAL REQUIREMENTS

Fed.Spec. W-C-1094	Conduit and Conduit Fittings; Plastic, Rigid (cancelled; replaced by UL 514 Boxes, Nonmetallic Outlet, Flush Device Boxes, & Covers, and UL 651 Standard for Conduit & Hope Conduit, Type EB & A Rigid PVC)
Underwriters Laboratories Standard 6	Rigid Metal Conduit
Underwriters Laboratories Standard 514B	Fittings for Cable and Conduit
Underwriters Laboratories Standard 1242	Intermediate Metal Conduit
Underwriters Laboratories Standard 651	Schedule 40 and 80 Rigid PVC Conduit (for Direct Burial)
Underwriters Laboratories Standard 651A	Type EB and A Rigid PVC Conduit and HDPE Conduit(for concrete encasement)
AC 150/5340-18	Standards For Airport Sign Systems
AC 150/5340-30	Design and Installation Details for Airport Visual Aids
AC 150/5345-42	Specification for Airport Light Bases, Transformer Housing, Junction Boxes, and Accessories
AC 150/5345-44	Specification for Taxiway and Runway Signs
AC 150/5345-46	Specification for Runway and Taxiway Light Fixtures
AC 150/5345-47	Isolation Transformers for Airport Light Systems
AC 150/5345-51	Specification for Discharge-Type Flashing Light Equipment
AC 150/5345-53	Airport Lighting Equipment Certification Program

REFERENCE DOCUMENTS

NFPA No. 70	National Electrical Code (NEC)

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APPENDIX

FAA ADVISORY CIRCULAR 150/5370-2
OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION

CONSTRUCTION SAFETY AND PHASING PLAN

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U.S. Department of Transportation

Federal Aviation Administration

Advisory Circular

Subject: Operational Safety on Airports During Construction	**Date:** 9/29/11 **Initiated by:** AAS-100	**AC No:** 150/5370-2F

1. Purpose. This AC sets forth guidelines for operational safety on airports during construction.

2. What this AC Cancels. This AC cancels AC 150/5370-2E, Operational Safety on Airports During Construction, dated January 17, 2003.

3. Whom This AC Affects. This AC assists airport operators in complying with Title 14 Code of Federal Regulations (CFR) Part 139, Certification of Airports (Part 139). For those certificated airports, this AC provides one way, but not the only way, of meeting those requirements. The use of this AC is mandatory for those airport construction projects receiving funds under the Airport Improvement Program (AIP) or the Passenger Facility Charge (PFC) Program. See Grant Assurance No. 34, "Policies, Standards, and Specifications," and PFC Assurance No. 9, "Standard and Specifications." While we do not require non-certificated airports without grant agreements to adhere to these guidelines, we recommend that they do so to help these airports maintain operational safety during construction.

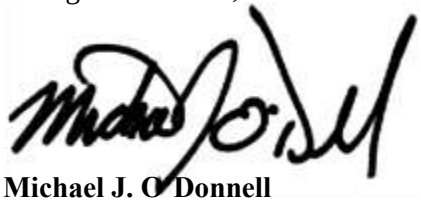
4. Principal Changes.

a. Construction activities are prohibited in safety areas while the associated runway or taxiway is open to aircraft.

b. Guidance is provided in incorporating Safety Risk Management.

c. Recommended checklists are provided for writing Construction Safety and Phasing Plans and for daily inspections.

5. Reading Material Related to this AC. Numerous ACs are referenced in the text of this AC. These references do not include a revision letter, as they are to be read as referring to the latest version. Appendix 1 contains a list of reading material on airport construction, design, and potential safety hazards during construction, as well as instructions for obtaining these documents.



Michael J. O'Donnell
Director of Airport Safety and Standards

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Chapter 1. Planning an Airfield Construction Project

101. Overview. Airports are complex environments, and procedures and conditions associated with construction activities often affect aircraft operations and can jeopardize operational safety. Safety considerations are paramount and may make operational impacts unavoidable. However, careful planning, scheduling, and coordination of construction activities can minimize disruption of normal aircraft operations and avoid situations that compromise the airport's operational safety. The airport operator must understand how construction activities and aircraft operations affect one another to be able to develop an effective plan to complete the project. While the guidance in this AC is primarily used for construction operations, some of the concepts, methods and procedures described may also enhance the day-to-day airport maintenance operations, such as lighting maintenance and snow removal operations.

102. Plan for Safety. Safety, maintaining aircraft operations, and construction costs are all interrelated. Since safety must not be compromised, the airport operator must strike a balance between maintaining aircraft operations and construction costs. This balance will vary widely depending on the operational needs and resources of the airport and will require early coordination with airport users and the FAA. As the project design progresses, the necessary construction locations, activities, and associated costs will be identified. As they are identified, their impact to airport operations must be assessed. Adjustments are made to the proposed construction activities, often by phasing the project, and/or to airport operations in order to maintain operational safety. This planning effort will ultimately result in a project Construction Safety and Phasing Plan (CSPP). The development of the CSPP takes place through the following five steps:

a. Identify Affected Areas. The airport operator must determine the geographic areas on the airport affected by the construction project. Some, such as a runway extension, will be defined by the project. Others may be variable, such as the location of haul routes and material stockpiles.

b. Describe Current Operations. Identify the normal airport operations in each affected area for each phase of the project. This becomes the baseline from which the impact on operations by construction activities can be measured. This should include a narrative of the typical users and aircraft operating within the affected areas. It should also include information related to airport operations: the Aircraft Reference Code (ACRC) for each runway; Airplane Design Group (ADG) and Taxiway Design Group (TDG)[1] for each affected taxiway; designated approach visibility minimums; available approach and departure procedures; most demanding aircraft; declared distances; available air traffic control services; airport Surface Movement Guidance and Control System plan; and others. The applicable seasons, days and times for certain operations should also be identified as applicable.

c. Allow for Temporary Changes to Operations. To the extent practical, current airport operations should be maintained during the construction. In consultation with airport users, Aircraft Rescue and Fire Fighting (ARFF) personnel, and FAA Air Traffic Organization (ATO) personnel, the airport operator should identify and prioritize the airport's most important operations. The construction activities should be planned, through project phasing if necessary, to safely accommodate these operations. When the construction activities cannot be adjusted to safely maintain current operations, regardless of their importance, then the operations must be revised accordingly. Allowable changes include temporary revisions to approach procedures, restricting certain aircraft to specific runways and taxiways, suspension of certain operations, decreased weights for some aircraft due to shortened runways,

[1] Taxiway Design Group will be introduced in AC 150/5300-13A.

and other changes. An example of a table showing temporary operations versus current operations is shown in Table 3-1 Sample Operations Effects.

d. Take Required Measures to Revised Operations. Once the level and type of aircraft operations to be maintained are identified, the airport operator must determine the measures required to safely conduct the planned operations during the construction. These measures will result in associated costs, which can be broadly interpreted to include not only direct construction costs, but also loss of revenue from impacted operations. Analysis of costs may indicate a need to reevaluate allowable changes to operations. As aircraft operations and allowable changes will vary so widely among airports, this AC presents general guidance on those subjects.

e. Manage Safety Risk. Certain airport projects may require the airport operator to provide a Project Proposal Summary to help the FAA to determine the appropriate level of Safety Risk Management (SRM) documentation. The airport operator must coordinate with the appropriate FAA Airports Regional or District Office early in the development of the CSPP to determine the need for SRM documentation. See FAA Order 5200.11, FAA Airports (ARP) Safety Management System (SMS), for more information. If the FAA requires SRM documentation, the airport operator must at a minimum:

(1) Notify the appropriate FAA Airports Regional or District Office during the project "scope development" phase of any project requiring a CSPP.

(2) Provide documents identified by the FAA as necessary to conduct SRM.

(3) Participate in the SRM process for airport projects.

(4) Provide a representative to participate on the SRM panel.

(5) Ensure that all applicable SRM identified risks elements are recorded and mitigated within the CSPP.

103. Develop a Construction Safety and Phasing Plan (CSPP). Development of an effective CSPP will require familiarity with many other documents referenced throughout this AC. See Appendix 1, Related Reading Material for a list of related reading material.

a. List Requirements. A CSPP must be developed for each on-airfield construction project funded by the Airport Improvement Program (AIP) or the Passenger Facility Charge (PFC) program or located on an airport certificated under Part 139. As per Order 5200.11, such projects do not include construction, rehabilitation, or change of any facility that is entirely outside the air operations area, does not involve any expansion of the facility envelope and does not involve construction equipment, haul routes or placement of material in locations that require access to the air operations area, increase the facility envelope, or impact line-of-sight. Such facilities may include passenger terminals and parking or other structures. However, extraordinary circumstances may trigger the need for a Safety Assessment and a CSPP. The CSPP is subject to subsequent review and approval under the FAA's Safety Risk Management procedures (see paragraph 102.e above). Additional information may be found in Order 5200.11.

b. Prepare a Safety Plan Compliance Document. The Safety Plan Compliance Document (SPCD) details how the contractor will comply with the CSPP. Also, it will not be possible to determine all safety plan details (for example specific hazard equipment and lighting, contractor's points of contact, construction equipment heights) during the development of the CSPP. The successful contractor must define such details by preparing an SPCD that the airport operator reviews for approval prior to issuance of a notice-to-proceed. The SPCD is a subset of the CSPP, similar to how a shop drawing review is a subset to the technical specifications.

c. Assume Responsibility for the CSPP. The airport operator is responsible for establishing and enforcing the CSPP. The airport operator may use the services of an engineering consultant to help develop the CSPP. However, writing the CSPP cannot be delegated to the construction contractor. Only those details the airport operator determines cannot be addressed before contract award are developed by the contractor and submitted for approval as the SPCD. The SPCD does not restate nor propose differences to provisions already addressed in the CSPP.

104. Who Is Responsible for Safety During Construction?

a. Establish a Safety Culture. Everyone has a role in operational safety on airports during construction: the airport operator, the airport's consultants, the construction contractor and subcontractors, airport users, airport tenants, ARFF personnel, Air Traffic personnel, including Technical Operations personnel, FAA Airports Division personnel, and others. Close communication and coordination between all affected parties is the key to maintaining safe operations. Such communication and coordination should start at the project scoping meeting and continue through the completion of the project. The airport operator and contractor should conduct onsite safety inspections throughout the project and immediately remedy any deficiencies, whether caused by negligence, oversight, or project scope change.

b. Assess Airport Operator's Responsibilities. An airport operator has overall responsibility for all activities on an airport, including construction. This includes the predesign, design, preconstruction, construction, and inspection phases. Additional information on the responsibilities listed below can be found throughout this AC. The airport operator must:

(1) Develop a CSPP that complies with the safety guidelines of Chapter 2, Construction Safety and Phasing Plans, and Chapter 3, Guidelines for Writing a CSPP. The airport operator may develop the CSPP internally or have a consultant develop the CSPP for approval by the airport operator. For tenant sponsored projects, approve a CSPP developed by the tenant or its consultant.

(2) Require, review and approve the SPCD by the contractor that indicates how it will comply with the CSPP and provides details that cannot be determined before contract award.

(3) Convene a preconstruction meeting with the construction contractor, consultant, airport employees and, if appropriate, tenant sponsor and other tenants to review and discuss project safety before beginning construction activity. The appropriate FAA representatives should be invited to attend the meeting. See AC 150/5300-9, *Predesign, Prebid, and Preconstruction Conferences for Airport Grant Projects.* (Note "FAA" refers to the Airports Regional or District Office, the Air Traffic Organization, Flight Standards Service, and other offices that support airport operations, flight regulations, and construction/environmental policies.)

(4) Ensure contact information is accurate for each representative/point of contact identified in the CSPP and SPCD.

(5) Hold weekly or, if necessary, daily safety meetings with all affected parties to coordinate activities.

(6) Notify users, ARFF personnel, and FAA ATO personnel of construction and conditions that may adversely affect the operational safety of the airport via Notices to Airmen (NOTAM) and other methods, as appropriate. Convene a meeting for review and discussion if necessary.

(7) Ensure construction personnel know of any applicable airport procedures and of changes to those procedures that may affect their work.

(8) Ensure construction contractors and subcontractors undergo training required by the CSPP and SPCD.

(9) Ensure vehicle and pedestrian operations addressed in the CSPP and SPCD are coordinated with airport tenants, the airport traffic control tower (ATCT), and construction contractors.

(10) At certificated airports, ensure each CSPP and SPCD is consistent with Part 139.

(11) Conduct inspections sufficiently frequently to ensure construction contractors and tenants comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards.

(12) Resolve safety deficiencies immediately. At airports subject to 49 CFR Part 1542, Airport Security, ensure construction access complies with the security requirements of that regulation.

(13) Notify appropriate parties when conditions exist that invoke provisions of the CSPP and SPCD (for example, implementation of low-visibility operations).

(14) Ensure prompt submittal of a Notice of Proposed Construction or Alteration (Form 7460-1) for conducting an aeronautical study of potential obstructions such as tall equipment (cranes, concrete pumps, other.), stock piles, and haul routes. A separate form may be filed for each potential obstruction, or one form may be filed describing the entire construction area and maximum equipment height. In the latter case, a separate form must be filed for any object beyond or higher than the originally evaluated area/height. The FAA encourages online submittal of forms for expediency. The appropriate FAA Airports Regional or District Office can provide assistance in determining which objects require an aeronautical study.

(15) Promptly notify the FAA Airports Regional or District Office of any proposed changes to the CSPP prior to implementation of the change. Changes to the CSPP require review and approval by the airport operator and the FAA. Coordinate with appropriate local and other federal government agencies, such as EPA, OSHA, TSA, and the state environmental agency.

c. Define Construction Contractor's Responsibilities. The contractor is responsible for complying with the CSPP and SPCD. The contractor must:

(1) Submit a Safety Plan Compliance Document (SPCD) to the airport operator describing how it will comply with the requirements of the CSPP and supplying any details that could not be determined before contract award. The SPCD must include a certification statement by the contractor that indicates it understands the operational safety requirements of the CSPP and it asserts it will not deviate from the approved CSPP and SPCD unless written approval is granted by the airport operator. Any construction practice proposed by the contractor that does not conform to the CSPP and SPCD may impact the airport's operational safety and will require a revision to the CSPP and SPCD and re-coordination with the airport operator and the FAA in advance.

(2) Have available at all times copies of the CSPP and SPCD for reference by the airport operator and its representatives, and by subcontractors and contractor employees.

(3) Ensure that construction personnel are familiar with safety procedures and regulations on the airport. Provide a point of contact who will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the airport. Many projects will require 24-hour coverage.

(4) Identify in the SPCD the contractor's on-site employees responsible for monitoring compliance with the CSPP and SPCD during construction. At least one of these employees must be on-site whenever active construction is taking place.

(5) Conduct inspections sufficiently frequently to ensure construction personnel comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards.

(6) Restrict movement of construction vehicles and personnel to permitted construction areas by flagging, barricading, erecting temporary fencing, or providing escorts, as appropriate and as specified in the CSPP and SPCD.

(7) Ensure that no contractor employees, employees of subcontractors or suppliers, or other persons enter any part of the air operations area (AOA) from the construction site unless authorized.

(8) Ensure prompt submittal through the airport operator of Form 7460-1 for the purpose of conducting an aeronautical study of contractor equipment such as tall equipment (cranes, concrete pumps, other equipment), stock piles, and haul routes when different from cases previously filed by the airport operator. The FAA encourages online submittal of forms for expediency.

d. Define Tenant's Responsibilities if planning construction activities on leased property. Airport tenants, such as airline operators, fixed base operators, and FAA ATO/Technical Operations sponsoring construction must:

(1) Develop, or have a consultant develop, a project specific CSPP and submit it to the airport operator for certification and subsequent approval by the FAA. The approved CSPP must be made part of any contract awarded by the tenant for construction work.

(2) In coordination with its contractor, develop an SPCD and submit it to the airport operator for approval to be issued prior to issuance of a Notice to Proceed.

(3) Ensure that construction personnel are familiar with safety procedures and regulations on the airport.

(4) Provide a point of contact of who will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the airport.

(5) Identify in the SPCD the contractor's on-site employees responsible for monitoring compliance with the CSPP and SPCD during construction. At least one of these employees must be on-site whenever active construction is taking place.

(6) Ensure that no tenant or contractor employees, employees of subcontractors or suppliers, or any other persons enter any part of the AOA from the construction site unless authorized.

(7) Restrict movement of construction vehicles to construction areas by flagging and barricading, erecting temporary fencing, or providing escorts, as appropriate, and as specified in the CSPP and SPCD.

(8) Ensure prompt submittal through the airport operator of Form 7460-1 for the purpose of conducting an aeronautical study of contractor equipment such as tall equipment (cranes, concrete pumps, other.), stock piles, and haul routes. The FAA encourages online submittal of forms for expediency.

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Chapter 2. Construction Safety and Phasing Plans

Section 1. Basic Considerations

201. Overview. Aviation safety is the primary consideration at airports, especially during construction. The airport operator's Construction Safety and Phasing Plan (CSPP) and the contractor's Safety Plan Compliance Document (SPCD) are the primary tools to ensure safety compliance when coordinating construction activities with airport operations. These documents identify all aspects of the construction project that pose a potential safety hazard to airport operations and outline respective mitigation procedures for each hazard. They must provide all information necessary for the Airport Operations department to conduct airfield inspections and expeditiously identify and correct unsafe conditions during construction. All aviation safety provisions included within the project drawings, contract specifications, and other related documents must also be reflected in the CSPP and SPCD.

202. Assume Responsibility. Operational safety on the airport remains the airport operator's responsibility at all times. The airport operator must develop, certify, and submit for FAA approval each CSPP. It is the airport operator's responsibility to apply the requirements of the FAA approved CSPP. The airport operator must revise the CSPP when conditions warrant changes and must submit the revised CSPP to the FAA for approval. The airport operator must also require and approve a SPCD from the project contractor.

203. Submit the CSPP. Construction Safety and Phasing Plans should be developed concurrently with the project design. Milestone versions of the CSPP should be submitted for review and approval as follows. While these milestones are not mandatory, early submission will help to avoid delays. Submittals are preferred in 8.5 x 11 in or 11 x 17 in format for compatibility with the FAA's Obstruction Evaluation / Airport Airspace Analysis (OE / AAA) process.

a. Submit an Outline/Draft. By the time approximately 25% to 30% of the project design is completed, the principal elements of the CSPP should be established. Airport operators are encouraged to submit an outline or draft, detailing all CSPP provisions developed to date, to the FAA for review at this stage of the project design.

b. Submit a Construction Safety and Phasing Plan (CSPP). The CSPP should be formally submitted for FAA approval when the project design is 80% to 90% complete. Since provisions in the CSPP will influence contract costs, it is important to obtain FAA approval in time to include all such provisions in the procurement contract.

c. Submit a Safety Plan Compliance Document (SPCD). The contractor should submit the SPCD to the airport operator for approval to be issued prior to the Notice to Proceed.

d. Submit CSPP Revisions. All revisions to the CSPP or SPCD should be submitted to the FAA for approval as soon as required changes are identified.

204. Meet CSPP Requirements.

a. To the extent possible, the CSPP should address the following as outlined in Section 2, Plan Requirements and Chapter 3, Guidelines for Writing a CSPP, as appropriate. Details that cannot be determined at this stage are to be included in the SPCD.

(1) Coordination.

(a) Contractor progress meetings.

(b) Scope or schedule changes.

(c) FAA ATO coordination.

(2) Phasing.

(a) Phase elements.

(b) Construction safety drawings

(3) Areas and operations affected by the construction activity.

(a) Identification of affected areas.

(b) Mitigation of effects.

(4) Protection of navigation aids (NAVAIDs).

(5) Contractor access.

(a) Location of stockpiled construction materials.

(b) Vehicle and pedestrian operations.

(6) Wildlife management.

(a) Trash.

(b) Standing water.

(c) Tall grass and seeds.

(d) Poorly maintained fencing and gates.

(e) Disruption of existing wildlife habitat.

(7) Foreign Object Debris (FOD) management.

(8) Hazardous materials (HAZMAT) management

(9) Notification of construction activities.

(a) Maintenance of a list of responsible representatives/ points of contact.

(b) Notices to Airmen (NOTAM).

(c) Emergency notification procedures.

(d) Coordination with ARFF Personnel.

(e) Notification to the FAA.

(10) Inspection requirements.

(a) Daily (or more frequent) inspections.

(b) Final inspections.

(11) Underground utilities.

(12) Penalties.

(13) Special conditions.

(14) Runway and taxiway visual aids. Marking, lighting, signs, and visual NAVAIDs.

(a) General.

(b) Markings.

(c) Lighting and visual NAVAIDs.

(d) Signs.

(15) Marking and signs for access routes.

(16) Hazard marking and lighting.

(a) Purpose.

(b) Equipment.

(17) Protection. Of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces

(a) Runway Safety Area (RSA).

(b) Runway Object Free Area (ROFA).

(c) Taxiway Safety Area (TSA).

(d) Taxiway Object Free Area (TOFA).

(e) Obstacle Free Zone (OFZ).

(f) Runway approach/departure surfaces.

(18) Other limitations on construction.

(a) Prohibitions.

(b) Restrictions.

b. The Safety Plan Compliance Document (SPCD) should include a general statement by the construction contractor that he/she has read and will abide by the CSPP. In addition, the SPCD must include all supplemental information that could not be included in the CSPP prior to the contract award. The contractor statement should include the name of the contractor, the title of the project CSPP, the approval date of the CSPP, and a reference to any supplemental information (that is, "I , Name of Contractor , have read the Title of Project CSPP, approved on Date , and will abide by it as written and with the following additions as noted:"). The supplemental information in the SPCD should be written to match the format of the CSPP indicating each subject by corresponding CSPP subject number and title. If no supplemental information is necessary for any specific subject, the statement, "No supplemental information," should be written after the corresponding subject title. The SPCD should not duplicate information in the CSPP:

(1) Coordination. Discuss details of proposed safety meetings with the airport operator and with contractor employees and subcontractors.

(2) Phasing. Discuss proposed construction schedule elements, including:

(a) Duration of each phase.

(b) Daily start and finish of construction, including "night only" construction.

(c) Duration of construction activities during:

(i) Normal runway operations.

(ii) Closed runway operations.

(iii) Modified runway "Aircraft Reference Code" usage.

(3) Areas and operations affected by the construction activity. These areas and operations should be identified in the CSPP and should not require an entry in the SPCD.

(4) Protection of NAVAIDs. Discuss specific methods proposed to protect operating NAVAIDs.

(5) Contractor access. Provide the following:

(a) Details on how the contractor will maintain the integrity of the airport security fence (gate guards, daily log of construction personnel, and other).

(b) Listing of individuals requiring driver training (for certificated airports and as requested).

(c) Radio communications.

(i) Types of radios and backup capabilities.

(ii) Who will be monitoring radios.

(iii) Whom to contact if the ATCT cannot reach the contractor's designated person by radio.

(d) Details on how the contractor will escort material delivery vehicles.

(6) Wildlife management. Discuss the following:

(a) Methods and procedures to prevent wildlife attraction.

(b) Wildlife reporting procedures.

(7) Foreign Object Debris (FOD) management. Discuss equipment and methods for control of FOD, including construction debris and dust.

(8) Hazardous material (HAZMAT) management. Discuss equipment and methods for responding to hazardous spills.

(9) Notification of construction activities. Provide the following:

(a) Contractor points of contact.

(b) Contractor emergency contact.

(c) Listing of tall or other requested equipment proposed for use on the airport and the timeframe for submitting 7460-1 forms not previously submitted by the airport operator.

(d) Batch plant details, including 7460-1 submittal.

(10) Inspection requirements. Discuss daily (or more frequent) inspections and special inspection procedures.

(11) Underground utilities. Discuss proposed methods of identifying and protecting underground utilities.

(12) Penalties. Penalties should be identified in the CSPP and should not require an entry in the SPCD.

(13) Special conditions. Discuss proposed actions for each special condition identified in the CSPP.

(14) Runway and taxiway visual aids. Including marking, lighting, signs, and visual NAVAIDs. Discuss proposed visual aids including the following:

(a) Equipment and methods for covering signage and airfield lights.

(b) Equipment and methods for temporary closure markings (paint, fabric, other).

(c) Types of temporary Visual Guidance Slope Indicators (VGSI).

(15) Marking and signs for access routes. Discuss proposed methods of demarcating access routes for vehicle drivers.

(16) Hazard marking and lighting. Discuss proposed equipment and methods for identifying excavation areas.

(17) Protection of runway and taxiway safety areas. including object free areas, obstacle free zones, and approach/departure surfaces. Discuss proposed methods of identifying, demarcating, and protecting airport surfaces including:

(a) Equipment and methods for maintaining Taxiway Safety Area standards.

(b) Equipment and methods for separation of construction operations from aircraft operations, including details of barricades.

(18) Other limitations on construction should be identified in the CSPP and should not require an entry in the SPCD.

Section 2. Plan Requirements

205. Coordination. Airport operators, or tenants conducting construction on their leased properties, should use predesign, prebid, and preconstruction conferences to introduce the subject of airport operational safety during construction (see AC 150/5300-9). In addition, the following should be coordinated as required:

a. Contractor Progress Meetings. Operational safety should be a standing agenda item for discussion during progress meetings throughout the project.

b. Scope or Schedule Changes. Changes in the scope or duration of the project may necessitate revisions to the CSPP and review and approval by the airport operator and the FAA.

c. FAA ATO Coordination. Early coordination with FAA ATO is required to schedule airway facility shutdowns and restarts. Relocation or adjustments to NAVAIDs, or changes to final grades in critical areas, may require an FAA flight inspection prior to restarting the facility. Flight inspections must be coordinated and scheduled well in advance of the intended facility restart. Flight inspections may require a reimbursable agreement between the airport operator and FAA ATO. Reimbursable agreements should be coordinated a minimum of 12 months prior to the start of construction. (See 213.e(3)(b) for required FAA notification regarding FAA owned NAVAIDs.)

206. Phasing. Once it has been determined what types and levels of airport operations will be maintained, the most efficient sequence of construction may not be feasible. In such a case, the sequence of construction may be phased to gain maximum efficiency while allowing for the required operations. The development of the resulting construction phases should be coordinated with local Air Traffic personnel and airport users. The sequenced construction phases established in the CSPP must be incorporated into the project design and must be reflected in the contract drawings and specifications.

a. Phase Elements. For each phase the CSPP should detail:

- Areas closed to aircraft operations

- Duration of closures
- Taxi routes
- ARFF access routes
- Construction staging areas
- Construction access and haul routes
- Impacts to NAVAIDs
- Lighting and marking changes
- Available runway length
- Declared distances (if applicable)
- Required hazard marking and lighting
- Lead times for required notifications

b. Construction Safety Drawings. Drawings specifically indicating operational safety procedures and methods in affected areas (that is, construction safety drawings) should be developed for each construction phase. Such drawings should be included in the CSPP as referenced attachments and should likewise be included in the contract drawing package.

207. Areas and Operations Affected by Construction Activity. Runways and taxiways should remain in use by aircraft to the maximum extent possible without compromising safety. Pre-meetings with the FAA Air Traffic Organization (ATO) will support operational simulations. See Chapter 3 for an example of a table showing temporary operations versus current operations.

a. Identification of Affected Areas. Identifying areas and operations affected by the construction will help to determine possible safety problems. The affected areas should be indentified in the construction safety drawings for each construction phase. (See 206.b above.) Of particular concern are:

(1) Closing, or partial closing, of runways, taxiways and aprons. When a runway is partially closed, a portion of the pavement is unavailable for any aircraft operation, meaning taxiing, landing, or taking off in either direction on that pavement is prohibited. A displaced threshold, by contrast, is established to ensure obstacle clearance and adequate safety area for landing aircraft. The pavement prior to the displaced threshold is available for take-off in the direction of the displacement and for landing and taking off in the opposite direction. Misunderstanding this difference, and issuance of a subsequently inaccurate NOTAM, can lead to a hazardous condition.

(2) Closing of Aircraft Rescue and Fire Fighting access routes.

(3) Closing of access routes used by airport and airline support vehicles.

(4) Interruption of utilities, including water supplies for fire fighting.

(5) Approach/departure surfaces affected by heights of objects.

(6) Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads.

b. Mitigation of Effects. Establishment of specific procedures is necessary to maintain the safety and efficiency of airport operations. The CSPP must address:

(1) Temporary changes to runway and/or taxi operations.

(2) Detours for ARFF and other airport vehicles.

(3) Maintenance of essential utilities.

(4) Temporary changes to air traffic control procedures. Such changes must be coordinated with the ATO.

208. Navigation Aid (NAVAID) Protection. Before commencing construction activity, parking vehicles, or storing construction equipment and materials near a NAVAID, coordinate with the appropriate FAA ATO/Technical Operations office to evaluate the effect of construction activity and the required distance and direction from the NAVAID. (See paragraph 213.e(3) below.) Construction activities, materials/equipment storage, and vehicle parking near electronic NAVAIDs require special consideration since they may interfere with signals essential to air navigation. If any NAVAID may be affected, the CSPP and SPCD must show an understanding of the "critical area" associated with each NAVAID and describe how it will be protected. Where applicable, the operational critical areas of NAVAIDs should be graphically delineated on the project drawings. Pay particular attention to stockpiling material, as well as to movement and parking of equipment that may interfere with line of sight from the ATCT or with electronic emissions. Interference from construction equipment and activities may require NAVAID shutdown or adjustment of instrument approach minimums for low visibility operations. This condition requires that a NOTAM be filed (see paragraph 213.b below). Construction activities and materials/equipment storage near a NAVAID must not obstruct access to the equipment and instruments for maintenance. Submittal of a 7460-1 form is required for construction vehicles operating near FAA NAVAIDs. (See paragraph 213.e(1) below.)

209. Contractor Access. The CSPP must detail the areas to which the contractor must have access, and explain how contractor personnel will access those areas. Specifically address:

a. Location of Stockpiled Construction Materials. Stockpiled materials and equipment storage are not permitted within the RSA and OFZ, and if possible should not be permitted within the Object Free Area (OFA) of an operational runway. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval. The airport operator must ensure that stockpiled materials and equipment adjacent to these areas are prominently marked and lighted during hours of restricted visibility or darkness. (See paragraph 218.b below.) This includes determining and verifying that materials are stabilized and stored at an approved location so as not to be a hazard to aircraft operations and to prevent attraction of wildlife and foreign object damage. See paragraphs 210 and 211 below.

b. Vehicle and Pedestrian Operations. The CSPP should include specific vehicle and pedestrian requirements. Vehicle and pedestrian access routes for airport construction projects must be controlled to prevent inadvertent or unauthorized entry of persons, vehicles, or animals onto the AOA. The airport operator should coordinate requirements for vehicle operations with airport tenants, contractors, and the FAA air traffic manager. In regard to vehicle and pedestrian operations, the CSPP should include the following, and detail associated training requirements:

(1) Construction site parking. Designate in advance vehicle parking areas for contractor employees to prevent any unauthorized entry of persons or vehicles onto the AOA. These areas should provide reasonable contractor employee access to the job site.

(2) Construction equipment parking. Contractor employees must park and service all construction vehicles in an area designated by the airport operator outside the OFZ and never in the safety area of an active runway or taxiway. Unless a complex setup procedure makes movement of specialized equipment infeasible, inactive equipment must not be parked on a closed taxiway or runway. If it is necessary to leave specialized equipment on a closed taxiway or runway at night, the equipment must be well lighted. Employees should also park construction vehicles outside the OFA when not in use by

construction personnel (for example, overnight, on weekends, or during other periods when construction is not active). Parking areas must not obstruct the clear line of sight by the ATCT to any taxiways or runways under air traffic control nor obstruct any runway visual aids, signs, or navigation aids. The FAA must also study those areas to determine effects on airport design criteria, surfaces established by 14 CFR Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace (Part 77), and on NAVAIDs and Instrument Approach Procedures (IAP). See paragraph 213.e(1) below for further information.

(3) Access and haul roads. Determine the construction contractor's access to the construction sites and haul roads. Do not permit the construction contractor to use any access or haul roads other than those approved. Access routes used by contractor vehicles must be clearly marked to prevent inadvertent entry to areas open to airport operations. Pay special attention to ensure that if construction traffic is to share or cross any ARFF routes that ARFF right of way is not impeded at any time, and that construction traffic on haul roads does not interfere with NAVAIDs or approach surfaces of operational runways.

(4) Marking and lighting of vehicles in accordance with AC 150/5210-5, Painting, Marking, and Lighting of Vehicles Used on an Airport.

(5) Description of proper vehicle operations on various areas under normal, lost communications, and emergency conditions.

(6) Required escorts.

(7) Training requirements for vehicle drivers to ensure compliance with the airport operator's vehicle rules and regulations. Specific training should be provided to those vehicle operators providing escorts. See AC 150/5210-20, Ground Vehicle Operations on Airports, for information on training and records maintenance requirements.

(8) Situational awareness. Vehicle drivers must confirm by personal observation that no aircraft is approaching their position (either in the air or on the ground) when given clearance to cross a runway, taxiway, or any other area open to airport operations. In addition, it is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

(9) Two-way radio communication procedures.

(a) General. The airport operator must ensure that tenant and construction contractor personnel engaged in activities involving unescorted operation on aircraft movement areas observe the proper procedures for communications, including using appropriate radio frequencies at airports with and without ATCT. When operating vehicles on or near open runways or taxiways, construction personnel must understand the critical importance of maintaining radio contact, as directed by the airport operator, with:

(i) Airport operations

(ii) ATCT

(iii) Common Traffic Advisory Frequency (CTAF), which may include UNICOM, MULTICOM.

(iv) Automatic Terminal Information Service (ATIS). This frequency is useful for monitoring conditions on the airport. Local air traffic will broadcast information regarding construction related runway closures and "shortened" runways on the ATIS frequency.

(b) Areas requiring two-way radio communication with the ATCT. Vehicular traffic crossing active movement areas must be controlled either by two-way radio with the ATCT, escort, flagman, signal light, or other means appropriate for the particular airport.

(c) Frequencies to be used. The airport operator will specify the frequencies to be used by the contractor, which may include the CTAF for monitoring of aircraft operations. Frequencies may also be assigned by the airport operator for other communications, including any radio frequency in compliance with Federal Communications Commission requirements. At airports with an ATCT, the airport operator will specify the frequency assigned by the ATCT to be used between contractor vehicles and the ATCT.

(d) Proper radio usage, including read back requirements.

(e) Proper phraseology, including the International Phonetic Alphabet.

(f) Light gun signals. Even though radio communication is maintained, escort vehicle drivers must also familiarize themselves with ATCT light gun signals in the event of radio failure. See the FAA safety placard "Ground Vehicle Guide to Airport Signs and Markings." This safety placard may be downloaded through the Runway Safety Program Web site at http://www.faa.gov/airports/runway_safety/publications/ (See "Signs & Markings Vehicle Dashboard Sticker".) or obtained from the FAA Airports Regional Office.

(10) Maintenance of the secured area of the airport, including:

(a) Fencing and gates. Airport operators and contractors must take care to maintain security during construction when access points are created in the security fencing to permit the passage of construction vehicles or personnel. Temporary gates should be equipped so they can be securely closed and locked to prevent access by animals and unauthorized people. Procedures should be in place to ensure that only authorized persons and vehicles have access to the AOA and to prohibit "piggybacking" behind another person or vehicle. The Department of Transportation (DOT) document DOT/FAA/AR-00/52, Recommended Security Guidelines for Airport Planning and Construction, provides more specific information on fencing. A copy of this document can be obtained from the Airport Consultants Council, Airports Council International, or American Association of Airport Executives.

(b) Badging requirements.

(c) Airports subject to 49 CFR Part 1542, Airport Security, must meet standards for access control, movement of ground vehicles, and identification of construction contractor and tenant personnel.

210. Wildlife Management. The CSPP and SPCD must be in accordance with the airport operator's wildlife hazard management plan, if applicable. See also AC 150/5200-33, Hazardous Wildlife Attractants On or Near Airports, and Certalert 98-05, Grasses Attractive to Hazardous Wildlife. Construction contractors must carefully control and continuously remove waste or loose materials that might attract wildlife. Contractor personnel must be aware of and avoid construction activities that can create wildlife hazards on airports, such as:

a. Trash. Food scraps must be collected from construction personnel activity.

b. Standing Water.

c. Tall Grass and Seeds. Requirements for turf establishment can be at odds with requirements for wildlife control. Grass seed is attractive to birds. Lower quality seed mixtures can contain seeds of plants (such as clover) that attract larger wildlife. Seeding should comply with the guidance in AC 150/5370-10, Standards for Specifying Construction of Airports, Item T-901, Seeding. Contact the local office of the United Sates Department of Agriculture Soil Conservation Service or the State University Agricultural Extension Service (County Agent or equivalent) for assistance and recommendations. These agencies can also provide liming and fertilizer recommendations.

d. Poorly Maintained Fencing and Gates. See 209.b(10)(a) above.

e. Disruption of Existing Wildlife Habitat. While this will frequently be unavoidable due to the nature of the project, the CSPP should specify under what circumstances (location, wildlife type) contractor personnel should immediately notify the airport operator of wildlife sightings.

211. Foreign Object Debris (FOD) Management. Waste and loose materials, commonly referred to as FOD, are capable of causing damage to aircraft landing gears, propellers, and jet engines. Construction contractors must not leave or place FOD on or near active aircraft movement areas. Materials capable of creating FOD must be continuously removed during the construction project. Fencing (other than security fencing) may be necessary to contain material that can be carried by wind into areas where aircraft operate. See AC 150/5210-24, Foreign Object Debris (FOD) Management.

212. Hazardous Materials (HAZMAT) Management. Contractors operating construction vehicles and equipment on the airport must be prepared to expeditiously contain and clean-up spills resulting from fuel or hydraulic fluid leaks. Transport and handling of other hazardous materials on an airport also requires special procedures. See AC 150/5320-15, Management of Airport Industrial Waste.

213. Notification of Construction Activities. The CSPP and SPCD must detail procedures for the immediate notification of airport users and the FAA of any conditions adversely affecting the operational safety of the airport. It must address the notification actions described below, as applicable.

a. List of Responsible Representatives/ points of contact for all involved parties, and procedures for contacting each of them, including after hours.

b. NOTAMs. Only the airport operator may initiate or cancel NOTAMs on airport conditions, and is the only entity that can close or open a runway. The airport operator must coordinate the issuance, maintenance, and cancellation of NOTAMs about airport conditions resulting from construction activities with tenants and the local air traffic facility (control tower, approach control, or air traffic control center), and must provide information on closed or hazardous conditions on airport movement areas to the FAA Flight Service Station (FSS) so it can issue a NOTAM. The airport operator must file and maintain a list of authorized representatives with the FSS. Refer to AC 150/5200-28, Notices to Airmen (NOTAMs) for Airport Operators, for a sample NOTAM form. Only the FAA may issue or cancel NOTAMs on shutdown or irregular operation of FAA owned facilities. Any person having reason to believe that a NOTAM is missing, incomplete, or inaccurate must notify the airport operator. See paragraph 207.a(1) above regarding issuing NOTAMs for partially closed runways versus runways with displaced thresholds.

c. Emergency notification procedures for medical, fire fighting, and police response.

d. Coordination with ARFF. The CSPP must detail procedures for coordinating through the airport sponsor with ARFF personnel, mutual aid providers, and other emergency services if construction requires:

- The deactivation and subsequent reactivation of water lines or fire hydrants, or
- The rerouting, blocking and restoration of emergency access routes, or
- The use of hazardous materials on the airfield.

e. Notification to the FAA.

(1) Part 77. Any person proposing construction or alteration of objects that affect navigable airspace, as defined in Part 77, must notify the FAA. This includes construction equipment and proposed

parking areas for this equipment (i.e. cranes, graders, other equipment) on airports. FAA Form 7460-1, Notice of Proposed Construction or Alteration, can be used for this purpose and submitted to the appropriate FAA Airports Regional or District Office. See Appendix 1, Related Reading Material, to download the form. Further guidance is available on the FAA web site at oeaaa.faa.gov.

(2) Part 157. With some exceptions, Title 14 CFR Part 157, Notice of Construction, Alteration, Activation, and Deactivation of Airports, requires that the airport operator notify the FAA in writing whenever a non-Federally funded project involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport. Notification involves submitting FAA Form 7480-1, Notice of Landing Area Proposal, to the nearest FAA Airports Regional or District Office. See Appendix 1, Related Reading Material to download the form.

(3) NAVAIDS. For emergency (short-notice) notification about impacts to both airport owned and FAA owned NAVAIDs, contact: 866-432-2622.

(a) Airport owned/FAA maintained. If construction operations require a shutdown of more than 24 hours, or more than 4 hours daily on consecutive days, of a NAVAID owned by the airport but maintained by the FAA, provide a 45-day minimum notice to FAA ATO/Technical Operations prior to facility shutdown.

(b) FAA owned.

(i) General. The airport operator must notify the appropriate FAA ATO Service Area Planning and Requirements (P&R) Group a minimum of 45 days prior to implementing an event that causes impacts to NAVAIDs. (Impacts to FAA equipment covered by a Reimbursable Agreement (RA) do not have to be reported by the airport operator.)

(ii) Coordinate work for an FAA owned NAVAID shutdown with the local FAA ATO/Technical Operations office, including any necessary reimbursable agreements and flight checks. Detail procedures that address unanticipated utility outages and cable cuts that could impact FAA NAVAIDs. In addition, provide seven days notice to schedule the actual shutdown.

214. Inspection Requirements.

a. Daily Inspections. Inspections should be conducted at least daily, but more frequently if necessary to ensure conformance with the CSPP. A sample checklist is provided in Appendix 3, Safety and Phasing Plan Checklist. See also AC 150/5200-18, Airport Safety Self-Inspection.

b. Final Inspections. New runways and extended runway closures may require safety inspections at certificated airports prior to allowing air carrier service. Coordinate with the FAA Airport Certification Safety Inspector (ACSI) to determine if a final inspection will be necessary.

215. Underground Utilities. The CSPP and/or SPCD must include procedures for locating and protecting existing underground utilities, cables, wires, pipelines, and other underground facilities in excavation areas. This may involve coordinating with public utilities and FAA ATO/Technical Operations. Note that “One Call” or “Miss Utility” services do not include FAA ATO/Technical Operations

216. Penalties. The CSPP should detail penalty provisions for noncompliance with airport rules and regulations and the safety plans (for example, if a vehicle is involved in a runway incursion). Such penalties typically include rescission of driving privileges or access to the AOA.

217. Special Conditions. The CSPP must detail any special conditions that affect the operation of the

airport and will require the activation of any special procedures (for example, low-visibility operations, snow removal, aircraft in distress, aircraft accident, security breach, Vehicle / Pedestrian Deviation (VPD) and other activities requiring construction suspension/resumption).

218. Runway and Taxiway Visual Aids. Includes marking, lighting, signs, and visual NAVAIDS. The CSPP must ensure that areas where aircraft will be operating are clearly and visibly separated from construction areas, including closed runways. Throughout the duration of the construction project, verify that these areas remain clearly marked and visible at all times and that marking, lighting, signs, and visual NAVAIDs remain in place and operational. The CSPP must address the following, as appropriate:

a. General. Airport markings, lighting, signs, and visual NAVAIDs must be clearly visible to pilots, not misleading, confusing, or deceptive. All must be secured in place to prevent movement by prop wash, jet blast, wing vortices, or other wind currents and constructed of materials that would minimize damage to an aircraft in the event of inadvertent contact.

b. Markings. Markings must be in compliance with the standards of AC 150/5340-1, Standards for Airport Markings. Runways and runway exit taxiways closed to aircraft operations are marked with a yellow X. The preferred visual aid to depict temporary runway closure is the lighted X signal placed on or near the runway designation numbers. (See paragraph 218.b(1)(b) below.)

(1) Closed Runways and Taxiways.

(a) Permanently Closed Runways. For runways, obliterate the threshold marking, runway designation marking, and touchdown zone markings, and place Xs at each end and at 1,000-foot (300 m) intervals.

(b) Temporarily Closed Runways. For runways that have been temporarily closed, place an X at the each end of the runway directly on or as near as practicable to the runway designation numbers. Figure 2-1 illustrates.

Figure 2-1 Markings for a Temporarily Closed Runway

(c) Partially Closed Runways and Displaced Thresholds. When threshold markings are needed to identify the temporary beginning of the runway that is available for landing, the markings must comply with AC 150/5340-1. An X is not used on a partially closed runway or a runway with a displaced threshold. See paragraph 207.a(1) above for the difference between partially closed runways and runways with displaced thresholds.

(i) Partially Closed Runways. Pavement markings for temporary closed portions of the runway consist of a runway threshold bar and yellow chevrons to identify pavement areas that are unsuitable for takeoff or landing (see AC 150/5340-1).

(ii) Displaced Thresholds. Pavement markings for a displaced threshold consist of a runway threshold bar and white arrowheads with and without arrow shafts. These markings are required to identify the portion of the runway before the displaced threshold to provide centerline guidance for pilots during approaches, takeoffs, and landing rollouts from the opposite direction. See AC 150/5340-1.

(d) Taxiways.

(i) Permanently Closed Taxiways. AC 150/5300-13 notes that it is preferable to remove the pavement, but for pavement that is to remain, place an X at the entrance to both ends of the closed section. Obliterate taxiway centerline markings, including runway leadoff lines, leading to the closed taxiway. Figure 2-2 illustrates.

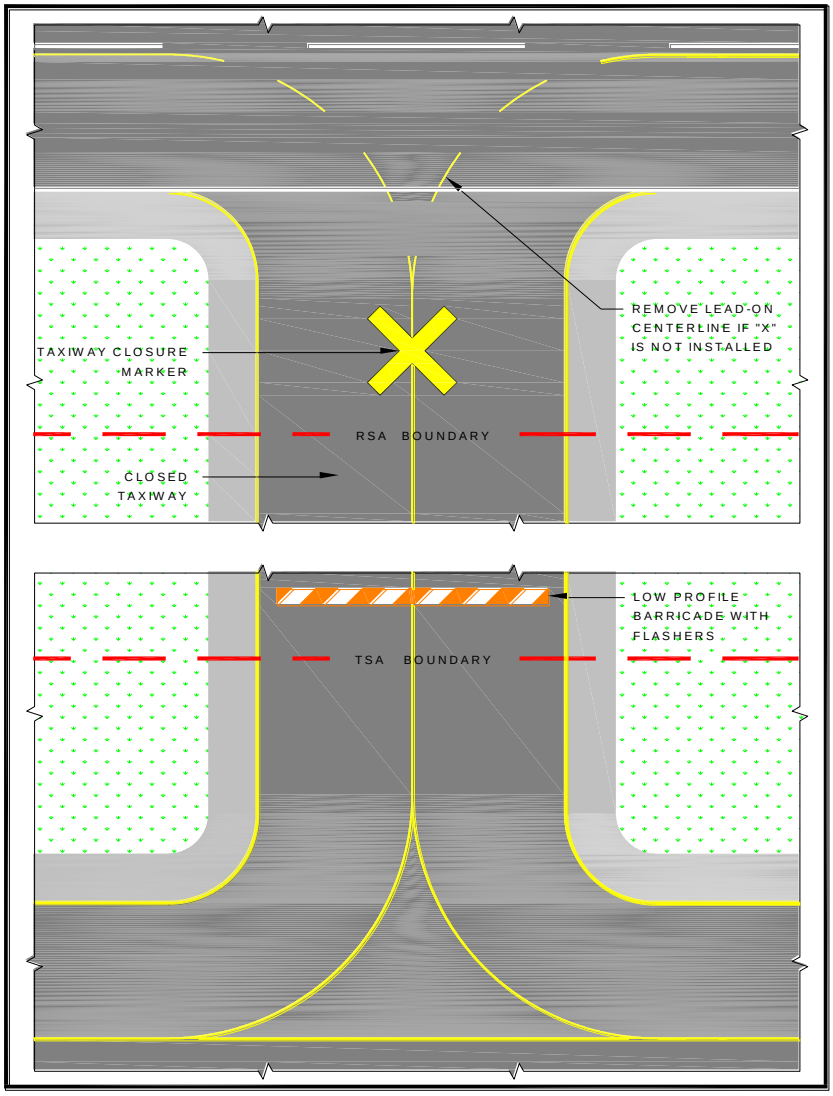

Figure 2-2 Taxiway Closure

(ii) Temporarily Closed Taxiways. Place barricades outside the safety area of intersecting taxiways. For runway/taxiway intersections, place an X at the entrance to the closed taxiway from the runway. If the taxiway will be closed for an extended period, obliterate taxiway centerline markings, including runway leadoff lines, leading to the closed section. If the centerline markings will be reused upon reopening the taxiway, it is preferable to paint over the marking. This will result in less damage to the pavement when the upper layer of paint is ultimately removed.

(e) Temporarily Closed Airport. When the airport is closed temporarily, mark all the runways as closed.

(i) If unable to paint temporary markings on the pavement, construct them from any of the following materials: fabric, colored plastic, painted sheets of plywood, or similar materials. They must be properly configured and appropriately secured to prevent movement by prop wash, jet blast, or other wind currents.

(ii) It may be necessary to remove or cover runway markings, including but not limited to, runway designation markings, threshold markings, centerline markings, edge stripes, touchdown zone markings and aiming point markings, depending on the length of construction and type of activity at the airport. When removing runway markings, apply the same treatment to areas between stripes or numbers, as the cleaned area will appear to pilots as a marking in the shape of the treated area.

(iii) If it is not possible to install threshold bars, chevrons, and arrows on the pavement, temporary outboard markings may be used. Locate them outside of the runway pavement surface on both sides of the runway. The dimension along the runway direction must be the same as if installed on the pavement. The lateral dimension must be at least one-half that of on-pavement markings. If the markings are not discernable on grass or snow, apply a black background with appropriate material over the ground to ensure they are clearly visible.

(iv) The application rate of paint to mark a short-term temporary runway and taxiway markings may deviate from the standard (see Item P-620, "Runway and Taxiway Painting," in AC 150/5370-10), but the dimensions must meet the existing standards.

(f) Lighting and Visual NAVAIDs. This paragraph refers to standard runway and taxiway lighting systems. See below for hazard lighting. Lighting must be in conformance with AC 150/5340-30, Design and Installation Details for Airport Visual Aids, and AC 150/5345-50, Specification for Portable Runway and Taxiway Lights. When disconnecting runway and taxiway lighting fixtures, disconnect the associated isolation transformers. Alternately, cover the light fixture in such a way as to prevent light leakage. Avoid removing the lamp from energized fixtures because an excessive number of isolation transformers with open secondaries may damage the regulators and/or increase the current above its normal value. Secure, identify, and place any above ground temporary wiring in conduit to prevent electrocution and fire ignition sources.

(2) Permanently Closed Runways and Taxiways. For runways and taxiways that have been permanently closed, disconnect the lighting circuits.

(3) Temporarily Closed Runways. If available, use a lighted X, both at night and during the day, placed at each end of the runway facing the approach. The use of a lighted X is required if night work requires runway lighting to be on. See AC 150/5345-55, Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure. For runways that have been temporarily closed, but for an extended period, and for those with pilot controlled lighting, disconnect the lighting circuits or secure switches to prevent inadvertent activation. For runways that will be opened periodically, coordinate procedures with the FAA air traffic manager or, at airports without an ATCT, the airport operator. Activate stop bars if available. Figure 2-3 shows a lighted X by day. Figure 2-4 shows a lighted X at night.

Figure 2-3 Lighted X in Daytime

Figure 2-4 Lighted X at Night

(4) Partially Closed Runways and Displaced Thresholds. When a runway is partially closed, a portion of the pavement is unavailable for any aircraft operation, meaning taxiing and landing or

taking off in either direction. A displaced threshold, by contrast, is put in place to ensure obstacle clearance by landing aircraft. The pavement prior to the displaced threshold is available for takeoff in the direction of the displacement, and for landing and takeoff in the opposite direction. Misunderstanding this difference and issuance of a subsequently inaccurate NOTAM can result in a hazardous situation. For both partially closed runways and displaced thresholds, approach lighting systems at the affected end must be placed out of service

(a) Partially Closed Runways. Disconnect edge and threshold lights on that part of the runway at and behind the threshold (that is, the portion of the runway that is closed). Alternately, cover the light fixture in such a way as to prevent light leakage.

(b) Displaced Thresholds. Edge lighting in the area of the displacement emits red light in the direction of approach and yellow light in the opposite direction. Centerline lights are blanked out in the direction of approach if the displacement is 700 ft or less. If the displacement is over 700 ft, place the centerline lights out of service. See AC 150/5340-30 for details on lighting displaced thresholds.

(c) Temporary runway thresholds and runway ends must be lighted if the runway is lighted and it is the intended threshold for night landings or instrument meteorological conditions.

(d) A temporary threshold on an unlighted runway may be marked by retroreflective, elevated markers in addition to markings noted in paragraph 218.b(1)(c) above. Markers seen by aircraft on approach are green. Markers at the rollout end of the runway are red. At certificated airports, temporary elevated threshold markers must be mounted with a frangible fitting (see 14 CFR Part 139.309). At non-certificated airports, the temporary elevated threshold markings may either be mounted with a frangible fitting or be flexible. See AC 150/5345-39, Specification for L-853, Runway and Taxiway Retroreflective Markers.

(e) Temporary threshold lights and end lights and related visual NAVAIDs are installed outboard of the edges of the full-strength pavement only when they cannot be installed on the pavement. They are installed with bases at grade level or as low as possible, but not more than 3 in (7.6 cm) above ground. When any portion of a base is above grade, place properly compacted fill around the base to minimize the rate of gradient change so aircraft can, in an emergency, cross at normal landing or takeoff speeds without incurring significant damage. See AC 150/5370-10.

(f) Maintain threshold and edge lighting color and spacing standards as described in AC 150/5340-30. Battery powered, solar, or portable lights that meet the criteria in AC 150/5345-50 may be used. These systems are intended primarily for visual flight rules (VFR) aircraft operations but may be used for instrument flight rules (IFR) aircraft operations, upon individual approval from the Flight Standards Division of the applicable FAA Regional Office.

(g) Reconfigure yellow lenses (caution zone), as necessary. If the runway has centerline lights, reconfigure the red lenses, as necessary, or place the centerline lights out of service.

(h) Relocate the visual glide slope indicator (VGSI), such as VASI and PAPI; other airport lights, such as Runway End Identifier Lights (REIL); and approach lights to identify the temporary threshold. Another option is to disable the VGSI or any equipment that would give misleading indications to pilots as to the new threshold location. Installation of temporary visual aids may be necessary to provide adequate guidance to pilots on approach to the affected runway. If the FAA owns and operates the VGSI, coordinate its installation or disabling with the local ATO/Technical Operations Office. Relocation of such visual aids will depend on the duration of the project and the benefits gained from the relocation, as this can result in great expense.

(i) Issue a NOTAM to inform pilots of temporary lighting conditions.

(5) Temporarily Closed Taxiways. If possible, deactivate the taxiway lighting circuits. When deactivation is not possible (for example other taxiways on the same circuit are to remain open),

cover the light fixture in such a way as to prevent light leakage.

c. Signs. To the extent possible, signs must be in conformance with AC 150/5345-44, Specification for Runway and Taxiway Signs and AC 150/5340-18, Standard for Airport Sign Systems. Any time a sign does not serve its normal function; it must be covered or removed to prevent misdirecting pilots. Note that information signs identifying a crossing taxiway continue to perform their normal function even if the crossing taxiway is closed. For long term construction projects, consider relocating signs, especially runway distance remaining signs.

219. Marking and Signs for Access Routes. The CSPP should indicate that pavement markings and signs for construction personnel will conform to AC 150/5340-18 and, to the extent practicable, with the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and/or State highway specifications. Signs adjacent to areas used by aircraft must comply with the frangibility requirements of AC 150/5220-23, Frangible Connections, which may require modification to size and height guidance in the MUTCD.

220. Hazard Marking, Lighting and Signing.

a. Hazard Marking and Lighting Prevents Pilots from entering areas closed to aircraft, and prevents construction personnel from entering areas open to aircraft. The CSPP must specify prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles. Hazard marking and lighting must also be specified to identify open manholes, small areas under repair, stockpiled material, waste areas, and areas subject to jet blast. Also consider less obvious construction-related hazards and include markings to identify FAA, airport, and National Weather Service facilities cables and power lines; instrument landing system (ILS) critical areas; airport surfaces, such as RSA, OFA, and OFZ; and other sensitive areas to make it easier for contractor personnel to avoid these areas.

b. Equipment.

(1) Barricades, including traffic cones, (weighted or sturdily attached to the surface) are acceptable methods used to identify and define the limits of construction and hazardous areas on airports. Careful consideration must be given to selecting equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast. The spacing of barricades must be such that a breach is physically prevented barring a deliberate act. For example, if barricades are intended to exclude vehicles, gaps between barricades must be smaller than the width of the excluded vehicles, generally 4 ft. Provision must be made for ARFF access if necessary. If barricades are intended to exclude pedestrians, they must be continuously linked. Continuous linking may be accomplished through the use of ropes, securely attached to prevent FOD.

(2) Lights must be red, either steady burning or flashing, and must meet the luminance requirements of the State Highway Department. Batteries powering lights will last longer if lights flash. Lights must be mounted on barricades and spaced at no more than 10 ft. Lights must be operated between sunset and sunrise and during periods of low visibility whenever the airport is open for operations. They may be operated by photocell, but this may require that the contractor turn them on manually during periods of low visibility during daytime hours.

(3) Supplement barricades with signs (for example “No Entry,” “No Vehicles”) as necessary.

(4) Air Operations Area – General. Barricades are not permitted in any active safety area. Within a runway or taxiway object free area, and on aprons, use orange traffic cones, flashing or steady burning red lights as noted above, collapsible barricades marked with diagonal, alternating orange and

white stripes; and/or signs to separate all construction/maintenance areas from the movement area. Barricades may be supplemented with alternating orange and white flags at least 20 by 20 in (50 by 50 cm) square and securely fastened to eliminate FOD. All barricades adjacent to any open runway or taxiway / taxilane safety area, or apron must be as low as possible to the ground, and no more than 18 in high, exclusive of supplementary lights and flags. Barricades must be of low mass; easily collapsible upon contact with an aircraft or any of its components; and weighted or sturdily attached to the surface to prevent displacement from prop wash, jet blast, wing vortex, or other surface wind currents. If affixed to the surface, they must be frangible at grade level or as low as possible, but not to exceed 3 in (7.6 cm) above the ground. Figure 2-5 and Figure 2-6 show sample barricades with proper coloring and flags.

Figure 2-5 Interlocking Barricades

Figure 2-6 Low Profile Barricades

(5) Air Operations Area – Runway/Taxiway Intersections. Use highly reflective barricades with lights to close taxiways leading to closed runways. Evaluate all operating factors when determining how to mark temporary closures that can last from 10 to 15 minutes to a much longer period of time. However, even for closures of relatively short duration, close all taxiway/runway intersections with barricades. The use of traffic cones is appropriate for short duration closures.

(6) Air Operations Area – Other. Beyond runway and taxiway object free areas and

aprons, barricades intended for construction vehicles and personnel may be many different shapes and made from various materials, including railroad ties, sawhorses, jersey barriers, or barrels.

(7) Maintenance. The construction specifications must include a provision requiring the contractor to have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades. The contractor must file the contact person's information with the airport operator. Lighting should be checked for proper operation at least once per day, preferably at dusk.

221. Protection of Runway and Taxiway Safety Areas. Runway and taxiway safety areas, Obstacle Free zones (OFZ), object free areas (OFA), and approach surfaces are described in AC 150/5300-13. Protection of these areas includes limitations on the location and height of equipment and stockpiled material. An FAA airspace study may be required. Coordinate with the appropriate FAA Airports Regional or District Office if there is any doubt as to requirements or dimensions (See paragraph 213.e above.) as soon as the location and height of materials or equipment are known. The CSPP should include drawings showing all safety areas, object free areas, obstacle free zones and approach departure surfaces affected by construction.

a. Runway Safety Area (RSA). A runway safety area is the defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway (see AC 150/5300-13). Construction activities within the existing RSA are subject to the following conditions:

(1) No construction may occur within the existing RSA while the runway is open for aircraft operations. The RSA dimensions may be temporarily adjusted if the runway is restricted to aircraft operations requiring an RSA that is equal to the RSA width and length beyond the runway ends available during construction. (see AC 150/5300-13). The temporary use of declared distances and/or partial runway closures may provide the necessary RSA under certain circumstances. Coordinate with the appropriate FAA Airports Regional or District Office to have declared distances information published. See AC 150/5300-13 for guidance on the use of declared distances.

(2) The airport operator must coordinate the adjustment of RSA dimensions as permitted above with the appropriate FAA Airports Regional or District Office and the local FAA air traffic manager and issue a NOTAM.

(3) The CSPP and SPCD must provide procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations.

(4) Excavations.

(a) Open trenches or excavations are not permitted within the RSA while the runway is open. If possible, backfill trenches before the runway is opened. If the runway must be opened before excavations are backfilled, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the runway across the trench without damage to the aircraft.

(b) Construction contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during hours of restricted visibility or darkness.

(5) Erosion Control. Soil erosion must be controlled to maintain RSA standards, that is, the RSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and fire fighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

b. Runway Object Free Area (ROFA). Construction, including excavations, may be permitted in the ROFA. However, equipment must be removed from the ROFA when not in use, and material should not be stockpiled in the ROFA if not necessary. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval.

c. Taxiway Safety Area (TSA). A taxiway safety area is a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway. (See AC 150/5300-13.) Construction activities within the TSA are subject to the following conditions:

(1) No construction may occur within the TSA while the taxiway is open for aircraft operations. The TSA dimensions may be temporarily adjusted if the taxiway is restricted to aircraft operations requiring a TSA that is equal to the TSA width available during construction (see AC 150/5300-13, Table 4-1).

(2) The airport operator must coordinate the adjustment of the TSA width as permitted above with the appropriate FAA Airports Regional or District Office and the FAA air traffic manager and issue a NOTAM.

(3) The CSPP and SPCD must provide procedures for ensuring adequate distance for protection from blasting operations.

(4) Excavations.

(a) Open trenches or excavations are not permitted within the TSA while the taxiway is open. If possible, backfill trenches before the taxiway is opened. If the taxiway must be opened before excavations are backfilled, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the taxiway across the trench without damage to the aircraft.

(b) Construction contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during hours of restricted visibility or darkness.

(5) Erosion Control. Soil erosion must be controlled to maintain TSA standards, that is, the TSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and fire fighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

d. Taxiway Object Free Area (TOFA). Unlike the Runway Object Free Area, aircraft wings regularly penetrate the taxiway object free area during normal operations. Thus the restrictions are more stringent. Except as provided below, no construction may occur within the taxiway object free area while the taxiway is open for aircraft operations.

(1) The taxiway object free area dimensions may be temporarily adjusted if the taxiway is restricted to aircraft operations requiring a taxiway object free area that is equal to the taxiway object free area width available.

(2) Offset taxiway pavement markings may be used as a temporary measure to provide the required taxiway object free area. Where offset taxiway pavement markings are provided, centerline lighting or reflectors are required.

(3) Construction activity may be accomplished without adjusting the width of the taxiway object free area, subject to the following restrictions:

(a) Appropriate NOTAMs are issued.

(b) Marking and lighting meeting the provisions of paragraphs 218 and 220 above are implemented.

(c) Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang). In these situations, flaggers must be used to direct construction equipment, and wing walkers will be necessary to guide aircraft. Wing walkers should be airline/aviation personnel rather than construction workers. If such clearance can only be maintained if an aircraft does not have full use of the entire taxiway width (with its main landing gear at the edge of the pavement), then it will be necessary to move personnel and equipment for the passage of that aircraft.

e. Obstacle Free Zone (OFZ). In general, personnel, material, and/or equipment may not penetrate the OFZ while the runway is open for aircraft operations. If a penetration to the OFZ is necessary, it may be possible to continue aircraft operations through operational restrictions. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

f. Runway Approach/Departure Areas and Clearways. All personnel, materials, and/or equipment must remain clear of the applicable threshold siting surfaces, as defined in Appendix 2, "Threshold Siting Requirements," of AC 150/5300-13. Objects that do not penetrate these surfaces may still be obstructions to air navigation and may affect standard instrument approach procedures. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

(1) Construction activity in a runway approach/departure area may result in the need to partially close a runway or displace the existing runway threshold. Partial runway closure, displacement of the runway threshold, as well as closure of the complete runway and other portions of the movement area also require coordination through the airport operator with the appropriate FAA air traffic manager (FSS if non-towered) and ATO/Technical Operations (for affected NAVAIDS) and airport users.

(2) Caution regarding partial runway closures. When filing a NOTAM for a partial runway closure, clearly state to OCC personnel that the portion of pavement located prior to the threshold is not available for landing and departing traffic. In this case, the threshold has been moved for both landing and takeoff purposes (this is different than a displaced threshold). There may be situations where the portion of closed runway is available for taxiing only. If so, the NOTAM must reflect this condition).

(3) Caution regarding displaced thresholds. : Implementation of a displaced threshold affects runway length available for aircraft landing over the displacement. Depending on the reason for the displacement (to provide obstruction clearance or RSA), such a displacement may also require an adjustment in the landing distance available and accelerate-stop distance available in the opposite direction. If project scope includes personnel, equipment, excavation, other work. within the existing RSA of any usable runway end, do not implement a displaced threshold unless arrivals and departures toward the construction activity are prohibited. Instead, implement a partial closure.

222. Other Limitations on Construction. The CSPP must specify any other limitations on construction, including but not limited to:

a. Prohibitions.

(1) No use of tall equipment (cranes, concrete pumps, and so on) unless a 7460-1 determination letter is issued for such equipment.

(2) No use of open flame welding or torches unless fire safety precautions are provided and the airport operator has approved their use.

(3) No use of electrical blasting caps on or within 1,000 ft (300 m) of the airport property.

See AC 150/5370-10.

(4) No use of flare pots within the AOA.

b. Restrictions.

(1) Construction suspension required during specific airport operations.

(2) Areas that cannot be worked on simultaneously.

(3) Day or night construction restrictions.

(4) Seasonal construction restrictions.

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Chapter 3. Guidelines for Writing a CSPP

301. General Requirements. The CSPP is a standalone document written to correspond with the subjects outlined in Chapter 2, Section 1, paragraph 204. The CSPP is organized by numbered sections corresponding to each subject listed in Chapter 2, Section 1, paragraph 204, and described in detail in Chapter 2, Section 2. Each section number and title in the CSPP matches the corresponding subject outlined in Chapter 2, paragraph 204 (for example, 1. Coordination, 2. Phasing, 3. Areas and Operations Affected by the Construction Activity, and so on.). With the exception of the project scope of work outlined in Section 2. Phasing, only subjects specific to operational safety during construction should be addressed.

302. Applicability of Subjects. Each section should, to the extent practical, focus on the specific subject. Where an overlapping requirement spans several sections, the requirement should be explained in detail in the most applicable section. A reference to that section should be included in all other sections where the requirement may apply. For example, the requirement to protect existing underground FAA Instrument Landing System (ILS) cables during trenching operations could be considered FAA ATO coordination (Section 1. Coordination, paragraph 205.c), an area and operation affected by the construction activity (Section 3. Areas and Operations Affected by the Construction Activity, paragraph 207.a(4)), a protection of a NAVAID (Section 4. Protection of Navigational Aids (NAVAIDs),paragraph 208), or a notification to the FAA of construction activities (Section 9. Notification of Construction Activities, paragraph 210.e(3)(b)). However, it is more specifically an underground utility requirement (Section 11. Underground Utilities, paragraph 215). The procedure for protecting underground ILS cables during trenching operations should therefore be described in Section 11: "*The contractor must coordinate with the local FAA System Support Center (SSC) to mark existing ILS cable routes along Runway 17-35. The ILS cables will be located by hand digging whenever the trenching operation moves within 10 feet of the cable markings.*" All other applicable sections should include a reference to Section 11: "*ILS cables shall be identified and protected as described in Section 11*" or "*See Section 11 for ILS cable identification and protection requirements.*" Thus, the CSPP should be considered as a whole, with no need to duplicate responses to related issues.

303. Graphical Representations. Construction safety drawings should be included in the CSPP as attachments. When other graphical representations will aid in supporting written statements, the drawings, diagrams, and/or photographs should also be attached to the CSPP. References should be made in the CSPP to each graphical attachment and may be made in multiple sections.

304. Reference Documents. The CSPP must not incorporate a document by reference unless reproduction of the material in that document is prohibited. In that case, either copies of or a source for the referenced document must be provided to the contractor.

305. Restrictions. The CSPP should not be considered as a project design review document. The CSPP should also avoid mention of permanent ("as-built") features such as pavements, markings, signs, and lighting, except when such features are intended to aid in maintaining operational safety during the construction.

306. Coordination. Include in this section a detailed description of conferences and meetings both before and during the project. Include appropriate information from AC 150/5300-9. Discuss coordination procedures and schedules for each required FAA ATO airway facility shutdown and restart and all required flight inspections.

307. Phasing. Include in this section a detailed scope of work description for the project as a whole and each phase of work covered by the CSPP. This includes all locations and durations of the work proposed. Attach drawings to graphically support the written scope of work. Detail in this section the sequenced phases of the proposed construction. Include a reference to paragraph 308 below, as appropriate.

308. Areas and Operations Affected By Construction. Focus in this section on identifying the areas and operations affected by the construction. Describe corresponding mitigation that is not covered in detail elsewhere in the CSPP. Include references to paragraphs below as appropriate. Attach drawings as necessary to graphically describe affected areas and mechanisms proposed. Tables and charts such as the following may be helpful in highlighting issues to be addressed.

Table 3-1 Sample Operations Effects

Project	Runway 15-33 Reconstruction	
Phase	Phase II: Reconstruct Runway 15 End	
Scope of Work	Reconstruct 1,000 ft of north end of Runway 15-33 with Portland Cement Concrete (PCC).	
Operational Requirements	**Normal (Existing)**	**Phase II (Anticipated)**
Runway 15 Average Aircraft Operations	Carrier: 52 /day GA: 26 /day Military: 11 /day	Carrier: 52 / day GA: 20 / day Military: 0 /day
Runway 33 Average Aircraft Operations	Carrier: 40 /day GA: 18 /day Military: 10 /day	Carrier: 20 /day GA: 5 /day Military: 0 /day
Runway 15-33 ARC	C-IV	C-IV
Runway 15 Approach Visibility Minimums	¾ mile	1 mile
Runway 33 Approach Visibility Minimums	¾ mile	1 mile
Runway 15 Declared Distances	TORA: 7,820	TORA: 6,420
	TODA: 7,820	TODA: 6,420
	ASDA: 7,820	ASDA: 6,420
	LDA: 7,820	LDA: 6,420
Runway 33 Declared Distances	TORA: 8,320	TORA: 6,920
	TODA: 8,320	TODA: 6,920
	ASDA: 8,320	ASDA: 6,920
	LDA: 7,820	LDA: 6,420
Runway 15 Approach Procedures	ILS	LOC only
	RNAV	N/A
	VOR	N/A
Runway 33 Approach Procedures	ILS	Visual only
	RNAV	N/A
	VOR	N/A
Runway 15 NAVAIDs	ILS/DME, MALSR, RVR	LOC/DME, PAPI (temp), RVR

Runway 33 NAVAIDs	ILS/DME, MALSF, PAPI, RVR	MALSF, PAPI, RVR
Taxiway G ADG	IV	IV (N/A between T/W H and R/W 15 end)
Taxiway E ADG	IV	IV
ATCT (hours open)	06:00 – 24:00 local	06:00 – 24:00 local
ARFF Index	D	D
Special Conditions	Air National Guard (ANG) military operations	Military operations relocated to alternate ANG Base
	Airline XYZ requires VGSI	Airline XYZ requires VGSI

Complete the following chart for each phase to determine the area that must be protected along the runway edges:

Runway	**Aircraft Approach Category* A, B, C, or D**	**Airplane Design Group* I, II, III, or IV**	**RSA Width in Feet Divided by 2***
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
*See AC 150/5300-13 to complete the chart for a specific runway.			

Complete the following chart for each phase to determine the area that must be protected before the runway threshold:

Runway End Number	**Airplane Design Group* I, II, III, or IV**	**Aircraft Approach Category* A, B, C, or D**	**Minimum Safety Area Prior to the Threshold***	**Minimum Distance to Threshold Based on Required Approach Slope***	
_____	_____	_____	_____ ft	_____ ft	_____: 1
_____	_____	_____	_____ ft	_____ ft	_____: 1
_____	_____	_____	_____ ft	_____ ft	_____: 1
_____	_____	_____	_____ ft	_____ ft	_____: 1
*See AC 150/5300-13 to complete the chart for a specific runway.					

309. Navigation Aid (NAVAID) Protection. List in this section all NAVAID facilities that will be affected by the construction. Identify NAVAID facilities that will be placed out of service at any time prior to or during construction activities. Identify individuals responsible for coordinating each shutdown and when each facility will be out of service. Include a reference to paragraph 306 above for FAA ATO NAVAID shutdown, restart, and flight inspection coordination. Outline in detail procedures to protect each NAVAID facility remaining in service from interference by construction activities. Include a reference to paragraph 314 for the issuance of NOTAMs as required. Include a reference to paragraph 316 for the protection of underground cables and piping serving NAVAIDs. If temporary visual aids are proposed to replace or supplement existing facilities, include a reference to paragraph 319. Attach drawings to graphically indicate the affected NAVAIDS and the corresponding critical areas.

310. Contractor Access. This will necessarily be the most extensive section of the CSPP. Provide

sufficient detail so that a contractor not experienced in working on airports will understand the unique restrictions such work will require. Due to this extent, it should be broken down into subsections as described below:

a. Location of Stockpiled Construction Materials. Describe in this section specific locations for stockpiling material. Note any height restrictions on stockpiles. Include a reference to paragraph 321 for hazard marking and lighting devices used to identify stockpiles. Include a reference to paragraph 311 for provisions to prevent stockpile material from becoming wildlife attractants. Include a reference to paragraph 312 for provisions to prevent stockpile material from becoming FOD. Attach drawings to graphically indicate the stockpile locations.

b. Vehicle and Pedestrian Operations. While there are many items to be addressed in this major subsection of the CSPP, all are concerned with one main issue: keeping people and vehicles from areas of the airport where they don't belong. This includes preventing unauthorized entry to the AOA and preventing the improper movement of pedestrians or vehicles on the airport. In this section, focus on mechanisms to prevent construction vehicles and workers traveling to and from the worksite from unauthorized entry into movement areas. Specify locations of parking for both employee vehicles and construction equipment, and routes for access and haul roads. In most cases, this will best be accomplished by attaching a drawing. Quote from AC 150/5210-5 specific requirements for contractor vehicles rather than referring to the AC as a whole, and include special requirements for identifying Hazardous Material (HAZMAT) vehicles. Quote from, rather than incorporate by reference, AC 150/5210-20 as appropriate to address the airport's rules for ground vehicle operations, including its training program. Discuss the airport's recordkeeping system listing authorized vehicle operators.

c. Two-Way Radio Communications. Include a special section to identify all individuals who are required to maintain communications with Air Traffic (AT) at airports with active towers, or monitor Common Traffic Advisory Frequencies (CTAF) at airports without or with closed ATCT. Include training requirements for all individuals required to communicate with AT. Individuals required to monitor AT frequencies should also be identified. If construction employees are also required to communicate by radio with Airport Operations, this procedure should be described in detail. Usage of vehicle mounted radios and/or portable radios should be addressed. Communication procedures for the event of disabled radio communication (that is, light signals, telephone numbers, others) must be included. All radio frequencies should by identified (Tower, Ground Control, CTAF, UNICOM, ATIS, and so on).

d. Airport Security. Address security as it applies to vehicle and pedestrian operations. Discuss TSA requirements, security badging requirements, perimeter fence integrity, gate security, and other needs. Attach drawings to graphically indicate secured and/or Security Identification Display Areas (SIDA), perimeter fencing, and available access points.

311. Wildlife Management. Discuss in this section wildlife management procedures. Describe the maintenance of existing wildlife mitigation devices, such as perimeter fences, and procedures to limit wildlife attractants. Include procedures to notify Airport Operations of wildlife encounters. Include a reference to paragraph 310 for security (wildlife) fence integrity maintenance as required.

312. Foreign Object Debris (FOD) Management. In this section, discuss methods to control and monitor FOD: worksite housekeeping, ground vehicle tire inspections, runway sweeps, and so on. Include a reference to paragraph 315 for inspection requirements as required.

313. Hazardous Materials (HAZMAT) Management. Describe in this section HAZMAT management procedures: fuel deliveries, spill recovery procedures, Material Safety Data Sheet (MSDS) availability, and other considerations. Any specific airport HAZMAT restrictions should also be

identified. Include a reference to paragraph 310 for HAZMAT vehicle identification requirements. Quote from, rather than incorporate by reference, AC 150/5320-15.

314. Notification of Construction Activities. List in this section the names and telephone numbers of points of contact for all parties affected by the construction project. We recommend a single list that includes all telephone numbers required under this section. Include emergency notification procedures for all representatives of all parties potentially impacted by the construction. Identify individual representatives – and at least one alternate – for each party. List both on-duty and off-duty contact information for each individual, including individuals responsible for emergency maintenance of airport construction hazard lighting and barricades. Describe procedures to coordinate immediate response to events that might adversely affect the operational safety of the airport (such as interrupted NAVAID service). Explain requirements for and the procedures for the issuance of Notices to Airmen (NOTAMs), notification to FAA required by 14 CFR Part 77 and Part 157 and in the event of affected NAVAIDs. For NOTAMs, identify an individual, and at least one alternate, responsible for issuing and cancelling each specific type of Notice to Airmen (NOTAM) required. Detail notification methods for police, fire fighting, and medical emergencies. This may include 911, but should also include direct phone numbers of local police departments and nearby hospitals. The local Poison Control number should be listed. Procedures regarding notification of Airport Operations and/or the ARFF Department of such emergencies should be identified, as applicable. If airport radio communications are identified as a means of emergency notification, include a reference to paragraph 310. Differentiate between emergency and nonemergency notification of ARFF personnel, the latter including activities that affect ARFF water supplies and access roads. Identify the primary ARFF contact person and at least one alternate. If notification is to be made through Airport Operations, then detail this procedure. Include a method of confirmation from the ARFF department.

315. Inspection Requirements. Describe in this section inspection requirements to ensure airfield safety compliance. Include a requirement for routine inspections by the resident engineer (RE) and the construction contractors. If the engineering consultants and/or contractors have a Safety Officer who will conduct such inspections, identify this individual. Describe procedures for special inspections, such as those required to reopen areas for aircraft operations. Part 139 requires daily airfield inspections at certificated airports, but these may need to be more frequent when construction is in progress. Discuss the role of such inspections on areas under construction. Include a requirement to immediately remedy any deficiencies, whether caused by negligence, oversight, or project scope change.

316. Underground Utilities. Explain how existing underground utilities will be located and protected. Identify each utility owner and include contact information for each company/agency in the master list. Address emergency response procedures for damaged or disrupted utilities. Include a reference to paragraph 314 above for notification of utility owners of accidental utility disruption as required.

317. Penalties. Describe in this section specific penalties imposed for noncompliance with airport rules and regulations, including the CSPP: SIDA violations, Vehicle/Pedestrian Deviations (VPD), and others.

318. Special Conditions. Identify any special conditions that may trigger specific safety mitigation actions outlined in this CSPP: low visibility operations, snow removal, aircraft in distress, aircraft accident, security breach, VPD, and other activities requiring construction suspension/resumption. Include a reference to paragraph 310 above for compliance with airport safety and security measures and for radio communications as required. Include a reference to paragraph 319 below for emergency notification of all involved parties, including police/security, ARFF, and medical services.

319. Runway and Taxiway Visual Aids. Include marking, lighting, signs, and visual NAVAIDS.

Detail temporary runway and taxiway marking, lighting, signs, and visual NAVAIDs required for the construction. Discuss existing marking, lighting, signs, and visual NAVAIDs that are temporarily, altered, obliterated, or shut down. Consider non-federal facilities and address requirements for reimbursable agreements necessary for alteration of FAA facilities and for necessary flight checks. Identify temporary TORA signs or runway distance remaining signs if appropriate. Identify required temporary visual NAVAIDs such as REIL or PAPI. Quote from, rather than incorporate by reference, AC 150/5340-1, Standards for Airport Markings, AC 150/5340-18, Standards for Airport Sign Systems, and AC 150/5340-30, as required. Attach drawings to graphically indicate proposed marking, lighting, signs, and visual NAVAIDs.

320. Marking and Signs for Access Routes. Detail plans for marking and signs for vehicle access routes. To the extent possible, signs should be in conformance with the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and/or State highway specifications, not hand lettered. Detail any modifications to the guidance in the MUTCD necessary to meet frangibility/height requirements.

321. Hazard Marking and Lighting. Specify all marking and lighting equipment, including when and where each type of device is to be used. Specify maximum gaps between barricades and the maximum spacing of hazard lighting. Identify one individual and at least one alternate responsible for maintenance of hazard marking and lighting equipment in the master telephone list. Include a reference to paragraph 314 above. Attach drawings to graphically indicate the placement of hazard marking and lighting equipment.

322. Protection of Runway and Taxiway Safety Areas. This section should focus exclusively on procedures for protecting all safety areas, including those altered by the construction: methods of demarcation, limit of access, movement within safety areas, stockpiling and trenching restrictions, and so on. Reference AC 150/5300-13: Airport Design as required. Include a reference to paragraph 310 above for procedures regarding vehicle and personnel movement within safety areas. Include a reference to paragraph 310 above for material stockpile restrictions as required. Detail requirements for trenching, excavations, and backfill. Include a reference to paragraph 321 for hazard marking and lighting devices used to identify open excavations as required. If runway and taxiway closures are proposed to protect safety areas, or if temporary displaced thresholds and/or revised declared distances are used to provide adequate Runway Safety Area, include a reference to paragraphs 314 and 319 above. Detail procedures for protecting the runway OFZ, runway OFA, taxiway OFA and runway approach surfaces including those altered by the construction: methods of demarcation, limit of cranes, storage of equipment, and so on. Quote from, rather than incorporate by reference, AC 150/5300-13: Airport Design as required. Include a reference to paragraph 323 for height (i.e. crane) restrictions as required. One way to address the height of equipment that will move during the project is to establish a three-dimensional “box” within which equipment will be confined that can be studied as a single object. Attach drawings to graphically indicate the safety area, OFZ, and OFA boundaries.

323. Other Limitations on Construction. This section should describe what limitations must be applied to each area of work and when each limitation will be applied: limitations due to airport operations, height (i.e. crane) restrictions, areas which cannot be worked at simultaneously, day/night work restrictions, winter construction, and other limitations. Include a reference to paragraph 307 above for project phasing requirements based on construction limitations as required.

Appendix 1. Related Reading Material

Obtain the latest version of the following free publications from the FAA on its Web site at http://www.faa.gov/airports/.

AC	Title and Description
AC 150/5200-28	Notices to Airmen (NOTAMs) for Airport Operators
	Guidance for using the NOTAM System in airport reporting.
AC 150/5200-30	Airport Winter Safety and Operations
	Guidance for airport owners/operators on the development of an acceptable airport snow and ice control program and on appropriate field condition reporting procedures.
AC 150/5200-33	Hazardous Wildlife Attractants On or Near Airports
	Guidance on locating certain land uses that might attract hazardous wildlife to public-use airports.
AC 150/5210-5	Painting, Marking, and Lighting of Vehicles Used on an Airport.
	Guidance, specifications, and standards for painting, marking, and lighting vehicles operating in the airport air operations areas.
AC 150/5210-20	Ground Vehicle Operations on Airports
	Guidance to airport operators on developing ground vehicle operation training programs.
AC 150/5300-13	Airport Design
	FAA standards and recommendations for airport design, establishes approach visibility minimums as an airport design parameter, and contains the Object Free area and the obstacle free-zone criteria.
AC 150/5310-24	Airport Foreign Object Debris Management
	Guidance for developing and managing an airport foreign object debris (FOD) program
AC 150/5220-4	Water Supply Systems for Aircraft Fire and Rescue Protection.
	Guidance on selecting a water source and meeting standards for a distribution system to support aircraft rescue and fire fighting service operations on airports.
AC 150/5320-15	Management of Airport Industrial Waste
	Basic information on the characteristics, management, and regulations of industrial wastes generated at airports. Guidance for developing a Storm Water Pollution Prevention Plan (SWPPP) that applies best management practices to eliminate, prevent, or reduce pollutants in storm water runoff with particular airport industrial activities.
AC 150/5340-1	Standards for Airport Markings
	FAA standards for markings used on airport runways, taxiways, and aprons.
AC 150/5340-18	Standards for Airport Sign Systems
	FAA standards for the siting and installation of signs on airport runways and taxiways.
AC 150/5345-28	Precision Approach Path Indicator (PAPI) Systems
	FAA standards for PAPI systems, which provide pilots with visual glide slope guidance during approach for landing.

AC	Title and Description
AC 150/5340-30	Design and Installation Details for Airport Visual Aids
	Guidance and recommendations on the installation of airport visual aids.
AC 150/5345-39	Specification for L-853, Runway and Taxiway Retroreflective Markers
AC 150/5345-44	Specification for Runway and Taxiway Signs
	FAA specifications for unlighted and lighted signs for taxiways and runways.
AC 150/5345-53	Airport Lighting Certification Program
	Details on the Airport Lighting Equipment Certification Program (ALECP).
AC 150/5345-50	Specification for Portable Runway and Taxiway Lights
	FAA standards for portable runway and taxiway lights and runway end identifier lights for temporary use to permit continued aircraft operations while all or part of a runway lighting system is inoperative.
AC 150/5345-55	Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure
AC 150/5370-10	Standards for Specifying Construction of Airports
	Standards for construction of airports, including earthwork, drainage, paving, turfing, lighting, and incidental construction.
FAA Order 5200.11	FAA Airports (ARP) Safety Management System (SMS)
	Basics for implementing SMS within ARP. Includes roles and responsibilities of ARP management and staff as well as other FAA lines of business that contribute to the ARP SMS.
FAA Certalert 98-05	Grasses Attractive to Hazardous Wildlife
	Guidance on grass management and seed selection.
FAA Form 7460-1	Notice of Proposed Construction or Alteration
FAA Form 7480-1	Notice of Landing Area Proposal

Obtain the latest version of the following free publications from the Electronic Code of Federal Regulations at http://ecfr.gpoaccess.gov/.

Title 14 CFR Part 139	Certification of Airports
Title 49 CFR Part 1542	Airport Security

Obtain the latest version of the Manual on Uniform Traffic Control Devices from the Federal Highway Administration at http://mutcd.fhwa.dot.gov/.

Appendix 2. Definition of Terms

Term	Definition
7460-1	Notice Of Proposed Construction Or Alteration. For on-airport projects, the form submitted to the FAA regional or airports division office as formal written notification of any kind of construction or alteration of objects that affect navigable airspace, as defined in 14 CFR Part 77, safe, efficient use, and preservation of the navigable airspace. (See guidance available on the FAA web site at oeaaa.faa.gov.) The form may be downloaded at http://www.faa.gov/airports/resources/forms/, or filed electronically at: https://oeaaa.faa.gov.
7480-1	Notice Of Landing Area Proposal. Form submitted to the FAA Airports Regional Division Office or Airports District Office as formal written notification whenever a project without an airport layout plan on file with the FAA involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport The form may be downloaded at http://www.faa.gov/airports/resources/forms/.
AC	Advisory Circular
ACRC	Aircraft Reference Code
ACSI	Airport Certification Safety Inspector
ADG	Airplane Design Group
AIP	Airport Improvement Program
ALECP	Airport Lighting Equipment Certification Program
ANG	Air National Guard
AOA	Air Operations Area. Any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operations area includes such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runways, taxiways, or aprons.
ARFF	Aircraft Rescue and Fire Fighting
ARP	FAA Office of Airports
ASDA	Accelerate-Stop Distance Available
ATCT	Airport Traffic Control Tower
ATIS	Automatic Terminal Information Service
ATO	Air Traffic Organization
Certificated Airport	An airport that has been issued an Airport Operating Certificate by the FAA under the authority of 14 CFR Part 139, Certification of Airports.
CFR	Code of Federal Regulations
Construction	The presence and movement of construction-related personnel, equipment, and materials in any location that could infringe upon the movement of aircraft.
CSPP	Construction Safety And Phasing Plan. The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.

Term	Definition
CTAF	Common Traffic Advisory Frequency
Displaced Threshold	A threshold that is located at a point on the runway other than the designated beginning of the runway. The portion of pavement behind a displaced threshold is available for takeoffs in either direction or landing from the opposite direction.
DOT	Department of Transportation
EPA	Environmental Protection Agency
FOD	Foreign Object Debris
HAZMAT	Hazardous Materials
IFR	Instrument Flight Rules
ILS	Instrument Landing System
LDA	Landing Distance Available
LOC	Localizer antenna array
Movement Area	The runways, taxiways, and other areas of an airport that are used for taxiing or hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading aprons and aircraft parking areas (reference 14 CFR Part 139).
MSDS	Material Safety Data Sheet
MUTCD	Manual on Uniform Traffic Control Devices
NAVAID	Navigation Aid
NAVAID Critical Area	An area of defined shape and size associated with a NAVAID that must remain clear and graded to avoid interference with the electronic signal.
Non-Movement Area	The area inside the airport security fence exclusive of the Movement Area. It is important to note that the non-movement area includes pavement traversed by aircraft.
NOTAM	Notices to Airmen
Obstruction	Any object/obstacle exceeding the obstruction standards specified by 14 CFR Part 77, subpart C.
OE / AAA	Obstruction Evaluation / Airport Airspace Analysis
OFA	Object Free Area. An area on the ground centered on the runway, taxiway, or taxi lane centerline provided to enhance safety of aircraft operations by having the area free of objects except for those objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes. (See AC 150/5300-13, for additional guidance on OFA standards and wingtip clearance criteria.)
OFZ	Obstacle Free Zone. The airspace below 150 ft (45 m) above the established airport elevation and along the runway and extended runway centerline that is required to be clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance protection for aircraft landing or taking off from the runway and for missed approaches. The OFZ is subdivided as follows: Runway OFZ, Inner Approach OFZ, Inner Transitional OFZ, and Precision OFZ. Refer to AC 150/5300-13 for guidance on OFZ.
OSHA	Occupational Safety and Health Administration
P&R	Planning and Requirements Group

Term	Definition
PAPI	Precision Approach Path Indicators
PFC	Passenger Facility Charge
PLASI	Pulse Light Approach Slope Indicators
Project Proposal Summary	A clear and concise description of the proposed project or change that is the object of Safety Risk Management.
RE	Resident Engineer
REIL	Runway End Identifier Lights
RNAV	Area Navigation
ROFA	Runway Object Free Area
RSA	Runway Safety Area. A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway, in accordance with AC 150/5300-13.
SIDA	Security Identification Display Area
SMS	Safety Management System
SPCD	Safety Plan Compliance Document. Details developed and submitted by a contractor to the airport operator for approval providing details on how the performance of a construction project will comply with the CSPP.
SRM	Safety Risk Management
Taxiway Safety Area	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway, in accordance with AC 150/5300-13.
TDG	Taxiway Design Group
Temporary	Any condition that is not intended to be permanent.
Temporary Runway End	The beginning of that portion of the runway available for landing and taking off in one direction, and for landing in the other direction. Note the difference from a displaced threshold.
Threshold	The beginning of that portion of the runway available for landing. In some instances, the landing threshold may be displaced.
TODA	Takeoff Distance Available
TOFA	Taxiway Object Free Area
TORA	Takeoff Run Available. The length of the runway less any length of runway unavailable and/or unsuitable for takeoff run computations. See AC 150/5300-13 for guidance on declared distances.
TSA	Taxiway Safety Area Transportation Security Administration
UNICOM	A radio communications system of a type used at small airports.
VASI	Visual Approach Slope Indicators

Term	Definition
VGSI	Visual Glide Slope Indicator. A device that provides a visual glide slope indicator to landing pilots. These systems include precision approach path indicators (PAPI), visual approach slope indicators (VASI), and pulse light approach slope indicators (PLASI).
VFR	Visual Flight Rules
VOR	VHF Omnidirectional Radio Range
VPD	Vehicle / Pedestrian Deviation

Appendix 3. Safety and Phasing Plan Checklist

This appendix is keyed to Section 2. Plan Requirements. In the electronic version of this AC, clicking on the paragraph designation in the Reference column will access the applicable paragraph. There may be instances where the CSPP requires provisions that are not covered by the list in this appendix.

This checklist is intended as an aid, not as a required submittal.

Coordination	Reference	Addressed			Remarks
General Considerations					
Requirements for predesign, prebid, and preconstruction conferences to introduce the subject of airport operational safety during construction are specified.	205	☐ Yes	☐ No	☐ NA	
Operational safety is a standing agenda item for construction progress meetings.	205	☐ Yes	☐ No	☐ NA	
Scheduling of the construction phases is properly addressed.	206	☐ Yes	☐ No	☐ NA	
Areas and Operations Affected by Construction Activity					
Drawings showing affected areas are included.	207.a	☐ Yes	☐ No	☐ NA	
Closed or partially closed runways, taxiways, and aprons are depicted on drawings.	207.a(1)	☐ Yes	☐ No	☐ NA	
Access routes used by ARFF vehicles affected by the project are addressed.	207.a(2)	☐ Yes	☐ No	☐ NA	
Access routes used by airport and airline support vehicles affected by the project are addressed.	207.a(3)	☐ Yes	☐ No	☐ NA	
Underground utilities, including water supplies for fire fighting and drainage.	207.a(4)	☐ Yes	☐ No	☐ NA	
Approach/departure surfaces affected by heights of temporary objects are addressed.	207.a(5)	☐ Yes	☐ No	☐ NA	
Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads are properly depicted on drawings.	207.a	☐ Yes	☐ No	☐ NA	
Temporary changes to taxi operations are addressed.	207.b(1)	☐ Yes	☐ No	☐ NA	

Coordination	Reference	Addressed			Remarks
Detours for ARFF and other airport vehicles are identified.	207.b(2)	☐ Yes	☐ No	☐ NA	
Maintenance of essential utilities and underground infrastructure is addressed.	207.b(3)	☐ Yes	☐ No	☐ NA	
Temporary changes to air traffic control procedures are addressed.	207.b(4)	☐ Yes	☐ No	☐ NA	
NAVAIDS					
Critical areas for NAVAIDs are depicted on drawings.	208	☐ Yes	☐ No	☐ NA	
Effects of construction activity on the performance of NAVAIDS, including unanticipated power outages, are addressed.	208	☐ Yes	☐ No	☐ NA	
Protection of NAVAID facilities is addressed.	208	☐ Yes	☐ No	☐ NA	
The required distance and direction from each NAVAID to any construction activity is depicted on drawings.	208	☐ Yes	☐ No	☐ NA	
Procedures for coordination with FAA ATO/Technical Operations, including identification of points of contact, are included.	208, 213.a, 213.e(3)(a), 218.a	☐ Yes	☐ No	☐ NA	
Contractor Access					
The CSPP addresses areas to which contractor will have access and how the areas will be accessed.	209	☐ Yes	☐ No	☐ NA	
The application of 49 CFR Part 1542 Airport Security, where appropriate, is addressed.	209	☐ Yes	☐ No	☐ NA	
The location of stockpiled construction materials is depicted on drawings.	209.a	☐ Yes	☐ No	☐ NA	
The requirement for stockpiles in the ROFA to be approved by FAA is included.	209.a	☐ Yes	☐ No	☐ NA	
Requirements for proper stockpiling of materials are included.	209.a	☐ Yes	☐ No	☐ NA	

Coordination	Reference	Addressed			Remarks
Construction site parking is addressed.	209.b(1)	☐ Yes	☐ No	☐ NA	
Construction equipment parking is addressed.	209.b(2)	☐ Yes	☐ No	☐ NA	
Access and haul roads are addressed.	209.b(3)	☐ Yes	☐ No	☐ NA	
A requirement for marking and lighting of vehicles to comply with AC 150/5210-5, Painting, Marking and Lighting of Vehicles Used on an Airport, is included.	209.b(4)	☐ Yes	☐ No	☐ NA	
Proper vehicle operations, including requirements for escorts, are described.	209.b(5), 209.b(6)	☐ Yes	☐ No	☐ NA	
Training requirements for vehicle drivers are addressed.	209.b(7)	☐ Yes	☐ No	☐ NA	
Two-way radio communications procedures are described.	209.b(9)	☐ Yes	☐ No	☐ NA	
Maintenance of the secured area of the airport is addressed.	209.b(10)	☐ Yes	☐ No	☐ NA	
Wildlife Management					
The airport operator's wildlife management procedures are addressed.	210	☐ Yes	☐ No	☐ NA	
Foreign Object Debris Management					
The airport operator's FOD management procedures are addressed.	211	☐ Yes	☐ No	☐ NA	
Hazardous Materials Management					
The airport operator's hazardous materials management procedures are addressed.	212	☐ Yes	☐ No	☐ NA	
Notification of Construction Activities					
Procedures for the immediate notification of airport user and local FAA of any conditions adversely affecting the operational safety of the airport are detailed.	213	☐ Yes	☐ No	☐ NA	

Coordination	Reference	Addressed			Remarks
Maintenance of a list by the airport operator of the responsible representatives/points of contact for all involved parties and procedures for contacting them 24 hours a day, seven days a week is specified.	213.a	☐ Yes	☐ No	☐ NA	
A list of local ATO/Technical Operations personnel is included.	213.a	☐ Yes	☐ No	☐ NA	
A list of ATCT managers on duty is included.	213.a	☐ Yes	☐ No	☐ NA	
A list of authorized representatives to the OCC is included.	213.b	☐ Yes	☐ No	☐ NA	
Procedures for coordinating, issuing, maintaining and cancelling by the airport operator of NOTAMS about airport conditions resulting from construction are included.	208, 213.b, 218.b(4)(i)	☐ Yes	☐ No	☐ NA	
Provision of information on closed or hazardous conditions on airport movement areas by the airport operator to the OCC is specified.	213.b	☐ Yes	☐ No	☐ NA	
Emergency notification procedures for medical, fire fighting, and police response are addressed.	213.c	☐ Yes	☐ No	☐ NA	
Coordination with ARFF personnel for non-emergency issues is addressed.	213.d	☐ Yes	☐ No	☐ NA	
Notification to the FAA under 14 CFR parts 77 and 157 is addressed.	213.e	☐ Yes	☐ No	☐ NA	
Reimbursable agreements for flight checks and/or design and construction for FAA owned NAVAIDs are addressed.	213.e(3)(b)	☐ Yes	☐ No	☐ NA	
Inspection Requirements					
Daily inspections by both the airport operator and contractor are specified.	214.a	☐ Yes	☐ No	☐ NA	
Final inspections at certificated airports are specified when required.	214.b	☐ Yes	☐ No	☐ NA	
Underground Utilities					
Procedures for protecting existing underground facilities in excavation areas are described.	215	☐ Yes	☐ No	☐ NA	

Coordination	Reference	Addressed			Remarks
Penalties					
Penalty provisions for noncompliance with airport rules and regulations and the safety plans are detailed.	216	☐ Yes	☐ No	☐ NA	
Special Conditions					
Any special conditions that affect the operation of the airport or require the activation of any special procedures are addressed.	217	☐ Yes	☐ No	☐ NA	
Runway and Taxiway Visual Aids - Marking, Lighting, Signs, and Visual NAVAIDs					
The proper securing of temporary airport markings, lighting, signs, and visual NAVAIDs is addressed.	218.a	☐ Yes	☐ No	☐ NA	
Frangibility of airport markings, lighting, signs, and visual NAVAIDs is specified.	218.a, 218.c, 219, 220.b(4)	☐ Yes	☐ No	☐ NA	
The requirement for markings to be in compliance with AC 150/5340-1, Standards for Airport Markings is specified.	218.b	☐ Yes	☐ No	☐ NA	
The requirement for lighting to conform to AC 150/5340-30, Design and Installation Details for Airport Visual Aids, AC 150/5345-50, Specification for Portable Runway and Taxiway Lights , and AC 150/5345-53 Airport Lighting Certification Program, is specified.	218.b(1)(f)	☐ Yes	☐ No	☐ NA	
The use of a lighted X is specified where appropriate.	218.b(1)(b), 218.b(3)	☐ Yes	☐ No	☐ NA	
The requirement for signs to conform to AC 150/5345-44, Specification for Runway and Taxiway Signs, AC 50/5340-18, Standards for Airport Sign Systems, and AC 150/5345-53, Airport Lighting Certification Program, is specified.	218.c	☐ Yes	☐ No	☐ NA	
Marking and Signs For Access Routes					
The CSPP specifies that pavement markings and signs intended for construction personnel should conform to AC 150/5340-18 and, to the extent practicable, with the MUTCD and/or State highway specifications.	219	☐ Yes	☐ No	☐ NA	
Hazard Marking and Lighting					
Prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles are specified.	220.a	☐ Yes	☐ No	☐ NA	

Coordination	Reference	Addressed			Remarks
Hazard marking and lighting are specified to identify open manholes, small areas under repair, stockpiled material, and waste areas.	220.a	☐ Yes	☐ No	☐ NA	
The CSPP considers less obvious construction-related hazards.	220.a	☐ Yes	☐ No	☐ NA	
Equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast is specified.	220.b(1)	☐ Yes	☐ No	☐ NA	
The spacing of barricades is specified such that a breach is physically prevented barring a deliberate act.	220.b(1)	☐ Yes	☐ No	☐ NA	
Red lights meeting the luminance requirements of the State Highway Department are specified.	220.b(2)	☐ Yes	☐ No	☐ NA	
Barricades, temporary markers, and other objects placed and left in areas adjacent to any open runway, taxiway, taxi lane, or apron are specified to be as low as possible to the ground, and no more than 18 in high.	220.b(4)	☐ Yes	☐ No	☐ NA	
Barricades marked with diagonal, alternating orange and white stripes are specified to indicate construction locations in which no part of an aircraft may enter.	220.b(4)	☐ Yes	☐ No	☐ NA	
Highly reflective barriers with lights are specified to barricade taxiways leading to closed runways.	220.b(5)	☐ Yes	☐ No	☐ NA	
Markings for temporary closures are specified.	220.b(5)	☐ Yes	☐ No	☐ NA	
The provision of a contractor's representative on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades is specified.	220.b(7)	☐ Yes	☐ No	☐ NA	
Protection of Runway and Taxiway Safety Areas					
The CSPP clearly states that no construction may occur within a safety area while the associated runway or taxiway is open for aircraft operations.	221.a(1), 221.c(1)	☐ Yes	☐ No	☐ NA	
The CSPP specifies that the airport operator coordinates the adjustment of RSA or TSA dimensions with the ATCT and the appropriate FAA Airports Regional or District Office and issues a local NOTAM.	221.a(2), 221.c(2)	☐ Yes	☐ No	☐ NA	

Coordination	Reference	Addressed			Remarks
Procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations, are detailed.	221.c(3)	☐ Yes	☐ No	☐ NA	
The CSPP specifies that open trenches or excavations are not permitted within a safety area while the associated runway or taxiway is open.	221.a(4)	☐ Yes	☐ No	☐ NA	
Appropriate covering of excavations in the RSA or TSA that cannot be backfilled before the associated runway or taxiway is open is detailed.	221.a(4)	☐ Yes	☐ No	☐ NA	
The CSPP includes provisions for prominent marking of open trenches and excavations at the construction site.	221.a(4)	☐ Yes	☐ No	☐ NA	
Grading and soil erosion control to maintain RSA/TSA standards are addressed.	221.c(5)	☐ Yes	☐ No	☐ NA	
The CSPP specifies that equipment is to be removed from the ROFA when not in use.	221.b	☐ Yes	☐ No	☐ NA	
The CSPP clearly states that no construction may occur within a taxiway safety area while the taxiway is open for aircraft operations.	221.c	☐ Yes	☐ No	☐ NA	
Appropriate details are specified for any construction work to be accomplished in a taxiway object free area.	221.d	☐ Yes	☐ No	☐ NA	
Measures to ensure that personnel, material, and/or equipment do not penetrate the OFZ or threshold siting surfaces while the runway is open for aircraft operations are included.	221.e	☐ Yes	☐ No	☐ NA	
Provisions for protection of runway approach/departure areas and clearways are included.	221.f	☐ Yes	☐ No	☐ NA	
Other Limitations on Construction					
The CSPP prohibits the use of open flame welding or torches unless adequate fire safety precautions are provided and the airport operator has approved their use.	222.a(2)	☐ Yes	☐ No	☐ NA	
The CSPP prohibits the use of flare pots within the AOA at any time.	222.a(4)	☐ Yes	☐ No	☐ NA	
The CSPP prohibits the use of electrical blasting caps on or within 1,000 ft (300 m) of the airport property.	222.a(3)	☐ Yes	☐ No	☐ NA	

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Appendix 4. Construction Project Daily Safety Inspection Checklist

The situations identified below are potentially hazardous conditions that may occur during airport construction projects. Safety area encroachments, unauthorized and improper ground vehicle operations, and unmarked or uncovered holes and trenches near aircraft operating surfaces pose the most prevalent threats to airport operational safety during airport construction projects. The list below is one tool that the airport operator or contractor may use to aid in identifying and correcting potentially hazardous conditions. It should be customized as appropriate for each project.

Potentially Hazardous Conditions

Item	Action Required	or	None
Excavation adjacent to runways, taxiways, and aprons improperly backfilled.			☐
Mounds of earth, construction materials, temporary structures, and other obstacles near any open runway, taxiway, or taxi lane; in the related Object Free area and aircraft approach or departure areas/zones; or obstructing any sign or marking.			☐
Runway resurfacing projects resulting in lips exceeding 3 in (7.6 cm) from pavement edges and ends.			☐
Heavy equipment (stationary or mobile) operating or idle near AOA, in runway approaches and departures areas, or in OFZ.			☐
Equipment or material near NAVAIDs that may degrade or impair radiated signals and/or the monitoring of navigation and visual aids. Unauthorized or improper vehicle operations in localizer or glide slope critical areas, resulting in electronic interference and/or facility shutdown.			☐
Tall and especially relatively low visibility units (that is, equipment with slim profiles) — cranes, drills, and similar objects — located in critical areas, such as OFZ and approach zones.			☐
Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on any apron, open taxiway, or open taxi lane or in a related safety, approach, or departure area.			☐
Obstacles, loose pavement, trash, and other debris on or near AOA. Construction debris (gravel, sand, mud, paving materials) on airport pavements may result in aircraft propeller, turbine engine, or tire damage. Also, loose materials may blow about, potentially causing personal injury or equipment damage.			☐

Item	Action Required	or	None
Inappropriate or poorly maintained fencing during construction intended to deter human and animal intrusions into the AOA. Fencing and other markings that are inadequate to separate construction areas from open AOA create aviation hazards.			☐
Improper or inadequate marking or lighting of runways (especially thresholds that have been displaced or runways that have been closed) and taxiways that could cause pilot confusion and provide a potential for a runway incursion. Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of AOA create aviation hazards.			☐
Wildlife attractants — such as trash (food scraps not collected from construction personnel activity), grass seeds, tall grass, or standing water — on or near airports.			☐
Obliterated or faded temporary markings on active operational areas.			☐
Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards.			☐
Failure to issue, update, or cancel NOTAMs about airport or runway closures or other construction related airport conditions.			☐
Failure to mark and identify utilities or power cables. Damage to utilities and power cables during construction activity can result in the loss of runway / taxiway lighting; loss of navigation, visual, or approach aids; disruption of weather reporting services; and/or loss of communications.			☐
Restrictions on ARFF access from fire stations to the runway / taxiway system or airport buildings.			☐
Lack of radio communications with construction vehicles in airport movement areas.			☐
Objects, regardless of whether they are marked or flagged, or activities anywhere on or near an airport that could be distracting, confusing, or alarming to pilots during aircraft operations.			☐
Water, snow, dirt, debris, or other contaminants that temporarily obscure or derogate the visibility of runway/taxiway marking, lighting, and pavement edges. Any condition or factor that obscures or diminishes the visibility of areas under construction.			☐
Spillage from vehicles (gasoline, diesel fuel, oil) on active pavement areas, such as runways, taxiways, aprons, and airport roadways.			☐

Item	Action Required	or	None
Failure to maintain drainage system integrity during construction (for example, no temporary drainage provided when working on a drainage system).			☐
Failure to provide for proper electrical lockout and tagging procedures. At larger airports with multiple maintenance shifts/workers, construction contractors should make provisions for coordinating work on circuits.			☐
Failure to control dust. Consider limiting the amount of area from which the contractor is allowed to strip turf.			☐
Exposed wiring that creates an electrocution or fire ignition hazard. Identify and secure wiring, and place it in conduit or bury it.			☐
Site burning, which can cause possible obscuration.			☐
Construction work taking place outside of designated work areas and out of phase.			☐

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CONSTRUCTION SAFETY AND PHASING PLAN

Schedule I

Runway Remarking

MoDOT Project No. AIR 156-019A

Skyhaven Airport

Sponsored By:
University of Central Missouri
Federal Aviation Administration
MoDOT

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April 27, 2015

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CONSTRUCTION SAFETY AND PHASING PLAN

1. COORDINATION

During construction, airport operational safety is of paramount importance. Coordination of project information to all individuals involved with the project is essential for ensuring safe operations are maintained at all times. In order to minimize the potential for incidents during construction, it is imperative that all individuals involved with the project and/or airport users be kept informed of any and all changes to operations. Discussions of operational safety will need to take place throughout the entire life of the project, including design, bidding, pre-construction, and construction. Meetings between the Engineer, Skyhaven Airport (Airport), contractor, sub-contractors, and airport users will be required to discuss specific project related impacts to operations. The Airport is ultimately responsible for the safety at the airport. Notice to users of operational changes due to construction will be issued via NOTAMs by the airport. No closures will be permitted without the pertinent NOTAM in place for each specific closure. Emergency access for off-airport (Police, Fire, and EMT) based emergency service shall be maintained at all times. Routing for such traffic shall be determined and made known to all supervisor personnel involved in the construction project. Coordination of this access will be proposed by the Contractor and approved by the Engineer and the Airport Manager.

The Contractor shall prepare and submit a Safety Plan Compliance Document (SPCD). The SPCD shall detail how the Contractor will comply with the Construction Safety and Phasing Plan (CSPP). Also, it will not be possible to determine all safety plan details (for example specific hazard equipment and lighting, or contractor's points of contact) during the development of the CSPP. The Contractor defines such details by preparing an SPCD that the Airport reviews for approval prior to issuance of a Notice to Proceed. The SPCD is a subset of the CSPP, similar to how a shop drawing review is a subset to the technical specifications. The SPCD must include all other criterion included in the FAA AC 150/5370-2F, *Operational Safety on Airports during Construction.*

A pre-construction meeting will be held after the project has been awarded and prior to the Contractor beginning work or staging major construction material and equipment on-site. The Airport, the Contractor's on-site supervisory staff and representatives from the Engineer shall be present. Safety and this document will be a significant topic on the agenda.

A. CONTRACTOR PROGRESS MEETINGS

The Contractor shall be required to adhere to this CSPP throughout the project duration. The Contractor shall continue to monitor safety and have discussions with all construction personnel, the Airport, the Engineer, and any other pertinent personnel on a weekly basis at a minimum. These discussions will serve as an update to the Airport and the Engineer and will include the discussion of safety reminders, scheduling, and general construction issues. Operational safety will be a standing topic in these discussions as will the Contractor's adherence to the CSPP. Any deficiencies by the Contractor in adhering to the CSPP will be addressed immediately. The location, time, and format of the weekly discussions will be coordinated with the Airport prior to construction.

B. SCOPE OR SCHEDULE CHANGES

In the case of a scope or schedule change, the Contractor shall notify the Engineer and the Airport Manager. All parties involved will need to evaluate the impact(s) of the change and will determine what measures will need to be taken to maintain a safe construction site. Change in the scope or duration of the project may necessitate revisions to the CSPP. No scope changes shall occur without approval of the FAA.

C. FAA AIR TRAFFIC ORGANIZATION (ATO) COORDINATION

The FAA will need to be notified immediately of any changes that affect aircraft movement within the airport which include airway facility shutdowns and restarts. The Airport will be responsible for coordinating any changes, including NOTAMS, with the FAA. It is not anticipated that any shutdown to FAA facilities will be required for this project. All project limits are outside the critical area of any navigational aid (NAVAID).

2. PHASING

There will be three phases for this project, and the Contractor shall submit a proposed work schedule in the Safety Plan Compliance Document (SPCD) to the Engineer prior to commencing work. No work shall commence until the Engineer and the Airport have approved the Contractor's SPCD.

A. PHASE ELEMENTS

This project will consist of a multiple phases. The Contractor shall ensure that construction minimally impact airport operations at all times during this project. Additional information on project phasing and airport operational safety may be found in the Construction Safety Drawings (Sheets G004 through G007).

PHASE 1: Runway 14/32 (prev. 13/31) Numeral Remarking, Taxiway Painting, and Signage
This phase will consist of the Contractor obliterating the numbers on both ends of Runway 14/32 (prev. 13/31) and re-painting, per the MO-620. Also included is painting of various taxiway centerlines. After the existing numbers have been obliterated and re-striping has been completed, the Contractor will apply a seal coat to the pavements, per the MO-623 specification. Also, the corresponding signage will be updated and re-located to the edge of the Runway Safety Area (RSA).

The duration of this phase will be seven (5) days and Runway 14/32 (prev. 13/31) will be closed for the duration of this phase. Aircraft access will be available to Runway 1/19 (prev. 18/36) for the duration of this phase. This phase shall be performed concurrently with Phase 2. Prior to beginning work on this phase, the Contractor shall place safety barricades and runway closure markers in accordance with the Overall Phasing Plan (G004) and Construction Phase 1 Plan (G005). Aircraft access will only be available to Runway 1/19 (prev. 18/36) during this phase. Also, the corresponding signage will be updated and re-located to the edge of the Runway Safety Area (RSA).

PHASE 2: Runway 36 Numeral Remarking, Taxiway and Apron Painting, and Signage
This phase will consist of the Contractor obliterating the numbers on Runway 36 and re-painting, per the MO-620. After the paint has been obliterate and re-striping has been completed, the Contractor will apply a seal coat to the pavement, per the MO-623 specification. Taxiways and Aprons will be re-painted.

The duration of this phase will be three (3) days and Runway 1/19 (prev. 18/36) and Runway 14/32 (prev. 13/31) will be closed for the duration of this phase. This phase shall be constructed concurrently with Phase 1. Prior to beginning work on this phase, the Contractor shall place safety barricades and runway closure markers in accordance with the Construction Safety Drawing (G003) and Construction Phase 2 Plan (G006). Aircraft access will not be available to either runway during this phase.

PHASE 3: Runway 18 Numeral Remarking, Taxiway Painting, and Signage
This phase will consist of the Contractor obliterating the numbers on Runway 18 and re-painting, per the MO-620. After the paint has been obliterate and re-striping has been completed, the Contractor will apply a seal coat to the pavement, per the MO-623 specification. Taxiways and Aprons will be re-painted.

The duration of this phase will be three (3) days and will not be constructed concurrently with any other phase. Prior to beginning work on this phase, the Contractor shall place safety barricades and runway closure markers in accordance with the Construction Safety Drawing (G003) and Construction Phase 3 Plan (G007). Aircraft access will only be available to Runway 14/32 (prev. 13/31) during this phase.

B. CONSTRUCTION SAFETY DRAWINGS

The Construction Safety Drawings (Sheets G003 through G007) are attached at the back of this document to show the phasing requirements for this project. Airport operations including aircraft access, airport emergency access, and pedestrian traffic shall not be impacted in this project.

3. AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY

All work within the Airport Operations Area shall be accomplished in conformance with Advisory Circular 150/5370-2F, *Operational Safety on Airports during Construction*. The contract drawings include information regarding requirements for operational safety on the airport during construction. The Contractor shall prepare a detailed SPCD as stated in the Advisory Circular 150/5370-2F. The Contractor's SPCD shall identify specific methods, sequencing, phasing that he/she intends to use in order to accomplish the project work. The final SPCD shall be the result of a coordinated effort between the Airport, the Engineer and the Contractor. The Contractor's SPCD shall be submitted to the Airport and Engineer prior to the issuance of a Notice to Proceed. No Notice to Proceed shall be issued until the Contractor's submitted SPCD has been approved by the Airport and the Engineer.

The Contractor shall adhere to the approved SPCD as agreed upon by the Airport, Engineer, and Contractor. Modifications or deviations from the approved safety plan shall be submitted to the Engineer for review and approval prior to implementation.

A. IDENTIFICATION OF AFFECTED AREAS

Construction operations during this project will impact both runways, parallel, connecting taxiways and the main apron. These airfield facilities will be closed at all times while construction operations are being performed. Section 2 of this document and the attached Construction Safety Drawings describe in detail which areas are affected and for what durations.

B. MITIGATION OF EFFECTS

This project shall temporarily close runway, taxiway, and apron facilities. Aircraft detours or temporary changes to aircraft operations, emergency access, maintenance access, or air traffic control procedures shall be identified in a NOTAM. To ensure that impacts to airport operations are minimized, it is important that pertinent airport personnel, contractor personnel, and engineering personnel discuss current and upcoming work and phasing continuously throughout the project.

4. PROTECTION OF NAVIGATION AIDS (NAVAIDS)

The Runway 1/19 (prev. 18/36) and Runway 14/32 (prev. 13/31) NAVAIDS will not require a shutdown for this project. Required NAVAID shutdowns will be coordinated with the FAA by the Engineer prior to construction through the FAA Airway Facilities regional office.

5. CONTRACTOR ACCESS

During the course of the construction operations, the Contractor will be allowed to utilize the access route shown on the plans as entrance to the airfield and construction site. The airport shall designate this access and the associated haul roads. The Contractor shall be held duly responsible to uphold the Airport's security stipulations at all times during the progress of the construction project. No deviations from these security measures shall be allowed at any time.

A. LOCATION OF STOCKPILED CONSTRUCTION MATERIALS

The Contractor's staging area is shown on the Construction Layout and Safety Drawing Plan (Sheet G003) and is located east of the terminal area off of NW 251 Rd in the existing gravel area as indicated in the plans. All material storage and staging will occur in this area, unless otherwise approved by the Airport and Engineer. The Contractor's stockpile location shall be an approved area indicated in the plans and shall be outside of airfield object free areas.

B. VEHICLE AND PEDESTRIAN OPERATIONS

1. Construction Site Parking

Construction site parking will be outside of the Airport Operations Area (AOA) and within the staging area as shown on the Construction Layout and Safety Drawing Plan (Sheet G003).

2. Construction Equipment Parking

Construction equipment parking will be allowed at the contractor's staging area in the same location as shown on the Construction Layout and Safety Drawing Plan (Sheet G003), or at a location approved by the Engineer. If the equipment must be parked in an Airport Operations Area (AOA), the equipment must be lighted with a beacon per AC 150/5370-2F, and will be located within the barricaded area. No equipment or material shall be parked or stored in any runway or taxiway safety area or object free area. All construction vehicles shall be parked outside the object free areas when not in use by construction personnel (for example, overnight, on weekends, or during any other periods when construction is not active).

3. Access and Haul Roads

The Contractor shall obtain approval from the Engineer prior to establishing haul roads within the airport property. Once established, the haul roads shall be utilized for all equipment traffic, and the equipment shall not be allowed to stray or wander away from the established routes. The haul roads shall be the responsibility of the Contractor and shall be maintained and kept in good order at all times. When required, water shall be applied at the locations and in the amounts necessary to minimize dust and dirt in the air operations area. Since construction operations will be within active airport operation areas, the airport will require additional dust control measures be used on haul roads and the work area in order not to interfere with airport operations. Haul roads that cross any active taxiway or movement areas shall be kept clean and in good order at all times. The Contractor shall be prepared at all times to repair any damage caused by the movement of equipment on any of the haul roads at the direction of the Engineer or Airport, whether in designated or undesignated areas. After completion of the project, the Contractor shall be required to regrade any unpaved portions of the haul road and to reseed the area with local native grasses to match the existing conditions of the area. The performance of any work as specified by this provision, including watering, maintenance, and repair of the haul roads, shall not be measured and paid for directly, but shall be considered as necessary and incidental to the work.

Establishment of haul roads off of Airport property shall be the sole responsibility of the Contractor.

Contractor movement shall be restricted to the pre-determined access routes as shown on the attached phasing sheets and within the work area. The contractor shall not operate outside of these areas without approval of the Engineer or Airport Manager.

4. Marking and Lighting of Vehicles

All vehicles operating within the AOA and in the movement areas must clearly identify themselves for control purposes. The identification symbols should be a minimum 8-inch block-type characters of a contrasting color and easy to read. They may be applied either by using tape or a water-soluble paint to facilitate removal. Magnetic signs are also acceptable. To operate in those areas, the vehicle must have a flag (day only) or beacon (day or night) attached to it. Any vehicle operation on the movement areas during hours of darkness or reduced visibility must be equipped with a flashing dome-type light. All authorized vehicles and construction equipment must display three foot by three foot flag with international orange and white 12 inch squares displayed in full view above the vehicles or rotating beacons. All vehicle marking and lighting shall be in accordance with FAA AC 150/5210-5, *Painting,*

Marking, and Lighting of Vehicles Used on an Airport. All authorized vehicles and passengers in any authorized vehicle shall be the responsibility of the Contractor.

5. Description of Proper Vehicle Operations

Proper vehicle operations are described as conforming to all rules and regulations for driving as directed by the Airport or found in FAA AC 5210-20, *Ground Vehicle Operations on Airports.*

6. Required Escorts

Escorts will not be required for this project; however, the Contractor shall maintain responsibility for monitoring any access gates used by construction personnel.

7. Training Requirements of Vehicle Drivers

To ensure compliance with the Airport's vehicle rules and regulations, the driver must demonstrate proper procedures for driving, pertinent to airport operations. Driving procedures must be in conformance with FAA AC 5210-20, *Ground Vehicle Operations on Airports.*

8. Situational Awareness

Vehicle drivers must confirm by personal observation that no aircraft is approaching their position (either in the air or on the ground) when given clearance to cross a runway, taxiway, or any other area open to airport operations.

9. Two-way Radio Communication Procedures

The Contractor's superintendent and/or foreman shall be required to monitor transceiver radios tuned to the Skyhaven Airport Unicom frequency, **123.0 MHz** in order to monitor aircraft movement, both in the air and on the ground at all times. The Contractor shall supply the radios. Such radios shall be used to obtain proper clearance in regard to the movement of equipment, trucks, etc., on the airport. Contractor personnel shall demonstrate proper procedures for communications, pertinent to airport operations. Further, any unusual occurrences in the flight pattern of approaching or departing aircraft shall be acknowledged by all concerned so that operation of the airport and the construction work can be safely carried on at all times. Aviation communication protocols may be found on the FAA website at:

http://www.faa.gov/airports/runway_safety/media/Ground_Vehicle_Guide_Proof_Final.pdf

10. Maintenance of the Secured Area of the Airport

The Contractor shall be responsible for maintaining the secured area of the Airport by monitoring all access gates in use by construction personnel. Any gates used by Construction personnel shall be locked or guarded by the Contractor.

6. WILDLIFE MANAGEMENT

The airport does not currently have a wildlife hazard management plan. However, the Contractor must carefully control and continuously remove waste or loose material that might attract wildlife.

A. TRASH

The Contractor is responsible for completing a daily inspection of the construction site (including the Contractor's Staging Area) for any trash or objects that might attract wildlife.

B. STANDING WATER

Because standing water can attract wildlife, the Contractor is responsible for completing a daily inspection of the construction site for any standing water. With the discretion of the Engineer, the Contractor shall remove this hazard.

C. TALL GRASS AND SEEDS

Seeding is not required for this project.

D. POORLY MAINTAINED FENCING AND GATES

The Contractor shall be required to maintain all fences and gates throughout the duration of the project, to the satisfaction of the Engineer.

E. DISRUPTION OF EXISTING WILDLIFE HABITAT

The Contractor shall notify the Engineer and the Airport when any large mammals (deer, feral hogs, coyote, etc.) are sited within the AOA to help to mitigate any disruption to the existing wildlife habitat.

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT

The presence of FOD on the airfield is a significant safety concern, as debris can be ingested into an aircraft's engine causing extensive damage, or can be launched across the apron by jet blast, potentially causing bodily injury or damaging other aircraft. Materials capable of creating FOD must be continuously removed during the construction project. The Contractor is required to keep all areas within the construction site free from FOD at all times, and to keep all airfield areas adjacent to construction operations open to aircraft and free from FOD at all times. The Contractor is required to maintain FOD control continually and to the satisfaction of the Engineer. Prior to opening any pavement to aircraft, the contractor shall conduct a sweep of the pavement to verify that it is FOD free.

8. HAZARDOUS MATERIAL (HAZMAT) MANAGEMENT

Contractors operating construction vehicles and equipment on the airport must be prepared to expeditiously contain and clean up spills resulting from fuel or hydraulic fluid leaks.

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES

A. MAINTENANCE OF A LIST OF RESPONSIBLE REPRESENTATIVES/POINTS OF CONTACT

Agency Name	Type of Agency	Telephone No.
University of Central Missouri Police	Police Department	(660) 543-4123 Or 911
Warrensburg Fire Department	Fire Department	(660) 747-8927 Or 911
Western Missouri Medical Center	Hospital/Ambulance	(660) 747-2500 Or 911
Airport Administration/Manager	Airport Administration (Denis Godfrey)	(660) 543-4460
Jviation, Inc.	Project Manager / Engineer (Ryan B. Lorton)	(573) 418-1450

B. NOTICES TO AIRMEN (NOTAM)

Only the Airport Manager may initiate or cancel NOTAMs on airport conditions, and is the only entity that can close or open a runway. The Airport Manager must coordinate the issuance, maintenance, and cancellation of NOTAMs about airport conditions resulting from construction activities and must provide information on closed or hazardous conditions on airport movement areas to the FAA Flight Service Station (FSS) so it can issue a NOTAM. The Contractor must notify the Engineer and Airport Manager when scheduling/scoping for the project has changed that would require a modification to the NOTAMs.

C. EMERGENCY NOTIFICATION PROCEDURES

In the event of an emergency, the Contractor shall notify the Engineer and Airport. If necessary, the Contractor shall contact the local authorities such as the University of Central Missouri Police Department or Warrensburg Fire Department.

D. COORDINATION WITH EMERGENCY RESPONSE PERSONNEL

The Contractor must coordinate any temporary shutoffs of waterlines with the Engineer and the Airport a minimum of one week prior to the proposed deactivation. If there are any changes to scheduled waterline deactivations the Contractor shall notify the Airport or the Engineer immediately. This project shall not require any rerouting or blocking of any emergency access routes, or the use of any hazardous material on the airfield that would require coordination with pertinent airport personnel or emergency services. However, in an event that the Contractor must coordinate construction activities with emergency response personnel, the Contractor will notify the Airport or Engineer prior to performing such activities.

E. NOTIFICATION TO THE FAA

Any person proposing construction or alteration of objects that affect navigable airspace, as defined in Part 77, must notify the FAA. Such proposal shall require the submittal of a FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, to the FAA Airports Regional or District Office. This includes construction equipment and proposed parking areas for this equipment. A FAA Form 7460-1 has been submitted for the construction and restricts all equipment heights to 25 feet. Any conflict with the 25 foot equipment height restriction will require an additional FAA Form 7460 to be submitted. If the Contractor anticipates any equipment to be onsite that will violate the 25

foot maximum height, the Contractor must submit a request to do so to the Engineer and the Airport prior to commencing construction. This request may or may not be granted.
There are no anticipated impacts to any Airport or FAA owned NAVAIDS, however, in the event that a NAVAID is damaged, the Contractor shall inform the Engineer and the Airport immediately. Any damage to Airport of FAA owned NAVAIDs will be repaired at no cost to the Airport.

10. INSPECTION REQUIREMENTS

A. DAILY (OR MORE FREQUENT) INSPECTIONS

Inspections shall be conducted daily and more frequently if necessary to ensure conformance with this document. A safety checklist has been provided with this document and shall be completed by the Contractor on a daily basis.

B. FINAL INSPECTIONS

Final inspections shall be conducted after construction is complete as detailed in Section 2 of this document. The checklist provided in the Advisory Circular 150-5370-2F Appendix 4, *Construction Project Daily Safety Inspection Checklist*, shall be completed by the Contractor to the Engineer's satisfaction and the Contractor shall submit a copy of all the completed checklists to the Engineer.

11. UNDERGROUND UTILITIES

The location of utilities, whether FAA or Airport owned, shall be coordinated with the FAA prior to construction in that area. Damage to the underground cables, whether FAA's or Airport's, through negligence on the part of the Contractor will require replacement by the Contractor at no cost to the Sponsor. Any splicing or replacing of damaged cable shall meet current FAA specifications. Damage to other underground utilities through the Contractor's negligence shall be repaired according to the relevant utility's standards and at no cost to the Airport.

12. PENALTIES

No deviations from these security measures shall be allowed at any time. There shall be a $1,000.00 penalty and rescission of driving privileges within the AOA for each deviation from these security provisions.

13. SPECIAL CONDITIONS

This section is not applicable to this project.

14. RUNWAY AND TAXIWAY VISUAL AIDS

A. GENERAL

The runway edge lighting and REILs will be deactivated when working is being performed on each runway. In addition, the PAPIs on Runway 18 will also be deactivated when work is being performed on Runway 18-36.

B. MARKINGS

Markings must be in compliance with the standards of AC 150/5340-1K, Standards for Airport Markings.

C. CLOSED RUNWAYS AND TAXIWAYS

Runway 14/32 (prev. 13/31) will be closed for the duration of Phase 1 and 2. Runway 1/19 (prev. 18/36) will be closed for the duration of Phase 2 and Phase 3. The south half of the apron will be closed during Phase 1 and the north half of the apron will be closed during Phase 3. Each closure will require a NOTAM to be issued. The Airport will be the authority on issuing all NOTAMs

15. MARKING AND SIGNS FOR ACCESS ROUTES

All required signs and markings shall conform to Advisory Circular 150/5340-18, *Standard for Airport Sign Systems*, or the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD). Signs adjacent to areas used by aircraft must comply with the frangibility requirements as stated in Advisory Circular 150/5220-23, *Frangible Connections.*

16. HAZARD MARKING, LIGHTING, AND SIGNING

A. PURPOSE

The hazard marking and lighting prevents pilots from entering areas closed to aircraft, and prevents construction personnel from entering areas open to aircraft. Any areas to be affected by construction shall be hazard marked and lighted and clearly identifiable as closed by airport personnel. Approved hazard marking and lighting barricades must also be used by the Contractor to identify any open manholes, small areas under repair, stockpiled material, waste areas, and areas subject to jet blast. The Contractor shall be responsible for maintaining these barricades and keeping them clearly visible at all times.

B. EQUIPMENT

Barricades, including traffic cones, (weighted or sturdily attached to the surface) are acceptable methods used to identify and define the limits of construction and hazardous areas on airports. Careful consideration must be given to equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash, and jet blast. The spacing must be such that a breach is physically prevented barring a deliberate act. For example, if barricades are intended to exclude vehicles, gaps between barricades must be smaller than the width of the excluded vehicles, generally four feet. Provision must be made for emergency access. If barricades are intended to exclude pedestrians, they must be continuously linked. Continuous linking may be accomplished through the use of ropes, securely attached to prevent FOD.

If lighted barricades are used, the lights shall red, either steady burning or flashing, and must meet the luminescence requirements of the State Highway Department. Batteries powering lights will last longer if lights flash. Lights must be mounted on barricades and spaced at no more than ten feet. Lights must be operated between sunset and sunrise and during periods of low visibility whenever the airport is open for operations. They may be operated by photocell, but this may require that the Contractor turn them on manually during periods of low visibility during daytime hours.

17. PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS

A. RUNWAY SAFETY AREA (RSA)

The Skyhaven Airport defines the RSA for Runways 1/19 (prev. 18/36) and 14/32 (prev. 13/31) as the area that is within 60 feet from the centerline of each runway. Construction operations will not be allowed within any active RSA.

B. RUNWAY OBJECT FREE AREA (ROFA)

The Skyhaven Airport defines the ROFA for Runways 1/19 (prev. 18/36) and 14/32 (prev. 13/31) as the area that is within 125 feet from the centerline of each runway. Construction operations shall be permitted in the ROFA when the respective runway is closed by NOTAM. However, equipment must be removed from the ROFA when not in use, and material shall not be stockpiled in the ROFA.

C. TAXIWAY SAFETY AREA (TSA)

The Skyhaven Airport defines the TSAs for Taxiways as the areas that are within 24.5 feet from the Taxiway centerlines.

Work shall not be performed in any active TSA.

D. TAXIWAY OBJECT FREE AREA (TOFA)

The Skyhaven Airport defines the TOFAs for Taxiways as the areas that are within 44.5 feet from the Taxiway centerlines. Signs/embankments/equipment within the TOFA must comply with the frangibility requirements as stated in Advisory Circular 150/5220-23, *Frangible Connections.*

Work shall not be performed in any active TOFA.

E. OBSTACLE FREE ZONE (OFZ)

The Skyhaven Airport defines the OFZ for Runways 1/19 (prev. 18/36) and 14/32 (prev. 13/31) as the space that is below 150 feet above the centerline of each runway, is 250 feet wide, and extends 200 feet past the runway ends. This project will require a NOTAM to be issued stating that construction operations will be occurring within the Runway 1/19 (prev. 18/36) and Runway 14/32 (prev. 13/31) OFZ's.

F. RUNWAY APPROACH/DEPARTURE AREAS AND CLEARWAYS

The Airport defines the runway approach and departure surfaces as imaginary surfaces beginning 200 feet beyond the runway end and extending away from the runway at a slope of 20:1 for 10,000 feet. All personnel, materials, and/or equipment must remain clear of the applicable threshold surfaces.

18. OTHER LIMITATIONS ON CONSTRUCTION

A. PROHIBITIONS

The use of open flame welding or torches is prohibited unless adequate fire safety precautions are provided and the Airport Manager has approved their use. The use of flare pots within the AOA is prohibited at all times. The use of electrical blasting caps is prohibited on or within 1,000 feet of the airport property.

B. RESTRICTIONS

Construction suspension may be required during specific airport operations. Night construction may only be performed if approved by the Engineer and Airport Manager. Construction operations shall only be allowed in weather conditions compliant with the project specifications.

Construction Project Daily Safety Inspection Checklist

Potentially Hazardous Conditions

Item	Action Required	or	None
Heavy equipment (stationary or mobile) operating or idle near AOA, in runway approaches and departures areas, or in OFZ.			□
Equipment or material near NAVAIDs that may degrade or impair radiated signals and/or the monitoring of navigation and visual aids. Unauthorized or improper vehicle operations in localizer or glide slope critical areas, resulting in electronic interference and/or facility shutdown.			□
Tall and especially relatively low visibility units (that is, equipment with slim profiles)—cranes, drills, and similar objects—located in critical areas, such as OFZ and approach zones.			□
Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on any apron, open taxiway, or open taxi lane or in a related safety, approach, or departure area.			□
Obstacles, loose pavement, trash, and other debris on or near AOA. Construction debris (gravel, sand, mud, and paving materials) on airport pavements may result in aircraft propeller, turbine engine, or tire damage. Also, loose materials may blow about, potentially causing personal injury or equipment damage.			□
Inappropriate or poorly maintained fencing during construction intended to deter human and animal intrusions into the AOA. Fencing and other markings that are inadequate to separate construction areas from open AOA create aviation hazards.			□
Wildlife attractants—such as trash (food scraps not collected from construction personnel activity), grass seeds, tall grass, or standing water—on or near airports.			□
Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards.			□
Failures to issue, updates, or cancel NOTAMs about airport or runway closures or other construction related airport conditions.			□
Failure to mark and identify utilities or power cables. Damage to utilities and power cables during construction activity can result in the loss of runway/taxiway lighting; loss of navigation, visual, or approach aids; disruption of weather reporting services; and/or loss of communications.			□
Restrictions on emergency access from fire stations to the runway / taxiway system or airport buildings.			□

Item	Action Required	or	None
Lack of radio communications with construction vehicles in airport movement areas.			□
Objects, regardless of whether they are marked or flagged, or activities anywhere on or near an airport that could be distracting, confusing, or alarming to pilots during aircraft operations.			□
Spillage from vehicles (gasoline, diesel fuel, oil) on active pavement areas, such as runways, taxiways, aprons, and airport roadways.			□
Failure to maintain drainage system integrity during construction (for example, no temporary drainage provided when working on a drainage system).			□
Failure to control dust. Consider limiting the amount of area from which the contractor is allowed to strip turf.			□
Exposed wiring that creates an electrocution or fire ignition hazard. Identify and secure wiring, and place it in conduit or bury it.			□
Site burning, which can cause possible obscuration.			□
Construction work taking place outside of designated work areas and out of phase.			□

AIRPORT IMPROVEMENT PROGRAM

SAFETY/PHASING PLAN CHECKLIST

Operational Safety on Airports During Construction (AC 150/ 5370-2F)

Airport Name/Associated City	State	Project No.	Date
Skyhaven Airport	MO	AIR 156-019A	March 26, 2015

Checklist for Airport Sponsor	N/A	Included		N/A	Included
1. Scope of work to be performed, including proposed duration of work	☐	☒	16. Procedures for notifying ARFF personnel about deactivated water lines or fire hydrants or blocked/rerouted emergency access routes	☒	☐
2. Runway and taxiway marking and lighting	☐	☒	17. Emergency notification procedures for medical and police response	☐	☒
3. Procedures for protecting runway and taxiway safety areas	☐	☒	18. Use of temporary visual aids	☐	☒
4. Procedures for protecting obstacle-free zones (OFZs), object free areas (OFAs), and threshold citing criteria	☐	☒	19. Wildlife management	☐	☒
5. Affected areas and operations, including possible safety problems	☐	☒	20. Foreign object debris (FOD) control provisions	☐	☒
6. NAVAIDs that could be affected	☐	☒	21. Hazardous material (HAZMAT) management	☐	☒
7. Methods of separating vehicle and pedestrian construction traffic from airport movement areas	☐	☒	22. NOTAM issuance	☐	☒
8. Procedures and equipment to delineate closed construction areas from airport operational areas	☐	☒	23. Inspection requirements	☐	☒
9. Limitations on construction	☐	☒	24. Procedures for locating and protecting existing underground utilities/facilities in excavation areas	☒	☐
10. Required compliance of contractor personnel with airport safety and security measures	☐	☒	25. Emergency procedures for contacting responsible representatives of all involved parties, including Airway Facilities personnel	☐	☒
11. Location of stockpiled construction materials	☐	☒	26. Vehicle operator training	☒	☐
12. Location of construction site parking and access and haul roads	☐	☒	27. Penalty provisions for noncompliance with airport rules and regulations and the safety plan	☐	☒
13. Radio communications	☐	☒	28. Special conditions that affect airport operation and will require a portion of the safety plan to be activated	☐	☒
14. Vehicle Identification	☐	☒	29. Notification to airport users	☐	☒
15. Trenches and excavations and cover requirements	☒	☐	30. Safety plan includes phasing sub-plans	☐	☒

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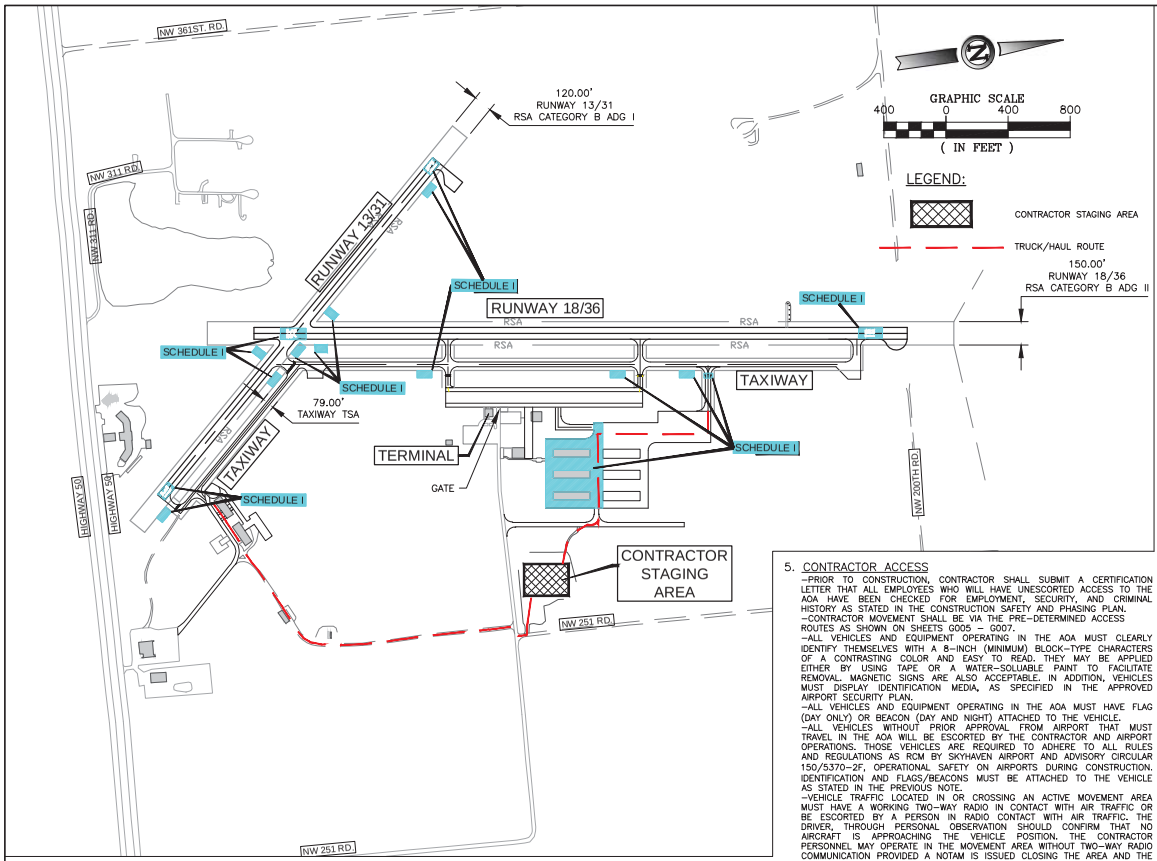

1. COORDINATION

–ALL COORDINATION WILL TAKE PLACE THROUGH THE RESIDENT ENGINEER AND SKYHAVEN (RCM) AIRPORT MANAGER. NO CLOSURES WITHIN THE MOVEMENT AREAS WILL BE PERMITTED WITHOUT A NOTAM IN PLACE FOR EACH SPECIFIC CLOSURE. PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL GIVE 48 HOURS ADVANCE NOTICE TO THE RESIDENT ENGINEER AND AIRPORT FOR FILINGS OF ALL NOTAMS.
–A WEEKLY CONSTRUCTION PROGRESS MEETING WILL BE REQUIRED TO DISCUSS ALL OPERATIONAL SAFETY TOPICS THAT HAVE BEEN AFFECTED OR WILL BE AFFECTED IN THE NEAR FUTURE. IN ATTENDANCE WILL BE THE CONTRACTOR, ENGINEER, AND SET OPERATIONS.
–ANY CHANGES TO SCOPE OR SCHEDULE MUST BE NOTIFIED TO THE ENGINEER AND SET AIRPORT MANAGER. ALL PARTIES WILL EVALUATE THE IMPACT OF THE CHANGE AND WILL DETERMINE THE MEASURES NEEDED TO MAINTAIN A SAFE CONSTRUCTION SITE.
–AIRPORT RUNWAYS AND TAXIWAYS SHOULD REMAIN IN USE BY AIRCRAFT TO THE MAXIMUM EXTENT POSSIBLE.
–AIRCRAFT USE OF AREAS NEAR THE CONTRACTOR'S WORK SHOULD BE CONTROLLED TO MINIMIZE DISTURBANCE TO THE CONTRACTOR'S OPERATION.
–CONSTRUCTION THAT IS WITHIN THE SAFETY AREA OF A RUNWAY, TAXIWAY, OR APRON THAT IS PERFORMED UNDER NORMAL OPERATIONAL CONDITIONS MUST BE PERFORMED WHEN THE RUNWAY, TAXIWAY, OR APRON IS CLOSED OR USE–RESTRICTED AND INITIATED ONLY WITH PRIOR PERMISSION FROM THE AIRPORT OPERATOR.
–THE CONTRACTING OFFICER, AIRPORT OPERATOR, OR OTHER DESIGNATED AIRPORT REPRESENTATIVE MAY ORDER THE CONTRACTOR TO SUSPEND OPERATIONS; MOVE PERSONNEL, EQUIPMENT, AND MATERIALS TO A SAFE LOCATION; BARRICADE ANY OPEN TRENCHES AND STAND BY UNTIL AIRCRAFT USE IS COMPLETED.

2. PHASING

–SEE SHEETS G004 – G007 FOR PHASING OF THIS PROJECT.
–ENGINEER AND SET AIRPORT MANAGER WILL APPROVE A PROPOSED SCHEDULE FOR CONSTRUCTION OF EACH PHASE PRIOR TO ANY CONSTRUCTION.
–CONTRACTOR TO NOTIFY ENGINEER AND SET AIRPORT MANAGER IF A CHANGE IN SCHEDULE IS NEEDED.
–CONTRACTOR SHALL HAVE 8 CALENDAR DAYS TO COMPLETE ALL WORK IN THIS CONTRACT.

3. AREAS AND OPERATIONS AFFECT BY THE CONSTRUCTION ACTIVITY

–ALL WORK WITHIN AOA SHALL CONFORM TO ADVISORY CIRCULAR 150/5370–2F, OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.
–SEVERAL NOTAMS WILL BE ISSUED DURING THE DURATION OF THIS PROJECT. CONTRACTOR TO SEE SHEETS G004 – G007 FOR DETAILED PHASING.
–CONTRACTOR SHALL ADHERE TO REQUIREMENTS AS MENTIONED IN PHASING SHEETS G004 – G007. THESE REQUIREMENTS INCLUDE BUT NOT LIMITED TO AIRCRAFT ROUTES, CONSTRUCTION ACCESS ROUTES, CONSTRUCTION LIMITS, AND BARRICADE LOCATIONS.

4. PROTECTION OF NAVIGATION AIDS (NAVAIDS)

–THE CONTRACTOR MUST NOT CONDUCT ANY CONSTRUCTION ACTIVITY WITHIN NAVIGATIONAL AID RESTRICTED AREAS WITHOUT PRIOR APPROVAL FROM THE LOCAL FAA AIRWAY FACILITIES SECTOR REPRESENTATIVE. NAVIGATIONAL AIDS INCLUDE INSTRUMENT LANDING SYSTEM COMPONENTS AND VERY HIGH–FREQUENCY OMNIDIRECTIONAL RANGE, AIRPORT SURVEILLANCE RADAR. SUCH RESTRICTED AREAS ARE DEPICTED ON CONSTRUCTION PLANS.

5. CONTRACTOR ACCESS

–PRIOR TO CONSTRUCTION, CONTRACTOR SHALL SUBMIT A CERTIFICATION LETTER THAT ALL EMPLOYEES WHO WILL HAVE UNESCORTED ACCESS TO THE AOA HAVE BEEN CHECKED FOR EMPLOYMENT, SECURITY, AND CRIMINAL HISTORY AS STATED IN THE CONSTRUCTION SAFETY AND PHASING PLAN.
–CONTRACTOR MOVEMENT SHALL BE VIA THE PRE–DETERMINED ACCESS ROUTES AS SHOWN ON SHEETS G005 – G007.
–ALL VEHICLES AND EQUIPMENT OPERATING IN THE AOA MUST CLEARLY IDENTIFY THEMSELVES WITH A 8–INCH (MINIMUM) BLOCK–TYPE CHARACTERS OF A CONTRASTING COLOR AND EASY TO READ. THEY MAY BE APPLIED EITHER BY USING TAPE OR A WATER–SOLUABLE PAINT TO FACILITATE REMOVAL. MAGNETIC SIGNS ARE ALSO ACCEPTABLE. IN ADDITION, VEHICLES MUST DISPLAY IDENTIFICATION MEDIA, AS SPECIFIED IN THE APPROVED AIRPORT SECURITY PLAN.
–ALL VEHICLES AND EQUIPMENT OPERATING IN THE AOA MUST HAVE FLAG (DAY ONLY) OR BEACON (DAY AND NIGHT) ATTACHED TO THE VEHICLE.
–ALL VEHICLES WITHOUT PRIOR APPROVAL FROM AIRPORT THAT MUST TRAVEL IN THE AOA WILL BE ESCORTED BY THE CONTRACTOR AND AIRPORT OPERATIONS. THOSE VEHICLES ARE REQUIRED TO ADHERE TO ALL RULES AND REGULATIONS AS RCM BY SKYHAVEN AIRPORT AND ADVISORY CIRCULAR 150/5370–2F, OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION. IDENTIFICATION AND FLAGS/BEACONS MUST BE ATTACHED TO THE VEHICLE AS STATED IN THE PREVIOUS NOTE.
–VEHICLE TRAFFIC LOCATED IN OR CROSSING AN ACTIVE MOVEMENT AREA MUST HAVE A WORKING TWO–WAY RADIO IN CONTACT WITH AIR TRAFFIC OR BE ESCORTED BY PERSON IN RADIO CONTACT WITH AIR TRAFFIC. THE DRIVER, THROUGH PERSONAL OBSERVATION SHOULD CONFIRM THAT NO AIRCRAFT IS APPROACHING THE VEHICLE POSITION. THE CONTRACTOR PERSONNEL MAY OPERATE IN THE MOVEMENT AREA WITHOUT TWO–WAY RADIO COMMUNICATION PROVIDED A NOTAM IS ISSUED CLOSING THE AREA AND THE AREA IS PROPERLY BARRICADED TO PREVENT INCURSIONS. TWO–WAY RADIO COMMUNICATIONS ARE REQUIRED BETWEEN THE CONTRACTOR AND AIR TRAFFIC. CONTINUOUS MONITORING IS REQUIRED ONLY WHEN EQUIPMENT MOVEMENT IS NECESSARY IN CERTAIN AREAS. CONTRACTOR SHALL HAVE A MINIMUM OF TWO ICOM AC–200 TOWER/CTAF RADIOS ON SITE AT ALL TIMES.

SKYHAVEN GROUND – CTAF/UNICOM 123.0

–CONTRACTOR IS REQUIRED TO NOTIFY AND COORDINATE WITH THE PROJECT ENGINEER PRIOR TO ENTERING ANY ACTIVE SURFACE SAFETY AREAS OR OBJECT FREE AREAS.
–CONTRACTOR, SUBCONTRACTOR, AND SUPPLIER EMPLOYEES OR ANY UNAUTHORIZED PERSONS MUST BE RESTRICTED FROM ENTERING AN AIRPORT AREA THAT WOULD BE HAZARDOUS.

6. WILDLIFE MANAGEMENT

–CONTRACTOR SHALL ADHERE TO ALL WILDLIFE MANAGEMENT PRACTICES AS STATED IN ADVISORY CIRCULAR 150/5200–33, HAZARDOUS WILDLIFE ATTRACTIONS ON OR NEAR AIRPORTS, AND CERTALERT 98–08, GRASSES ATTRACTIVE TO HAZARDOUS WILDLIFE.
–CONTRACTOR IS RESPONSIBLE FOR COMPLETING A DAILY INSPECTION OF TRASH AND OR FOREIGN OBJECTS ON THE CONSTRUCTION SITE THAT MIGHT ATTRACT WILDLIFE.
–CONTRACTOR IS RESPONSIBLE FOR COMPLETING A DAILY INSPECTION OF STANDING WATER THAT MIGHT ATTRACT WILDLIFE ONTO THE CONSTRUCTION SITE.
–CONTRACTOR SHALL MAINTAIN ALL FENCES AND GATES THROUGHOUT THE PROJECT TO THE SATISFACTION OF THE ENGINEER.
–CONTRACTOR SHALL NOTIFY ENGINEER WHEN A WILDLIFE SIGHTING HAS OCCURRED ON THE PROJECT SITE.

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT

–CONTRACTOR SHALL KEEP ALL PAVEMENTS IN THE AOA INCLUDING APRONS, TAXIWAYS, AND RUNWAYS FREE FROM FOD AT ALL TIMES TO PREVENT ANY DEBRIS FROM BEING INGESTED INTO AN AIRCRAFT'S ENGINE OR ANY DEBRIS FROM BEING LAUNCHED DUE TO JET BLAST.
–CONTRACTOR IS REQUIRED TO MAINTAIN FOD SEVERAL TIMES A DAY TO THE SATISFACTION OF THE ENGINEER.
–PRIOR TO OPENING ANY PAVEMENT TO AIRCRAFT, THE CONTRACTOR SHALL CONDUCT A SWEEP OF THE PAVEMENT TO VERIFY THAT THE PAVEMENT IS FREE FROM FOD.
–THE CONTRACTOR IS ADVISED THAT DUST CONTROL, CLEANUP OF ACTIVE PAVEMENTS TRACKING DEBRIS ONTO ACTIVE PAVEMENT AND GENERAL JOBSITE CLEANLINESS IS A SERIOUS SAFETY CONCERN. FOREIGN OBJECT DEBRIS (FOD) IS CONSIDERED AS ANY ITEM THAT COULD POSSIBLY IMPACT THE OPERATIONS OF AN AIRPORT. FOD COULD CAUSE INJURY OR DEATH THROUGH INGESTION IN MOVING AIRCRAFT ENGINES. SPECIFIC ITEMS OF CONCERN INCLUDE BUT ARE NOT LIMITED TO: ANY PACKAGING FROM MATERIAL INSTALLATION, GRAVEL LEFT ON ACTIVE PAVEMENTS, DUST TRACKED ONTO ACTIVE PAVEMENTS, HAND TOOLS, HARDWARE DROPPED, ETC.

8. HAZARDOUS MATERIAL (HAZMAT) MANAGEMENT

–CONTRACTOR SHALL NOTIFY ENGINEER AND AIRPORT EMERGENCY PERSONNEL IF HAZARDOUS MATERIAL IS ENCOUNTERED ON THIS PROJECT.

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES

AGENCY NAME	TYPE OF AGENCY	TELEPHONE NUMBER
UNIVERSITY OF CENTRAL MISSOURI POLICE	POLICE DEPARTMENT	(660) 543–4123 OR 911
WARRENSBURG FIRE DEPARTMENT	FIRE DEPARTMENT	(660) 747–8927 OR 911
WESTERN MISSOURI MEDICAL CENTER	HOSPITAL/AMBULANCE	(660) 747–2500 OR 911
AIRPORT ADMINISTRATIVE	DENIS GODFREY	(660) 543–4460

BEFORE BEGINNING ANY CONSTRUCTION ACTIVITY ON THE AOA, THE CONTRACTOR MUST GIVE NOTICE TO THE ENGINEER. THE ENGINEER WILL COORDINATE WITH RCM OPERATIONS TO DETERMINE IF THE CONSTRUCTION REQUIRES THE ISSUANCE OF NOTICE TO AIRMEN (NOTAM) SYSTEM OF PROPOSED LOCATION, TIME, AND DATE OF COMMENCEMENT OF CONSTRUCTION. ALL NOTAMS SHOULD BE ISSUED BY THE SKYHAVEN AIRPORT. UPON COMPLETION OF WORK AND RETURN OF ALL SUCH AREAS TO STANDARD CONDITIONS, THE CONTRACTOR MUST COORDINATE WITH THE ENGINEER AND VERIFY THE CANCELLATION OF ALL NOTICES ISSUED VIA THE NOTAM SYSTEM. THROUGHOUT THE DURATION OF THE CONSTRUCTION PROJECT, THE CONTRACTOR MUST:

A. BE AWARE OF AND UNDERSTAND THE SAFETY PROBLEMS AND HAZARDS DESCRIBED IN AC 150/5370–2F, OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.
B. CONDUCT ACTIVITIES SO AS NOT TO VIOLATE ANY SAFETY STANDARDS CONTAINED IN AC 150/5370–2F OR ANY OF THE REFERENCES THEREIN.
C. INSPECT ALL CONSTRUCTION AND STORAGE AREAS AS OFTEN AS NECESSARY TO BE AWARE OF CONDITIONS.
D. PROMPTLY TAKE ALL ACTIONS NECESSARY TO PREVENT OR REMEDY ANY UNSAFE OR POTENTIALLY UNSAFE CONDITIONS AS SOON AS THEY ARE DISCOVERED.
E. THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS, PROVISIONS, AND PROCEDURES OUTLINED IN CONSTRUCTION SAFETY PHASING PLAN (SEE APPENDIX OF THE CONTRACT DOCUMENTS).

–ANY CHANGES TO SCOPE OR SCHEDULE MUST BE NOTIFIED TO THE ENGINEER AND RCM DIRECTOR OF OPERATIONS AND AIRPORT OPERATIONS SPECIALIST SO THAT NOTAMS CAN BE ISSUED, MAINTAINED, AND CANCELED.
–IN AN EVENT OF AN EMERGENCY, CONTRACTOR SHALL NOTIFY ENGINEER, RCMOPERATIONS, AND AIRPORT EMERGENCY.
–ANY CONSTRUCTION OR ALTERATION THAT AFFECTS NAVIGABLE AIRSPACE AS DEFINED IN PART 77, MUST NOTIFY THE ENGINEER.

10. INSPECTION REQUIREMENTS

–CONTRACTOR TO COMPLETE A DAILY INSPECTION FOR SAFETY ON THE CONSTRUCTION SITE BY COMPLETING THE CHECKLIST PROVIDED IN THE ADVISORY CIRCULAR 150/5370–2F APPENDIX 3, SAFETY AND PHASING PLAN CHECKLIST.
–THE CONTRACTOR, ENGINEER AND AIRPORT OPERATOR MUST PERFORM ONSITE INSPECTIONS THROUGHOUT THE PROJECT, WITH IMMEDIATE REMEDY OF ANY DEFICIENCIES, WHETHER CAUSED BY NEGLIGENCE, OVERSIGHT, OR PROJECT SCOPE CHANGE.
–CONTRACTOR TO COMPLETE A FINAL INSPECTION FOR SAFETY ON THE CONSTRUCTION SITE AT THE END OF EACH PHASE. THE INSPECTION WILL INCLUDE A COMPLETED CHECKLIST PROVIDED IN THE ADVISORY CIRCULAR 150/5370–2F APPENDIX 3, SAFETY AND PHASING PLAN CHECKLIST.

11. APPROACH CLEARANCE TO RUNWAYS

–RUNWAY THRESHOLDS MUST PROVIDE AN UNOBSTRUCTED APPROACH SURFACE OVER EQUIPMENT AND MATERIALS. (REFER TO CHAPTER 3 PARAGRAPH 303C) IN AC 150/5300–13A AIRPORT DESIGN, FOR GUIDANCE IN THIS AREA.

12. RUNWAY AND TAXIWAY VISUAL AIDS

–CONTRACTOR TO PLACE LOW–PROFILE BARRICADES AS DETAILED ON AND IN ALL DESIGNATED AREAS AS SHOWN ON PHASING SHEETS G004 – G007.
–APPROVED LOW–PROFILE BARRICADES SHALL BE LIT AT NIGHT AS APPROVED BY THE ENGINEER.

13. MARKING AND SIGNS FOR ACCESS ROUTES

–ALL REQUIRED SIGNS AND MARKINGS SHALL CONFORM TO ADVISORY CIRCULAR 150/5340–18, STANDARD FOR AIRPORT SIGN SYSTEMS, OR THE FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
–ALL SIGNS ADJACENT TO AREAS USED BY AIRCRAFT MUST COMPLY WITH THE FRANGIBLE REQUIREMENTS AS STATED IN ADVISORY CIRCULAR, FRANGIBLE CONNECTIONS.

14. UNDERGROUND UTILITIES

–THE LOCATION OF UTILITIES, WHETHER FAA OR AIRPORT OWNED SHALL BE COORDINATED WITH THE FAA AND AIRPORT PRIOR TO CONSTRUCTION IN THAT AREA. DAMAGE TO THE UNDERGROUND CABLES, WHETHER FAA'S OR AIRPORT'S, THROUGH NEGLIGENCE ON THE PART OF THE CONTRACTOR WILL REQUIRE REPLACEMENT BY THE CONTRACTOR AT NO COST TO THE SPONSOR. ANY SPLICING OR REPLACING OF DAMAGED CABLE SHALL MEET CURRENT FAA SPECIFICATIONS. DAMAGE TO OTHER UNDERGROUND UTILITIES THROUGH THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED ACCORDING TO THE RELEVANT UTILITY'S STANDARDS AND AT NO COST TO THE AIRPORT.

15. PENALTIES

–NO DEVIATIONS FROM THESE SECURITY MEASURES SHALL BE ALLOWED AT ANY TIME. THERE SHALL BE A $1,000.00 PENALTY AND RECISSION OF DRIVING PRIVILEGES WITHIN THE AOA FOR EACH DEVIATION FROM THESE SECURITY PROVISIONS.

16. HAZARD MARKINGS AND LIGHTINGS

–PRIOR TO CLOSING ANY AREAS IN THE AOA TO AIRCRAFT OR EMERGENCY TRAFFIC, CONTRACTOR MUST CLEARLY MARK AND DEFINE CLOSED AREAS WITH WARNING LIGHTS, BARRICADES, AND FLAGS TO THE APPROVAL OF THE ENGINEER. CONTRACTOR TO USE PHASING SHEETS G004 – G007 FOR GUIDANCE.
–HAZARDOUS AREAS ON THE MOVEMENT AREA WILL BE MARKED WITH BARRICADES. THESE BARRICADES RESTRICT ACCESS AND MAKE HAZARDS OBVIOUS TO AIRCRAFT, PERSONNEL, AND VEHICLES. DURING PERIODS OF LOW VISIBILITY AND AT NIGHT, IDENTIFY HAZARDOUS AREAS WITH RED FLASHING LIGHTS. THE HAZARDOUS AREA MARKING AND LIGHTING WILL BE SUPPLIED BY THE CONTRACTOR, AS SPECIFIED IN THE CONTRACT, AND IS DEPICTED ON THE PLANS.

17. PROTECTION OF RUNWAY AND TAXIWAY AREAS

–SAFETY AREAS – CONTRACTOR SHALL NOT IMPEDE ON THE SAFETY AREAS OF ANY ACTIVE RUNWAYS OR TAXIWAYS.
–OBJECT FREE AREAS – CONTRACTOR SHALL NOT PLACE EQUIPMENT, MATERIAL, OR STOCKPILES IN THIS AREA. ALL OBJECTS OR MATERIALS ADJACENT TO THIS AREA SHALL BE PROPERLY MARKED/LIT PER ADVISORY CIRCULAR 150/5370–2F. CONTRACTOR SHALL NOT WORK IN ANY OBJECT FREE AREAS FOR ACTIVE RUNWAYS, TAXIWAYS, OR TAXILANES DURING NORMAL AIRPORT HOURS.
–OBSTACLE FREE ZONE – CONTRACTOR TO PREVENT PERSONNEL, MATERIAL, AND/OR EQUIPMENT FROM PENETRATING THE OBSTACLE FREE ZONE AS DEFINED IN ADVISORY CIRCULAR 150/5300–13, PARAGRAPH 306.

SKYHAVEN AIRPORT – RUNWAY 18/36
–RUNWAY SAFETY AREA (RSA) 75' FROM ℄ OF RUNWAY (EACH SIDE)
–RUNWAY OBJECT FREE AREA (ROFA) 250' FROM ℄ RUNWAY (EACH SIDE)
–OBJECT FREE ZONE 200' FROM ℄ RUNWAY (EACH SIDE)

SKYHAVEN AIRPORT – RUNWAY 13/31
–RUNWAY SAFETY AREA (RSA) 60' FROM ℄ OF RUNWAY (EACH SIDE)
–RUNWAY OBJECT FREE AREA (ROFA) 125' FROM ℄ RUNWAY (EACH SIDE)
–OBJECT FREE ZONE 125' FROM ℄ RUNWAY (EACH SIDE)

SKYHAVEN AIRPORT – ALL CONNECTOR TAXIWAYS
–TAXIWAY SAFETY AREA (TSA) 39.5' FROM ℄ TAXIWAY (EACH SIDE)
–TAXIWAY OBJECT FREE AREA (TOFA) 65.5' FROM ℄ TAXIWAY (EACH SIDE)

18. AIRPORT SECURITY

–CONTRACTOR SHALL ADHERE TO AIRPORT SECURITY REQUIREMENTS AT ALL TIMES. SECURITY REQUIREMENTS AND RELATED AIRPORT FAMILIARIZATION REQUIREMENTS ARE MANDATORY. ANY GATE UTILIZED FOR CONSTRUCTION PURPOSES SHALL BE GUARDED BY CONTRACTOR OR LOCKED AT ALL TIMES. KEY CONSTRUCTION SUPERINTENDENTS AND ANY OTHER PERSONNEL DEEMED NECESSARY BY THE AIRPORT SHALL BE REQUIRED TO BE BADGED BY THE AIRPORT, COMPLETE A SECURITY CLASS AND AN AIRPORT DRIVING CLASS AT THE EXPENSE OF THE CONTRACTOR PRIOR TO CONSTRUCTION. UNBADGED CONSTRUCTION PERSONNEL SHALL BE ESCORTED AT ALL TIMES DURING AIRSIDE CONSTRUCTION.

19. OTHER LIMITATIONS ON CONSTRUCTION

ADDITIONAL LIMITATIONS ON CONSTRUCTION INCLUDE:

A. PROHIBITING OPEN–FLAME WELDING OR TORCH CUTTING OPERATIONS UNLESS ADEQUATE FIRE SAFETY PRECAUTIONS ARE PROVIDED AND THESE OPERATIONS HAVE BEEN AUTHORIZED BY THE AIRPORT OPERATOR (AS TAILORED TO CONFORM TO LOCAL REQUIREMENTS AND RESTRICTIONS).
B. PROMINENTLY MARKING OPEN TRENCHES, EXCAVATIONS, AND STOCKPILED MATERIALS AT THE CONSTRUCTION AND LIGHTING THESE OBSTACLES DURING HOURS OF RESTRICTED VISIBILITY AND DARKNESS.
C. MARKING AND LIGHTING CLOSED, DECEPTIVE, AND HAZARDOUS AREAS ON AIRPORTS, AS APPROPRIATE.
D. CONSTRAINING STOCKPILED MATERIAL TO PREVENT ITS MOVEMENT AS A RESULT OF THE MAXIMUM ANTICIPATED AIRCRAFT BLAST AND FORECAST WIND CONDITIONS.
E. NO USE OF TALL EQUIPMENTS (CRANES, CONCRETE PUMPS, AND SO ON) UNLESS AN FAA FORM 7460–1 DETERMINATION LETTER IS ISSUED FOR SUCH EQUIPMENT. THE CONTRACTOR IS RESPONSIBLE FOR FILING ANY NECESSARY 7460'S.
F. NO USE OF FLARE POTS WITHIN THE AOA.

20. SPECIAL CONDITIONS AFFECTING AIRPORT OPERATION

–IN THE EVENT THAT THE OPERATION OF THE AIRPORT IS IMPACTED BY A WEATHER EVENT OR ANY UNFORESEEN EVENT, THE CONTRACTOR SHALL BE PREPARED TO STOP WORK AND RELOCATE MEN AND EQUIPMENT, AS REQUIRED BY THE AIRPORT, UNTIL SUCH TIME THAT THE EVENT HAS CEASED AND IT IS SAFE TO RESUME CONSTRUCTION ACTIVITIES.

ISSUE FOR BID

THESE DRAWINGS ARE FOR BIDDING ONLY AND ARE NOT INTENDED FOR CONSTRUCTION, OR PERMIT PURPOSES. THEY WERE PREPARED BY OR UNDER THE SUPERVISION OF:

RYAN B. LORTON	PE-2004017211	04/27/2015
NAME	REG. NO.	DATE

FOR AND ON BEHALF OF JVIATION, INC.

JVIATION®

SKYHAVEN AIRPORT
WARRENSBURG, MISSOURI

DES: J.D.C.
DR: J.D.C.
CH: C.L.G.
APP: R.B.L.

ISSUE RECORD

NO.	BY	DATE	DESCRIPTION
1	R.B.L.	04/27/2015	ISSUED FOR BID

RUNWAY RENUMBERING

CONSTRUCTION LAYOUT AND SAFETY DRAWING PLAN

MoDOT PROJ. NO.	JVIATION PROJ. NO.	DATE:
AIR 156-019A	2013.RCM.01	04/27/2015

SHEET NAME: G003
SHEET NO.: 3 of 12

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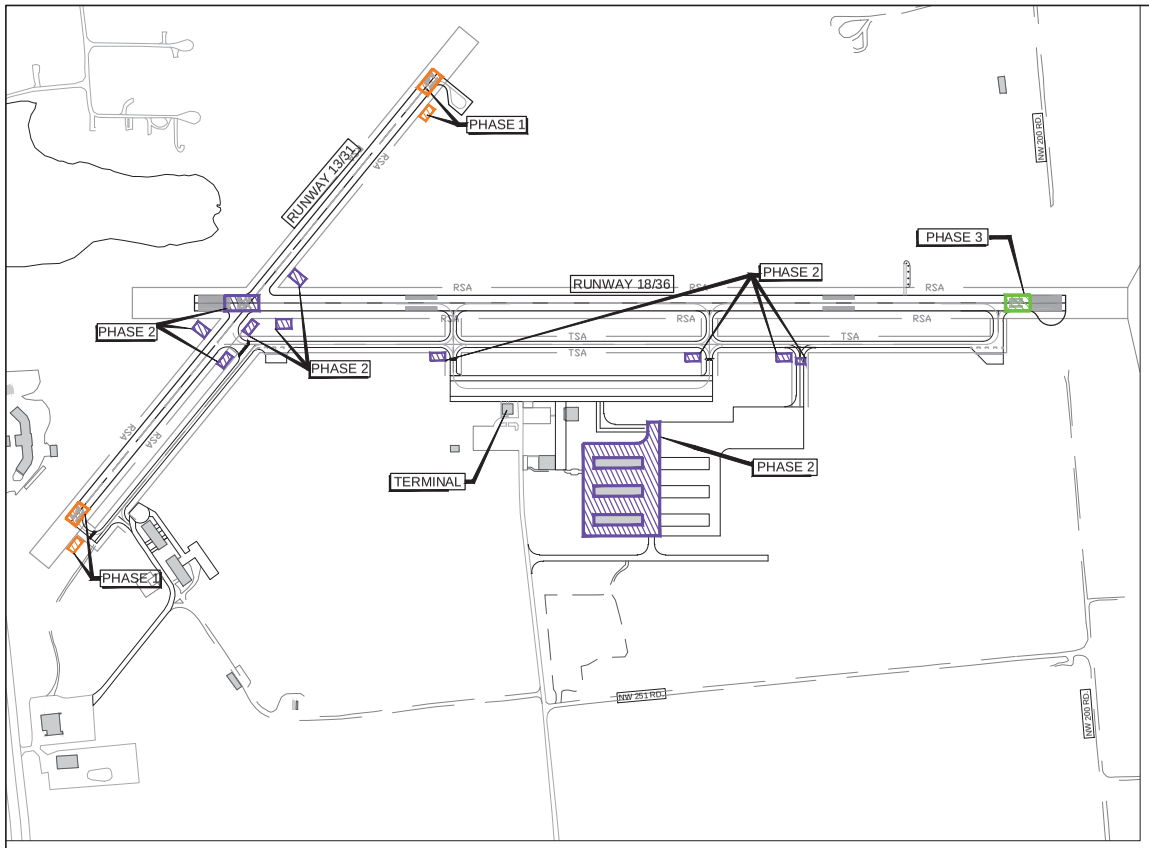


SCHEDULE I - CONSTRUCTION PHASING NOTES - TOTAL ALL PHASES (8 CALENDAR DAYS)

SCHEDULE I

PHASE 2 WORK SHALL BE PERFORMED CONCURRENTLY WITH PHASE 1.

PHASE 1

ESTIMATED START DATE: SUMMER 2015
5 CALENDAR DAYS

PHASE 2

ESTIMATED START DATE: SUMMER 2015
3 CALENDAR DAYS CONCURRENT WITH PHASE 1

PHASE 3

ESTIMATED START DATE: SUMMER 2015
3 CALENDAR DAYS

MAJOR WORK TO BE COMPLETED

1. OBLITERATE EXISTING MARKINGS AND CLEAN PAVEMENT SUURFACES
2. SEAL COAT RUNWAY 18/36 AND RUNWAY 13/31 AS INDICATED ON THE PLANS AT THE LOCATION OF THE EXISTING RUNWAY NUMERALS.
3. INSTALL NEW PAVEMENT MARKINGS.
4. INSTALL NON-LIGHTED GUIDANCE SIGNS.

CONSTRUCTION PHASING LEGEND

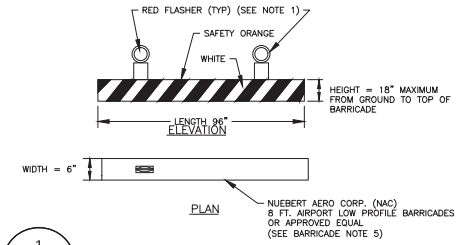
- PHASE 1 – (5 CALENDAR DAYS)
- PHASE 2 – (3 CALENDAR DAYS CONCURRENT WITH PHASE 1)
- PHASE 3 – (3 CALENDAR DAYS)
- CONTRACTOR STAGING AREA
- CONTRACTOR STAGING AREA TRUCK/HAUL ROUTE
- TEMPORARY AIRPORT ACCESS ROUTE
- FLASHER BARRICADES SEE DETAIL 1 ON THIS SHEET
- CLOSED RUNWAY "X" SEE DETAIL 2 ON THIS SHEET

AIRPORT OPERATIONAL NOTES

1. IN ADDITION TO BARRICADE PLACEMENTS SHOWN ON PHASING SHEETS G004 – G007 CONSTRUCTION BARRICADES SHALL BE INSTALLED AS DIRECTED BY ENGINEER FOR AREAS THAT ARE TEMPORARILY CLOSED TO TRAFFIC DURING PAVEMENT MARKING APPLICATION AND DRY TIME.
2. THE CONTRACTOR SHALL COORDINATE WITH ANY OTHER CONSTRUCTION ACTIVITY TO APPLY THE PAVEMENT MARKINGS IN AREAS WHERE CONSTRUCTION HAS BEEN OR IS BEING PERFORMED.
3. ALL OF THE CONTRACTOR'S EQUIPMENT AND ANY FOREIGN OBJECT DEBRIS (FOD) MUST BE REMOVED FROM ALL PAVEMENT SURFACES AND RUNWAY AND TAXIWAY SAFETY AREAS PRIOR TO OPENING.

OTHER NOTES

1. A MINIMUM OF 72 HOUR NOTICE SHOULD BE GIVEN TO THE AIRPORT FOR CONSTRUCTION ACCESS ON THE RUNWAY AND ALL TAXIWAYS IN ORDER FOR THE AIRPORT TO ISSUE A NOTAM. IF CLOSURES ARE NOT SCHEDULED PROPERLY AND IN WRITING, THE CONTRACTOR MAY NOT HAVE ACCESS TO THE DESIRED WORK AREA AND IN NO WAY IS THIS A VALIDATION FOR ADDITIONAL CALENDAR DAYS.
2. UNICOM 123.0 MHZ.
3. A SWEEPER OR OTHER APPROVED EQUIPMENT SHALL BE AVAILABLE AT ALL TIMES TO CLEAN DEBRIS FROM HAUL ROUTE OR AREAS ADJACENT TO CONSTRUCTION.
4. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING AIRFIELD PAVEMENT, LIGHTS OR AREAS ALONG THE HAUL ROUTE.
5. THE CONTRACTOR SHALL ONLY PARK EQUIPMENT IN THE DESIGNATED STAGING AREA.
6. THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE.

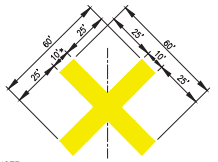


1 / G004 FLASHER BARRICADE DETAIL
NOT TO SCALE

NOTE:
1. FLASHER BARRICADES WILL BE REQUIRED ALONG THE EDGE OF ANY VERTICAL DROP OFF GREATER THAN 3". OPERATIONS WILL ISSUE NOTAM TO ADVISE AIRCRAFT OF THIS CONDITION, AND IN LOCATIONS SHOWN ON SHEETS G004–G007.

BARRICADE NOTES:

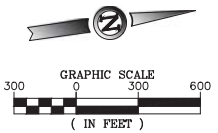
1. LENS TO BE RED AND BE ABLE TO ROTATE 90°. NEUBERT AERO CORP. (NAC) – 360 DEGREE RED–TYPE D HAZARD SOLAR POWERED DUAL FUNCTION AND/OR APPROVED EQUAL BY ENGINEER.
2. FACING OF LOW–PROFILE BARRICADE TO BE COVERED WITH REFLECTIVE MATERIAL.
3. LOW–PROFILE BARRICADES TO BE PLACED CONTINUALLY ALONG OPERATIONAL PAVEMENT, ADJACENT TO CONSTRUCTION, AS DIRECTED BY THE ENGINEER.
4. FLASHERS SHALL BE SECURED TO THE BARRICADES, AS APPROVED BY AIRPORT OPERATIONS. ALTERNATE FLASHER LENSES SO THAT EVERY OTHER LENS IS ROTATED 90°.
5. LOW–PROFILE BARRICADES SHALL BE OF LOW MASS, EASILY COLLAPSIBLE UPON CONTACT WITH AN AIRCRAFT OR ANY OF ITS COMPONENTS, AND WEIGHTED OR STURDILY ATTACHED TO THE SURFACE. IF AFFIXED TO THE SURFACE, THE BARRICADE MUST BE FRANGIBLE AT GRADE LEVEL OR LOW AS POSSIBLE, BUT NOT TO EXCEED 3 INCHES ABOVE THE GROUND. THE CONTRACTOR IS TO REPAIR ANY SURFACE DAMAGE IF BARRICADE IS AFFIXED TO THE SURFACE. NEUBERT AERO CORP. (NAC) 8 FT AIRPORT LOW PROFILE BARRICADES AND/OR APPROVED EQUAL BY ENGINEER.
6. THE CONTRACTOR SHALL MAINTAIN ALL BARRICADES DURING DAYLIGHT HOURS. CONTRACTORS SHALL ALSO PROVIDE THE AIRPORT SPARE LIGHTING UNITS FOR MAINTENANCE DURING NIGHTTIME HOURS.
7. BARRICADES TO BE PLACED IN LOCATIONS AS SHOWN ON PLANS AND AS DIRECTED BY THE FIELD ENGINEER THROUGHOUT THE PROJECT.
8. THE BARRICADES SHALL BE INCIDENTAL TO BID ITEM MO–100 MOBILIZATION. CONTRACTOR SHALL PLACE ALL BARRICADES IN STORAGE AT A LOCATION DETERMINED BY THE AIRPORT.



NOTE:
THE CONTRACTOR WILL BE REQUIRED TO PLACE CROSSES AT EACH END OF A RUNWAY WHEN HE CLOSES THE RUNWAY FOR CONSTRUCTION. THE MATERIAL USED FOR THE CROSS SHALL BE ANY SUITABLE WOOD, PLYWOOD OR FABRIC ACCEPTABLE TO THE ENGINEER. THE MATERIAL SHALL BE PAINTED YELLOW. THE CROSS SHALL BE PLACED OVER RUNWAY NUMBER UNLESSS OTHERWISE SHOWN IN PLANS. IF PLACED OFF THE RUNWAY DURING CRACK SEALING OPERATIONS, YELLOW "X" SHALL HAVE A 1' WIDE BLACK OUTLINE SO IT CAN CLEARLY BE SEEN FROM THE AIR.

* 8' DIMENSION IS ALLOWABLE FOR TEMPORARY RUNWAY CLOSURES

2 / G004 RUNWAY "X" NOTES
N.T.S.



ISSUE FOR BID

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RYAN B. LORTON | PE-2004017211 | 04/27/2015
NAME | REG. NO. | DATE
FOR AND ON BEHALF OF JVIATION, INC.

JVIATION®

SKYHAVEN AIRPORT
WARRENSBURG, MISSOURI

DES: J.D.C.
DR: J.D.C.
CH: C.L.G.
APP: R.B.L.

ISSUE RECORD

NO.	BY	DATE	DESCRIPTION
1	R.B.L.	04/27/2015	ISSUED FOR BID

RUNWAY RENUMBERING

OVERALL PHASING PLAN

MoDOT PROJ. NO.	JVIATION PROJ. NO.	DATE:
AIR 156-019A	2013.RCM.01	04/27/2015

SHEET NAME: G004
SHEET NO.: 4 of 12

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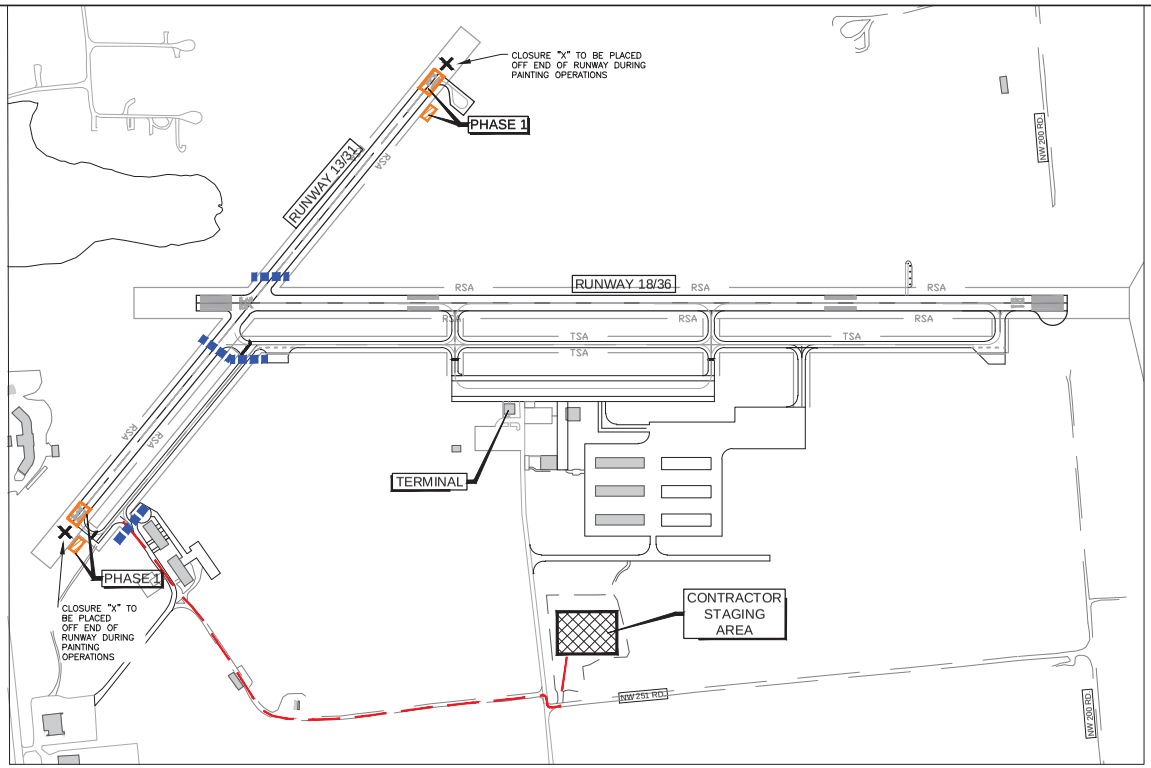

SCHEDULE I - CONSTRUCTION PHASING NOTES - CONSTRUCTION PHASE 1 (5 CALENDAR DAYS)

PHASE 1

PHASE 1 SHALL BE COMPLETED CONCURRENTLY WITH WORK IN PHASE 2.

PHASE 1

ESTIMATED START DATE: SUMMER 2015
5 CALENDAR DAYS

MAJOR WORK TO BE COMPLETED

PHASE 1

1. OBLITERATE EXISTING MARKINGS AND CLEAN ALL PAVEMENT SURFACES
2. SEAL COAT AREAS OF REMOVAL.
3. INSTALL PAVEMENT MARKINGS.
4. INSTALL NON-LIGHTED GUIDANCE SIGNS.

AIRPORT OPERATIONAL NOTES

1. THE CONTRACTOR SHALL HAVE 24 HOURS PER DAY ACCESS TO RUNWAY 13/31 DURING PHASE 1.
2. IN ADDITION TO BARRICADE PLACEMENTS SHOWN ON PHASING SHEETS G004–G007, CONSTRUCTION BARRICADES SHALL BE INSTALLED AS DIRECTED BY ENGINEER FOR AREAS THAT ARE TEMPORARILY CLOSED TO TRAFFIC DURING PAVEMENT MARKING APPLICATION AND DRY TIME.
3. THE CONTRACTOR SHALL COORDINATE WITH ANY OTHER CONSTRUCTION ACTIVITY TO APPLY THE PAVEMENT MARKINGS IN AREAS WHERE CONSTRUCTION HAS BEEN OR IS BEING PERFORMED.
4. ALL OF THE CONTRACTOR'S EQUIPMENT AND ANY FOREIGN OBJECT DEBRIS (FOD) MUST BE REMOVED FROM ALL PAVEMENT SURFACES AND RUNWAY AND TAXIWAY SAFETY AREAS PRIOR TO OPENING.

CLOSURES FOR PHASE 1:

RUNWAY 13/31 – 5 CALENDAR DAYS

OTHER NOTES

1. A MINIMUM OF 72 HOUR NOTICE SHOULD BE GIVEN TO THE AIRPORT FOR CONSTRUCTION ACCESS ON THE RUNWAY AND ALL TAXIWAYS IN ORDER FOR THE AIRPORT TO ISSUE A NOTAM. IF CLOSURES ARE NOT SCHEDULED PROPERLY AND IN WRITING, THE CONTRACTOR MAY NOT HAVE ACCESS TO THE DESIRED WORK AREA AND IN NO WAY IS THIS A VALIDATION FOR ADDITIONAL CALENDAR DAYS.
2. UNICOM 123.0 MHZ.
3. A SWEEPER OR OTHER APPROVED EQUIPMENT SHALL BE AVAILABLE AT ALL TIMES TO CLEAN DEBRIS FROM HAUL ROUTE OR AREAS ADJACENT TO CONSTRUCTION.
4. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING AIRFIELD PAVEMENT, LIGHTS OR AREAS ALONG THE HAUL ROUTE.
5. THE CONTRACTOR SHALL ONLY PARK EQUIPMENT IN THE DESIGNATED STAGING AREA.
6. THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE.

CONSTRUCTION PHASING LEGEND

- PHASE 1
- CONTRACTOR STAGING AREA
- TRUCK/HAUL ROUTE
- FLASHER BARRICADES SEE DETAIL 1 ON SHEET G004
- CLOSED RUNWAY "X" SEE DETAIL 2 ON SHEET G004

GRAPHIC SCALE
300 0 300 600
(IN FEET)

ISSUE FOR BID

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ISSUE RECORD

NO.	BY	DATE	DESCRIPTION
1	R.B.L.	04/27/2015	ISSUED FOR BID

RUNWAY RENUMBERING

CONSTRUCTION PHASING PLAN
PHASE 1

MoDOT PROJ. NO.	JVIATION PROJ. NO.	DATE
AIR 156-019A	2013.RCM.01	04/27/2015

SHEET NAME: G005
SHEET NO.: 5 of 12

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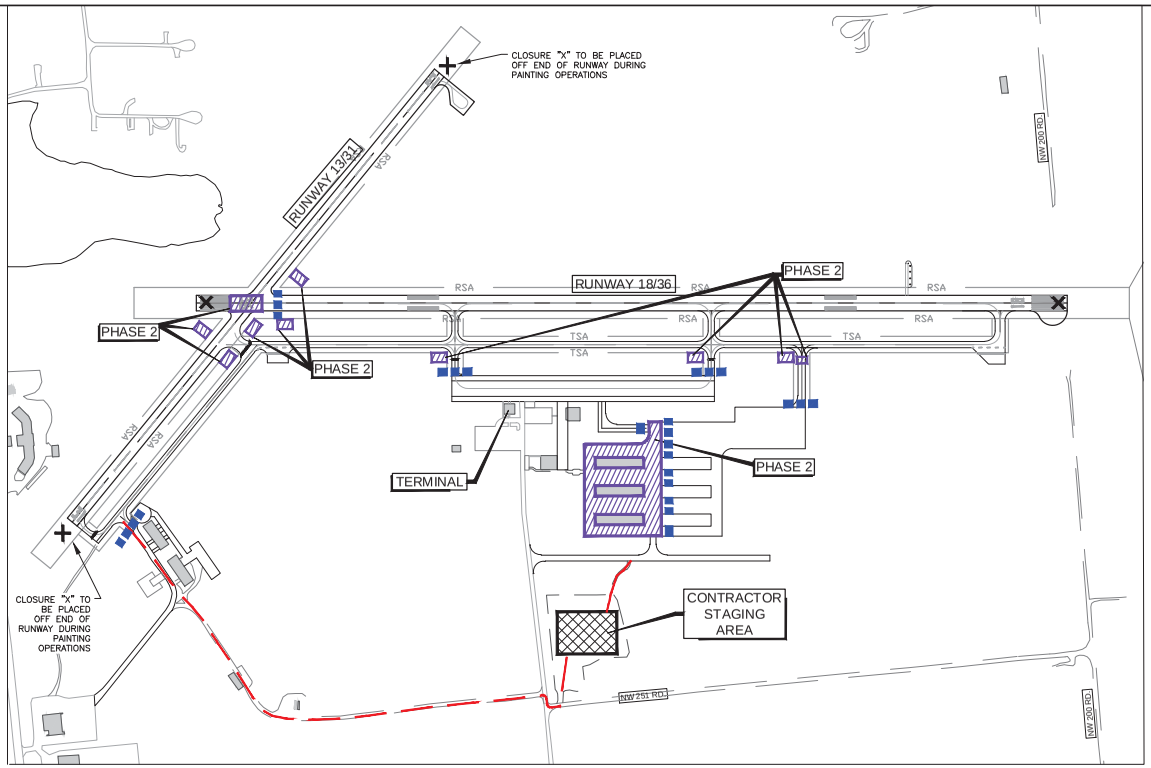

SCHEDULE I - CONSTRUCTION PHASING NOTES - CONSTRUCTION PHASE 2 (3 CALENDAR DAYS)

PHASE 2

ALL WORK IN PHASE 2 SHALL BE COMPLETED CONCURRENTLY WITH WORK IN PHASE 1.

PHASE 2

ESTIMATED START DATE: SUMMER 2015
3 CALENDAR DAYS

MAJOR WORK TO BE COMPLETED

PHASE 2

1. OBLITERATE EXISTING MARKINGS AND CLEAN ALL PAVEMENT SURFACES.
2. SEAL COAT AREAS OF REMOVAL.
3. INSTALL PAVEMENT MARKINGS.
4. INSTALL NON-LIGHTED GUIDANCE SIGNS.

AIRPORT OPERATIONAL NOTES

1. THE CONTRACTOR SHALL HAVE 24 HOURS PER DAY ACCESS TO RUNWAY 13/31 AND RUNWAY 18/36 DURING PHASE 2.
2. IN ADDITION TO BARRICADE PLACEMENTS SHOWN ON PHASING SHEETS G004–G007, CONSTRUCTION BARRICADES SHALL BE INSTALLED AS DIRECTED BY ENGINEER FOR AREAS THAT ARE TEMPORARILY CLOSED TO TRAFFIC DURING PAVEMENT MARKING APPLICATION AND DRY TIME.
3. THE CONTRACTOR SHALL COORDINATE WITH ANY OTHER CONSTRUCTION ACTIVITY TO APPLY THE PAVEMENT MARKINGS IN AREAS WHERE CONSTRUCTION HAS BEEN OR IS BEING PERFORMED.
4. ALL OF THE CONTRACTOR'S EQUIPMENT AND ANY FOREIGN OBJECT DEBRIS (FOD) MUST BE REMOVED FROM ALL PAVEMENT SURFACES AND RUNWAY AND TAXIWAY SAFETY AREAS PRIOR TO OPENING.

CLOSURES FOR PHASE 2:

RUNWAY 13/31 – 3 CALENDAR DAYS

RUNWAY 18/36 – 3 CALENDAR DAYS

SOUTHERNMOST TAXILANES – 3 CALENDAR DAYS

OTHER NOTES

1. A MINIMUM OF 72 HOUR NOTICE SHOULD BE GIVEN TO THE AIRPORT FOR CONSTRUCTION ACCESS ON THE RUNWAY AND ALL TAXIWAYS IN ORDER FOR THE AIRPORT TO ISSUE A NOTAM. IF CLOSURES ARE NOT SCHEDULED PROPERLY AND IN WRITING, THE CONTRACTOR MAY NOT HAVE ACCESS TO THE DESIRED WORK AREA AND IN NO WAY IS THIS A VALIDATION FOR ADDITIONAL CALENDAR DAYS.
2. UNICOM 123.0 MHZ.
3. A SWEEPER OR OTHER APPROVED EQUIPMENT SHALL BE AVAILABLE AT ALL TIMES TO CLEAN DEBRIS FROM HAUL ROUTE OR AREAS ADJACENT TO CONSTRUCTION.
4. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING AIRFIELD PAVEMENT, LIGHTS OR AREAS ALONG THE HAUL ROUTE.
5. THE CONTRACTOR SHALL ONLY PARK EQUIPMENT IN THE DESIGNATED STAGING AREA.
6. THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE.

CONSTRUCTION PHASING LEGEND

- PHASE 2
- CONTRACTOR STAGING AREA
- TRUCK/HAUL ROUTE
- FLASHER BARRICADES SEE DETAIL 1 ON SHEET G004
- X — CLOSED RUNWAY "X" SEE DETAIL 2 ON SHEET G004

GRAPHIC SCALE
300 0 300 600
(IN FEET)

ISSUE FOR BID

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ISSUE RECORD

NO.	BY	DATE	DESCRIPTION
1	R.B.L.	04/27/2015	ISSUED FOR BID

RUNWAY RENUMBERING

CONSTRUCTION PHASING PLAN
PHASE 2

SHEET NAME: G006
SHEET NO.: 6 of 12

MoDOT PROJ. NO.	JVIATION PROJ. NO.	DATE
AIR 156-019A	2013.RCM.01	04/27/2015

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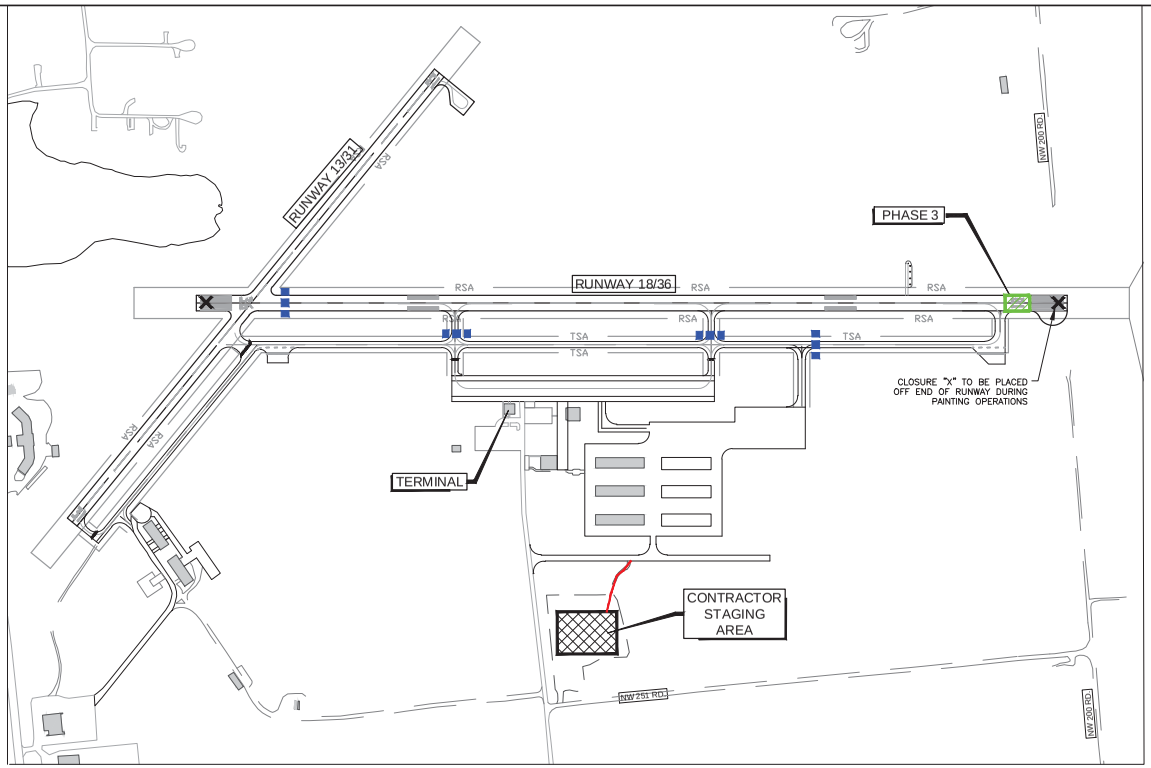

SCHEDULE I - CONSTRUCTION PHASING NOTES - CONSTRUCTION PHASE 3 (3 CALENDAR DAYS)

PHASE 3

PHASE 3 WORK SHALL NOT START UNTIL AFTER THE COMPLETION OF PHASE 1 AND 2.

PHASE 2

ESTIMATED START DATE: SUMMER 2015
3 CALENDAR DAYS

MAJOR WORK TO BE COMPLETED

PHASE 3

1. OBLITERATE EXISTING MARKINGS AND CLEAN ALL PAVEMENT SURFACES
2. SEAL COAT AREAS OF REMOVAL.
3. INSTALL PAVEMENT MARKINGS.

AIRPORT OPERATIONAL NOTES

1. THE CONTRACTOR SHALL HAVE 24 HOURS PER DAY ACCESS TO RUNWAY 18/36 DURING PHASE 3.
2. IN ADDITION TO BARRICADE PLACEMENTS SHOWN ON PHASING SHEETS G004–G007, CONSTRUCTION BARRICADES SHALL BE INSTALLED AS DIRECTED BY ENGINEER FOR AREAS THAT ARE TEMPORARILY CLOSED TO TRAFFIC DURING PAVEMENT MARKING APPLICATION AND DRY TIME.
3. THE CONTRACTOR SHALL COORDINATE WITH ANY OTHER CONSTRUCTION ACTIVITY TO APPLY THE PAVEMENT MARKINGS IN AREAS WHERE CONSTRUCTION HAS BEEN OR IS BEING PERFORMED.
4. ALL OF THE CONTRACTOR'S EQUIPMENT AND ANY FOREIGN OBJECT DEBRIS (FOD) MUST BE REMOVED FROM ALL PAVEMENT SURFACES AND RUNWAY AND TAXIWAY SAFETY AREAS PRIOR TO OPENING.

CLOSURES FOR PHASE 3:

RUNWAY 18/36 – 3 CALENDAR DAYS

OTHER NOTES

1. A MINIMUM OF 72 HOUR NOTICE SHOULD BE GIVEN TO THE AIRPORT FOR CONSTRUCTION ACCESS ON THE RUNWAY AND ALL TAXIWAYS IN ORDER FOR THE AIRPORT TO ISSUE A NOTAM. IF CLOSURES ARE NOT SCHEDULED PROPERLY AND IN WRITING, THE CONTRACTOR MAY NOT HAVE ACCESS TO THE DESIRED WORK AREA AND IN NO WAY IS THIS A VALIDATION FOR ADDITIONAL CALENDAR DAYS.
2. UNICOM 123.0 MHZ.
3. A SWEEPER OR OTHER APPROVED EQUIPMENT SHALL BE AVAILABLE AT ALL TIMES TO CLEAN DEBRIS FROM HAUL ROUTE OR AREAS ADJACENT TO CONSTRUCTION.
4. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING AIRFIELD PAVEMENT, LIGHTS OR AREAS ALONG THE HAUL ROUTE.
5. THE CONTRACTOR SHALL ONLY PARK EQUIPMENT IN THE DESIGNATED STAGING AREA.
6. THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE.

CONSTRUCTION PHASING LEGEND

- PHASE 3
- CONTRACTOR STAGING AREA
- TRUCK/HAUL ROUTE
- FLASHER BARRICADES SEE DETAIL 1 ON SHEET G004
- CLOSED RUNWAY "X" SEE DETAIL 2 ON SHEET G004

GRAPHIC SCALE
300 0 300 600
(IN FEET)

ISSUE FOR BID

THESE DRAWINGS ARE FOR BIDDING ONLY AND ARE NOT INTENDED FOR CONSTRUCTION, OR PERMIT PURPOSES. THEY WERE PREPARED BY OR UNDER THE SUPERVISION OF:

NAME	REG. NO.	DATE
RYAN B. LORTON	PE-2004017211	04/27/2015

FOR AND ON BEHALF OF JVIATION, INC.

JVIATION®

SKYHAVEN AIRPORT
WARRENSBURG, MISSOURI

DES: J.D.C.
DR: J.D.C.
CH: C.L.G.
APP: R.B.L.

ISSUE RECORD

NO.	BY	DATE	DESCRIPTION
1	R.B.L.	04/27/2015	ISSUED FOR BID

RUNWAY RENUMBERING

CONSTRUCTION PHASING PLAN
PHASE 3

MoDOT PROJ. NO.	JVIATION PROJ. NO.	DATE
AIR 156-019A	2013.RCM.01	04/27/2015

SHEET NAME: G007
SHEET NO.: 7 of 12

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PROPOSAL FORM

ATTACHMENT A
University of Central Missouri
State Block Grant Project No. AIR 156-019A

BID FOR: **SKYHAVEN AIRPORT: Schedule I: Runway Remarking**

UNIVERSITY OF CENTRAL MISSOURI
WARRENSBURG, MO 64093

The undersigned bidder, in compliance with the Invitation for Schedule I: Runway Remarking Bid at the University of Central Missouri, having examined specifications, related documents, and site of proposed project, hereby proposes to furnish the work as described in the specifications. These prices are for all labor, tools, operations, and are to cover the specified work and all associated charges. The contract for this project will be for the amount of the Base Bid and shall be the sum of all work items contained herein.

A. Base Bid – Perform all work items Contained in Bid Proposal (Section B-3A and B-3B): **$**_____

Number of calendar days to completion: 8 Calendar Days

The contractor certifies, by submitting this bid or proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction (contract) by any governmental department or agency.

By submitting your bid, you understand and agree that the terms and conditions provided throughout this solicitation are the governing terms and conditions of the Agreement. Any exception or additional terms you may wish to propose must be presented in your initial proposal at that time.

By signing this bid, the bidder signifies agreement with and acceptance of all the terms, conditions and specifications shown in this IFB, signifies that this is an accurate estimate for providing the requested services, and agrees to hold prices firm as required in the IFB. The person signing below represents and warrants that he/she has authority to bind his/her company.

The Owner reserves the right to reject any or all bids and to waive informalities. Bid shall remain valid for sixty (60) days after openings.

I (we) received Amendment number _____ (fill in number received-- if none, write none.)

_____ _____
COMPANY NAME DATE

_____ _____
AUTHORIZED SIGNATURE TELEPHONE NUMBER

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BID PROPOSAL SUMMARY

Bidder Name: _____

BASE BID - SCHEDULE I TOTAL $ _____

TOTAL BASE BID $ _____

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BASE BID: SCHEDULE I BID PROPOSAL

Item No.	Description		Units	Estimated Quantity	Unit Price	Total
MO-100a	MOBILIZATION	at the unit price of: dollars and_____cents.	LS	1	$	$
MO-620a	PERMANENT AIRPORT PAVEMENT MARKING (WHITE)	at the unit price of: dollars and_____cents.	SF	3,698	$	$
MO-620b	PERMANENT AIRPORT PAVEMENT MARKING (YELLOW)	at the unit price of: dollars and_____cents.	SF	909	$	$
MO-620c	PERMANENT AIRPORT PAVEMENT MARKING (BLACK)	at the unit price of: dollars and_____cents.	SF	1,877	$	$
MO-620d	PAVEMENT MARKING REMOVAL	at the unit price of: dollars and_____cents.	SF	4,459	$	$
MO-623a	PAVEMENT FRICTION SEALCOAT SURFACE TREATMENT	at the unit price of: dollars and_____cents.	SY	1,590	$	$
MO-125a	REMOVE EXISTING NON-LIT GUIDANCE SIGN	at the unit price of: dollars and_____cents.	EA	7	$	$
MO-125b	INSTALL NEW NON-LIT GUIDANCE SIGN	at the unit price of: dollars and_____cents.	EA	12	$	$

SCHEDULE I TOTAL $ _____

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ACKNOWLEDGEMENTS BY BIDDER

a. By submittal of a proposal, the BIDDER acknowledges and accepts that the quantities established by the OWNER are an approximate estimate of the quantities required to fully complete the Project and that the estimated quantities are principally intended to serve as a basis for evaluation of bids. The BIDDER further acknowledges and accepts that payment under this contract will be made only for actual quantities and that quantities will vary in accordance with the General Provisions subsection entitled "Alteration of Work and Quantities".

b. The BIDDER acknowledges and accepts that the Bid Documents are comprised of the documents identified within the General Provisions. The BIDDER further acknowledges that each the individual documents that comprise the Bid Documents are complementary to one another and together establishes the complete terms, conditions and obligations of the successful BIDDER.

c. As evidence of good faith in submitting this proposal, the undersigned encloses a bid guaranty in the form of a bid bond in the amount of 5% of the bid price. The BIDDER acknowledges and accepts that refusal or failure to accept award and execute a contract within the terms and conditions established herein will result in forfeiture of the bid guaranty to the owner as a liquidated damage.

d. The BIDDER acknowledges and accepts the OWNER'S right to reject any or all bids.

e. The BIDDER acknowledges and accepts the OWNER'S right to hold all Proposals for purposes of review and evaluation and not issue a notice-of-award for a period not to exceed 60 calendar days from the stated date for receipt of bids.

f. The undersigned agrees that upon written notice of award of contract, he or she will execute the contract within thirty (30) days of the notice-of-award, and furthermore, and provide executed payment and performance bonds within fifteen (15) days from the date of contract execution. The undersigned accepts that failure to execute the contract and provide the required bonds within the stated timeframe shall result in forfeiture of the bid guaranty to the owner as a liquidated damage.

g. Time of Performance: By submittal of this proposal, the undersigned acknowledges and agrees to commence work within ten (10) calendar days of the date specified in the written "Notice-to-Proceed" as issued by the OWNER. The undersigned further agrees to complete the Project within 8 Calendar days from the commencement date specified in the Notice-to-Proceed.

h. The undersigned acknowledges and accepts that for each and every Calendar day the project remains incomplete beyond the contract time of performance, the Contractor shall pay the non-penal amount of $750 per Calendar day as a liquidated damage to the OWNER.

i. The BIDDER, by submission of a proposal, acknowledges that award of this contract is subject to the provisions of the Missouri Prevailing Wage Law. The BIDDER accepts the requirement to pay prevailing wages for each classification and type of worker as established in the attached wage rate determinations as issued by the Missouri Division of Labor Standards. The BIDDER further acknowledges and accepts their requirement to incorporate the provision to pay the established prevailing wages in every subcontract agreement entered into by the Bidder under this project.

j. The undersigned acknowledges receipt of the following addenda:

Addendum No. _____, dated _____		Date Received	_____
Addendum No. _____, dated _____		Date Received	_____
Addendum No. _____, dated _____		Date Received	_____
Addendum No. _____, dated _____		Date Received	_____
Addendum No. _____, dated _____		Date Received	_____

REPRESENTATIONS BY BIDDER

By submittal of a proposal (bid), the BIDDER represents the following:

i. The BIDDER has read and thoroughly examined the bid documents including all authorized addenda.

ii. The BIDDER has a complete understanding of the terms and conditions required for the satisfactory performance of project work.

iii. The BIDDER has fully informed themselves of the project site, the project site conditions and the surrounding area.

iv. The BIDDER has familiarized themselves of the requirements of working on an operating airport and understands the conditions that may in any manner affect cost, progress or performance of the work

v. The BIDDER has correlated their observations with that of the project documents.

vi. The BIDDER has found no errors, conflicts, ambiguities or omissions in the project documents, except as previously submitted in writing to the owner that would affect cost, progress or performance of the work.

vii. The BIDDER is familiar with all applicable Federal, State and local laws, rules and regulations pertaining to execution of the contract and the project work.

viii. The BIDDER has complied with all requirements of these instructions and the associated project documents.

CERTIFICATIONS BY BIDDER

a. The undersigned hereby declares and certifies that the only parties interested in this proposal are named herein and that this proposal is made without collusion with any other person, firm or corporation. The undersigned further certifies that no member, officer or agent of OWNER'S has direct or indirect financial interest in this proposal.

b. Compliance with the Work Authorization Law (as required by Section 285.530, Revised Statues of Missouri)

For all contracts which include state or local funds in excess of $5,000, the Bidder, by submission of an offer and by signing the Worker Eligibility Verification Affidavit for All Contract Agreements in Excess of $5,000, certifies that it:

1. does not knowingly employ any person who is an unauthorized alien in connection with the contracted services;

2. has enrolled and actively participates in a federal work authorization program;

A general contractor or subcontractor of any tier shall not be liable under sections 285.525 to 285.550 when such general contractor or subcontractor contracts with its direct subcontractor who violates subsection 1 of this section, if the contract binding the contractor and subcontractor affirmatively states that the direct subcontractor is not knowingly in violation of subsection 1 of this section and shall not henceforth be in such violation and the contractor or subcontractor receives a sworn affidavit under the penalty of perjury attesting to the fact that the direct subcontractor's employees are lawfully present in the United States.

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WORKER ELIGIBILITY VERIFICATION AFFIDAVIT FOR ALL CONTRACT AGREEMENTS IN EXCESS OF $100,000 (Local match in excess of $5,000)

(for joint ventures, a separate affidavit is required for each business entity)

STATE OF _____)
) ss
COUNTY OF _____)

On this _____ day of _____, 20____, before me appeared _____, Personally known to me or proved to me on the basis of satisfactory evidence to be a person whose name is subscribed to this affidavit, who being by me duly sworn, deposed as follows:

My name is _____, and I am of sound mind, capable of making this affidavit, and personally certify the facts herein stated, as required by Section 285.530, RSMo, to enter into any contract agreement with the state or any of its political subdivisions to perform any job, task, employment, labor, personal services, or any other activity for which compensation is provided, expected, or due, including but not limited to all activities conducted by business entities:

I am the _____ of _____, and am duly authorized, directed, and/or
(title name) (business name)
empowered to act officially and properly on behalf of this business entity.

I hereby affirm and warrant that the aforementioned business entity is enrolled in a federal work authorization program operated by the United States Department of Homeland Security, and the aforementioned business entity shall participate in said program to verify information (employment eligibility) of newly hired employees working in connection to work under the within contract agreement. I have attached documentation to this affidavit to evidence enrollment/participation by the aforementioned business entity in a federal work authorization program, as required by Section 285.530, RSMo.

In addition, I hereby affirm and warrant that the aforementioned business entity does not and shall not knowingly employ, in connection to work under the within contract agreement, any alien who does not have the legal right or authorization under federal law to work in the United States, as defined in 8 U.S.C. § 1324a(h)(3).

I am aware and recognize that, unless certain contract and affidavit conditions are satisfied pursuant to Section 285.530, RSMo, the aforementioned business entity may be held liable under Sections 285.525 though 285.550, RSMo, for subcontractors that knowingly employ or continue to employ any unauthorized alien to work within the state of Missouri.

I acknowledge that I am signing this affidavit as a free act and deed of the aforementioned business entity and not under duress.

_____
(Affiant Signature)

Subscribed and sworn to before me this _____ day of _____, 20____.

_____
(Notary Public)

My commission expires:

[Documentation of enrollment/participation in a federal work authorization program is attached. Acceptable enrollment and participation documentation consists of the following two pages of the E- Verify Memorandum of Understanding: (1) A valid, completed copy of the first page identifying the business entity; and (2) A valid copy of the signature page completed and signed by the business entity, the Social Security Administration, and the Department of Homeland Security – Verification Division.]

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THIS EXECUTED PROPOSAL FORM MUST BE SUBMITTED WITH SECTIONS B-1 THROUGH B-13 FILLED OUT COMPLETELY

SIGNATURE OF BIDDER

The undersigned states that the correct LEGAL NAME AND ADDRESS of (1) the individual bidder, (2) each partner or joint venturer (whether individuals or corporations, and whether doing business under a fictitious name), or (3) the corporation (with the state in which it is incorporated) are shown below; that (if not signing with the intention to bind themselves to become responsible and sole bidder) they are the agent of, and they are signing and executing this (as indicated in the proper spaces below) as the bid of a

( ) sole individual ( ) partnership ( ) joint venture

( ) corporation, incorporated under the laws of state of _____.

Executed by bidder this _____ day of _____ 20_____.

Name of individual, all partners or joint venturers:	Address of each:
_____	_____
_____	_____
_____	_____

doing business under the name of:	Address of principal place of business in Missouri:
_____	_____
(If using a fictitious name, show this name above in addition to legal names)	_____
_____	_____
(If a corporation, show its name above)	_____

ATTEST: (SEAL)

_____	_____
(Signature) Secretary	(Signature) (Title)
_____	_____
Please print name	Please print name

NOTE: If bidder is doing business under a fictitious name, the bid shall be executed in the legal name of the individual partners, joint ventures, or corporation, with the legal address shown, and registration of fictitious name filed with the secretary of state, as required by sections 417.200 to 417.230 RSMo. If the bidder is a corporation not organized under the laws of Missouri, it shall procure a certificate of authority to do business in Missouri, as required by section 351.572 et seq RSMo.

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CONTRACTOR'S QUALIFICATIONS

_____

Name of firm and address with zip code

`

_____

_____ _____ _____

Date Area Code and Telephone Number Area Code and Fax Number

CONSTRUCTION CAPABILITIES: General, Electrical, Plumbing, Heating, Air-Conditioning, Ventilation and Demolition

Other: _____

FOR CORPORATION ONLY Federal I.D. Number _____

_____

Date of Incorporation Name of State(s) in which incorporated

_____

If not incorporated in Missouri: give Certificate of Authority to do business in Missouri Certificate No.
Date

_____

_____

President's Name Vice President's Name

_____ _____

Secretary's Name Treasurer's Name

FOR PARTNERSHIP ONLY Is the Partnership: GENERAL LIMITED ASSOCIATION

Date of Organization: _____

1. _____

Names and addresses of all partners with zip codes

2. _____

3. _____

Use additional sheet if necessary

GENERAL INFORMATION Federal I.D. #_____ or Social Security # _____

_____

% of work done by contractor No. of permanent employees Geographical limits of operation

_____

No. of years in business If you have done business under a different name, please give name and location

_____

Has firm ever failed to complete project or defaulted on a contract? If so, state where and why.

_____

Has firm ever been engaged in litigation over any contract? If so, state where and why.

LIST COMPLETED PROJECTS WITHIN LAST FIVE YEARS THAT ARE SIMILAR IN SCOPE TO THE ONE BEING BID, INCLUDING COST OF EACH, NAME, TELEPHONE NUMBER AND ADDRESS OF OWNER CONTACT.

LIST PROJECTS CURRENTLY UNDER CONSTRUCTION, INCLUDING COST OF EACH, NAME, TELEPHONE NUMBER AND ADDRESS OF OWNER CONTACT

PERFORMANCE BOND	BOND NUMBER
PRINCIPAL *(Legal Name and Business Address)*	
SURETY *(Legal Name and Business Address)*	STATE OF INCORPORATION
PENAL SUM OF BOND *(Expressed in words and numerals)*	CONTRACT DATE

OBLIGATION

KNOW ALL PERSONS BY THESE PRESENTS, that the above named PRINCIPAL, hereinafter referred to and called CONTRACTOR, and the above named SURETY hereby bind themselves unto University of Central Missouri, 281 N. W. HWY 50, Missouri 64093 as OBLIGEE, hereinafter referred to and called OWNER, in the penal sum stated above, in lawful money of the United States of America to be paid to OWNER. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

CONTRACTOR has entered into the written contract agreement identified hereinabove with the OWNER for the following project:

Schedule I: Runway Remarking

which said contract and associated contract documents, including any present or future amendment thereto, is incorporated herein by reference and is hereinafter referred to as the Contract.

CONDITION

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if CONTRACTOR shall promptly and faithfully perform all undertakings, covenants, terms, conditions and agreements of the Contract during the original term of the Contract and any extensions thereof that are granted by the OWNER, with or without notice to the SURETY, and during the period of any guarantee or warranties required under the Contract, and if CONTRACTOR shall perform and fulfill all undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of the Contract that hereafter are made, then this obligation shall be void; otherwise it shall remain in full force and effect subject to the following additional conditions:

1. SURETY, for value received, hereby stipulates and agrees that no change, extension of time, modification, omission, addition or change in or to the Contract, or the work

performed thereunder or the specifications accompanying the same, shall in any way affect the SURETY'S obligation on this bond; and SURETY hereby agrees to waive notice of any and all such extensions, modifications, omissions, alterations, and additions to the terms of the Contract, work or specifications.

2. Whenever CONTRACTOR shall be and declared by the OWNER to be in default under the Contract, the Surety shall promptly and at the SURETY'S expense remedy the default by implementing one or more of the following actions:

   a. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or

   b. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

   c. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract; arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER'S concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract; and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the penal sum of the bond. The term "balance of the contract price", as used in this paragraph, shall mean the total amount payable by OWNER to CONTRACTOR under the Contract and any amendments thereto, disbursed at the rate provided in the original contract, less the amount properly paid by OWNER to CONTRACTOR.

   d. With written consent of the OWNER, SURETY may waive its right to perform and complete, arrange for completion or obtain a new contractor and with reasonable promptness, investigate and determine the amount the SURETY is liable to the OWNER and tender payment therefor to the OWNER.

3. CONTRACTOR and SURETY agree that if in connection with the enforcement of this Bond, the OWNER is required to engage the services of an attorney, that reasonable attorney fees incurred by the OWNER, with or without suit, are in addition to the balance of the contract price.

4. No right of action shall accrue on this bond to or for the use of any person or corporation other than the OWNER named herein or the successors or assigns of the OWNER.

WITNESS

In witness whereof, this instrument is executed this the _____ day of _____, 20____.

INDIVIDUAL PRINCIPAL:

Company Name: _____

Signature: _____

Name and Title: _____

CORPORATE PRINCIPAL:

ATTEST:

Signature: _____

Name and Title: _____
(Affix Corporate Seal)

Corporate Name: _____

Signature: _____

Name and Title: _____

SURETY:

ATTEST:

Signature: _____

Name and Title: _____
(Affix Seal)

Surety Name: _____

Signature: _____

Name and Title: _____
(Attach Power of Attorney)

OWNER ACCEPTANCE:

The OWNER approves the form of this Performance Bond.

Date: _____

Signature: _____

Name and Title: _____
(Affix Seal)

Signature: _____

Name and Title: _____

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PAYMENT BOND	BOND NUMBER
PRINCIPAL *(Legal Name and Business Address)*	
SURETY *(Legal Name and Business Address)*	STATE OF INCORPORATION
PENAL SUM OF BOND *(Expressed in words and numerals)*	CONTRACT DATE

OBLIGATION

KNOW ALL PERSONS BY THESE PRESENTS, that the above named PRINCIPAL, hereinafter referred to and called CONTRACTOR, and the above named SURETY hereby bind themselves unto University of Central Missouri, 281 N. W. HWY 50 Missouri 64093 as OBLIGEE, hereinafter referred to and called OWNER, in the penal sum stated above, in lawful money of the United States of America to be paid to OWNER. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

CONTRACTOR has entered into the written contract agreement identified hereinabove with the OWNER for the following project:

Schedule I: Runway Remarking

which said contract and associated contract documents, including any present or future amendment thereto, is incorporated herein by reference and is hereinafter referred to as the Contract.

CONDITION

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if CONTRACTOR shall promptly make payment to all employees, persons, firms or corporations for all incurred indebtedness and just claims for labor, supplies, materials and services furnished for or used in connection with the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect subject to the following additional conditions:

1. CONTRACTOR and SURETY indemnify and hold harmless the OWNER for all claims, demands, liens or suits that arise from performance of the Contract

2. SURETY, for value received, hereby stipulates and agrees that no change, extension of time, modification, omission, addition or change in or to the Contract, or the work performed thereunder or the specifications accompanying the same, shall in any way affect the SURETY'S obligation on this bond; and SURETY hereby agrees to waive notice of any and all such extensions, modifications, omissions, alterations, and additions to the terms of the Contract, work or specifications.

3. No final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

4. The amount of this bond shall be reduced by and to the extent of any payments made in good faith hereunder.

5. Amounts owed by the OWNER to the CONTRACTOR under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Contract are dedicated to satisfy obligations of the CONTRACTOR and the SURETY under this Bond, subject to the OWNER'S priority to use the funds for the completion of the project.

WITNESS

In witness whereof, this instrument is executed this the _____ day of _____, 20____.

INDIVIDUAL PRINCIPAL:

Company Name: _____

Signature: _____

Name and Title: _____

CORPORATE PRINCIPAL:

ATTEST: Corporate Name: _____

Signature: _____ Signature: _____

Name and Title: _____ Name and Title: _____

(Affix Corporate Seal)

SURETY:

ATTEST: Surety Name: _____

Signature: _____ Signature: _____

Name and Title: _____ Name and Title: _____

(Affix Seal) (Attach Power of Attorney)

OWNER ACCEPTANCE:

The OWNER approves the form of this Payment Bond.

Date: _____

Signature: _____ Signature: _____

Name and Title: _____ Name and Title: _____

(Affix Seal)

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FORM OF CONTRACT AGREEMENT

University of Central Missouri
State Block Grant Project No. AIR 156-019A

THIS AGREEMENT, made as of this _____day of _____, 20____, is

BY AND BETWEEN

the OWNER:	Name:	_____
	Address:	_____
	City/State/Zip Code:	
And the CONTRACTOR:	Name:	_____
	Address:	_____
	City/State/Zip Code:	_____

WITNESSETH:

WHEREAS it is the intent of the Owner to make improvements at Skyhaven Airport generally described as follows;

Schedule I: Runway Remarking

hereinafter referred to as the Project.

NOW THEREFORE in consideration of the mutual covenants hereinafter set forth, OWNER and CONTRACTOR agree as follows:

Article 1 – Work

It is hereby mutually agreed that for and in consideration of the payments as provided for herein to the CONTRACTOR by the OWNER, CONTRACTOR shall faithfully furnish all necessary labor, equipment, and material and shall fully perform all necessary work to complete the Project in strict accordance with this Contract Agreement and the Contract Documents.

Article 2 – Contract Documents

CONTRACTOR agrees that the Contract Documents consist of the following: this Agreement, General Provisions, Supplementary Provisions, Specifications, Drawings, all issued addenda, Notice-to-Bidders, Instructions-to-Bidders, Proposal and associated attachments, Performance Bond, Payment Bond, Wage Rate Determinations, Insurance certificates, documents incorporated by reference, documents incorporated by attachment, and all OWNER authorized change orders issued subsequent to the date of this agreement. All documents comprising the Contract Documents are complementary to one another and together establish the complete terms, conditions and obligations of the CONTRACTOR. All said Contract Documents are incorporated by reference into the Contract Agreement as if fully rewritten herein or attached thereto.

Article 3 – Contract Price

In consideration of the faithful performance and completion of the Work by the CONTRACTOR in accordance with the Contract Documents, OWNER shall pay the CONTRACTOR an amount equal to:

_____

(Amount in Written Words) (Amount in Numerals)

subject to the following;

a. Said amount is based on the schedule of prices and estimated quantities stated in CONTRACTOR'S Bid Proposal, which is attached to and made a part of this Agreement;

b. Said amount is the aggregate sum of the result of the CONTRACTOR'S stated unit prices multiplied by the associated estimated quantities;

c. CONTRACTOR and OWNER agree that said estimated quantities are not guaranteed and that the determination of actual quantities is to be made by the OWNER'S ENGINEER;

d. Said amount is subject to modification for additions and deductions as provided for within the Contract General Provisions.

Article 4 – Payment

Upon the completion of the work and its acceptance by the OWNER, all sums due the CONTRACTOR by reason of faithful performance of the work, taking into consideration additions to or deductions from the Contract price by reason of alterations or modifications of the original Contract or by reason of "Extra Work" authorized under this Contract, will be paid to the CONTRACTOR by the OWNER after said completion and acceptance.

The acceptance of final payment by the CONTRACTOR shall be considered as a release in full of all claims against the OWNER, arising out of, or by reason of, the work completed and materials furnished under this Contract.

OWNER shall make progress payments to the CONTRACTOR in accordance with the terms set forth in the General Provisions. Progress payments shall be based on estimates prepared by the ENGINEER for the value of work performed and materials completed in place in accordance with the Contract Drawings and Specifications. Progress payments are subject to retainage requirements as set forth in the General Provisions.

Article 5 – Contract Time

The CONTRACTOR agrees to commence work within ten (10) calendar days of the date specified in the OWNER'S Notice-to-Proceed. CONTRACTOR further agrees to complete said work within 8 days of the commencement date stated within the Notice-to-Proceed.

It is expressly understood and agreed that the stated Contract Time is reasonable for the completion of the Work, taking all factors into consideration. Furthermore, extensions of the Contract Time may only be permitted by execution of a formal modification to this Contract Agreement in accordance with the General Provisions and as approved by the OWNER.

Article 6 – Liquidated Damages

The CONTRACTOR and OWNER understand and agree that time is of essence for completion of the Work and that the OWNER will suffer additional expense and financial loss if said Work is not completed within the authorized Contract Time. Furthermore, the CONTRACTOR and OWNER recognize and understand the difficulty, delay, and expense in establishing the exact amount of actual financial loss and additional expense. Accordingly, in place of requiring such proof, the CONTRACTOR expressly agrees to pay the OWNER as liquidated damages the non-penal sum of $750 per day for each calendar day required in excess of the authorized Contract Time.

Furthermore, the CONTRACTOR understands and agrees that;

a. the OWNER has the right to deduct from any moneys due the CONTRACTOR, the amount of said liquidated damages;

b. the OWNER has the right to recover the amount of said liquidated damages from the CONTRACTOR, SURETY or both.

Article 7 – CONTRACTOR'S Representations

The CONTRACTOR understands and agrees that all representations made by the CONTRACTOR within the Proposal Form shall apply under this Agreement as if fully rewritten herein.

Article 8 – Miscellaneous

a. CONTRACTOR understands that it shall be solely responsible for the means, methods, techniques, sequences and procedures of construction in connection with completion of the Work;

b. CONTRACTOR understands and agrees that it shall not accomplish any work or furnish any materials that are not covered or authorized by the Contract Documents unless authorized in writing by the OWNER or ENGINEER;

c. The rights of each party under this Agreement shall not be assigned or transferred to any other person, entity, firm or corporation without prior written consent of both parties;

d. OWNER and CONTRACTOR each bind itself, their partners, successors, assigns and legal representatives to the other party in respect to all covenants, agreements, and obligations contained in the Contract Documents.

Article 9 – OWNER'S Representative

The OWNER'S Representative, herein referred to as ENGINEER, is defined as follows:

Jviation, Inc.
900 S. Broadway, Suite 350
Denver, CO 80209

Said ENGINEER will act as the OWNER'S representative and shall assume all rights and authority assigned to the ENGINEER as stated within the Contract Documents in connection with the completion of the Project Work.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have executed five (5) copies of this Agreement on the day and year first noted herein.

OWNER	**CONTRACTOR**
Name: _____	Name: _____
Address: _____	Address: _____
_____	_____
By: _____	By: _____
Signature	*Signature*
_____	_____
Title of Representative	*Title of Representative*
ATTEST:	ATTEST
By: _____	By: _____
Signature	*Signature*
_____	_____
Title	*Title*