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**COMMUNITY DEVELOPMENT****MEMORANDUM**Planning,  
Zoning,  
Building Safety,  
Construction Inspection Services,  
Public Health,  
Housing Inspections,  
Code Enforcement

**To:** Mayor and City Council Members

**From:** Jodi Royal-Goodwin, Community Development Director

**Cc:** Gregg Mandsager, City Administrator

**Date:** June 20, 2019

**Re:** **Resolution Approving the Plans and Specifications, Form of Contract, and Cost Estimate to Construct 3-Unit Hangar, Taxilane & Apron**

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**INTRODUCTION:** In 2017 the City of Muscatine received a grant from the Iowa Department of Transportation (IDOT) for the construction of hangars and associated apron at the Muscatine Municipal Airport. Bolton & Menk has developed plans and specifications to be used in a request for bids that is ready to be let. The anticipated scheduled for contracting is:

1. Set Public Hearing – June 6, 2019
2. Hold Public Hearing – June 20, 2019
3. Approve Plans and Specifications – June 20, 2019
4. Receive and Open Bids – July 16, 2019
5. Request Approval of Contract and Performance Bond – August 1, 2019

**BACKGROUND:** The City of Muscatine and the Airport Advisory Commission have been working for several years to develop additional hangar space at the Muscatine Municipal Airport. The Airport currently has 20 T-hangars that were built approximately 50 years ago, and there have been no vacancies in the past decade. As soon as a hangar becomes available, a tenant is identified and lease executed. There is currently a wait list of 17 and 11 pilots requesting a hangar upgrade.

In November 2016 City Council approved a professional services agreement with Bolton & Menk for engineering and construction services at the Airport from November 2016 through November 2021. A work order was also issued in November 2016 under this contract for the design and construction of 4 T-hangars and associated taxilane and apron improvements. The expansion of the hangars was adopted as part of the 5-Year Capital Improvement Program. Under this contract an application for vertical infrastructure (hangars) was submitted to IDOT, an option that had been unavailable for a number of years.

In November 2017 Council accepted two grants from IDOT. These grants included funds for:

- The construction of 4 T-hangars with up to 44% of the eligible project costs, not to exceed \$150,000, covered; and

- An apron expansion for up to 85% of eligible project costs not to exceed \$203,567.

In July 2018 Work Orders 2 and 3 were approved for design and construction services for 4 corporate (box) hangars and associated apron and taxilane extensions. Additional funding for this project was anticipated to be available from private entities who would execute long-term land leases of the facilities. Unfortunately, Federal Aviation Administration regulations prevent such long-term leases and the commercial hangars were determined infeasible.

At the February meeting of the Airport Advisory Commission there was a discussion of how to proceed with the grant funded projects, and there was significant interest in pursuing box hangars rather than additional T-hangars. Staff requested Bolton & Menk provide a cost estimate for the construction of 5 box hangars. The total estimated construction costs for this project was \$512,600, compared to \$499,900 for the original 4 T-hangar design, plus the taxilane and apron. Also in February staff received grant amendments extending grant period giving the City until fall 2019 to execute appropriate construction contracts. Bolton & Menk confirmed with IDOT the proposed project would be approved.

As discussed at the April 4 meeting of the City Council, there is currently \$177,583 available for this project and City council concurred with the staff's proposal to use \$400,000 in proceeds from the 2020 bond issue to fully fund the balance of the project costs. State grant funds and proceeds from the City's May 2018 bond issue will fund the estimated costs for the Apron Expansion Project.

At their April 18 meeting, City Council approved Addendum Number 1 to the Professional Services Contract with Bolton & Menk for the Design and Construction of Hangars for Hangar Row 4 and use of bond proceeds for the local share of design and construction costs.

The attached plans and specifications are for the construction of three box hangars, with two additional hangars as a bid alternative, as well as associated taxilane and aprons at a total estimated cost of \$789,518.

**RECOMMENDATION:** Staff recommends approval of the plans, specifications, form of contract, and cost estimate for the construction of hangars, taxilane and apron at the Muscatine Municipal Airport.

#### **Supporting Documents**

1. Resolution
2. Public Notice
3. Project Manual
4. Plans for Hangars, Taxilane and Apron

**RESOLUTION NO. \_\_\_\_\_**

**APPROVING PLANS, SPECIFICATIONS, FORMS OF CONTRAT, COST ESTIMATE  
AND SETTING DATE FOR RECEIPT OF BIDS**

**FOR: BOX HANGARS, TAXILANE AND APRON PROJECT**

WHEREAS, there is on file in Finance a copy of the plans, specifications, form of contract, and notice to bidders prepared by Bolton & Menk for the proposed construction of box hangars, taxilane and apron project at the Muscatine Municipal Airport; and

WHEREAS, said plans, specifications, form of contract, and cost estimate have been examined by Council;

NOW, THEREFORE, be it resolved by the Council that:

1. All objections to the foregoing plans, specifications, form of contract, notice to bidders and cost estimate are overruled.
2. The foregoing plans, specifications, form of contract, notice to bidders, and cost estimate are finally approved.
3. Date for Receipt of Bids will be July 16, 2019.

(NOTICE TO BIDDERS ATTACHED)

PASSED, APPROVED, AND ADOPTED THIS 20<sup>th</sup> DAY OF JUNE, 2019

CITY COUNCIL OF THE CITY OF MUSCATINE, IOWA

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Diana Broderson, Mayor

ATTEST

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Gregg Mandsager, City Administrator

**NOTICE TO BIDDERS**  
**CONSTRUCTION OF BOX HANGARS, APRON, AND TAXILANE PROJECT**

Notice is hereby given that the City of Muscatine, will receive Bids in the Finance Department, 215 Sycamore Street, Muscatine, Iowa until July 16 2019, at 3:00 pm, local time, for the Construction of Box Hangars and associated Apron and Taxilane at the Muscatine Municipal Airport, at which time Bids will be publicly opened and read aloud. Bids will be acted upon at the regular council meeting August 1, 2019, or at such later time and place as may be fixed. Regular council meetings are held on the first and third Thursdays of the month.

General work to be performed: Construct a hangar facility consisting of (Base Bid) three (3) bays, one of size 50' x 70', with a powered bi-fold door of 60' x 18', and two (2) each of nominal size of 45' x 35', and each with a powered bi-fold door of 45' wide by 16' high. Each hangar bay shall include electrical service, lighting, a PCC floor, and will be insulated. An additional two (2) bays (of the smaller size listed above) will be bid as a Bid Alternate. Also, construct pavement for taxilanes and aprons for access to all hangar bays. Includes drainage improvements, paving, and pavement marking. Site work for Base Bid includes the following approximate quantities: 625 CY Unclassified Excavation and Topsoil, 1,535 SY Granular Base and PCC Pavement, and 0.3 Acre Seeding and Fertilizing.

Work shall be in accordance with the SUDAS Standard Specifications, 2019 Edition, and as further modified by the supplemental specifications and special provisions included in the Bidding Documents, including the Project Manual and Drawings.

Copies of the project documents are available for a price of \$25 per set. This fee is refundable, provided the plans and specifications are returned complete and in good usable condition, and they are returned within fourteen (14) calendar days after the award of the project. Please make your check payable to Bolton & Menk, Inc. and send it to 855 Wright Brothers Blvd SW, Suite 2A, Cedar Rapids, Iowa 52404, (515)233-6100. You may view the digital plan documents for free by entering Quest project #6405515 on the website's Project Search page. Documents may be downloaded of \$0.00. Please contact QuestCDN.com at 952-233-1632 or [info@questioncdn.com](mailto:info@questioncdn.com) for assistance in free membership registration, viewing, downloading, and working with this digital project information.

# **PROJECT MANUAL**

**Construct 3-Unit Box Hangar, Taxilane & Apron**

**Muscatine Municipal Airport**

City of Muscatine, Iowa



Real People. Real Solutions.

**Bolton-Menk.com**



**SECTION 00005 – CERTIFICATION**


**PROJECT MANUAL**

for

**Construct 3-Unit Box Hangar, Taxilane & Apron**

**Muscatine Municipal Airport**

Muscatine, Iowa

	<p>I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.</p> <p><u>Carl L. Byers</u> Date: <u>6/14/2019</u></p> <p>Carl L. Byers, P.E. License No. 12845 My renewal date is December 31, 2019 Pages or sheets covered by this seal: <u>Entire Document</u></p>
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## SECTION 00010 - TABLE OF CONTENTS

### Construct 3-Unit Box Hangar, Taxilane & Apron

Muscatine Municipal Airport, Muscatine, IA

#### CONTRACT DOCUMENTS:

##### PROJECT MANUAL:

##### Introductory Information, Bidding Requirements, Contract Forms and Conditions of Contract

- 00005 - CERTIFICATION PAGE
- 00010 - TABLE OF CONTENTS
- 00100 - NOTICE TO BIDDERS AND NOTICE OF PUBLIC HEARING
- 00200 - INSTRUCTIONS TO BIDDERS
- 00410 - PROPOSAL
- 00410 – PROPOSAL ATTACHMENT: BID ITEMS
- Targeted Small Business (TSB) Forms
- 00420 - BID BOND
- 00500 - CONTRACT
- 00610 - PERFORMANCE, PAYMENT AND MAINTENANCE BOND
- 00800 - SPECIAL PROVISIONS, PART 1 - GENERAL REQUIREMENTS
- 00800 - SPECIAL PROVISIONS, PART 2 - SPECIAL CONSTRUCTION

##### Technical Specifications – See SUDAS

- Item P-620 Runway & Taxiway Marking
- Supplemental Specifications

#### DRAWINGS (UNDER SEPARATE COVER):

Ten (10) sheets numbered 1 through 10, inclusive, dated June, 2019, and with each sheet bearing the following general title:

**Muscatine Municipal Airport**  
**Construct 3-Unit Box Hangar, Taxilane & Apron**

#### APPENDICES

None

This project is based on  
**SUDAS STANDARD SPECIFICATIONS, 2019 EDITION**  
unless modified herein.

\*\*\*\*END OF SECTION\*\*\*\*

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## NOTICE TO BIDDERS AND NOTICE OF PUBLIC HEARING

### Construct 3-Unit Box Hangar, Taxilane & Apron Muscatine Municipal Airport Muscatine, Iowa

**Time and Place for Filing Sealed Proposals.** Sealed bids for the work comprising the repair & improvement as stated below must be filed before 3:00 P.M. on July 16, 2019, in the office of the Community Development Director, 215 Sycamore Street, Muscatine, Iowa 52761.

**Time and Place Sealed Proposals Will be Opened and Considered.** Sealed proposals will be opened and bids tabulated at 3:00 P.M. on July 16, 2019, in the office of the Community Development Director, City of Muscatine, Iowa, 215 Sycamore Street, Muscatine, Iowa for consideration by the City of Muscatine, Iowa to consider bids at its meeting at 7:00 P.M. on August 1, 2019. The City of Muscatine, Iowa reserves the right to reject any and all bids.

**Time for Commencement and Completion of Work.** Work on the improvement shall commence upon approval of the contract by the Council, and as stated in the Notice to Proceed. All work under the Contract must be substantially complete on or before July 31, 2020. Damages in the amount of \$250.00 per calendar day will be assessed for each calendar day the work remains incomplete.

**Bid Security.** Each bidder shall accompany its bid with bid security, as defined in Section 468.35 of the Iowa Code in the amount equal to 5 percent of the total amount of the bid.

**Contract Documents.** Copies of the project documents are available for a price of \$25 per set. This fee is refundable, provided the plans and specifications are returned complete and in good usable condition, and they are returned within fourteen (14) calendar days after the award of the project. Please make your check payable to Bolton & Menk, Inc. and send it to 855 Wright Brothers Blvd SW, Suite 2A, Cedar Rapids, IA 52404, (515)233-6100. You may view the digital plan documents for free by entering **Quest project # 6405515** on the website's Project Search page. Documents may be downloaded for \$0.00. Please contact QuestCDN.com at 952-233-1632 or [info@questcdn.com](mailto:info@questcdn.com) for assistance in free membership registration, viewing, downloading, and working with this digital project information.

**Public Hearing on Proposed Contract Documents and Estimated Costs for Repair or Improvement.** A public hearing was held by the City of Muscatine, Iowa on the proposed contract documents (plans, specifications and form of contract) and estimated cost for the improvement at its meeting at 7:00 P.M. on June 20, 2019, at 215 Sycamore Street, Muscatine, Iowa.

**Preference of Products and Labor.** Preference shall be given to domestic construction materials by the contractor, subcontractors, material, men, and suppliers in performance of the contract and further, by virtue of statutory authority, preference will be given to products and provisions grown and coal produced within the State of Iowa, and to Iowa domestic labor, to the extent lawfully required under Iowa statutes. Failure to submit a fully completed Bidder Status Form with the bid may result in the bid being deemed nonresponsive and rejected.

**Sales Tax Exemption Certificates.** The bidder shall not include sales tax in the bid. The City of Muscatine, Iowa will distribute tax exemption certificates and authorization letters to the Contractor and all subcontractors who are identified. The Contractor and subcontractor may make copies of the tax exemption certificates and provide a copy to each supplier providing construction materials. These tax exemption certificates and authorization letters are applicable only for this specific project under the Contract.

**PROJECT DESCRIPTION:** Construct a hangar facility consisting of (Base Bid) three (3) bays, one of size 50' x 70', with a powered bi-fold door of 60' x 18', and two (2) each of nominal size of 45' x 35', and each with a powered bi-fold door of 45' wide by 16' high. Each hangar bay shall include electrical service, lighting, a PCC floor, and will be insulated. An additional two (2) bays (of the smaller size listed above) will be bid as a Bid Alternate. Also, construct pavement for taxilanes and aprons for access to all three hangar bays. Includes drainage improvements, paving, pavement marking. Site work for Base Bid includes the following approximate quantities: 625 CY Unclassified Excavation and Topsoil, 1,535 SY Granular Base and PCC Pavement, and 0.3 Acre Seeding and Fertilizing.

This Notice is given by authority of the City of Muscatine, Iowa  
Jodi Royal-Goodwin, Director of Community Development

\*\*\*\*\*END OF SECTION 00100\*\*\*\*\*

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## INSTRUCTIONS TO BIDDERS

### Construct 3-Unit Box Hangar, Taxilane & Apron Muscatine Municipal Airport Muscatine, Iowa

The work comprising the above referenced project shall be constructed in accordance with the SUDAS Standard Specifications, 2019 Edition and as further modified by supplemental specifications and special provision included in the contract documents. The terms used in the contract version of the documents are defined in said Standard Specifications. Before submitting your bid, please review the requirements of Division One, General Provisions and Covenants. Please be certain that all documents have been completed properly, as failure to complete and sign all documents and to comply with the requirements listed below can cause your bid not to be read.

#### I. BID SECURITY

- A. The bid security must be in the minimum amount of 5% of the total bid amount including all add alternates (do not deduct the amount of deduct alternates). Bid security shall be in the form of a cashier's check, a certified check drawn on a FDIC insured bank in Iowa or drawn on a FDIC insured bank chartered under the laws of the United States; or a certified share draft drawn on a credit union in Iowa or chartered under the laws of the United States; or a bid bond executed by a corporation authorized to contract as a surety in Iowa or satisfactory to the Jurisdiction.
- B. The bid bond must be submitted on the enclosed Bid Bond form as no other bid bond forms are acceptable. All signatures on the bid bond must be original signatures in ink; facsimile (fax) of any signature on the bid bond is not acceptable.
- C. Bid security other than said bid bond shall be in accordance with Chapter 26 of the Iowa Code.

#### II. SUBMISSION OF THE PROPOSAL AND IDENTITY OF BIDDER

- A. The proposal shall be sealed in an envelope, properly identified as the Proposal with the project title and the name and address of the bidder, and deposited with the Jurisdiction at or before the time and at the place provided in the Notice to Bidders. It is the sole responsibility of the bidder to see that its proposal is delivered to the Jurisdiction prior to the time for opening bids, along with the appropriate bid security sealed in the separate envelope identified as Bid Security and attached to the outside of the bid proposal envelope. Any proposal received after the scheduled time for the receiving of proposals will be returned to the bidder unopened and will not be considered.
- B. The following documents shall be completed, signed and returned in the Proposal envelope. The bid cannot be read if any of these documents are omitted from the Proposal envelope.

##### 1. PROPOSAL – Complete each of the following parts:

- Part B – Acknowledgment of Addenda, if any have been issued;
- Part C – Bid Items, Quantities and Prices
- Part F – Additional Requirements;

ITEM NO.	DESCRIPTION OF ATTACHMENT
1.	Targeted Small Business (TSB) Forms

- Part G – Identity of Bidder;

Sign the proposal. The signature on the proposal and all proposal attachments must be an original signature in ink signed by the same individual who is the Company Owner or an authorized Officer of the Company; copies or facsimile of any signature will not be accepted.

The following documents must be submitted as printed. No alterations, additions, or deletions are permitted. If the Bidder notes a requirement in the contract documents which the Bidder believes will require a conditioned or unsolicited alternate bid, the Bidder must immediately notify the Engineer in writing. The Engineer will issue any necessary interpretation by an addendum.

A. The general provisions and covenants, Division 1 of the 2018 SUDAS Standard Specifications are modified as follows:

1. Section 1020.1.09B, Unit Price Attachment.

A computer generated unit price attachment may be submitted by the Bidder as specified by this Section.

### III. PROSECUTION AND PROGRESS OF THE WORK

A. The work is located at the Muscatine Municipal Airport in the City of Muscatine, Iowa.

Work on the improvement shall commence upon approval of the contract by the Council, and as stated in the Notice to Proceed. All work under the Contract must be substantially complete on or before July 31, 2020. Damages in the amount of \$250.00 per calendar day will be assessed for each calendar day the project remains incomplete.

B. Community Events.

**None known at this time.**

C. Each successful bidder will be required to furnish a corporate surety bond in an amount equal to 100% of its contract price. Said bond shall be issued by a responsible surety approved by City of Muscatine, Iowa and shall guarantee the faithful performance of the contract and the terms and conditions therein contained and shall guarantee the prompt payment of all material and labor, and protect and save harmless City of Muscatine, Iowa from claims and damages of any kind caused by the operations of the contract and shall also guarantee the maintenance of the improvement caused by failures in materials and construction for a period of two years from and after acceptance of the contract. The guaranteed maintenance period for new paving shall be four years.

D. The City of Muscatine, Iowa, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42U.S.C. 2000d to 2000d-4 and title 49 Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full 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.

### IV. PREFERENCE OF PRODUCTS AND LABOR

A. In accordance with Iowa statutes, a resident bidder shall be allowed a preference as against a nonresident bidder from a state or foreign country if that state or foreign country gives or requires any preference to bidders from that state or foreign country, including but not limited to any preference to bidders, the imposition of any type of labor force preference, or any other form of preferential treatment to bidders or laborers from that state or foreign country. The preference allowed shall be equal to the preference given or required by the state of foreign country in which the nonresident bidder is a resident. In the instance of a resident labor force preference, a nonresident bidder shall apply the same resident labor force preference to a public improvement in this state as would be required in the construction of a public improvement by the state or foreign country in which the nonresident bidder is a resident.

V. TAXES

- A. The City will issue a sales tax exemption certificate to the Contractor for all materials purchased on the project. The City will issue the appropriate exemption certificates and authorization letters to the Contractor and all subcontractors completing work on the project. Tax exemption certificates are applicable only for the specific project for which the tax exemption certificate is issued.
- B. The Contractor shall provide a listing to the City identifying all appropriate subcontractors qualified for use of the tax exemption certificate. The Contractor and subcontractors may make copies of the certificate and provide to each supplier providing construction material a copy of the tax exemption certificate.
- C. Income Tax:
  - 1. Successful Bidder is subject to payment of Iowa income tax on income from this work in amounts prescribed by law.
  - 2. If successful bidder is a non-Iowa partnership, individual or association, he shall furnish evidence prior to execution of contract that bond or securities have been posted with the Iowa Department of Revenue in the amount required by law.

**\*\*\*\*\*END OF SECTION 00200\*\*\*\*\***

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## SECTION 00410 - PROPOSAL

### CONSTRUCT 3-UNIT BOX HANGAR, TAXILANE & APRON Muscatine Municipal Airport Muscatine, Iowa

#### PROPOSAL: PART A – SCOPE

The City of Muscatine, Iowa, hereinafter called the "Jurisdiction", has need of a qualified contractor to complete the work comprising the below referenced repair or improvement. The undersigned Bidder hereby proposes to complete the work comprising the below referenced repair or improvement as specified in the contract documents, which are officially on file with the Jurisdiction, in the office of the Community Development Director for the City of Muscatine, at the prices hereinafter provided in Part C of the Proposal, for the following described improvements:

**PROJECT DESCRIPTION:** Construct a hangar facility consisting of (Base Bid) three (3) bays, one of size 50' x 70', with a powered bi-fold door of 60' x 18', and two (2) each of nominal size of 45' x 35', and each with a powered bi-fold door of 45' wide by 16' high. Each hangar bay shall include electrical service, lighting, a PCC floor, and will be insulated. An additional two (2) bays (of the smaller size listed above) will be bid as a Bid Alternate. Also, construct pavement for taxilanes and aprons for access to all three hangar bays. Includes drainage improvements, paving, pavement marking. Site work for Base Bid includes the following approximate quantities: 625 CY Unclassified Excavation and Topsoil, 1,535 SY Granular Base and PCC Pavement, and 0.3 Acre Seeding and Fertilizing.

#### PROPOSAL: PART B – ACKNOWLEDGMENT OF ADDENDA

The Bidder hereby acknowledges that all addenda become a part of the contract documents when issued, and that each such addendum has been received and utilized in the preparation of this bid. The Bidder hereby acknowledges receipt of the following addenda by inserting the number of each addendum in the blanks below:

ADDENDUM NUMBER _____	ADDENDUM NUMBER _____
ADDENDUM NUMBER _____	ADDENDUM NUMBER _____

and certifies that said addenda were utilized in the preparation of this bid.

#### PROPOSAL: PART C – BID ITEMS AND QUANTITIES

**UNIT BID PRICE CONTRACTS:** The Bidder must provide the Unit Bid Price, the Total Bid Price, any Alternate Prices and the Total Construction Costs on the Proposal Attachment: Part C – Bid Items and Quantities. In case of discrepancy, the Unit Bid Price governs. The quantities shown on the Proposal Attachment: Part C – Bid Items and Quantities are approximate only, but are considered sufficiently adequate for the purpose of comparing bids. The Total Construction Cost shall be used only for the comparison of bids. The jurisdiction shall only use the Total Construction Cost for determining the sufficiency of the bid security.

**BASE BID CONTRACTS:** The Bidder must provide any Bid Prices, any Alternate Prices, and the Total of the Base Bid plus any Add-Alternates on the Proposal Attachment: Part C – Bid Items and Quantities. The Jurisdiction shall only use the Total Construction Cost, including selected Add-Alternates, for comparison of bids. The Total Construction Cost, including any Add-Alternates selected, shall be used for determining the sufficiency of the bid security.

## **PROPOSAL: PART D – GENERAL**

The Bidder hereby acknowledges that the Jurisdiction, in advertising for public bids for this project reserves the right to:

1. Reject any or all bids. Award of the contract, if any, to be to the lowest responsible, responsive bidder; and
2. Reject any or all alternates in determining the items to be included in the contract. Designation of the lowest responsible, responsive bidder to be based on comparison of the total bid only, not including any alternates; and
3. Make such alterations in the contract documents or in the proposal quantities as it determines necessary in accordance with the contract documents after execution of the contract. Such alterations shall not be considered a waiver of any conditions of the contract documents, and shall not invalidate any of the provisions thereof; and

The Bidder hereby agrees to:

1. Enter into a contract, if this proposal is selected, in the form approved by the Jurisdiction, provide proof of registration with the Iowa Division of Labor in accordance with Chapter 91C of the Iowa Code, and furnish a performance, maintenance, and payment bond; and
2. Forfeit bid security, not as a penalty but as liquidated damages, upon failure to enter into such contract and/or to furnish said bond; and
3. Commence the work upon written Notice to Proceed, and
4. Substantially complete the work on or before July 31, 2020, and
5. Pay liquidated damages for noncompliance with said completion provisions at the rate of Two Hundred Fifty Dollars dollars (\$250.00) for each calendar day thereafter that the work remains incomplete.

## **PROPOSAL: PART E – NON-COLLUSION AFFIDAVIT**

The Bidder hereby certifies:

1. That this proposal is not affected by, contingent on, or dependent on any other proposal submitted for any improvement with the Jurisdiction; and
2. That no individual employed by the Bidder has employed any person to solicit or procure the work on this project, nor will any employee of the Bidder make any payment or agreement for payment of any compensation in connection with the procurement of this project; and
3. That no part of the bid price received by the Bidder was or will be paid to any person, corporation, firm, association, or other organization for soliciting the bid, other than the payment of their normal compensation to persons regularly employed by the Bidder whose services in connection with the construction of the project were in the regular course of their duties for the Bidder; and
4. That this proposal is genuine and not collusive or sham; that the Bidder has not colluded, conspired, connived or agreed, directly or indirectly, with any bidder or person, to submit a sham bid or to refrain from bidding, and has not in any manner, directly or indirectly, sought, by agreement or collusion, or communication or conference, with any person, to fix the bid price of the Bidder or of any other bidder, and that all statements in this proposal are true; and
5. That the individual(s) executing this proposal have the authority to execute this proposal on behalf of the Bidder.

**PROPOSAL: PART F – ADDITIONAL REQUIREMENTS**

The Bidder hereby agrees to comply with the additional requirements listed below which are included in this proposal and identified as proposal attachments:

<u>ITEM NO.</u>	<u>DESCRIPTION OF ATTACHMENT</u>
○	General
○	Targeted Small Business (TSB) Requirements

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**CONSTRUCT 3-UNIT BOX HANGAR, TAXILANE & APRON**  
Muscatine Municipal Airport  
Muscatine, Iowa

**ADDITIONAL REQUIREMENTS FOR PRIMARY ROADS WITH LOCAL ADMINISTRATION AND LOCAL LETTING**

**PROPOSAL ATTACHMENT: PART F - ADDITIONAL REQUIREMENTS**

**ITEM 1 - GENERAL**

1. The work under this proposal shall be constructed in accordance with the SUDAS Standard Specifications, 2019 Edition, and as further modified by supplemental specifications and special provisions included in the contract documents.
2. The Bidder hereby acknowledged and agrees to comply with any and all applicable provisions of the Jurisdiction Human Rights Ordinance, Chapter. The Bidder specifically agrees not to discriminate against any employees or applicants for employment on the basis of age, race, religion, creed, color, sex, national origin, ancestry or disability. The Bidder further agrees to include this provision in all subcontracts for this project.

**ADDITIONAL REQUIREMENTS FOR PRIMARY ROADS WITH LOCAL ADMINISTRATION AND LOCAL LETTING**

**TARGETED SMALL BUSINESS (TSB) REQUIREMENTS**

(For use on Primary Roads with Local Administration and Local Letting)

**A. PROPOSAL ATTACHMENT: PART F – ADDITIONAL REQUIREMENTS**

The Bidder hereby agrees to comply with the additional requirements listed below which are included in this proposal and identified as proposal attachments:

<u>ITEM NO.</u>	<u>DESCRIPTION OF ATTACHMENT</u>
1.	<u>General</u>
2.	<u>Targeted Small Business (TSB) Pre-Bid Contract Information</u>
3.	<u> </u>
4.	<u> </u>

**B. PROPSAL ATTACHMENT: PART F – ADDITIONAL REQUIREMENTS**

ITEM 2 – TARGETED SMALL BUSINESS (TSB)  
PRE-BID CONTACT INFORMATION

The attached Targeted Small Business (TSB) Affirmative Action Responsibilities on Non-Federal Aid Projects (Third-Party State-Assisted Projects) as included as a Special Provision in the Contract Documents shall apply to this project. There is no TSB Goal on this project; however, Section 8 still requires positive efforts to utilize TSB's on this project. The bidder shall complete the "Targeted Small Business (TSB) Pre-bid Contract Information" form listing pre-bid contacts with TSB's and submit it with the proposal. The bidder must identify if each company contacted is a DBE or TSB or possibly both DBE and TSB; and report the company on the appropriate form or on both forms if the company is both a DBE and a TSB. For this project only, TSB participation may be utilized toward the **0.0% DBE Goal** established by the Jurisdiction.

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Contractor \_\_\_\_\_

Page# \_\_\_\_\_

Project# T51.114773

**TARGETED SMALL BUSINESS (TSB)  
PRE-BID CONTACT INFORMATION**

County Muscatine

City Muscatine, Iowa

(To Be Completed By All Bidders Per The Current Contract Provision)

In order for your bid to be considered responsive, you are required to provide information on this form showing your Targeted Small Business contacts made with your bid submission. This information is subject to verification and confirmation.

In the event it is determined that the Targeted Small Business goals are not met, then before awarding the contract, the Contracting Authority will make a determination as to whether or not the apparent successful low bidder made good faith efforts to meet the goals.

**NOTE:** Every effort shall be made to solicit quotes or bids on as many subcontractable items as necessary to achieve the established goals. If a TSB's quote is used in the bid, it is assumed that the firm listed will be used as a subcontractor.

TABLE OF INFORMATION SHOWING BIDDERS PRE-BID  
TARGETED SMALL BUSINESS (TSB) CONTACTS

SUBCONTRACTOR	TSB	DATES CONTACTED	QUOTES RECEIVED		QUOTATION USED IN BID	
			YES/ NO	DATES CONTACTED	YES/ NO	DOLLAR AMT. PROPOSED TO BE SUBCONTRACTED

<sup>1</sup>Total dollar amount proposed to be subcontracted to TSB on this project \$ \_\_\_\_\_  
List items by name to be subcontracted

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**PROPOSAL: PART G - IDENTITY OF BIDDER**

The bidder shall indicate whether the bid is Submitted by a/an:

☐ Individual,  
Sole Proprietorship

\_\_\_\_\_  
Bidder

☐ Partnership

\_\_\_\_\_  
Signature

☐ Corporation

By

\_\_\_\_\_  
Name (Print/Type)

☐ Limited Liability Company

\_\_\_\_\_  
Title

☐ Joint-venture; all parties must join-in and  
execute all documents

\_\_\_\_\_  
Street Address

☐ Other

\_\_\_\_\_  
City, State, Zip Code

The bidder shall enter its Public  
Registration Number \_\_\_\_ - \_\_\_\_  
issued by the Iowa Commissioner of Labor  
Pursuant Section 91C.5 of the Iowa Code.

\_\_\_\_\_  
Telephone Number

**Type or print the name and title of the company's  
owner, president, CEO, etc. if a different person  
than entered above**

Failure to provide said Registration  
Number shall result in the bid being read  
under advisement. A contract will not be  
executed until the Contractor is registered.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

**NOTE: The signature on this proposal must be an original signature in ink; copies, facsimiles, or  
electronic signatures will not be accepted.**

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All bidders must submit the following completed form to the governmental body requesting bids per  
875 Iowa Administrative Code Chapter 156.

## Bidder Status Form

To be completed by all bidders

### Part A

Please answer "Yes" or "No" for each of the following:

- ☐ Yes ☐ No My company is authorized to transact business in Iowa.  
(To help you determine if your company is authorized, please review the worksheet on the next page).
- ☐ Yes ☐ No My company has an office to transact business in Iowa.
- ☐ Yes ☐ No My company's office in Iowa is suitable for more than receiving mail, telephone calls, and e-mail.
- ☐ Yes ☐ No My company has been conducting business in Iowa for at least 3 years prior to the first request for bids on this project.
- ☐ Yes ☐ No My company is not a subsidiary of another business entity or my company is a subsidiary of another business entity that would qualify as a resident bidder in Iowa.  
If you answered "Yes" for each question above, your company qualifies as a resident bidder. Please complete Parts B and D of this form.  
If you answered "No" to one or more questions above, your company is a non-resident bidder. Please complete Parts C and D of this form.

To be completed by resident bidders

### Part B

My company has maintained offices in Iowa during the past 3 years at the following addresses:

Dates: \_\_\_\_\_ to \_\_\_\_\_ Address: \_\_\_\_\_  
(mm/dd/yyyy) City, State, Zip: \_\_\_\_\_

Dates: \_\_\_\_\_ to \_\_\_\_\_ Address: \_\_\_\_\_  
(mm/dd/yyyy) City, State, Zip: \_\_\_\_\_

Dates: \_\_\_\_\_ to \_\_\_\_\_ Address: \_\_\_\_\_  
(mm/dd/yyyy) City, State, Zip: \_\_\_\_\_

You may attach additional sheet(s) if needed.

To be completed by non-resident bidders

### Part C

1. Name of home state or foreign country reported to the Iowa Secretary of State: \_\_\_\_\_
2. Does your company's home state or foreign country offer preferences to bidders who are residents? ☐ Yes ☐ No
3. If you answered "Yes" to question 2, identify each preference offered by your company's home state or foreign country and the appropriate legal citation.  
\_\_\_\_\_  
\_\_\_\_\_

You may attach additional sheet(s) if needed.

To be completed by all bidders

### Part D

I certify that the statements made on this document are true and complete to the best of my knowledge and I know that my failure to provide accurate and truthful information may be reason to reject my bid.

Firm Name: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## WORKSHEET: AUTHORIZATION TO TRANSACT BUSINESS

This worksheet may be used to help complete Part A of the Resident Bidder Status form. If at least one of the following describes your business, you are authorized to transact business in Iowa.

- ☐ Yes ☐ No My business is currently registered as a contractor with the Iowa Division of Labor.
- ☐ Yes ☐ No My business is a sole proprietorship and I am an Iowa resident for Iowa income tax purposes.
- ☐ Yes ☐ No My business is a general partnership or joint venture. More than 50 percent of the general partners or joint venture parties are residents of Iowa for Iowa income tax purposes
- ☐ Yes ☐ No My business is an active corporation with the Iowa Secretary of State and has paid all fees required by the Secretary of State, has filed its most recent biennial report, and has not filed articles of dissolution.
- ☐ Yes ☐ No My business is a corporation whose articles of incorporation are filed in a state other than Iowa, the corporation has received a certificate of authority from the Iowa Secretary of State, has filed its most recent biennial report with the Secretary of State, and has neither received a certificate of withdrawal from the Secretary of state nor had its authority revoked.
- ☐ Yes ☐ No My business is a limited liability partnership which has filed a statement of qualification in this state and the statement has not been canceled.
- ☐ Yes ☐ No My business is a limited liability partnership which has filed a statement of qualification in a state other than Iowa, has filed a statement of foreign qualification in Iowa and a statement of cancellation has not been filed.
- ☐ Yes ☐ No My business is a limited partnership or limited liability limited partnership which has filed a certificate of limited partnership in this state, and has not filed a statement of termination.
- ☐ Yes ☐ No My business is a limited partnership or a limited liability limited partnership whose certificate of limited partnership is filed in a state other than Iowa, the limited partnership or limited liability limited partnership has received notification from the Iowa Secretary of state that the application for certificate of authority has been approved and no notice of cancellation has been filed by the limited partnership or the limited liability limited partnership.
- ☐ Yes ☐ No My business is a limited liability company whose certificate of organization is filed in Iowa and has not filed a statement of termination.
- ☐ Yes ☐ No My business is a limited liability company whose certificate of organization is filed in a state other than Iowa, has received a certificate of authority to transact business in Iowa and the certificate has not been revoked or canceled.

**Construct 3-Unit Box Hangar, Taxilane & Apron**

Muscatine Municipal Airport

Muscatine, Iowa

**PROPOSAL ATTACHMENT: PART C – BID ITEMS AND QUANTITIES**

This is a UNIT BID PRICE CONTRACT. The bidder must provide the Unit Bid Price, the total Bid Price, and the Total Bid Amount; in case of discrepancy, the Unit Bid Price governs. The Quantities shown on the Proposal Attachment: Part C – Bid Items and quantities are approximate only, but are considered sufficiently adequate for the purpose of comparing bids. The Jurisdiction shall only use the Total Base Bid Amount plus selected Bid Alternates for comparison of bids.

<b>BASE BID ITEMS AND QUANTITIES</b>					
<b>ITEM NO.</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>APPROX. QUANTITY</b>	<b>UNIT PRICE</b>	<b>AMOUNT</b>
1	TOPSOIL, ON-SITE	CY	525		
2	EXCAVATION, CLASS 13	CY	100		
3	SUBGRADE PREPARATION	SY	1618		
4	SUBBASE, MODIFIED	SY	1618		
5	STORM SEWER, TRENCHED, PVC, 8"	LF	225		
6	STORM SEWER, TRENCHED, RCP, 12"	LF	52		
7	STORM SEWER, TRENCHED, RCP, 15"	LF	119		
8	INTAKE, SW-502	EA	1		
9	PAVEMENT, PCC, 6-INCH	SY	1535		
10	CONVENTIONAL SEEDING, SEEDING, FERTILIZING, AND MULCHING	AC	0.3		
11	SILT FENCE OR SILT FENCE DITCH CHECK	LF	500		
12	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF SEDIMENT	LF	500		
13	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF DEVICE	LF	500		
14	CONSTRUCTION SURVEY	LS	1		
15	MOBILIZATION	LS	1		
16	PAVEMENT MARKING, SOLID YELLOW, WITH BEADS	SF	153		
17	PAVEMENT MARKING, BLACK OUTLINE, NO BEADS	SF	306		
18	HANGAR, 3-BAY, 70' X 95' COMPLETE	LS	1		
19	ELECTRICAL SERVICE EXTENSION	LS	1		
<b>TOTAL BASE BID AMOUNT \$</b>					

**TOTAL BASE BID WRITTEN AMOUNT:**

<b>BID ALTERNATE "A" ITEMS AND QUANTITIES</b>					
ITEM NO.	DESCRIPTION	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
A1	EXCAVATION, CLASS 13	CY	20		
A2	SUBGRADE PREPARATION	SY	231		
A3	SUBBASE, MODIFIED	SY	231		
A4	STORM SEWER, TRENCHED, PVC, 8"	LF	90		
A5	PAVEMENT, PCC, 6-INCH	SY	231		
A6	PAVEMENT MARKING, SOLID YELLOW, WITH BEADS	SF	40		
A7	PAVEMENT MARKING, BLACK OUTLINE, NO BEADS	SF	80		
A8	ADD 2-BAYS TO HANGAR, 70' X 45' COMPLETE	LS	1		
<b>TOTAL BID ALTERNATE "A" AMOUNT \$</b>					

**TOTAL BID ALTERNATE "A" WRITTEN AMOUNT:**

<b>BID ALTERNATE "B" ITEMS AND QUANTITIES</b>					
ITEM NO.	DESCRIPTION	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
B1	EXTEND GAS SERVICE TO HANGARS	LS	1		
<b>TOTAL BID ALTERNATE "B" AMOUNT \$</b>					

**TOTAL BID ALTERNATE "B" WRITTEN AMOUNT:**

<b>BID ALTERNATE "C" ITEMS AND QUANTITIES</b>					
ITEM NO.	DESCRIPTION	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
C1	COMPLETION DATE OF DECEMBER 1, 2019	LS	1		
<b>TOTAL BID ALTERNATE "C" AMOUNT \$</b>					

**TOTAL BID ALTERNATE "C" WRITTEN AMOUNT:**

NOTE: IT IS UNDERSTOOD THAT THE ABOVE QUANTITIES ARE ESTIMATED FOR THE PURPOSE OF THIS BID. ALL QUANTITIES ARE SUBJECT TO REVISION BY THE DISTRICT. QUANTITY CHANGES WHICH AMOUNT TO TWENTY (20) PERCENT OR LESS OF THE TOTAL BID SHALL NOT AFFECT THE UNIT PRICE BID.

\_\_\_\_\_  
Bidder Name

Muscatine Municipal Airport - T51.114773

PROPOSAL

June 14, 2019

PAGE 00410-14

## BID BOND

### CONSTRUCT 3-UNIT BOX HANGAR, TAXILANE & APRON

Muscatine Municipal Airport

Muscatine, Iowa

KNOW ALL BY THESE PRESENTS:

That we, \_\_\_\_\_, as Principal, and

\_\_\_\_\_, as Surety, are held and firmly bound unto, City of Muscatine, Iowa as Obligee, (hereinafter referred to as "the Jurisdiction"), in the penal sum of \_\_\_\_\_ dollars (\$ \_\_\_\_\_), lawful money of the United States, for which payment said Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents.

The condition of the above obligation is such that whereas the Principal has submitted to the Jurisdiction a certain proposal, in a separate envelope, and hereby made a part hereof, to enter into a contract in writing, for the following described improvements;

**PROJECT DESCRIPTION:** Construct a hangar facility consisting of (Base Bid) three (3) bays, one of size 50' x 70', with a powered bi-fold door of 60' x 18', and two (2) each of nominal size of 45' x 35', and each with a powered bi-fold door of 45' wide by 16' high. Each hangar bay shall include electrical service, lighting, a PCC floor, and will be insulated. An additional two (2) bays (of the smaller size listed above) will be bid as a Bid Alternate. Also, construct pavement for taxilanes and aprons for access to all three hangar bays. Includes drainage improvements, paving, pavement marking. Site work for Base Bid includes the following approximate quantities: 625 CY Unclassified Excavation and Topsoil, 1,535 SY Granular Base and PCC Pavement, and 0.3 Acre Seeding and Fertilizing.

The Surety hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Jurisdiction may accept such bid or execute such Contract; and said Surety does hereby waive notice of any such extension.

In the event that any actions or proceedings are initiated with respect to this Bond, the parties agree that the venue thereof shall be Muscatine County, State of Iowa. If legal action is required by the Jurisdiction against the Surety or Principal to enforce the provisions of the bond or to collect the monetary obligation incurring to the benefit of the Jurisdiction, the Surety or Principal agrees to pay the Jurisdiction all damages, costs, and attorney fees incurred by enforcing any of the provisions of this Bond. All rights, powers, and remedies of the Jurisdiction hereunder shall be cumulative and not alternative and shall be in addition to all rights, powers and remedies given to the Jurisdiction, by law. The Jurisdiction may proceed against Surety for any amount guaranteed hereunder whether action is brought against Principal or whether Principal is joined in any such action or actions or not.

NOW, THEREFORE, if said proposal by the Principal be accepted, and the Principal shall enter into a contract with Jurisdiction in accordance with the terms of such proposal, including the provision of insurance and of a bond as may be specified in the contract documents, with good and sufficient surety for the faithful performance of such contract, for the prompt payment of labor and material furnished in the prosecution thereof, and for the maintenance of said improvements as may be required therein, then this obligation shall become null and void; otherwise, the Principal shall pay to the Jurisdiction the full amount of the bid bond, together with court costs, attorney's fees, and any other expense of recovery.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

SURETY:

PRINCIPAL:

\_\_\_\_\_  
Surety Company

\_\_\_\_\_  
Bidder

By

\_\_\_\_\_  
Signature Attorney-in-Fact/Officer

By

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Attorney-in-Fact/Officer

\_\_\_\_\_  
Name (Print/Type)

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Company Address

\_\_\_\_\_  
Address

\_\_\_\_\_  
City, State, Zip Code

\_\_\_\_\_  
City, State, Zip Code

\_\_\_\_\_  
Company Telephone Number

\_\_\_\_\_  
Telephone Number

**NOTE: All signatures on this bid bond must be original signatures in ink; copies or facsimile of any signature will not be accepted. This bond must be sealed with the Surety's raised, embossing seal or official adhesive seal. The Certificate or Power of Attorney accompanying this bond must be valid on its face and sealed with the Surety's raised, embossing seal or official adhesive seal.**



## CONTRACT

### CONSTRUCT 3-UNIT BOX HANGAR, TAXILANE & APRON

Muscatine Municipal Airport

Muscatine, Iowa

THIS CONTRACT, made and entered into at the Muscatine Municipal Airport, this \_\_\_\_\_ day of \_\_\_\_\_, 2019, by and between the City of Muscatine, Iowa hereinafter called the "Jurisdiction", and \_\_\_\_\_, hereinafter called the "Contractor".

#### WITNESSETH:

The Contractor hereby agrees to complete the work comprising the "Construct 3-Unit Box Hangar, Taxilane & Apron" project, as specified in the contract documents, which are officially on file with the Jurisdiction, in the office of the Community Development Coordinator, City of Muscatine, Iowa, 215 Sycamore Street, Muscatine, Iowa, Iowa. This contract includes all such contract documents. All work under this contract shall be constructed in accordance with the SUDAS Standard Specifications, 2019 Edition, and as further modified by the supplemental specifications and special provisions included in said contract documents, and the Contract Attachment which is attached hereto. The Contractor further agrees to complete the work in strict accordance with said contract documents, and to guarantee the work as required by law, for the time required in said contract documents, after its acceptance by the Jurisdiction.

This contract is awarded and executed for completion of the work specified in the contract documents for the bid prices shown on the Contract Attachment: Bid Items and Quantities which were proposed by the Contractor in its proposal submitted in accordance with the Notice to Bidders and Notice of Public Hearing for the following described improvements:

**PROJECT DESCRIPTION:** Construct a hangar facility consisting of (Base Bid) three (3) bays, one of size 50' x 70', with a powered bi-fold door of 60' x 18', and two (2) each of nominal size of 45' x 35', and each with a powered bi-fold door of 45' wide by 16' high. Each hangar bay shall include electrical service, lighting, a PCC floor, and will be insulated. An additional two (2) bays (of the smaller size listed above) will be bid as a Bid Alternate. Also, construct pavement for taxilanes and aprons for access to all three hangar bays. Includes drainage improvements, paving, pavement marking. Site work for Base Bid includes the following approximate quantities: 625 CY Unclassified Excavation and Topsoil, 1,535 SY Granular Base and PCC Pavement, and 0.3 Acre Seeding and Fertilizing.

The Contractor agrees to perform said work for and in consideration of the Jurisdiction's payment of the bid amount of \_\_\_\_\_ dollars (\$ \_\_\_\_\_), which amount shall constitute the required amount of the performance, maintenance, and payment bond. The Contractor hereby agrees to commence work as stated in the written Notice to Proceed; and substantially complete the work on or before July 31, 2020; and to pay liquidated damages for noncompliance with said completion provisions at a rate of Two Hundred Fifty Dollars dollars (\$250.00) for each calendar day that the work remains incomplete.

IN WITNESS WHEREOF, the Parties hereto have executed this instrument, in triplicate on the date first shown written.

JURISDICTION: City of Muscatine, Iowa

CONTRACTOR:

By \_\_\_\_\_

\_\_\_\_\_

(Seal)  
ATTEST:

By \_\_\_\_\_

Contractor's Contact Name  
Contractor's Title

\_\_\_\_\_  
Jodi Royal-Goodwin  
Director of Community Development

\_\_\_\_\_

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
City, State, Zip Code

\_\_\_\_\_  
Telephone

CONTRACTOR PUBLIC REGISTRATION INFORMATION To Be Provided By:

1. All Contractors: The Contractor shall enter its Public Registration No. \_\_\_\_\_ issued by the Iowa Commissioner of Labor pursuant to Section 91C.5 of the Iowa Code.
2. Out-of-State Contractors:
  - A. Pursuant to Section 91C.7 of the Iowa Code, an out-of-state contractor, before commencing a contract in excess of five thousand dollars in value in Iowa, shall file a bond with the division of labor services of the department of workforce development. The contractor should contact 515-242-5871 for further information. Prior to contract execution, the Jurisdictional Engineer may forward a copy of this contract to the Iowa Department of Workforce Development as notification of pending construction work. It is the contractor's responsibility to comply with said Section 91C.7 before commencing this work.
  - B. Prior to entering into contract, the designated low bidder, if it be a corporation organized under the laws of a state other than Iowa, shall file with the Jurisdictional Engineer a certificate from the Secretary of the State of Iowa showing that it has complied with all the provisions of Chapter 490 of the Code of Iowa, or as amended, governing foreign corporations. For further information contact the Iowa Secretary of State Office at 515-281-5204.

Bond No. \_\_\_\_\_

Name of Surety \_\_\_\_\_

NOTE: All signatures on this contract must be original signatures in ink; copies or facsimile of any signature will not be accepted.

CORPORATE ACKNOWLEDGMENT

State of \_\_\_\_\_ )  
\_\_\_\_\_ ) SS  
\_\_\_\_\_ County )

On this \_\_\_\_ day of \_\_\_\_\_, 2017, before me, the undersigned, a Notary Public in and for the State of \_\_\_\_\_, personally appeared \_\_\_\_\_ and \_\_\_\_\_, to me known, who, being by me duly sworn, did say that they are the \_\_\_\_\_, and \_\_\_\_\_, respectively, of the corporation executing the foregoing instrument; that (no seal has been procured by) (the seal affixed thereto is the seal of) the corporation; that said instrument was signed (and sealed) on behalf of the corporation by authority of this Board of Directors; that \_\_\_\_\_ and \_\_\_\_\_ acknowledged the execution of the instrument to be the voluntary act and deed of the corporation, by it and by them voluntarily executed.

\_\_\_\_\_  
Notary Public in and for the State of \_\_\_\_\_  
My commission expires \_\_\_\_\_ 20, \_\_\_\_\_

PARTNERSHIP ACKNOWLEDGMENT

State of \_\_\_\_\_ )  
\_\_\_\_\_) SS  
\_\_\_\_\_ County )

On this \_\_\_\_ day of \_\_\_\_\_, 2017, before me, the undersigned, a Notary Public in and for the State of \_\_\_\_\_, personally appeared \_\_\_\_\_ to me personally known, who being by me duly sworn, did say that the person is one of the partners of \_\_\_\_\_, a partnership, and that the instrument was signed on behalf of the partnership by authority of the partners and the partner acknowledged the execution of the instrument to be the voluntary act and deed of the partnership by it and by the partner voluntarily executed.

\_\_\_\_\_  
Notary Public in and for the State of \_\_\_\_\_  
My commission expires \_\_\_\_\_ 20, \_\_\_\_\_

INDIVIDUAL ACKNOWLEDGMENT

State of \_\_\_\_\_ )  
\_\_\_\_\_) SS  
\_\_\_\_\_ County )

On this \_\_\_\_ day of \_\_\_\_\_, 2017, before me, the undersigned, a Notary Public in and for the State of \_\_\_\_\_, personally appeared \_\_\_\_\_ and \_\_\_\_\_, to me known to be the identical person(s) named in and who executed the foregoing instrument, and acknowledged that (he) (she) (they) executed the instrument as (his) (her) (their) voluntary act and deed.

\_\_\_\_\_  
Notary Public in and for the State of \_\_\_\_\_  
My commission expires \_\_\_\_\_ 20, \_\_\_\_\_

LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

State of \_\_\_\_\_ )  
\_\_\_\_\_) SS  
\_\_\_\_\_ County )

On this \_\_\_\_ day of \_\_\_\_\_, 2017, before me a Notary Public in and for said county, personally appeared \_\_\_\_\_, to me personally known, who being by me duly sworn did say that person is \_\_\_\_\_ of said \_\_\_\_\_, that (the seal affixed to said instrument is the seal of said OR no seal has been procured by the said) \_\_\_\_\_, and that said instrument was signed and sealed on behalf of the said \_\_\_\_\_, by authority of its managers and the said \_\_\_\_\_ acknowledged the execution of said instrument to be the voluntary act and deed of said \_\_\_\_\_, by it voluntarily executed.

\_\_\_\_\_  
Notary Public in and for the State of \_\_\_\_\_  
My commission expires \_\_\_\_\_ 20, \_\_\_\_\_

**CONTRACT ATTACHMENT:      ITEM 1: GENERAL - NONE**

**CONTRACT ATTACHMENT:      ITEM 2: BID ITEMS AND, QUANTITIES**

THIS CONTRACT IS AWARDED AND EXECUTED FOR COMPLETION OF THE WORK SPECIFIED IN THE CONTRACT DOCUMENTS FOR THE BID PRICES TABULATED BELOW AS PROPOSED BY THE CONTRACTOR IN ITS PROPOSAL SUBMITTED IN ACCORDANCE WITH NOTICE TO BIDDERS AND NOTICE OF PUBLIC HEARING. ALL QUANTITIES ARE SUBJECT TO REVISION BY THE JURISDICTION. THE JURISDICTION RESERVES THE RIGHT TO ADJUST QUANTITIES AS NECESSARY TO MAXIMIZE FUNDS BUDGETED FOR THIS PROJECT.

<Attach Schedule of Unit Prices with contract totals>

**INTENTIONALLY LEFT BLANK**

**PERFORMANCE, PAYMENT AND MAINTENANCE BOND****CONSTRUCT 3-UNIT BOX HANGAR, TAXILANE & APRON**

Muscatine Municipal Airport

Muscatine, Iowa

KNOW ALL BY THESE PRESENTS:

That we, \_\_\_\_\_, as Principal (hereinafter the "Contractor" or "Principal" and \_\_\_\_\_, as Surety are held and firmly bound unto \_\_\_\_\_, as Oblige (hereinafter referred to as "the Jurisdiction"), and to all persons who may be injured by any breach of any of the conditions of this Bond in the penal sum of \_\_\_\_\_ DOLLARS (\$\_\_\_\_\_), lawful money of the United States, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, legal representatives and assigns, jointly or severally, firmly by these presents.

The conditions of the above obligations are such that whereas said Contractor entered into a contract with the Jurisdiction, bearing date the \_\_\_\_\_ day of \_\_\_\_\_, hereinafter the "Contract") wherein said Contractor undertakes and agrees to construct the following described improvements:

**PROJECT DESCRIPTION:** Construct a hangar facility consisting of (Base Bid) three (3) bays, one of size 50' x 70', with a powered bi-fold door of 60' x 18', and two (2) each of nominal size of 45' x 35', and each with a powered bi-fold door of 45' wide by 16' high. Each hangar bay shall include electrical service, lighting, a PCC floor, and will be insulated. An additional two (2) bays (of the smaller size listed above) will be bid as a Bid Alternate. Also, construct pavement for taxilanes and aprons for access to all three hangar bays. Includes drainage improvements, paving, pavement marking. Site work for Base Bid includes the following approximate quantities: 625 CY Unclassified Excavation and Topsoil, 1,535 SY Granular Base and PCC Pavement, and 0.3 Acre Seeding and Fertilizing.

and to faithfully perform all the terms and requirements of said Contract within the time therein specified, in a good and workmanlike manner, and in accordance with the Contract Documents. Provided, however, that one year after the date of acceptance as complete of the work under the above referenced Contract, the maintenance portion of this Bond shall continue in force for the stated maintenance period.

It is expressly understood and agreed by the Contractor and Surety in this bond that the following provisions are a part of this Bond and are binding upon said Contractor and Surety, to-wit:

**PERFORMANCE:** The Contractor shall well and faithfully observe, perform, fulfill and abide by each and every covenant, condition and part of said Contract and Contract Documents, by reference made a part hereof, for the above referenced improvements, and shall indemnify and save harmless the Jurisdiction from all outlay and expense incurred by the Jurisdiction by reason of the Contractor's default of failure to perform as required. The Contractor shall also be responsible for the default or failure to perform as required under the Contract and Contract Documents by all its subcontractors, suppliers, agents, or employees furnishing materials or providing labor in the performance of the Contract.

**PAYMENT:** The Contractor and the Surety on this Bond are hereby agreed to pay all just claims submitted by persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the performance of the Contract on account of which this Bond is given, including but not limited to claims for all amounts due for labor, materials, lubricants, oil, gasoline, repairs on machinery, equipment and tools, consumed or used by the Contractor or any subcontractor, wherein the same are not satisfied out of the portion of the contract price which the Jurisdiction is required to retain until completion of the improvement, but the Contractor and Surety shall not be liable to said persons, firms, or corporations unless the claims of said claimants against said portion of the contract price shall have been established as provided by law. The Contractor and Surety hereby bind themselves to the obligations and conditions set forth in Chapter 573, Code of Iowa, which by this reference is made a part hereof as though fully set out herein.

**MAINTENANCE:** The Contractor and the Surety on this Bond hereby agree, at their own expense:

To remedy any and all defects that may develop in or result from work to be performed under the Contract within the of 2-year period for utility work, and 4-year period for paving, from the date of acceptance of the work under the Contract, by reason of defects in workmanship or materials used in construction of said work;

To keep all work in continuous good repair; and

To pay the Jurisdiction's reasonable costs of monitoring and inspection to assure that any defects are remedied, and to repay the Jurisdiction all outlay and expense incurred as a result of Contractor's and Surety's failure to remedy any defect as required by this section.

Contractor's and Surety's agreement herein made extends to defects in workmanship or materials not discovered or known to the Jurisdiction at the time such work was accepted.

**GENERAL:** Every Surety on this Bond shall be deemed and held bound, any contract to the contrary notwithstanding, to the following provisions:

To consent without notice to any extension of time to the Contractor in which to perform the Contract;

To consent without notice to any change in the Contract or Contract Documents, which thereby increases the total contract price and the penal sum of this bond, provided that all such changes do not, in the aggregate, involve an increase of more than twenty percent of the total contract price, and that this bond shall then be released as to such excess increase; and

To consent without notice that this Bond shall remain in full force and effect until the Contract is completed, whether completed within the specified contract period, within an extension thereof, or within a period of time after the contract period has elapsed and the liquidated damage penalty is being charged against the Contractor.

The Contractor and every Surety on the bond shall be deemed and held bound, any contract to the contrary notwithstanding, to the following provisions:

That no provision of this Bond or of any other contract shall be valid which limits to less than five years after the acceptance of the work under the Contract the right to sue on this Bond.

That as used herein, the phrase "all outlay and expense" is not to be limited in any way, but shall include the actual and reasonable costs and expenses incurred by the Jurisdiction including interest, benefits and overhead where applicable. Accordingly, "all outlay and expense" would include but not be limited to all contract or employee expense, all equipment usage or rental, materials, testing, outside experts, attorneys fees (including overhead expenses of the Jurisdiction's staff attorneys), and all costs and expenses of litigation as they are incurred by the Jurisdiction. It is intended the Contractor and Surety will defend and indemnify the Jurisdiction on all claims made against the Jurisdiction on account of Contractor's failure to perform as required in the Contract and Contract Documents, that all agreements and promises set forth in the Contract and Contract Documents, in approved change orders, and in this Bond will be fulfilled, and that the Jurisdiction will be fully indemnified so that it will be put into the position it would have been in had the Contract been performed in the first instance as required.

In the event the Jurisdiction incurs any "outlay and expense" in defending itself with respect to any claim as to which the Contractor or Surety should have provided the defense, or in the enforcement of the promises given by the Contractor in the Contract, Contract Documents, or approved change orders, or in the enforcement of the promises given by the Contractor and Surety in this Bond, the Contractor and Surety agree that they will make the Jurisdiction whole for all such outlay and expense, provided that the Surety's obligation under this bond shall not exceed 125% of the penal sum of this bond.

In the event that any actions or proceedings are initiated with respect to this Bond, the parties agree that the venue thereof shall be Muscatine County, State of Iowa. If legal action is required by the Jurisdiction to enforce the provisions of this Bond or to collect the monetary obligation incurring to the benefit of the Jurisdiction, the Contractor and the Surety agree, jointly and severally, to pay the Jurisdiction all outlay and expense incurred therefor by the Jurisdiction. All rights, powers, and remedies of the Jurisdiction hereunder shall be cumulative and not alternative and shall be in addition to all rights, powers and remedies given to the Jurisdiction, by law. The Jurisdiction may proceed against surety for any amount guaranteed hereunder whether action is brought against the Contractor or whether Contractor is joined in any such action or actions or not.



NOW THEREFORE, the condition of this obligation is such that if said Principal shall faithfully perform all the promises of the Principal, as set forth and provided in the Contract, in the Contract Documents, and in this Bond, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

When a work, term, or phrase is used in this Bond, it shall be interpreted or construed first as defined in this Bond, the Contract, or the Contract Documents; second, if not defined in the Bond, Contract, or Contract Documents, it shall be interpreted or construed as defined in applicable provisions of the Iowa Code; third, if not defined in the Iowa Code, it shall be interpreted or construed according to its generally accepted meaning in the construction industry; and fourth, if it has no generally accepted meaning in the construction industry, it shall be interpreted or construed according to its common or customary usage.

Failure to specify or particularize shall not exclude terms or provisions not mentioned and shall not limit liability hereunder. The Contract and Contract Documents are hereby made a part of this Bond.

Project No. \_\_\_\_\_

(CON'T – PERFORMANCE, PAYMENT AND MAINTENANCE BOND)

Witness our hands, in triplicate, this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Surety Countersigned By:

PRINCIPAL:

\_\_\_\_\_  
Signature of Iowa Resident Commission Agent as  
Prescribed by Chapter 515.52-57, Iowa Code.  
(Require only if Attorney-in-Fact is not also an  
Iowa Resident Commission Agent).

\_\_\_\_\_  
Contractor

By:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Resident Commission Agent

\_\_\_\_\_  
Title

\_\_\_\_\_  
Company Name

SURETY:

\_\_\_\_\_  
Company Address

\_\_\_\_\_  
Surety Company

\_\_\_\_\_  
City, State, Zip Code

By:

\_\_\_\_\_  
Signature Attorney-in-Fact Officer

\_\_\_\_\_  
Company Telephone Number

\_\_\_\_\_  
Name of Attorney-in-Fact Officer

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Company Address

\_\_\_\_\_  
City, State, Zip Code

\_\_\_\_\_  
Company Telephone Number

NOTE: All signatures on this Performance, Maintenance & Payment Bond must be original signatures in ink; copies or facsimile of any signature will not be accepted. This bond must be sealed with the Surety's raised, embossing seal or official adhesive seal. The Certificate or Power of Attorney accompanying this bond must be valid on its face and sealed with the Surety's raised, embossing seal or official adhesive seal

Special Provisions  
for  
Construct 3-Unit Box Hangar, Taxilane & Apron  
Muscatine Municipal Airport  
Muscatine, Iowa



## **SPECIAL PROVISIONS**

FOR

### **PART 1 - GENERAL REQUIREMENTS**

#### **INDEX**

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5. PLANS AND SPECIFICATIONS
6. CONSTRUCTION FACILITIES
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#### **1. DEFINITION AND INTENT**

- A. The Technical Specifications that apply to the materials and construction practices for this project are defined as follows:
  1. The 2019 Edition of the SUDAS Standard Specifications,, except as modified by these Special Provisions to the Technical Specifications.
  2. Omissions of words or phrases such as “the Contractor shall”, “in accordance with”, “shall be”, “as noted on the Plans”, “according to the Plans”, “a”, “an”, “the” and “all” are unintentional; supply omitted words or phrases by inference.
  3. “Owner”, and “City” shall mean the City of Muscatine, Iowa, acting through the City Council.

4. "Person" shall mean any individual, partnership, limited partnership, joint venture, society, association, joint stock company, corporation, limited liability company, estate, receiver, trustee, assignee, or referee, whether appointed by a court or otherwise, and any combination of individuals.
  5. "Engineer" shall mean the City of Muscatine, Iowa or designated agent.
  6. The intent of the Technical Specifications is to describe the construction desired, performance requirements, and standards of materials and construction.
  7. "Standard Drawings" shall mean the Figures bound within the SUDAS Standard Specifications and/or the Typical Drawings bound within the plans.
  8. "Work" shall mean the work to be done and the equipment, supplies, and materials to be furnished under the contract unless some other meaning is indicated by the context.
  9. "Or equal" shall follow manufacturers names used to establish standards and, if not stated, is implied.
- B. Engineer: Bolton & Menk, Inc., 855 Wright Brothers Blvd SW, Suite 2A, Cedar Rapids, IA 52404, (515) 233-6100.

## 2. GENERAL PROVISIONS AND COVENANTS

- A. The general provisions and covenants, Division 1 of the 2017 SUDAS Standard Specifications are modified as follows:
1. Section 1020.1.09B, Unit Price Attachment.  
A computer generated unit price attachment may be submitted by the Bidder as specified by this Section.
  2. Section 1050.1.05 Shop Drawings, Certificates and Equipment Lists.  
The Contractor shall submit a minimum of three (3) copies plus any additional required by the Contractor.

## 3. WORK REQUIRED

- A. Work under this contract includes all materials, equipment, transportation, traffic control and associated work for the construction of the "Construct 3-Unit Box Hangar, Taxilane & Apron" project, as described in the Official Publication.
- B. This project consists of one contract for all work described.
- C. The construction work will need to be phased to facilitate timely construction of the improvements.

## 4. SALVAGE OF MATERIALS AND EQUIPMENT

- A. The City of Muscatine, Iowa retains first right of refusal for retaining any existing materials removed by the construction.
- B. The Contractor shall carefully remove, in a manner to prevent damage, all materials and equipment specified or indicated as salvage. The Contractor shall protect and store items specified.
- C. Any items damaged in removal, storage, or handling through carelessness or improper procedures shall be replaced by the Contractor in kind with new items.

5. PLANS AND SPECIFICATIONS

- A. The City will furnish 5 sets of plans and specifications to the Contractor after award of the contract. The Contractor shall compensate the City for printing costs for additional copies required.
- B. Provide one set of plans and specifications for each foreman and superintendent in charge of each crew on the job.

6. CONSTRUCTION FACILITIES

- A. Provide telephone numbers where Contractor's representative can be reached during work days and on nights and weekends in event of emergency.
- B. Provide and maintain suitable sanitary facilities for construction personnel for duration of work; remove upon completion of work.
- C. Do not store construction equipment, employee's vehicles, or materials on streets open to traffic. Location for storage of equipment by Contractors is subject to approval of Engineer.
- D. The Contractor shall provide suitable storage facilities necessary for proper storage of materials and equipment.
- E. The Contractor will be required to make arrangements for all services required during the construction period and pay for such services at no additional cost to the Owner.

7. SUBMITTALS

- A. Provide construction schedule showing dates of starting and completing various portions of work.
- B. Submit the following information for Engineer's review. Provide 3 copies plus copies required by Contractor. This information shall be submitted to the Engineer at the preconstruction conference or at least 14 days prior to utilization of the particular item on this project.
  - 1. Testing reports.
  - 2. Manufacturer's data for materials that are to be permanently incorporated into the project.
  - 3. Details of proposed methods of any special construction required.
  - 4. Submit purchase orders and subcontracts without prices.
  - 5. Such other information as the Engineer may request to insure compliance with contract documents.
- C. Provide Traffic Control and staging plan (3 copies)

8. STANDARDS AND CODES

- A. Construct improvements with best present day construction practices and equipment.
- C. Conform with and test in accordance with applicable sections of the following standards and codes.
  - 1. American Association of State Highway and Transportation Officials (AASHTO).
  - 2. American Society for Testing and Materials (ASTM).
  - 3. Iowa Department of Transportation Standard Specifications (Iowa DOT).
  - 4. American National Standards Institute (ANSI).
  - 5. American Water Works Association (AWWA).
  - 6. American Welding Society (AWS).

7. Federal Specifications (FS).
8. Iowa Occupational Safety and Health Act of 1972 (IOSHA).
9. Manual of Accident Prevention in Construction by Associated General Contractors of America, Inc. (AGC).
10. Standards and Codes of the State of Iowa and the ordinances of the City of Muscatine, Iowa, Iowa.
11. Other standards and codes which may be applicable to acceptable standards of the industry for equipment, materials and installation under the contract.

9. SOIL BORINGS

- A. No soil borings were completed for this project.

10. CONSTRUCTION ON HIGHWAY RIGHT-OF-WAYS

- A. All work on this project will be within City Right-of-Way, Easements or Public Property.

11. EMPLOYMENT PRACTICES

- A. Neither the Contractor nor the Contractor's Subcontractors shall employ any person whose physical or mental condition is such that this employment will endanger the health and safety of anyone employed on the Project.
- B. The Contractor shall not commit any of the following employment practices and agrees to include the following clauses in any Subcontracts:
  1. To discharge from employment or refuse to hire any individual because of sex, race, color, religion, national origin, sexual orientation, marital status, age, or disability unless such disability is related to job performance of such person or employee.
  2. To discriminate against any individual in terms, conditions, or privileges or employment because of sex, race, color, religion, national origin, sexual orientation, marital status, age, or disability unless such disability is related to job performance of such person or employee.

12. WORK HOURS/COMMUNITY EVENTS

- A. The Contractor will be required to limit the Contractor's work hours on the Project from 7:00 a.m. to 7:00 p.m., Monday through Saturday, unless otherwise directed by the Engineer.
- B. The following Community Events are scheduled. Contractor is required to coordinate with the Owner as needed to allow use of adjacent public property.
  1. **None known at this time.**

13. DUST ABATEMENT

- A. The Contractor shall make a reasonable effort to assure dust does not become a problem. The Engineer reserves the right to stop Contractor's operations whenever dust becomes a problem on the Project and direct the Contractor to revise operations to solve the dust problem.

14. QUANTITIES

- A. The Contractor is to realize some of the quantities on this Project are best estimates and may vary from actual conditions at time of construction of the Project. Quantities must be regarded as approximate only, and are given as a guide to the Bidder and for comparison of Bids. The City reserves the right to increase



or decrease these quantities as designated in the Contract, and the Contractor will be paid for only as much work as the Contractor is required to do by the City at the unit price stated in the Proposal.

15. MAINTENANCE BOND AND WARRANTY PERIODS

- A. The requirements of the Payment, Performance and Maintenance Bond warranty period are modified as follows:
1. To remedy any and all defects that may develop in or result from work to be performed under the Contract within the of 2-year period for utility work, and 4-year period for paving, from the date of acceptance of the work under the Contract, by reason of defects in workmanship or materials

16. MATERIALS TESTS

- A. Material testing is as specified for construction and will be completed by an independent testing laboratory retained by the Contractor and approved by the Engineer. Testing shall meet the requirements of the SUDAS Standard Specifications.
- B. Coordinate all material testing with the Engineer.
- C. Provide transportation of all samples to the laboratory.
- D. Do not ship materials to the project site until laboratory tests have been furnished showing compliance of materials with specifications.
- E. Provide gradation and materials certifications for all granular materials. Certify that sources of Portland Cement and aggregates are Iowa DOT approved.
- F. Certify that materials and equipment are manufactured with applicable specifications.

17. FIELD TESTS

Testing shall meet the requirements of the SUDAS Standard Specifications. Owner/Contractor testing responsibility is as follows:

- A. Testing Responsibility
1. Owner
    - (a) Division 2, Earthwork, Section 3.09 - Field Quality Control.
    - (b) Division 3, Trench and Trenchless Construction, Section 3.06 - Trench Compaction Testing.
  2. Contractor
    - (a) Division 4, Sewers and Drains, Section 4060 – Cleaning, Inspection and Testing.
    - (b) Division 5, Water Mains and Appurtenances, Section 5030 – Testing and Disinfection.
  3. Owner/Contractor
    - (a) Division 7, Streets and Related Work:
      - Section 7010, 3.08 Quality Control,
      - Section 7020, 3.06 Quality Control, and
      - Section 7030, 3.11 Testing, as specified.
- B. The contractor shall be responsible for testing that is required of the contractor by the SUDAS Standard Specifications including the following.

1. Complete a pressure and leakage test on each section of water main in accordance with Division 5. Includes tapping existing main, tapping sleeves and valves, fittings, blow-offs, and equipment needed to complete the testing as incidental. City will provide water for initial flushing and disinfection testing. Contractor shall compensate the City for water as a result of failed tests.
  2. Utilize maturity testing to allow the streets to be opened to traffic as soon as possible. The contractor shall be responsible for obtaining pavement cores at the rate of one core/1,000 SY or at least one core per block of paving. The exact location of the core will be determined by the engineer.
- C. If test results do not meet those specified, the Contractor shall make necessary corrections and repeat testing to demonstrate compliance with the specifications. Contractor shall pay all costs for retesting.

18. MEASUREMENT AND PAYMENT

- A. Contract unit or lump sum prices are full compensation for furnishing all materials, equipment, tools, transportation, and labor necessary to construct and complete each item of work as specified. No separate payment will be made for work included in this project except as set forth in the bid item reference notes. Refer to the C sheets for bid items reference notes. All other items of work are incidental to construction.

19. INCIDENTAL CONTRACT ITEMS

- A. The following list includes major items that are incidental to the project and will not be paid for as separate bid items. Other items may be designated as incidental under certain bid items.
- Concrete header removal
  - Connections to existing storm sewer structures and pipes unless specified for separate payment
  - Construction and removal of temporary access roads
  - Construction fencing
  - Construction staging & phasing
  - Coordination and cooperation with affected property owners
  - Coordination and cooperation with the City of Muscatine, Iowa
  - Coordination and cooperation with other Contractors
  - Coordination and cooperation with other projects in the area
  - Coordination and cooperation with utility companies
  - Dewatering and handling storm water flow during construction
  - Dust control measures
  - Engineering Fabric
  - Excavation, verification and protection of existing utilities
  - Field and wood fence removal
  - Field testing
  - Finish grading
  - Full depth sawcutting of existing pavement
  - Grading for storm sewer outlets
  - Granular backfill and bedding for storm and sanitary sewer installation
  - Granular surfacing removal
  - Maintenance and watering for seeding and sodding
  - Maintenance of erosion control measures, including silt removal
  - Material testing
  - Monitoring weather conditions
  - Mowing
  - Overhaul
  - Pipe and structure bedding material

- Porous backfill for subdrain
- Proof rolling
- Protection of existing hydrant(s) and valve(s)
- Protection of existing trees and plantings not shown as removals
- Protection of existing utilities and light poles
- Removing and reinstalling existing signs
- Reseeding
- Site cleanup/restoration
- Temporary safety closures
- Temporary sheeting and shoring
- Water valve removal
- Working backfill to reduce moisture content
- Working subgrade to achieve acceptable moisture content
- Wrapping of storm sewer pipe joints

**\*\*\*\*END OF SECTION\*\*\*\***

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**SPECIAL PROVISIONS**  
FOR  
PART 2 – SPECIAL CONSTRUCTION  
INDEX

1. GENERAL
2. EXISTING UTILITIES
3. PROJECT SUPERVISION
4. COORDINATION WITH OTHERS
5. CONSTRUCTION LIMITS
6. CONSTRUCTION SCHEDULE
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8. CONSTRUCTION STAKING
9. CONSTRUCTION SURVEY DOCUMENTATION & RESPONSIBILITIES OF ENGINEER AND CONTRACTOR
10. DISPOSAL
11. DEWATERING
12. TRAFFIC CONTROL
13. TEMPORARY FENCES
14. RESPONSIBILITY OF CONTRACTOR
15. EARTHWORK
16. SITE WORK AND LANDSCAPING

1. GENERAL

- A. Procedures outlined herein are not intended to fully cover all special construction procedures but are offered as an aid to the Contractor in planning work.
- B. Cooperate with the City of Muscatine, Iowa and the Engineer to minimize inconvenience to property owners, other jurisdictions and motorists and to prevent delays in construction and interruption to continuous operation of utility services and site access.
- C. The Contractor is expected to provide adequate personnel and equipment to perform work within specified time of construction.
- D. Install and maintain orange safety fence around all open trenches or open structures when left unattended.
- E. Provide surface restoration and clean up as construction progresses.

2. EXISTING UTILITIES

- A. Location of utility lines, mains, cables and appurtenances shown on plans are from information provided by utility companies and records of the Owner.
- B. Prior to construction, contact all utility companies and have all utility lines and services located. The Contractor is responsible for excavating and exposing underground utilities in order to confirm their locations ahead of the work.

- C. Contractor is solely responsible for damage to utilities or private or public property due to utility disruption.
- D. The Contractor shall notify utility company immediately if utility infrastructure is damaged during construction.
- E. With the exception of water lines, utility companies will relocate utility infrastructure in direct conflict with line and grade of the work during construction. Support and protect all utilities that are not moved.
- F. Utility services are not generally shown on plans; protect and maintain services during construction. Notify Jurisdiction and affected property Jurisdictions 48 hours prior to any planned utility service interruptions.
- G. If utility work does occur during the construction period, work schedules from the contractor and from the utility companies will be submitted to the Engineer for coordination to obtain mutual acceptable schedules, if possible.
- H. Existing utilities shall remain in substantially continuous operation during construction. Select the order and methods of construction that will not interfere with the operation of the utility systems. Interrupt utility services only with approval of Jurisdiction and Engineer.
- I. No claims for additional compensation or time extensions will be allowed to the Contractor for interference or delay caused by utility companies.

### 3. PROJECT SUPERVISION

- A. The Prime Contractor shall be represented in person at the construction site at all times that construction operations are proceeding by a qualified superintendent or other designated, qualified representative capable of providing adequate supervision. The superintendent or representative must be duly authorized to receive and execute instructions, notices and written orders from the Engineer.
- B. Issues that arise during construction relating to traffic control and construction staging, etc. are the responsibility of the Prime Contractor.
- C. Weekly progress meetings, if specified at the preconstruction conference, with the Contractor, Engineer and Jurisdiction will be held at the project site to review the updated project schedule and progress, coordinate activities, resolve conflicts and coordinate the construction work. The day and time for this meeting will be set at the preconstruction conference.
- D. Refer to Division 1 – General Provisions and Covenants, Section 1080 – Contractual Provisions, Part 1 – Prosecution and Progress of the Work, Section 1.10 Contractors Employees, Methods and Equipment for additional requirements.

### 4. COORDINATION WITH OTHERS

- A. Cooperate and coordinate construction with the City of Muscatine, Iowa, utility companies, affected property Jurisdictions and other contractors working in vicinity of this project.
- B. It is the Contractor's responsibility to schedule and coordinate work to minimize construction delays and conflicts.
- C. Coordinate with property owners prior to beginning work that will affect their parcel.

### 5. CONSTRUCTION LIMITS

- A. Confine the construction operations within the construction limits shown on the plans.
- B. Do not store equipment, vehicles or materials within the right-of-way of any streets open to traffic or on temporary access roads at any time.

- C. Areas disturbed outside of construction limits shall be restored at the contractor's expense to the satisfaction of the Jurisdiction. Contractor shall protect trees, fences, and landscaping within the construction limits not marked as remove.

6. CONSTRUCTION SCHEDULE

- A. The Contractor will prepare and submit to the Engineer for approval a project schedule that will assure the completion of the project within the time specified.
- B. Adequate equipment and forces shall be made available by the Contractor to start work immediately upon receipt of the Notice to Proceed.
- C. Submit construction schedule at the preconstruction conference and periodically update it as requested by the Engineer.
- D. The Contractor shall be required to meet the final completion date as specified in the written Notice to Proceed.
- E. ~~Notify the City and property owners at least 48 hours prior to any street closures.~~
  - 1. ~~Notify all property owners, residential and business, affected by the street closures by written notice placed on the front door. Include the following items in the notice:~~
    - ~~The street name, location and proposed date of street closure~~
    - ~~The estimated schedule for completion of work~~
    - ~~The estimated date for reopening of the street~~
    - ~~Procedure for garbage collection, recycling and postal service~~

7. CONSTRUCTION PHASING

- A. Refer to construction staging and traffic control plans when included in construction plans.
- B. Include construction phasing on the required construction schedule submittal.

8. CONSTRUCTION STAKING

**Construction staking on this project is the responsibility of the Contractor. A bid item is included for this work.**

~~The City of Muscatine, Iowa, or an authorized representative, will provide construction staking. The Contractor shall provide two Working Day written notice to the Engineer to begin requested survey, staking, or layout work. Subsequent staking shall require two working days' notice in advance of the staking needs. Contractor shall be responsible for layout of all other construction items including, but not limited to, traffic control, structure removal, pavement markings, seeding, inlet filters and silt fence. One time staking shall be provided. Any re-staking shall be paid for by the contractor.~~

**Construction staking, provided by the City on the project, will include the following:**

- A. ~~HORIZONTAL AND VERTICAL CONTROL~~
  - 1. ~~Locate and maintain all horizontal control points and vertical benchmarks as listed on the plan sheets that may be destroyed by the plan construction.~~
- B. ~~REMOVAL LIMITS~~
  - 2. ~~Locate removals and pavement, sidewalks, drives, structure. Removals not authorized or outside of removal limits shall be at Contractor expense.~~

C. ~~STORM SEWER, CULVERTS/STRUCTURES~~

1. ~~Set graded offset stakes for structures at the location and station for each type of structure.~~
2. ~~Set graded offset for pipe runs at 50 foot interval.~~

D. ~~GRADE STAKING~~

1. ~~Stakes requiring cut/fill will be set to a predetermined grade reference. (Electronic file to be furnished to Contractor for grading operations).~~
2. ~~Centerline at 50 foot intervals including grade breaks.~~
3. ~~Radius points and ends of radius will be staked for islands and intersections.~~

E. ~~SANITARY SEWER~~

1. ~~Engineer will stake offset centerline of pipe runs at beginning, end, and deflection points.~~
2. ~~Offset points on a line parallel and perpendicular to pipe run starting at the low end of run and every 50 foot interval to the end of line with grades reference to flow line. Finished utility access rim elevation will be staked.~~

F. ~~WATER LINES~~

1. ~~Engineer will place lath at 50 foot intervals and assembly calls.~~
2. ~~Cut on lath referenced to flow line of pipe.~~
3. ~~Offset stake for hydrants with cut/fill to finish grade at bottom of flange 0.2 foot above proposed finish grade.~~

G. ~~PAVING~~

1. ~~Stakes requiring cut/fill will be set to a predetermined grade reference.~~
2. ~~Back of curb at 4 foot offset and 25 foot intervals including grade breaks.~~
3. ~~Interior of wide paving sections at 4 foot offset at 25 foot intervals including grade breaks.~~
4. ~~Radius points and ends of radius will be staked for islands and intersections. Midpoints or quarter points will be set for radius of more than 10 feet if necessary to define grade.~~
5. ~~Grades to be Form Grade (top of slab).~~

9. CONSTRUCTION SURVEY DOCUMENTATION & RESPONSIBILITIES OF ENGINEER AND CONTRACTOR

- A. ~~Survey work documentation shall be a combination of digital and hard copy format and is the property of the Engineer.~~
- B. Tie-ins with existing pavements and utilities shall be verified for correctness of alignment and elevation prior to construction staking. Any discrepancies discovered during this verification process will be brought to the attention of the Contractor or Engineer for review and assistance with resolution prior to staking.
- C. ~~When survey work is done under traffic conditions, the traffic control shall be in place prior to commencement of survey work.~~
- D. ~~The Engineer will have a representative at the preconstruction conference to discuss construction staking.~~
- E. ~~The Jurisdiction and Engineer will not be responsible for delays due to lack of grade or line stakes unless the Contractor has given the Engineer a 48 hour notice that such stakes will be needed and the Contractor's work is being conducted in a satisfactory manner and at the specified rate of progress.~~



10. DISPOSAL

- A. Remove from project site and dispose of trees, shrubs, vegetation, excess soil excavation, rubbish, concrete, granular materials and other materials encountered as shown on plans and as specified. Excess soil excavation not designated for waste locations shall be disposed as directed by the Engineer.
- B. Dispose of materials in accordance with applicable laws and ordinances. Disposal sites are subject to the review and approval of the Engineer.
  - 1. **Burning of brush and other debris is not permitted.** Contractor responsible for selecting disposal site.
  - 2. Dispose of broken concrete, asphalt, granular material, rubble, excess or unsuitable excavated material. Contractor is responsible for selecting disposal site.
  - 3. Cooperate with all applicable City, State and Federal agencies concerning disposal of materials.
  - 4. The Jurisdiction has the first right to any excess materials from construction.

11. EROSION/POLLUTION PREVENTION PLAN (Not Required on This Project)

- ~~A. If Contractor fails to install and/or perform the appropriate erosion and sediment control practices, as determined by the Engineer, the Engineer may issue a written order to the Contractor. **Failure to perform this work within 24 hours of notification of non-compliance may result in the Owner issuing a Municipal Infraction for Illicit Discharge and/or the Owner or Engineer arranging for completion of the work by others. A contract deduction shall be made equal to the total of all costs to perform such work so arranged, including but not limited to, labor, materials, equipment and administrative costs.**~~
- ~~B. Contractor is responsible for preparing the SWPPP to match staging, phasing, and construction methods as work progresses. Contractor shall comply with the erosion control requirements of said plan, the Iowa Code, and local ordinances. Protect against erosion and dust pollution on this project site and any off-site deposit or borrow area used for this project.~~
- ~~C. The Contractor will publish the necessary notification for the NPDES permit prior to the start of construction. The Contractor shall obtain an NPDES permit from the Iowa DNR for the area within the limits of this project based on the Pollution Prevention Plan. It shall be the contractor's responsibility to update the plan during construction and have the plan available on site at all times.~~
- ~~D. Protect adjoining property including public sanitary and storm sewer systems and streets from any damage resulting from movement of earth or other debris from project site. Repair any damage immediately.~~
- ~~E. Prevent accumulation of earth or debris on adjoining public or private property from project site. Remove any accumulation of earth or debris immediately. Prevent repetition of any instance where earth or debris moves from project site to adjoining public or private property.~~
- ~~F. Provide erosion control measures necessary to protect against siltation and erosion from the flow of storm water. Maintain continuous operation of the storm sewer system throughout the construction period.~~
- ~~G. Use silt fence and other means at all drainage courses, swales and storm sewer system inlets and outlets to protect against siltation and erosion as shown in the construction drawings or directed by the Engineer.
  - ~~1. Erosion protection measures, other than those specified as unit price pay items are incidental.~~~~
- ~~H. The Contractor will be fully liable for all damages to public and private property caused by their action or inaction in providing for handling of storm water flow during construction.~~
- ~~I. After the detention basin construction is completed, the Contractor is required to immediately seed and mulch these locations.~~

- ~~J. As construction progresses, sodding, seeding, and mulching is required in those segments of the corridor that become available to do so. The Contractor shall not wait until all grading and paving operations are completed before commencing final surface restoration.~~
- ~~K. The Contractor shall anticipate multiple mobilizations to complete seeding, sodding, mulching, and surface restoration operations as areas of the project corridor become available to do so.~~

## 12. DEWATERING

- A. Perform all construction work in dry conditions.
- B. Submit dewatering methods to the Engineer for review. Obtain the Engineer's approval on methods prior to construction.
- C. Groundwater levels are subject to variation. No additional compensation will be permitted due to high groundwater conditions.
- D. If excavation encounters only cohesive soils with no wet sand seams or layers, it may be possible to control water seepage by draining groundwater to temporary construction sumps and pumping it outside the perimeter of the excavation.
- E. Do not pump water from open excavation in sand and gravel below the natural ground water level.
- F. Maintain water levels 2 feet or more below the bottom of excavations in saturated cohesionless (sand and/or gravel) soils to prevent upward seepage, which could reduce subgrade support.
  - 1. Install dewatering system (well points or shallow wells) when working in cohesionless soils.
  - 2. Costs of installing and operating dewatering system are incidental.
- G. Provide for handling surface water encountered during construction.
  - 1. Prevent surface water from flowing into excavation, remove water as it accumulates.
  - 2. Divert surface water and storm sewer flow around areas of construction.
  - 3. Do not use sanitary sewers for the disposal of trench water.
- H. Backfill pipe and structures prior to stopping dewatering operations. Do not lay pipe or construct concrete structures on excessively wet soils.
- I. The costs of handling both surface water and groundwater are incidental.

## 13. TRAFFIC CONTROL

- A. Furnish, erect and maintain traffic control devices as specified in the construction drawings and directed by the Engineer including signs, barrels, cones, and barricades to direct traffic and separate traffic from work areas. Traffic control shall be in place prior to the closing of any streets.
- B. Provide traffic control devices in accordance with the Iowa DOT Standard Specification, Section 2528, Traffic Control, and the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
- C. Adjustments to the traffic control or the addition of flaggers will be required if, in the opinion of the Engineer, undue traffic congestion occurs.
- D. Provide continuous access for police, fire, and other emergency vehicles.

## 14. TEMPORARY FENCES

- A. Install temporary fencing around open excavations or material storage areas and as directed by Engineer to prevent access of unauthorized persons to construction areas.

- B. Provide orange plastic mesh safety fence with a nominal height of 48". Support fence securely on driven posts in vertical position without sagging.
  - 1. Materials: Iowa DOT Section 4188.03.
  - 2. Use unless required otherwise.
- C. Temporary fencing installed around open excavations or material storage areas is incidental to construction and will not be measured for payment.
- D. Remove temporary fencing upon completion of construction.

15. RESPONSIBILITY OF CONTRACTOR

- A. Supervision of the work.
- B. Protection of all property from injury or loss resulting from construction operations.
- C. Replace or repair objects sustaining any such damage, injury or loss to satisfaction of Jurisdiction and Engineer.
- D. Cooperate with Jurisdiction, Engineer, and representatives of utilities in locating underground utility lines and structures. Incorrect, inaccurate or inadequate information concerning location of utilities or structures shall not relieve the Contractor of responsibility for damage thereto caused by construction operations.
- E. Keep cleanup current with construction operations.
- F. Comply with all Federal, State of Iowa, and the City of Muscatine, Iowa, Iowa laws and ordinances.

16. EARTHWORK

- A. Complete all earthwork operations necessary to construct the pavement subgrade to the correct grade and elevations, backfill behind the new curbs, finish-grade to prepare for seeding and provide positive drainage and associated work.
  - 1. Provide suitable soil material on-site. No separate payment for over haul.
  - 2. Strip, salvage, and stockpile existing topsoil prior to performing mass grading. Respread stockpiled topsoil when construction is complete. The topsoil shall be spread uniformly at an 8-inch thickness over the area to be covered. The surface of the topsoil shall be smoothed and left in a finished condition so that it will drain properly. Topsoil strip, salvage, and respread is incidental to Class 13, Excavation.
  - 3. Subgrade Preparation will be paid for separately from the earthwork.
- B. Complete the earthwork to the lines and grades shown on the cross sections. Do not disturb areas outside the grading limits.
- C. Compact all fills under pavements and within right of way to 95% of Standard Proctor Density. Compact fills outside of the right of way limits to 90% density.

17. SUBGRADE PREPARATION

- A. Prepare subgrade with moisture and density control as required by the SUDAS Standard Specifications.
- B. No ~~street~~ pavement section shall be paved until after proof rolling the section with a truck loaded to the maximum tandem axle gross weight of 34,000 pounds. Failed areas shall be repaired and proof rolled again. Proof rolling is considered incidental to the subgrade preparation.

- C. The subgrade on all mainline street paving is to be trimmed to the final grade elevation prior to paving using an automatically controlled trimming machine.

18. STORM SEWER IMPROVEMENTS

- A. Construct all proposed intakes that are less than 4.5 feet deep with a concrete-filled well to place the bottom of the intake a minimum of 4.5 feet below the gutter elevation of the street. Provide precast structures, where possible. Provide smooth transition between pipe invert and structure. Grout lift holes on all storm sewer structures. Grout back of all intakes along line of casting, adjusting rings and structures.
- B. Grade the area around FES storm sewer inlets and outlets to provide positive drainage.
- C. Provide wrapped subdrain for all subdrain improvements and rodent guards at all daylight locations for subdrain.

19. P.C.C. PAVING, SIDEWALK, DRIVEWAY AND TRAIL

- A. Special care should be taken when forming at intersections so that the profiles and elevations shown on the cross sections, plan and profile, and intersection detail sheets are obtained. Short lengths of forms or flexible forms may be necessary at these locations.
- B. Maturity testing shall be utilized for all work requiring a paving machine.
- C. All sidewalks will be constructed to meet American with Disabilities Act (PROWAG) requirements. If it is not possible to maintain PROWAG required slopes, the contractor shall notify the Engineer immediately. Any sidewalks that are placed with non-compliant slopes without the knowledge of the Engineer shall be removed and replaced at the contractor's expense. Pedestrian ramps shall be doweled.
- D. The Contractor shall perform smoothness testing and furnish the straightedge test results to the Engineer in accordance with Section 7010, 3.08.C1. Smoothness incentives are not in effect on this project.
- E. Refer to SUDAS Section 7010, 1.08D for concrete thickness pay factor and thickness cores. Pavement disincentives will be charged and no thickness incentives will be paid.
- F. The use of a paving machine will be required for all mainline sections of paving.
- G. Concrete mix for work associated with street paving, driveways, trails and sidewalks shall conform to the following requirements:
  - 1. Concrete shall be Class C-4.
  - 2. Minimum Compressive Strength at 28 days shall be 4,000 psi. Areas not meeting this requirement will be subject to repairs, replacement or reduced payment as determined by the Engineer. Compression test results will represent all concrete placed in the same lot.
  - 3. Slump, Air content, Water-Cement Ratio and Supplementary Cementitious Materials are specified in SUDAS.
  - 4. Ground Granulated Blast Furnace Slag shall not be allowed for any work on the project.
- H. Cracked panels shall be removed and replaced at the Contractor's expense unless, in the judgement of the Engineer, the crack can be routed and sealed or otherwise repaired.
- I. Maturity testing ~~shall~~ may be utilized to expedite ~~street~~ pavement opening. If maturity testing is not used, the Contractor shall coordinate with a testing agency to collect cylinders and test them at ages they determine to expedite ~~street~~ pavement opening.

20. TRENCH BACKFILL

- A. Compact backfill adjacent to or within 12" over pipe with hand operated pneumatic or mechanical tampers or other approved techniques to consolidate primary trench backfill.
- B. Compact secondary backfill with rollers or vibrating plate compactors in lifts as specified to specified density and moisture content.
- C. Do not use drop hammers, backhoe buckets, flooding or jetting for compacting of backfill.

~~21. SANITARY SEWER IMPROVEMENTS~~

- ~~A. Provide internal chimney seals for all sanitary structures and grout lift holes in all sanitary sewer structures. All sanitary sewer manholes shall be provided with internal steps.~~
- ~~B. Connect to existing sanitary sewer using rigid couplings.~~
- ~~C. Refer to Part 20 Trench Backfill, for additional information.~~
- ~~D. Provide PVC pipe for sanitary sewer. Provide video inspection of all sanitary sewer improvements to City and repair any visible leaks. Any repairs that are made shall be reinspected via video inspection.~~

~~22.0 WATER MAIN IMPROVEMENTS~~

- ~~A. Hydrant assembly shall be as specified by City.~~

**\*\*\*\*END OF SECTION\*\*\*\***

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ITEM P-620 RUNWAY & TAXIWAY MARKING

for

Construct 3-Unit Box Hangar, Taxilane & Apron

Muscatine Municipal Airport

Muscatine, Iowa





## ITEM P-620 RUNWAY AND TAXIWAY MARKING

### DESCRIPTION

**620-1.1** This item shall consist of the preparation and 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. The terms “paint” and “marking material” as well as “painting” and “application of markings” are interchangeable throughout this specification.

### 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. All material shall arrive in sealed containers 55 gallons or smaller for inspection by the Engineer. Material shall not be loaded into the equipment until inspected by the Engineer.

**620-2.2 Marking materials.** Paint shall be **waterborne**, in accordance with the requirements of paragraph 620-2.2.a. Paint shall be furnished in the colors shown below, in accordance with Federal Standard No. 595.

<u>Fed Std. No 595 Color</u>	<u>Number</u>
Yellow	33538 or 33655
Black	37038

**Waterborne black paint, meeting the requirements of paragraph 620-2.2.a, shall be used to outline a border at least 6 inch (150 mm) wide around all markings on this project.**

- a. **Waterborne.** Paint shall meet the requirements of Federal Specification TT-P-1952E, Type II. 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.

**620-2.3 Reflective media.** Glass beads shall meet the requirements for **Federal Specification TT-B-1325D, Type I, gradation A**. Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

Paint Color	Glass Beads, Type I, Gradation A
Yellow	See Table 1
Black	Not used

### 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°F (7°C) and rising and the pavement surface temperature is at least 5°F (2.7°C) above the dew point or meets the manufacturer’s recommendations. Painting operations shall be discontinued when the surface temperature exceeds **120°F**. Markings shall not be applied when the pavement temperature is greater than 130°F (55°C). Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns.

**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 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 Preparation of surface.** 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 waterblasting, or sandblasting or by other methods as required to remove all contaminants without damage to the pavement surface. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the Engineer. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process.

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.

At least 24 hours prior to remarking existing markings, the existing markings must be removed such that 90% of the existing markings are removed with low (3,500-10,000 psi) waterblaster. After waterblasting, the surface shall be cleaned of all residue or debris either with sweeping or blowing with compressed air or both.

Prior to the initial application of markings, the Contractor shall certify in writing that the surface has been prepared in accordance with the paint manufacturer's requirements, that the application equipment is appropriate for the type of marking paint and that environmental conditions are appropriate for the material being applied. This certification along with a copy of the paint manufacturer's surface preparation and application requirements must be submitted and approved by the Engineer prior to the initial application of markings.

**620-3.4 Layout of markings.** The proposed markings shall be laid out in advance of the paint application. The locations of markings to receive glass beads shall be shown on the plans.

**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 (12 mm) in 50 feet (15 m), and marking dimensions and spacings shall be within the following tolerances:

Dimension and Spacing	Tolerance
36 inch or less	±1/2 inch
greater than 36 inch to 6 feet	±1 inch
greater than 6 feet to 60 feet	±2 inch
greater than 60 feet	±3 inch

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted. A period of **56 days** shall elapse between placement of a PCC pavement and application of the paint. **New concrete pavements shall be allowed to cure for eight to twelve weeks before removing the curing compound and installing permanent markings. Should manufacturer's recommendations specify a waiting period in excess of 30 days, the manufacturer's recommendations shall govern.**

If temporary painting is required prior to permanent painting, paint shall be applied at 50% of the permanent application rate with no glass beads. For temporary marking, use waterborne paint.

**620-3.6 Test strip.** Prior to the full application of airfield markings, the Contractor shall produce a test strip in the presence of the Engineer. The test strip shall include the application of a minimum of 5 gallons of paint and application of 35 lbs of Type I glass beads. The test strip shall be used to establish thickness/darkness standard for all markings. The test strip shall cover no more than the maximum area prescribed in Table 1 (e.g., for 5 gallons of waterborne paint shall cover no more than 575 square feet.

**Table 1. Application Rates for Paint and Glass Beads**

<b>Paint Type</b>	<b>Paint</b> Square feet per gallon, ft <sup>2</sup> /gal	<b>Glass Beads, Type I, Gradation A</b> Pounds per gallon of paint-lb/gal
<b>Waterborne Type II</b>	115 ft <sup>2</sup> /gal max	7 lb/gal min

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 or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment should be performed.

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.

#### **METHOD OF MEASUREMENT**

**620-4.1** The quantity of runway and taxiway markings to be paid for shall be the number of square feet of painting performed in accordance with the specifications and accepted by the Engineer. Reflective media will not be measured separately, but will be incidental to painting. Black outline painting (without reflective media) shall be measured separately from paint containing reflective media.

#### **BASIS OF PAYMENT**

**620-5.1** Payment shall be made at the respective contract **price per square foot** for runway and taxiway painting. 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:

<b>Item P-620-5.1.1</b>	Pavement Marking, Solid Yellow, with Beads – per Square Foot
<b>Item P-620-5.1.2</b>	Pavement Marking, Black Outline, no Beads – per Square Foot

#### **TESTING REQUIREMENTS**

ASTM C371	Standard Test Method for Wire-Cloth Sieve Analysis of Nonplastic Ceramic Powders
ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
ASTM D711	Standard Test Method for No-Pick-Up Time of Traffic Paint
ASTM D968	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive

ASTM D2074	Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method
ASTM D2240	Standard Test Method for Rubber Property - Durometer Hardness
ASTM D7585	Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments
ASTM E1710	Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer
ASTM E2302	Standard Test Method for Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

#### **MATERIAL REQUIREMENTS**

ASTM D476	Standard Classification for Dry Pigmentary Titanium Dioxide Products
40 CFR Part 60, Appendix A-7, Method 24	Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings
29 CFR Part 1910.1200	Hazard Communication
FED SPEC TT-B-1325D	Beads (Glass Spheres) Retro-Reflective
American Association of State Highway and Transportation Officials (AASHTO) M247	Standard Specification for Glass Beads Used in Pavement Markings
FED SPEC TT-P-1952E	Paint, Traffic and Airfield Marking, Waterborne
Commercial Item Description A-A-2886B	Paint, Traffic, Solvent Based
FED STD 595	Colors used in Government Procurement
AC 150/5340-1	Standards for Airport Markings

**\*\*\*\*END OF ITEM P-620\*\*\*\***

SUPPLEMENTAL SPECIFICATIONS

for

Construct 3-Unit Box Hangar, Taxilane & Apron

Muscatine Municipal Airport

Muscatine, Iowa



## SUPPLEMENTAL SPECIFICATIONS

**SS-01 – SCOPE OF WORK:** The intent of these specifications is to provide for the construction of, complete and ready for use, a 3-unit box hangar, with associated taxiway and apron improvements, at the Muscatine Municipal Airport.

It is the intent that all specified work and anticipated incidental work required to produce a completed job will be included in the specified bid items listed.

**Items in this “Supplemental Specifications” section are specific to this project and take precedence over conflicting information elsewhere in these specifications or on the plans.** If the Contractor notices conflicting information, it is his responsibility to bring the conflict to the attention of the Engineer for clarification.

It is possible that minor variations to the plans and specifications may be required. Prior to departing from these plans and specifications, the Contractor is responsible to gain approval from the Engineer and Sponsor for any deviations. The Contractor shall include in his bid all materials, work, and incidentals necessary to complete the work specified, including, but not limited to, removals, construction of the aircraft parking apron, installation of lighting systems, testing of all installed systems, and cleanup of the site upon completion.

**SS-02 – QUALITY OF WORK:** In the execution of the contract, all materials, methods of construction, and equipment shall be of commonly accepted high standards.

**SS-03 – SITE STAKING:** Staking required for the construction of this project is the responsibility of the Contractor. There is a separate bid item for construction staking, and staking (survey) required to complete the project shall be included by the Contractor in that bid item.

**SS-04 – UTILITIES:** The Contractor shall contact the various utility companies, whether public or private, regarding the movement or protection of poles, wires, cables, conduits, or pipe lines. The Contractor shall be responsible for the repair of any damage to utility lines or structures caused by the Contractor's work.

**SS-05 – CONSTRUCTION SEQUENCE:** The Contractor shall submit a written plan outlining the proposed work schedule and sequence of construction at the preconstruction conference.

**SS-06 – PROTECTION OF PRIVATE PROPERTY:** The Contractor shall be responsible to protect private property from damage during construction. The Contractor shall "hold harmless" the Owner and Engineer from any damage to either public or private property caused from the Contractor's construction.

**SS-07 – TESTING:** Testing for different types of work included in the project is described in each applicable section. All test results shall be forwarded to the Project Engineer/Manager as soon as available. Some project items are accepted by certification and do not require testing. **Quality assurance testing of hangar foundations and floors (subgrade, subbase, and PCC compressive strength), and exterior paving (subgrade, subbase, PCC compressive strength, and measurement of cores) will be completed by the Sponsor, when completed. With those exceptions, the cost of all testing shall be paid for by the Contractor.** Additional testing beyond that required by specification requested by the Contractor shall be completed and paid for by the Contractor.

**SS-08 – INCIDENTAL ITEMS OF WORK:** The Contractor shall provide all labor, material and equipment required to completely install all work throughout the entire project as shown on the plans and herein specified. This shall include providing all items, articles, materials, operations, methods, trenching and backfilling shown, noted, scheduled, listed or described on the drawings or herein, including all incidentals necessary and required for a complete, finished project. The plans and specifications contemplate the complete installation of the building and equipment shown and described so that at the conclusion of construction, the project shall be turned over to the Owner complete and ready for safe, efficient operation. The Contractor shall be obliged to furnish and install all

such items normally included on projects of this type, which, while not mentioned directly herein, are obviously essential to the installation and operation of the project and which are normally furnished on quality installations of this type. All miscellaneous items are considered included in those pay items which are listed in the Bid Schedule.

**SS-09 – EMERGENCY ACCESS:** The construction zone shall be maintained to such a condition to permit emergency vehicles access to the construction area at all times.

**SS-10 – SAFETY REQUIREMENTS:** The Contractor shall be solely and exclusively responsible for providing temporary ladders, guard rails, shoring, bracing, dewatering (if required), warning signs, night lights, and other safeguards desirable or required, and shall comply with all Federal, State and Municipal Safety Requirements. The Contractor shall be solely and exclusively responsible for the design, construction, inspection and continual maintenance of such facilities at all times. The Contractor shall be responsible for protecting the work and stored materials until completion and acceptance of the work by the Owner. It shall be the sole and exclusive responsibility of the Contractor to provide a safe place to work for all laborers and mechanics and other persons employed on or in connection with the project, and nothing in these Contract Documents shall be construed to give any of such responsibility to the Owner or Engineer.

**SS-11 – CONTRACTOR'S ACCESS:** The Contractor's access route will be off of U.S. Highway 61, south of the main airport entrance, for all project work, and assembly and storage areas are designated on the Plans. The Contractor shall be responsible for repair or replacement of any damage to existing facilities as a result of construction activities. The Contractor shall also be responsible for providing any temporary surfacing necessary for access to the construction site. **The Contractor will not be allowed to cross any new pavement, nor any operational taxiways without specific prior approval by the Engineer. Hauling of materials across any active portion of any taxiway/runway or any new pavement will not be allowed except as provided for on the project plans.**

**SS-12 – REGULATIONS:** The Contractor shall comply with the directions of all property appointed authorities having jurisdiction.

**SS-13 – PERMITS AND INSPECTIONS:** The Contractor shall obtain and furnish all necessary permits and inspection certificates for all material and labor furnished by the Contractor. Permits and certificates shall be obtained from the proper inspection authorities. The cost of permits, certificates and all fees required in connection with the installation shall be borne by the Contractor. The Contractor shall see that such application is properly filed with the utility and that all information required for such an application is presented to the extent and in the form required by the utility company.

**SS-14 – DAMAGE:** The Contractor is responsible for damage to existing buildings, existing pavement, and existing facilities and is responsible for the repair of any damage caused by the Contractor's work. This shall include any and all work to repair or restore the Contractor's assembly and storage area.

**SS-15 – CLEANUP OF PROJECT SITE:** The Contractor shall at all times keep the site of the work and adjacent premises as free from materials, debris, rubbish and trash as practicable, and shall remove same from any portion of the site if, in the opinion of the Owner, such materials, debris, rubbish or trash constitute a nuisance or are objectionable in any way to the public. The Contractor shall be responsible for the removal of dirt accumulation or any other debris on pavements resulting from the Contractor's operations on the work.

At the completion of the work, the Contractor shall remove all materials, implements, barricades, equipment, staging, piling, falsework, debris and rubbish connected with or caused by operations for such work immediately upon the completion of that work and shall leave the premises in perfect condition insofar as affected by the work under this Contract. Fires for disposal of rubbish on the site are prohibited.



All cleaning shall be accomplished by a street sweeper or power broom to remove debris. Prior to sweeping, the area shall be cleaned of large debris, concrete, mud, etc., with an end loader. If the street sweeper or power broom does not adequately clean the pavement surface, the Contractor shall flush the surface with a water truck and then re-sweep.

**SS-16 – COORDINATION OF SPECIFICATIONS, PLANS AND SPECIAL PROVISIONS:** Applicable FAA Standards for Specifying Construction of Airports are contained in these specifications. The Specifications shall govern this work except where modifications are made. When the requirements of any FAA Specification differ or conflict with the modifications, or the plans, the modification or plans shall govern. Any questions, which may arise because of such conflict, shall be submitted to the Engineer for clarification. **Information in this Supplemental Specifications section is specific for this project, and shall take priority over any conflicting information elsewhere in these specifications or on the plans.** In case of a discrepancy within the various items included in the contract documents, the items shall prevail, or govern, in the following descending order:

1. Supplemental Specifications
2. Special Provisions
3. Plans, including plan notes
4. Detailed Specifications
5. General Provisions

**SS-17 – SCHEDULE AND COORDINATION OF WORK:** The work under the contract shall commence within ten (10) days after issuance of a written “Notice-to-Proceed”, which for this project is anticipated to be approximately mid August, 2019. All work included in the Base Bid is to be completed no later than July 31, 2020.

The Contractor shall coordinate his work so that at the end of each calendar day all materials and equipment are placed no closer than 300 feet from any active runway and 80 feet from active taxiway areas. Completed work in place closer than this distance is exempt from this requirement.

**In addition to specific phases identified on the project plans, a few limitations will be imposed for work on or near adjacent runways, taxiways and buildings. The following limitations are mandatory, and shall be followed independent of the Contractor’s preferences.**

1. Contractor shall not use taxiways for transport of materials or any use by heavy trucks, unless specific approval is given by the Engineer and the City of Muscatine.
2. Electrical systems for airside areas remaining open may not be turned off or left off overnight or during periods of low visibility weather.

**SS-18 – SEEDING TIME REQUIREMENT:** All finish seeding shall be placed between August 10 and October 15, or between March 31 and May 31. Temporary seeding may be required between May 31 and August 10. **For this project, the Contractor may complete seeding at any time as long as the grass becomes established. A proper stand of grass is the project requirement, without regards to when the seeding is actually completed. The dates above are typical for timeframes when seeding is more likely to become established, but is not a requirement.**

**SS-19 – LIST OF SUBMITTALS:** The following is a list of submittals required with the bid submittal. Every effort has been made to ensure that it is complete, however, the Owner reserves the right to request additional submittals prior to and during the contract time.

- A. BID
  - 1. Proposal Form with Schedule of Prices
  - 2. Identity of Bidder / Bidder Status Form
  - 3. TSB Contact Form
  - 4. Bid Bond (5%)
- B. AWARD
  - 1. Contract
  - 2. Performance, Payment and Maintenance Bond
  - 3. Insurance Certificate
  - 4. Owner - Notice of Award, Notice to Proceed
- C. DURING PROJECT
  - 1. Partial Pay Estimate
  - 2. Contract Change Orders
  - 3. Release by Claimants (Lien Waivers)

**SS-20 – PCC PAVEMENT:**

- A. Bar Placement

Particular attention will be paid to bar placement on this project. This will include all joint steel, as well as any reinforcing steel in PCC pavement. The Contractor shall closely monitor bar placement and demonstrate proper placement on the first day's paving of each paver used. Should any problems associated with bar placement surface within the pavement warranty period, the Contractor shall be required to test for bar placement and confirm the extent of the problem to the Sponsor and Engineer. Corrective measures may be required, as well as extended warranty periods on pavement with noted bar placement concerns.
- B. Joint Type

Jointing as shown on the project plans is predicated on a specific "paving pass" size, direction of paving, and order of paving. The Contractor is allowed to modify the paving sequence, direction, and size of paving pass, with the Engineer's approval of a revised paving plan, to be submitted by the Contractor in writing with a plan sheet showing the revised plan. Approval of a revised paving plan shall be at no additional cost to the Owner, as it will be proposed by Contractor, even if the revised plan requires additional and/or revised joint steel. **All construction joints (vertical "smooth" face, either longitudinal or transverse) shall be a Type "E" doweled joint as shown in the plans, for load transfer. Contraction joints (in the middle of a paving pass, also either longitudinal or transverse) shall be either Type "B" hinged or Type "D" dummy joints, also as shown in the plans. Any contraction joint within three (3) joints of a free edge or expansion joint shall be tied. On the outer two rows of panels on each side of the taxilanes, all transverse joints shall be tied, to create a "tension ring" around the completed pavement area.**
- C. Paving Schedule

Pavement of the row of panels next to the hangar construction cannot be completed until the hangar foundations and floor have been completed. The Contractor may schedule paving for after the hangar floor is complete, or complete all paving except the row of panels next to the hangar, then return to finish pouring that row of panels. However, if the Contractor elects to re-mobilize to pour the last row of panels after the remainder of the project is complete, **no cost for remobilization will be considered.** If the last row of panels is poured at a later time than the rest of the pavement, the construction joint shall be a doweled construction joint as shown on the jointing details. The pavement next to the hangar shall be a Type 'A' expansion/isolation joint.

#### **SS-21 – EROSION CONTROL:**

A. Intakes

At any intake where soil is disturbed, erosion control for each intake shall include installation of hay bales around the perimeter of the intakes and anchoring them to prevent displacement. Following major storm events, they shall be inspected and repaired if necessary. When a stand of grass allows removal of the bales, they shall be removed and properly disposed of off-site. This erosion control is not a bid item, but is considered incidental to mobilization or the intake where the protection is required.

B. General

After the establishment of permanent seeding, the Contractor shall remove all temporary silt fence and ditch checks. Any areas disturbed during the removal of temporary silt fence and ditch checks shall be graded, fertilized and mulched in accordance with SUDAS specifications.

#### **SS-22 – UTILITIES:**

A. Water

N/A for this project.

B. Sanitary Sewer

N/A for this project.

C. Electrical

Electrical is included in this project and is discussed elsewhere in this Supplemental Specification.

**SS-23 – PROJECT SIGN:** This project does not require a project sign.

**SS-24 – JOB TRAILER:** This project shall not require a job trailer.

**SS-25 – EROSION/POLLUTION PREVENTION PLAN:** This project shall not require a SWPPP. However, the Contractor is responsible for erosion control measures on this project as defined elsewhere in this specification.

#### **SS-26 – CODES USED ON HANGAR / ELECTRICAL:**

The most current codes in use and adopted by the City of Muscatine, Iowa shall be used. As of 6/14/2019, the following list of applicable codes was in effect, although the Contractor is cautioned to confirm this list is still current as of the date of bidding. The current list of State of Iowa Building Codes in effect are as follows (codes most likely to be applicable for this project are bolded):

- **2015 International Building Code**
- **2015 International Mechanical Code**
- **2015 International Plumbing Code**
- **National Electrical Code (most current as of bidding date)**
- **(All local amendments and codes as pertinent)**

#### **SS-27 – ELECTRICAL WORK:**

A. General Electrical Requirements

All electrical work shall meet all local and national codes. Work shall be completed by Contractors meeting Iowa state requirements for using qualified personnel for electrical work. Electrical work on this project consists of extending power to the hangar and service in the hangar. All electrical work shall be inspected as necessary by either the City or State Electrical Inspector, and any costs associated with inspections shall be the responsibility of the Contractor.

All wiring shall be copper. All underground conduit will be Schedule 40 (min.) PVC (including conduit encased in concrete), with the exception of conduit bored under pavement, which shall be Rigid Galvanized Steel (RGS) or Schedule 80 HDPE/PVC. Exposed (above-ground) conduit shall be RGS or Schedule 80 PVC, and the RGS/Schedule 80 PVC shall extend to the bottom of each sweep prior to transitioning to Schedule 40 PVC underground. Interior conduit shall be as allowed by the City of Muscatine and electrical codes.

All exterior-mounted panels, switches, meter bank(s), or other electrical boxes shall be weather-proof and lockable (as applicable). At least 3 keys shall be furnished to the Owner for each lockable box.

**B. Hangar Electrical / Apron Lighting**

All electrical beyond (and including) the exterior footprint of the hangar shall be considered part of the hangar. Costs associated with the hangar electrical shall be included in the Lump Sum bid item "Hangar, 3-Bay, 70' x 95', Complete". This includes, but is not limited to, entrances into the building for each interior (tenant) panel, an interior (suitable for wet conditions) 100-amp (tenant) panel (with main breaker and 12 (minimum) available spaces) in each bay. Also included will be all circuits necessary to furnish each of the three (3) hangar bays with 20-amp circuits for lighting and outlets in each bay, power to the door motors, and all items required for items as shown on the plans. Interior lighting shall be on 2 circuits (3 lights each), separately switched. Outlets shall be on enough separate circuits in each bay that no more than 3 outlets are on a single circuit. A lighted (with battery backup) "Exit" sign meeting all City codes for emergency exit shall be installed above each exit door. Coordination with the hangar supplier will be necessary to ensure all items required to operate the doors are included in the bid. Unless changes are made, no extra costs associated with electrical items in the hangar will be considered for payment.

The high-bay lights (4 in each small bay, 9 in the large bay, and 17 total for the Base Bid) shall be LED, and shall be rated at 24,000 lumens each. They shall be Phillips FBX24LL-40-UNV, or an acceptable equal. Alternate manufacturers may be used if equivalent. One fixture (min.) in each bay shall include an occupancy sensor.

The Contractor will be required to meet Fire Codes for "explosion-proof" portions of some electrical components, depending on location and height of installation. The assumption for this item shall be that aircraft wings may be within 2 ft. of exterior walls.

Phillips, Lithonia, and Cooper Lighting shall be pre-approved as a manufacturer/supplier of lighting fixtures. Each fixture shall meet the requirements of the project plans and specifications.

Also included in the bid cost for the hangar shall be the three (3) exterior floodlights (Type 'SB' lights) on the hangar face, the exterior power panel for the 3 exterior lights, and all cable and conduit for these exterior items.

**C. Electrical Service Extension**

As a separate bid item from the hangar electrical, extension of electrical power from the existing transformer location to the exterior wall of the hangar will be bid as a separate bid item. All electrical beyond (and including) the exterior footprint of the hangar shall be considered part of the hangar. Costs associated with the electrical service extension shall be included in the Lump Sum bid item "Electrical Service Extension". This includes, but is not limited to, furnishing and installing a 4-meter bank on the south wall of the proposed hangar and conduit and cable from the transformer to the meter bank. The mounting structure on the south hangar wall shall be capable of expansion to 10 meters without major modifications to the structure. The mounting structure shall be approved by the City of Muscatine and the power company. Meters shall be furnished by the utility. For sizing of conduits and cable, the power run from the transformer to the meter bank is estimated to be approximately 650 linear feet. Conduits and cable sizes shall be IAW NEC requirements, and shall require approval from Muscatine Power & Water (MP&W).

## SS-28 – HANGAR:

### A. Design Criteria

The design criteria for the hangar are as follows (criteria most likely to be applicable for this project are bolded):

- **Ground Snow Load:** 30 pounds per square foot
- **Wind Speed:** 90 mph for a 3-second gust with Exposure C
- **Seismic Design Category:** B
- **Weathering for Concrete:** Severe
- **Frost Line Depth:** 42 inches
- Termites: Moderate to Heavy
- Decay: Slight to Moderate
- **Winter Design Temperature:** -5 degrees

### B. Hangar General Requirements

Specific hangar specification sections are included elsewhere in this Project Specification. However, general requirements are that this hangar expansion matches other hangars on the airport in appearance and color as closely as possible. **The hangar structure may bid as a clear span steel structure, a clear span post frame structure, or any other clear span structure. Manufacturers and suppliers of the specified building furnished shall be (prior to award of the contract) able to produce evidence of at least 5 years of experience in manufacturing and constructing similar hangars in similar climates. Lack of said experience may preclude approval of the manufacturer or supplier for this project.** The proposed hangar expansion shall be a 3-unit (or “bay”) rectangular, with a single larger (50’ x 70’) bay and two (2) smaller back-to-back 45’ x 30’ bays. The entire building shall have a frost footing, and each bay shall have its own door, with size as specified on the project plans. The building envelope shall be insulated, and insulation between bays is also required. **The Contractor (or hangar supplier) is responsible for design of the building and foundations, and the hangar (including foundations) shall be certified by an Engineer licensed in the state of Iowa to meet all specified criteria.**

Price bid for the bid item “Hangar, 3-Bay, 70’ x 95’, Complete” shall include, but is not limited to, the following:

- Building Foundation
- Hangar Floor (Reinforced), **Including Subgrade Preparation and Granular Base**
- Hangar Building and Erection of Hangar
- All Doors and Door Operating Equipment
- Gutters and Downspouts (including transitions from the downspouts to underground piping)
- Hangar Electrical (see above paragraphs)
- **Required Permits and Inspections – Contractor is responsible for submitting all documentation required by the City for the building permit and cost of permit(s)**

### C. Hangar Plumbing

The only hangar plumbing required for this project shall be an in-place conduit under the pavement from the southwest wall (exterior) of the large bay of the hangar to a point at least 5 ft. outside of the PCC pavement on the SW side of the hangar. This pipe shall be for extension of gas service in the future, and shall meet Alliant Energy requirements for installation of gas service to the hangar, either in the future, or in Bid Alternate B. Installation of this pipe shall be included in the Base Bid as part of the hangar bid item, as no separate bid item exists for this pipe.

D. Miscellaneous Hangar Design Items

The following items shall be included in the hangar as bid, or are listed as acceptable alternate design items:

- The hangars are shown on the plans as a nominal size of 70 ft. by 50 ft. (large bay) and 45 ft. by 35 ft. (each smaller bay). However, if manufacturer's requirements to construct a clear door of the size shown on the plans requires a slightly wider hangar, the width (on the large door side) may be increased as necessary to accommodate the specified clear width for the door. Also, if the type of hangar construction requires bracing in the "front" wall (wall with the large bi-fold doors), the width of each bay may be slightly extended for such bracing. The maximum total width for each bay shall be 5 ft. larger than the dimension shown on the plans.
- Although these specifications note "bi-fold" doors in the front face for aircraft, hydraulic doors of the same clear opening, sheeting, and wind loadings may be used. All requirements for operation of the doors, whether bi-fold or hydraulic, shall be included in the price bid for the hangar itself. It is assumed that a bi-fold door will raise the building height to keep the specified minimum clear opening height of the hangar door. If a hydraulic door is used, it is assumed the building height may lower slightly and less structure will be needed due to less wind loads and dead loads from the door. Clear building height (from the floor elevation to the bottom of all structural members, sheeting, lighting, or any other installed building components) shall be the minimum required to match the clear height specified for the large bi-fold (or hydraulic) door for each unit as shown on the project plans.
- The hangar eave height has not been specified, as this may differ based on different building suppliers and/or door suppliers. The height requirement shall be driven by the required 18 ft. (16 ft. on the smaller units) clear height of the door and the inside of the hangar. The required clear height shall include inside the hangar, so structural components, lights, or other items shall allow for the specified 18 ft. (16 ft.) clear height.
- The east end wall of the building shall be constructed to be an expandable end-wall. Additional bays could potentially be constructed in the near future, and the expansion shall be able to be completed at that time without requiring replacement and/or modifications to the end-wall on this project.
- The hangar structure shall be capable of supporting all interior mechanical/electrical equipment loads, including specified lighting and potential future heaters (to be installed by others). For purposes of estimating future heater loads, potential loading shall be based on at least four (4) heater units, each of up to 150 pounds. These loads may be point loads or long (tube-type) radiant heaters.
- The hangar roof shall be a "standing seam" roof, with no exposed screws.
- **The hangar roof will not be accepted without the ability for the Sponsor and Engineer to observe the finished roof from the upper surface of the roof itself. The Contractor shall furnish a lift or ladder for the Sponsor and Engineer to examine the roof from above. Also, the roof shall be required to go through at least 2 rain events with winds in excess of 30 mph without signs of leakage prior to acceptance. Should any insulation in the roof, sidewalls, or doors be exposed to moisture, the Contractor shall be required to test for moisture in the insulation (by a testing firm certified in moisture testing) and a written report submitted of the results. Any insulation showing signs of moisture or having gotten wet shall be replace by the Contractor at no cost to the Owner.**
- All insulated walls, including the main bi-fold door and the partitions between the bays, shall include liner panels (to protect the insulation and vapor barrier) to a minimum height of 8 ft. above the finished floor, or the first main horizontal framing member, whichever is higher. Liner panels shall be the manufacturer's standard liner panels, of a color to be selected by the Owner from a standard color chart, and capped by a standard finish piece, to leave no exposed edges or exposed insulation at the top. On partition walls, the liner panel shall be on the "back" side of the wall, opposite the wall sheeting, which will be full-height.

- Foundation plans shall be designed and certified by the Contractor or hangar manufacturer, as noted in paragraph B above.
- Large Bi-Fold (Hydraulic) Hangar Door
  1. Each bi-fold (hydraulic) hangar door clear opening shall be of the width and height as shown on the plans with the door installed and open.
  2. The bi-fold hangar doors (3) (5 if Bid Alternate No. 1 is accepted) shall be bi-fold with lift straps or equivalent. The bi-fold hangar doors shall be fully insulated with non-permeable insulation. Insulation shall be installed so as there is no compression of the insulation material. The inner door surface shall have liner panels of the same material as exterior siding panels on the inside of the door, affixed full coverage to a minimum height of 8 ft. Headers and trusses shall be designed to handle the complete door load in all positions.
- Concrete – The concrete slab in the hangar shall be an Iowa DOT C-4 mix and 6” minimum thickness, reinforced with rebar grids (# 3 minimum) 24” (maximum spacing) on center. Under the slab, provide 6” (minimum) of crushed rock (to be compacted) over a vapor barrier. The floor shall have a slight slope (0.5% minimum) to large bi-fold (hydraulic) hangar door. The concrete below the large hangar door shall be sloped down going outward to provide a positive shed of water away from the door and building. 2” thick perimeter insulation shall be installed around the perimeter of the slab up to the insulated wall (flushed to floor for puncture protection). The floor slab shall be sawed at 10’ intervals each direction (to a depth of 1.5” minimum), and sawcuts shall be sealed. The floor slab shall receive treatment with a hardener/sealant, applied in accordance with manufacturer’s recommendations.
- Steel Sheeting
  1. Exterior steel siding and roofing shall have either a Kynar finish or a Silicone Polyester finish on G-90 Galvanized edge-rust resistant metal. Minimum wall thickness shall be 28 gauge steel and minimum roof thickness shall be 26 gauge steel.
  2. All inside walls shall have liner panels (white, of the same material as used for exterior siding) installed up 8’ completely around the perimeter of the hangar.
- Insulation
  1. Side walls shall be tyvec with R-19 insulation. Roof shall be R-38. Walls and ceiling insulation shall be installed so as there is no compression of the insulation material. The insulation backing shall be puncture-resistant. The tyvec shall have all seams permanently sealed for no wind infiltration through or around it.
  2. All insulation shall be supported to prevent any sagging in the walls or ceiling areas.
  3. Insulation edges shall be permanently sealed to its adjoining structure for air infiltration reduction.
- Each large bi-fold door shall include a “walk-through” door of minimum size as shown on the plans. Each “walk-through” door (total of 4) shall include a leverset, with a matching deadbolt. Both shall be Heavy-Duty, Commercial Grade 2, for exterior use, with a brushed nickel or brushed chrome finish. The deadbolt shall be keyed to match the existing Airport master key system, which is Schlage. The entrance lockset shall be “Design Z82 F US26D” locksets. Each door shall include weatherstripping and gaskets to make the door weatherproof. Also, each door shall include a closer capable of ensuring the door will close when the bi-fold door is in the down position yet will not interfere with the operation of the bi-fold door.

- A hangar manufacturer/supplier shall be used that offers the Airport the option of ordering and purchasing replacement parts or replacement panels in the future directly from the manufacturer/supplier, without a requirement of going through the Contractor. Also, replacement panels shall be available (if still a standard color) within 7 working days. A certified statement from the hangar supplier/manufacturer stating they will meet these requirements will be required prior to approval of the building plans.
- If the large (bi-fold) hangar door supplied includes a truss at the bottom that lessens inside space, the Contractor will be required to modify the door or building to eliminate those concerns.
- The gutters shall be oversized, and no less than a cross-sectional area of 36 square inches. This may require a deeper gutter than standard for the manufacturer.

**SS-29 – BID ALTERNATES:** At this time, there are three (3) listed Bid Alternates, as defined below

**Bid Alternate A – Add 2 Hangar Bays and Associated Apron**

Bid Alternate A will add two (2) additional hangar bays on the east end of the Base Bid hangar. These are shown on the plans, and the alternate will include the apron, as well as the additional hangar bays. The alternate bid item A7, “Add 2 Bays to Hangars, 45’ x 70’, Complete” will include all items required for a complete hangar, including, but not limited to, foundation, PCC floor, structure and door, all electrical equivalent to that shown for the smaller (Base Bid) bays, and an additional 2 meter sockets at the meter bank.

**Bid Alternate B – Extend Gas Service to Hangars**

As part of this bid item, the Contractor shall extend gas lines through proposed hangar bays as necessary to feed gas service to all hangar bays, as outlined below:

- Coordinate with the gas company to extend service to the southwest wall of the large (50’ x 70’) bay, with proper clearance between the gas manifold and the electrical meter bank. A manifold for gas distribution shall be located on the southwest wall, and this bid alternate will be to extend gas lines from the manifold into each of the 3 Base Bid bays. Should Bid Alternate A be selected, the price bid for this bid alternate shall be adjusted based on total linear feet of gas pipe required to be added to serve the Bid Alternate A hangar bays.
- The cost of extending these gas service lines shall be included in the Lump Sum cost for the Alternate B bid item “Extend Gas Service to Hangars”. No separate bid item exists for this work.
- As noted elsewhere in this specification, a pipe under the PCC pavement southwest of the hangar for gas service will be installed as part of the Base Bid for the hangar building, whether or not this Bid Alternate is accepted.

**Bid Alternate C – Completion Date of December 1, 2019**

This bid alternate is a Lump Sum to accelerate construction so the hangars are complete and ready for occupancy no later than December 1, 2019. Liquidated damages as noted elsewhere in these specifications will be assessed based on this alternative completion date.

**No bid on this alternate will not invalidate nor disqualify the Bidder from potential selection of the Base Bid. However, if a competitive bid for this bid alternate is given, the City reserves the right to take the bid for the earlier completion date, so no bid on this alternate could potentially limit the bidder’s opportunity for the contract.**



**SS-30 – CONTRACTOR’S PAYMENTS:** The Contractor shall be paid on a monthly basis as discussed elsewhere in this specification. In addition to requirements specified in other sections, the following requirements shall be imposed for release of monthly payments:

- 1<sup>st</sup> payment – no additional requirements
- 2<sup>nd</sup> payment through next to last payment
  - Lien waiver from prime contractor for amount received (to-date).
- Final payment
  - Lien waiver from prime contractor for amount paid (to-date) and following release of final payment, lien waiver for that payment
  - Lien waivers from all subcontractors / suppliers with contract amounts greater than \$500

**END OF SUPPLEMENTAL SPECIFICATIONS**

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CONSTRUCTION PLANS FOR  
CONSTRUCT 3-UNIT BOX HANGAR, TAXILANE & APRON  
MUSCATINE MUNICIPAL AIRPORT

MUSCATINE, IOWA  
BMI #T51.114773  
JUNE 2019

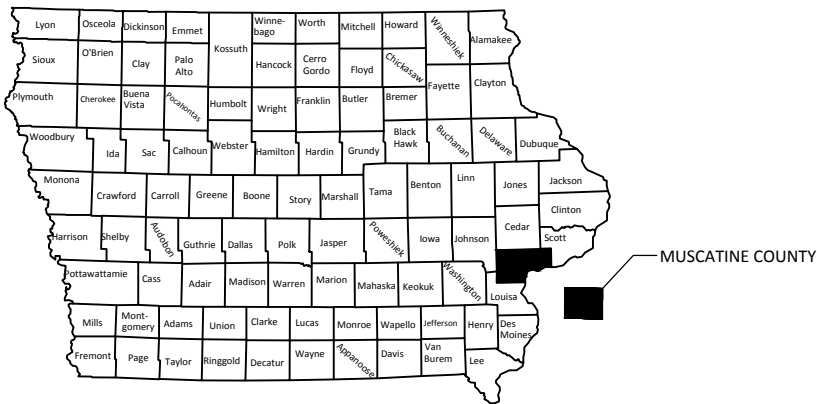
GOVERNING SPECIFICATIONS

THE 2017 EDITION OF THE "IOWA STATEWIDE URBAN SPECIFICATIONS FOR PUBLIC IMPROVEMENTS"

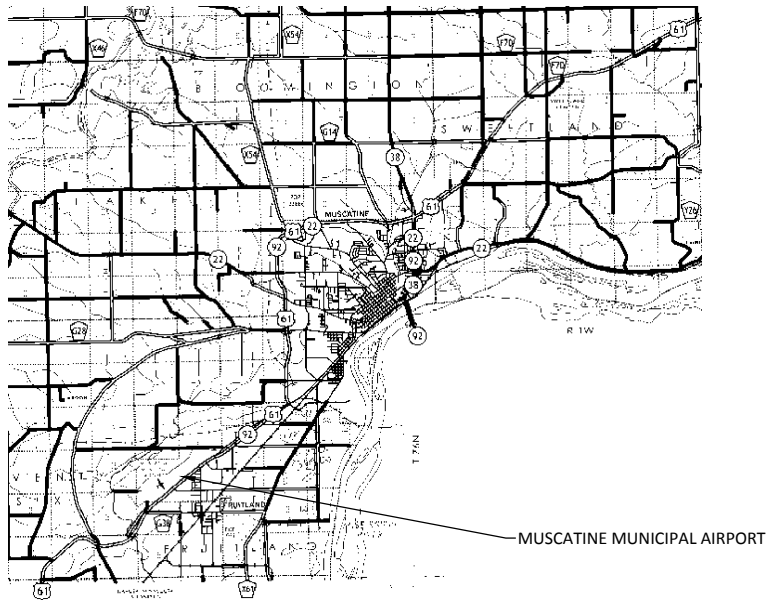
FEDERAL AVIATION ADMINISTRATION'S AC 150/5370-10G, DATED JULY 21, 2014 "STANDARDS FOR SPECIFYING CONSTRUCTION OF AIRPORTS" AND ALL SUPPLEMENTS.

IOWA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION", SERIES 2015 AND ALL CURRENT GENERAL SUPPLEMENTAL SPECIFICATIONS AND MATERIALS INSTRUCTIONAL MEMORANDUM SHALL GOVERN AS REFERENCED.

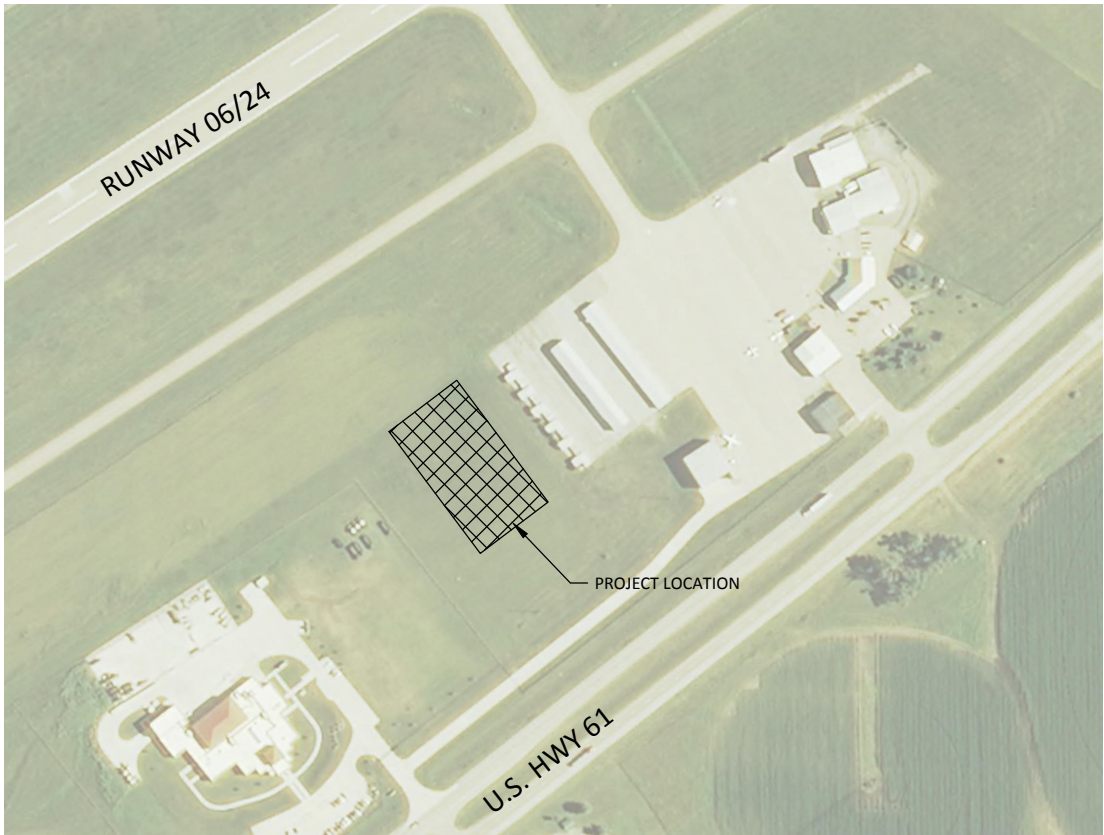
ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.



STATE MAP



VICINITY MAP



SHEET NUMBER	SHEET TITLE
1	TITLE SHEET
2	QUANTITIES & NOTES
3	CONSTRUCTION SAFETY & PHASING PLAN
4	SURVEY CONTROL & LAYOUT
5	GRADING, UTILITIES & EROSION CONTROL PLAN
6	JOINTING PLAN
7	JOINTING & PAVEMENT MARKING PLAN
8	JOINTING DETAILS
9	HANGAR ELEVATIONS & SLAB DETAIL
10	HANGAR ELECTRICAL PLAN



THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

*Carl L. Byers*

CARL L. BYERS, P.E.

REG. NO. 12845

DATE: 6/14/2019

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2019

PAGES OR SHEETS COVERED BY THIS SEAL:

ALL SHEETS



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MUSCATINE MUNICIPAL AIRPORT  
CONSTRUCT 3-UNIT HANGAR, TAXILANE & APRON

TITLE SHEET

SHEET  
1  
OF  
10

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ESTIMATED PROJECT QUANTITIES					
ITEM NO.	ITEM CODE	ITEM	UNIT	QUANT	AS BUILT QUANT.
1	2010-108-D-1	TOPSOIL, ON-SITE	CY	525	
2	2010-108-E-0	EXCAVATION, CLASS 13	CY	100	
3	2010-108-G-0	SUBGRADE PREPARATION	SY	1618	
4	2010-108-I-0	SUBBASE, MODIFIED	SY	1618	
5	4020-108-A-1	STORM SEWER, TRENCHED, PVC, 8"	LF	225	
6	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 12"	LF	52	
7	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 15"	LF	119	
8	6010-108-B-0	INTAKE, SW-502	EA	1	
9	7010-108-A-0	PAVEMENT, PCC, 6-INCH	SY	1535	
10	9010-108-A-0	CONVENTIONAL SEEDING, SEEDING, FERTILIZING, AND MULCHING	AC	0.3	
11	9040-108-N-1	SILT FENCE OR SILT FENCE DITCH CHECK	LF	500	
12	9040-108-N-2	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF SEDIMENT	LF	500	
13	9040-108-N-3	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF DEVICE	LF	500	
14	11010-108-A-1	CONSTRUCTION SURVEY	LS	1	
15	11020-108-A-1	MOBILIZATION	LS	1	
16	P-620-5.1.1	PAVEMENT MARKING, SOLID YELLOW, WITH BEADS	SF	153	
17	P-620-5.1.2	PAVEMENT MARKING, BLACK OUTLINE, NO BEADS	SF	306	
18	-	HANGAR, 3-BAY, 70' X 95' COMPLETE	LS	1	
19	-	ELECTRICAL SERVICE EXTENSION	LS	1	

ALTERNATE A					
A1	2010-108-E-0	EXCAVATION, CLASS 13	CY	20	
A2	2010-108-G-0	SUBGRADE PREPARATION	SY	231	
A3	2010-108-I-0	SUBBASE, MODIFIED	SY	231	
A4	4020-108-A-1	STORM SEWER, TRENCHED, PVC, 8"	LF	90	
A5	7010-108-A-0	PAVEMENT, PCC, 6-INCH	SY	231	
A6	P-620-5.1.1	PAVEMENT MARKING, SOLID YELLOW, WITH BEADS	SF	40	
A7	P-620-5.1.2	PAVEMENT MARKING, BLACK OUTLINE, NO BEADS	SF	80	
A8	-	ADD 2-BAYS TO HANGAR, 70' X 45' COMPLETE	LS	1	

ALTERNATE B					
B1	-	EXTEND GAS SERVICE TO HANGARS	LS	1	

ALTERNATE C					
C1	-	COMPLETION DATE OF DECEMBER 1, 2019	LS	1	

ESTIMATE REFERENCE INFORMATION		
ITEM NO.	ITEM CODE	DESCRIPTION
1	2010-108-D-1	TOPSOIL, ON-SITE
		WORK UNDER THIS BID ITEM SHALL INCLUDE STRIPPING OF TOPSOIL FROM ALL AREAS TO BE GRADED. THIS SHALL INCLUDE STRIPPING OF THE TOPSOIL, STOCKPILING ON SITE, AND RESPREADING IN PLACE, FOLLOWING GRADING, TO A MINIMUM DEPTH OF 6 INCHES. PAYMENT SHALL BE BY THE CUBIC YARD. NO MEASUREMENT WILL BE MADE FOR THIS ITEM, BUT PLAN QUANTITY SHALL BE USED UNLESS PLAN CHANGES ARE MADE.
2	2010-108-E-0	EXCAVATION, CLASS 13
		THIS ITEM SHALL INCLUDE REMOVAL AND RESHAPING OF EXISTING SOIL TO FINISHED SUBGRADE ELEVATION. PAYMENT SHALL BE BY THE CUBIC YARD, COMPUTED AND PAID FOR IN ACCORDANCE WITH SUDAS 2010,1.08.E. EXCESS MATERIAL SHALL BE WASTED ON AIRPORT LAND IN AN AREA SPECIFIED BY THE ENGINEER.
3	2010-108-G-0	SUBGRADE PREPARATION
		MODIFIED SUBBASE SHALL BE CONSTRUCTED TO 6" THICKNESS AND 2' OUTSIDE THE EDGE OF PAVEMENT. THIS ITEM SHALL BE MEASURED AND PAID FOR BY THE SQUARE YARD, IN ACCORDANCE WITH SUDAS 2010,1.08.I.
4	2010-108-I-0	SUBBASE, MODIFIED
		MODIFIED SUBBASE SHALL BE CONSTRUCTED TO 6" THICKNESS AND 1' OUTSIDE THE EDGE OF PAVEMENT. THIS ITEM SHALL BE MEASURED AND PAID FOR BY THE SQUARE YARD, IN ACCORDANCE WITH SUDAS 2010,1.08.I.
5	4020-108-A-1	STORM SEWER, TRENCHED, PVC, 8"
		THIS ITEM SHALL BE INSTALLED IN ACCORADANCE WITH THE PROJECT PLANS AND THE REFERENCE SPECIFICATION. ITEM SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR INSTALLATION AS SPECIFIED.
6	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 12"
		BEDDING CLASS SHALL BE R-2 FOR ALL PIPES. TYPE OF PIPE ALLOWED SHALL BE RCP, CLASS III. THE JOINTS WILL BE WRAPPED WITH ENGINEERING FABRIC.
7	4020-108-A-1	STORM SEWER, TRENCHED, RCP, 15"
		BEDDING CLASS SHALL BE R-2 FOR ALL PIPES. TYPE OF PIPE ALLOWED SHALL BE RCP, CLASS III. THE JOINTS WILL BE WRAPPED WITH ENGINEERING FABRIC.
8	6010-108-B-0	INTAKE, SW-502
		THE STORM SEWER INTAKE SHALL BE INSTALLED IN ACCORDANCE WITH THE PROJECT PLANS AND THE REFERENCE SPECIFICATION. PAYMENT SHALL BE PER EACH, IN ACCORDANCE WITH SUDAS 6010, 1.08.A. THE COMPLETED INTAKE SHALL INCLUDE A GRATE.
9	7010-108-A-0	PAVEMENT, PCC, 6-INCH
		ALL CONCRETE SHALL BE CLASS C, WITH A MINIMUM STRENGTH OF 4,000 PSI AT 28 DAYS. ALL JOINTS SHALL BE CONSTRUCTED, SAWED, AND SEALED AS SHOWN ON THE PROJECT PLANS. CRACKED PANELS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE, UNLESS, IN THE JUDGEMENT OF THE ENGINEER, THE CRACKS DO NOT NEGATIVELY IMPACT THE LIFE OF THE PAVEMENT AND CAN BE ROUTED AND SEALED.
10	9010-108-A-0	CONVENTIONAL SEEDING, SEEDING, FERTILIZING, AND MULCHING
		SEED ALL AREAS DISTURBED BY CONSTRUCTION. THE COST FOR WATERING SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM. ROCK PICKING, FINISH GRADING, AND RESEEDING ARE CONSIDERED INCIDENTAL TO THIS ITEM. NO ADDITIONAL PAYMENTS WILL BE MADE FOR RESEEDED AREAS. THE CONTRACTOR IS RESPONSIBLE FOR MOWING AND MAINTAINING SEEDED AREAS UNTIL THE PROJECT IS ACCEPTED BY THE OWNER. SEEDING OF AREAS DISTURBED OUTSIDE OF THE CONSTRUCTION LIMITS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO COST TO OWNER. PAYMENT SHALL BE BY THE ACRE, MEASURED AND PAID FOR IN ACCORDANCE WITH SUDAS 9010,1.08.A.
11	9040-108-N-1	SILT FENCE OR SILT FENCE DITCH CHECK
		LOCATION OF SILT FENCE SHALL BE DETERMINED IN THE FIELD DURING CONSTRUCTION. IF CONTRACTOR DETERMINES THAT ADDITIONAL QUANTITY IS REQUIRED TO PROPERLY PROTECT THE SITE AS REQUIRED BY THE NPDES GENERAL PERMIT NO.2, THEY MUST NOTIFY THE ENGINEER AND HAVE APPROVAL PRIOR TO THE INSTALLATION. REMOVAL OF SEDIMENT AND REMOVAL OF THE ITEM SHALL BE PAID AS SEPERATE BID ITEMS. THIS ITEM TO BE PAID PER LINEAR FOOT INSTALLED.
12	9040-108-N-2	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF SEDIMENT
13	9040-108-N-3	SILT FENCE OR SILT FENCE DITCH CHECK, REMOVAL OF DEVICE
		REMOVAL OF SILT FENCE SHALL BE EXECUTED AFTER SEEDING IS ESTABLISHED OR AS DIRECTED BY ENGINEER.
14	11010-108-A-1	CONSTRUCTION SURVEY
		THIS ITEM SHALL BE PAID BY LUMP SUM, AND SHALL INCLUDE ALL SURVEY NECESSARY FOR THE LAYOUT AND CONSTRUCTION OF THE PROJECT.
15	11020-108-A-1	MOBILIZATION
		THIS ITEM IS FOR ALL PREPATORY WORK AND COSTS INCURRED BEFORE BEGINNING THE WORK ON THE PROJECT AND DURING THE PROJECT. THIS ITEM SHALL ALSO INCLUDE THE COSTS FOR ANY STAGED CONSTRUCTION AND EQUIPMENT SET UP TO COMPLETE THE WORK. NO CHANGE IN CONTRACT PRICE WILL BE MADE FOR ANY COMBINATION OF ADD/ALTERNATES ADDED TO THE CONTRACT.
16	P-620-5.1.1	PAVEMENT MARKING, SOLID YELLOW, WITH BEADS
		WORK UNDER THIS ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-620 AND THE PLANS. PAYMENT SHALL BE PER SQUARE FOOT.
17	P-620-5.1.2	PAVEMENT MARKING, BLACK OUTLINE, NO BEADS
		WORK UNDER THIS ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-620 AND THE PLANS. PAYMENT SHALL BE PER SQUARE FOOT.

18	-	HANGAR, 3-BAY, 70' X 95' COMPLETE
		THIS ITEM SHALL BE PAID FOR AS SHOWN ON THE PLANS AND IN THE PROJECT SPECIFICATIONS. REFERENCE SUPPLEMENTAL SPECIFICATIONS. IT SHALL BE MEASURED AND PAID FOR AS A LUMP SUM ITEM.
19	-	ELECTRICAL SERVICE EXTENSION
		THIS ITEM SHALL BE PAID FOR AS SHOWN ON THE PLANS AND IN THE PROJECT SPECIFICATIONS. REFERENCE SUPPLEMENTAL SPECIFICATIONS. IT SHALL BE MEASURED AND PAID FOR AS A LUMP SUM ITEM.
		ESTIMATE REFERENCE INFORMATION (ALTERNATE A)

ITEM NO.	ITEM CODE	DESCRIPTION
A1	2010-108-E-0	EXCAVATION, CLASS 13
		THIS ITEM SHALL INCLUDE REMOVAL AND RESHAPING OF EXISTING SOIL TO FINISHED SUBGRADE ELEVATION. PAYMENT SHALL BE BY THE CUBIC YARD, COMPUTED AND PAID FOR IN ACCORDANCE WITH SUDAS 2010,1.08.E. EXCESS MATERIAL SHALL BE WASTED ON AIRPORT LAND IN AN AREA SPECIFIED BY THE ENGINEER.
A2	2010-108-G-0	SUBGRADE PREPARATION
		MODIFIED SUBBASE SHALL BE CONSTRUCTED TO 6" THICKNESS AND 2' OUTSIDE THE EDGE OF PAVEMENT. THIS ITEM SHALL BE MEASURED AND PAID FOR BY THE SQUARE YARD, IN ACCORDANCE WITH SUDAS 2010,1.08.I.
A3	2010-108-I-0	SUBBASE, MODIFIED
		MODIFIED SUBBASE SHALL BE CONSTRUCTED TO 6" THICKNESS AND 1' OUTSIDE THE EDGE OF PAVEMENT. THIS ITEM SHALL BE MEASURED AND PAID FOR BY THE SQUARE YARD, IN ACCORDANCE WITH SUDAS 2010,1.08.I.
A4	4020-108-A-1	STORM SEWER, TRENCHED, PVC, 8"
		THIS ITEM SHALL BE INSTALLED IN ACCORADANCE WITH THE PROJECT PLANS AND THE REFERENCE SPECIFICATION. ITEM SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR INSTALLATION AS SPECIFIED.
A5	7010-108-A-0	PAVEMENT, PCC, 6-INCH
		ALL CONCRETE SHALL BE CLASS C, WITH A MINIMUM STRENGTH OF 4,000 PSI AT 28 DAYS. ALL JOINTS SHALL BE CONSTRUCTED, SAWED, AND SEALED AS SHOWN ON THE PROJECT PLANS. CRACKED PANELS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE, UNLESS, IN THE JUDGEMENT OF THE ENGINEER, THE CRACKS DO NOT NEGATIVELY IMPACT THE LIFE OF THE PAVEMENT AND CAN BE ROUTED AND SEALED.
A6	P-620-5.1.1	PAVEMENT MARKING, SOLID YELLOW, WITH BEADS
		WORK UNDER THIS ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-620 AND THE PLANS. PAYMENT SHALL BE PER SQUARE FOOT.
A7	P-620-5.1.2	PAVEMENT MARKING, BLACK OUTLINE, NO BEADS
		WORK UNDER THIS ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-620 AND THE PLANS. PAYMENT SHALL BE PER SQUARE FOOT.
A8	-	ADD 2-BAYS TO HANGAR, 70' X 45' COMPLETE
		THIS ITEM SHALL BE PAID FOR AS SHOWN ON THE PLANS AND IN THE PROJECT SPECIFICATIONS. REFERENCE SUPPLEMENTAL SPECIFICATIONS. IT SHALL BE MEASURED AND PAID FOR AS A LUMP SUM ITEM.

ESTIMATE REFERENCE INFORMATION (ALTERNATE B)		
ITEM NO.	ITEM CODE	DESCRIPTION
B1	-	EXTEND GAS SERVICE TO HANGARS
		THIS ITEM SHALL BE PAID FOR AS SHOWN ON THE PLANS AND IN THE PROJECT SPECIFICATIONS. REFERENCE SUPPLEMENTAL SPECIFICATIONS. IT SHALL BE MEASURED AND PAID FOR AS A LUMP SUM ITEM.

ESTIMATE REFERENCE INFORMATION (ALTERNATE C)		
ITEM NO.	ITEM CODE	DESCRIPTION
C1	-	COMPLETION DATE OF DECEMBER 1, 2019
		THIS ITEM SHALL BE PAID FOR AS SHOWN ON THE PLANS AND IN THE PROJECT SPECIFICATIONS. REFERENCE SUPPLEMENTAL SPECIFICATIONS. IT SHALL BE MEASURED AND PAID FOR AS A LUMP SUM ITEM.



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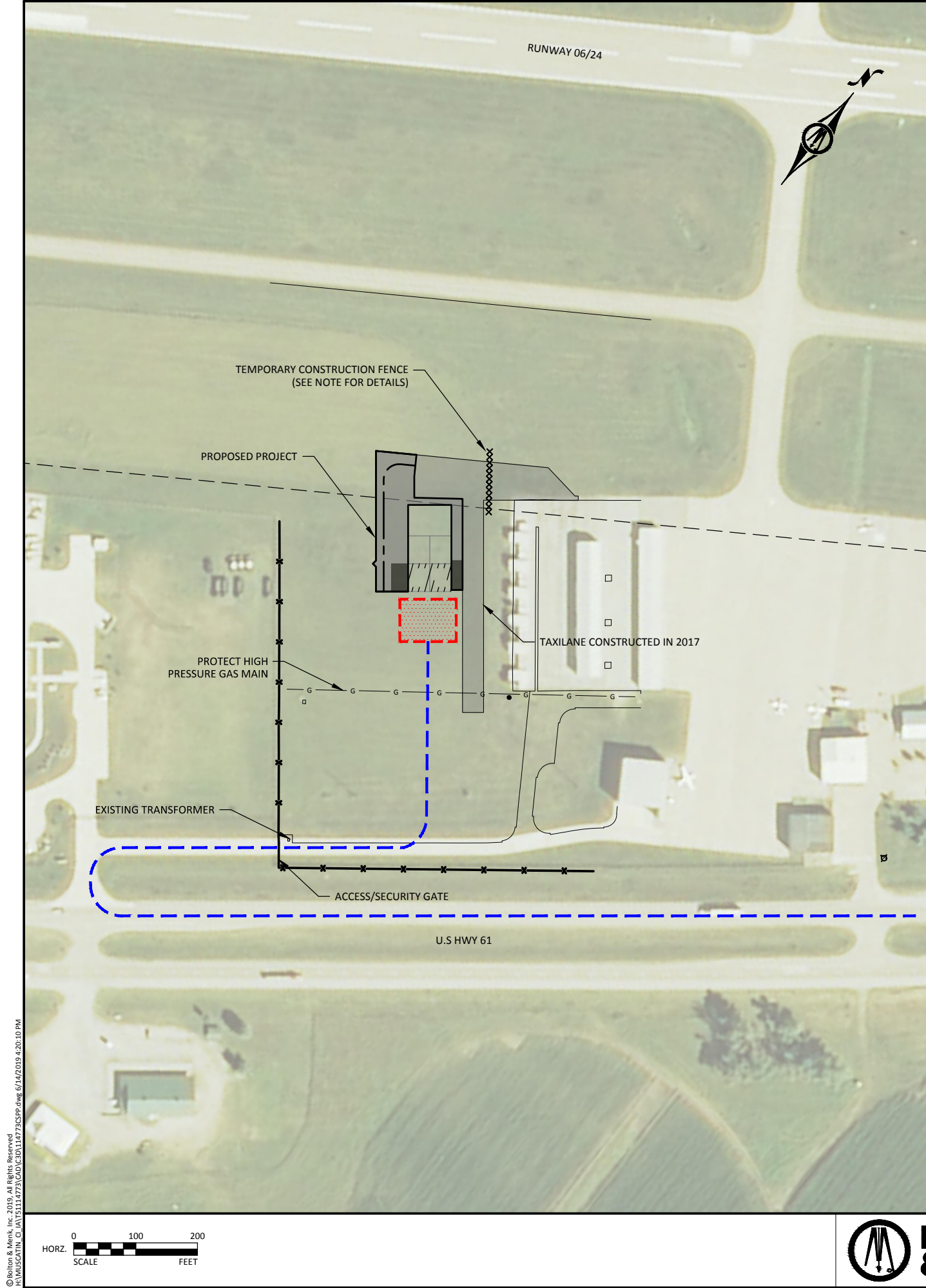
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MUSCATINE MUNICIPAL AIRPORT  
CONSTRUCT 3-UNIT HANGAR, TAXILANE & APRON

QUANTITIES & NOTES

SHEET  
2  
OF  
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MUSCATINE MUNICIPAL AIRPORT  
CONSTRUCT 3-UNIT HANGAR, TAXILANE & APRON  
CONSTRUCTION SAFETY & PHASING PLAN

SHEET  
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OF  
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PROJECT DESCRIPTION:  
CONSTRUCT HANGAR, TAXILANE & APRON

GENERAL CONSTRUCTION SAFETY:

1. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS SET FORTH IN FAA AC 150/5370-2G "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION". CONSTRUCTION SAFETY SHALL BE DISCUSSED DURING THE PRE CONSTRUCTION MEETING AND AT WEEKLY PROJECT MEETING
2. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL PUBLIC AND PRIVATE UTILITY LOCATIONS DURING CONSTRUCTION.

CONSTRUCTION EQUIPMENT:

3. ALL CONSTRUCTION EQUIPMENT SHALL BE PARKED IN DESIGNATED STAGING/STORAGE AREAS WHEN NOT IN USE OR OVERNIGHT. ALL BOOMS SHALL BE LOWERED.
4. THE EXPECTED MAXIMUM HEIGHT OF CONSTRUCTION EQUIPMENT IS 20 FEET AT ANY LOCATION. THE CONTRACTOR SHALL VERIFY ANY EQUIPMENT HEIGHT MORE THAN 20 FEET AND NOTIFY THE ENGINEER AND OWNER A MINIMUM OF 72 HOURS IN ADVANCE OF ANY CONSTRUCTION THAT REQUIRES EQUIPMENT WITH HEIGHTS OF MORE THAN 20 FEET SO THAT THE APPROPRIATE NOTICE TO AIRMEN (NOTAM) MAY BE ISSUED.
5. ALL EQUIPMENT WORKING ON THE AIRPORT CONSTRUCTION SITE MUST HAVE A ROTATING BEACON AND/OR WARNING FLAG. THE VEHICLE WARNING FLAGS SHALL BE AS PER DETAIL ON SHEET 3. THE FLAG SHALL BE SECURELY ATTACHED TO THE HIGHEST POINT ON THE CONSTRUCTION EQUIPMENT OR VEHICLE AND BE VISIBLE AT ALL TIMES. AMBER FLASHING BEACONS MOUNTED ON THE HIGHEST POINT OF THE CONSTRUCTION EQUIPMENT OR VEHICLE ARE ALSO REQUIRED TO BE INSTALLED AND OPERATIONAL.
6. VEHICULAR TRAFFIC LOCATED IN OR CROSSING ACTIVE MOVEMENT AREAS MUST HAVE A WORKING TWO-WAY RADIO CONTACT WITH AIRPORT OPERATIONS. THE DRIVER, THROUGH PERSONAL OBSERVATION, SHOULD CONFIRM THAT NO AIRCRAFT ARE APPROACHING THE VEHICLES POSITION. CONSTRUCTION PERSONNEL MAY OPERATE IN A MOVEMENT AREA WITHOUT TWO-WAY RADIO COMMUNICATION PROVIDED A NOTAM IS ISSUED CLOSING THE AREA AND THE AREA IS PROPERLY MARKED TO PREVENT INCURSIONS.

HAUL ROUTES, TRAFFIC CONTROL & ACCESS CONTROL

7. ALL TEMPORARY ACCESS, STORAGE/STAGING AREAS AND ROADS SHALL BE RESTORED TO ORIGINAL CONDITION, INCLUDING TOPSOILING, RESEEDING, IF NECESSARY, AFTER USE BY THE CONTRACTOR.
8. THE CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN ALL TRAFFIC CONTROL DEVICES AS NECESSARY.
9. THIS LAYOUT IS A MINIMUM REQUIREMENT NECESSARY TO ASSIST THE CONTRACTOR IN DETERMINING THE COST FOR PROVIDING NECESSARY TRAFFIC CONTROL. THE CONTRACTOR MAY ADD ADDITIONAL WARNING DEVICES AT OWN COST UPON APPROVAL OF THE ENGINEER.
10. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE OWNER A MINIMUM OF 72 HOURS IN ADVANCE OF ANY PROPOSED CONSTRUCTION WITHIN THE APRON OR TAXIWAY SAFETY AREAS, RUNWAY PROTECTION ZONES, APPROACH AREAS OR REQUIRED CLOSURE AREAS SO THAT THE APPROPRIATE NOTICE TO AIRMEN (NOTAM) MAY BE ISSUED. THE OWNER WILL ALSO ISSUE TIMELY NOTAMS WHICH SPECIFICALLY DETAIL THE CURRENT STATUS OF THE AIRPORT DURING CONSTRUCTION, INCLUDING CLOSURE STATUS. THE NOTAM SHALL INCLUDE THE PROPOSED LOCATION, TIME AND DATE OF COMMENCEMENT OF CONSTRUCTION.
11. INSPECT FOR AND REMOVE FOREIGN OBJECT DEBRIS (FOD) ON OR NEAR AIRCRAFT MOVEMENT AREAS BY SWEEPING DAILY AT TIMES OF CONCURRENT CONSTRUCTION AND AIRCRAFT OPERATIONS. WASTE AND LOOSE MATERIAL MUST NOT BE PLACED IN ACTIVE MOVEMENT AREAS. MATERIALS TRACKED ONTO THESE AREAS MUST BE REMOVED CONTINUOUSLY DURING THE PROJECT. THE CONSTRUCTION SITE, INCLUDING THE STAGING AREA, SHALL BE KEPT CLEAN OF ALL PERSONNEL DEBRIS.
12. NO UNAUTHORIZED PERSONNEL WILL BE ALLOWED ON AIRFIELD AT ALL TIMES. CONTRACTOR SHALL USE THE DESIGNATED AIRPORT ACCESS ROUTE WHEN ENTERING AIRPORT PROPERTY. NO GATES ARE TO BE LEFT OPENED AND UNATTENDED.
13. PERSONAL VEHICLES SHALL NOT BE ALLOWED ON THE AIRFIELD. ALL PERSONAL VEHICLES SHOULD BE PARKED IN A DESIGNATED STAGING/STORAGE AREA OR ANOTHER AREA AS DESIGNATED BY THE AIRPORT MANAGER.
14. PROMINENTLY MARK OPEN TRENCHES, EXCAVATIONS AND STOCKPILED MATERIALS AND LIGHT THESE OBSTACLES DURING HOURS OF RESTRICTED VISIBILITY AND DARKNESS. CONSTRAIN STOCKPILED MATERIAL TO PREVENT ITS MOVEMENT AS A RESULT OF THE MAXIMUM ANTICIPATED AIRCRAFT BLAST AND FORECAST WIND CONDITIONS.
15. PRIOR TO OPENING OR RE-OPENING ANY CLOSED PAVEMENT AREA, THE CONTRACTOR, TOGETHER WITH THE AIRPORT OPERATOR SHALL INSPECT THE PAVEMENT, SAFETY AREAS AND PRIMARY SURFACE FOR ANY OBSTRUCTION OR FOD.
16. THE CONTRACTOR SHALL NOTIFY POLICE AND FIRE PERSONNEL, MUTUAL AID PROVIDERS AND OTHER EMERGENCY SERVICES IF CONSTRUCTION REQUIRES SHUTTING OFF OR OTHERWISE DISTURPTING ANY WATER LINE OR FIRE HYDRANT ON THE AIRPORT OR ADJOINING AREAS AND IF CONTRACTORS WORK WITH HAZARDOUS MATERIAL ON THE AIRFIELD. NOTIFICATION MUST ALSO BE MADE WHEN THE WORK PERFORMED WILL CLOSE OR AFFECT ANY EMERGENCY ROUTES. ALSO MAKE NOTIFICATION WHEN SERVICES ARE RESTORED.

PROJECT NOTES

WORK ELEMENTS:

- HANGAR BUILDING
- STORM SEWER INSTALLATION
- TAXILANE AND APRON PAVEMENT
- SITE GRADING & SEEDING

NOTAMS

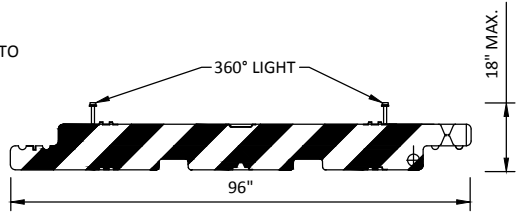
- CONTRACTOR TO COORDINATE WITH OWNER FOR ISSUANCE OF NOTAM'S.

CONSTRUCTION FENCE INFORMATION

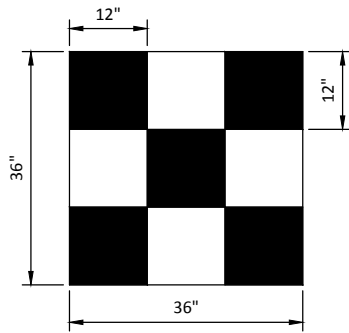
- TEMPORARY CONSTRUCTION FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION. FENCE SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. INSTALLATION AND REMOVAL OF FENCE SHALL BE INCIDENTAL TO MOBILIZATION.

LEGEND

- CONTRACTORS ACCESS ROUTE
- XXXXXXXXXX TEMPORARY CONSTRUCTION FENCE
- CONSTRUCTION STAGING/STORAGE



A  
3 LOW PROFILE BARRICADE DETAIL  
NOT TO SCALE



NOTE: FLAG SHALL HAVE A CHECKERED PATTERN OF INTERNATIONAL ORANGE AND WHITE SQUARES

B  
3 VEHICLE WARNING FLAG  
NOT TO SCALE





CONTROL POINTS				
POINT NUMBER	LATITUDE	LONGITUDE	ELEVATION	DESCRIPTION
1	N41°21'48.06"	W91°08'49.38"	545.05	CUT 'X'
2	N41°21'47.05"	W91°08'48.42"	545.68	CUT 'X'
3	N41°21'46.00"	W91°08'47.39"	545.27	CUT 'X'
4	N41°21'45.14"	W91°08'46.19"	545.20	CUT 'X'
5	N41°21'43.91"	W91°08'45.22"	546.00	CUT 'X'
6	N41°21'45.17"	W91°08'43.77"	547.37	CUT 'X'
7	N41°21'47.69"	W91°08'48.44"	545.18	CUT 'X'
8	N41°21'48.91"	W91°08'46.90"	546.16	CUT 'X'
15	N41°21'49.25"	W91°08'47.52"	545.04	1/2" REBAR
16	N41°21'46.06"	W91°08'44.92"	545.34	1/2" REBAR
17	N41°21'47.28"	W91°08'37.88"	549.12	1/2" REBAR
18	N41°21'44.34"	W91°08'45.04"	545.37	1/2" REBAR
19	N41°21'46.92"	W91°08'43.74"	546.21	1/2" REBAR



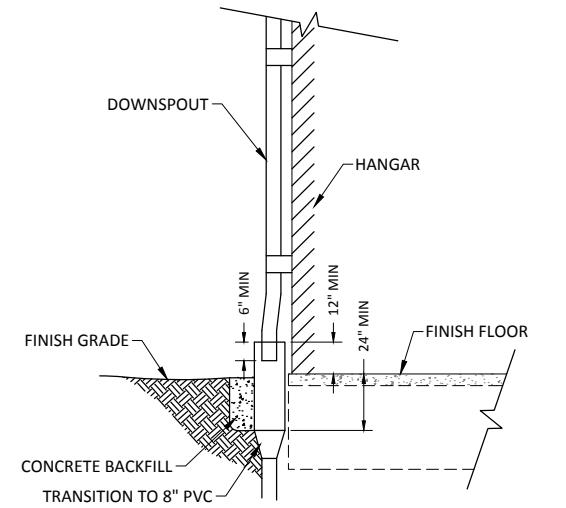
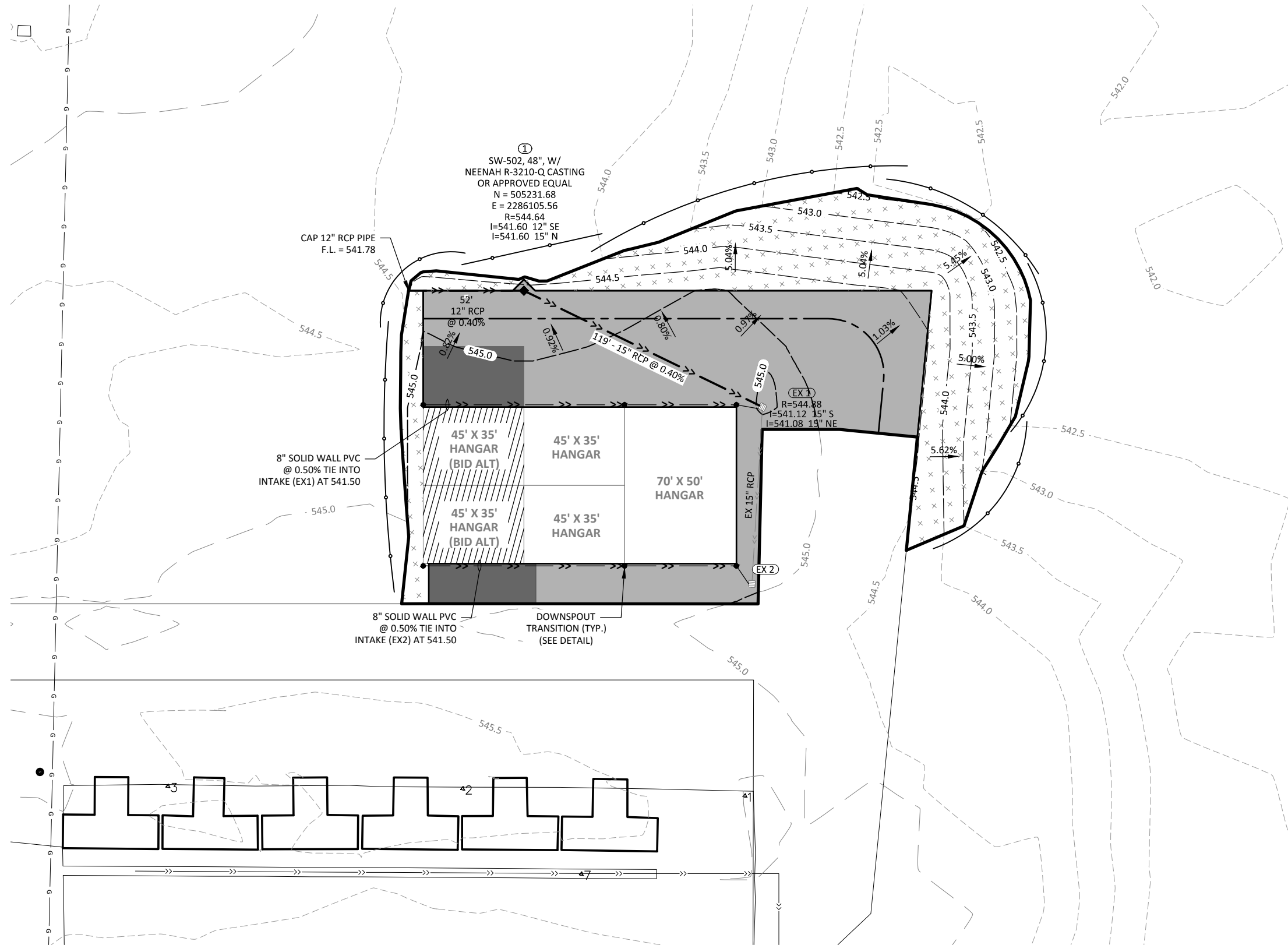
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MUSCATINE MUNICIPAL AIRPORT  
CONSTRUCT 3-UNIT HANGAR, TAXILANE & APRON  
SURVEY CONTROL & LAYOUT

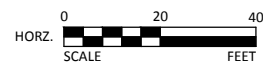
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A  
5  
DOWNSPOUT TRANSITION  
NOT TO SCALE

LEGEND

- SILT FENCE
- SEEDING AREA

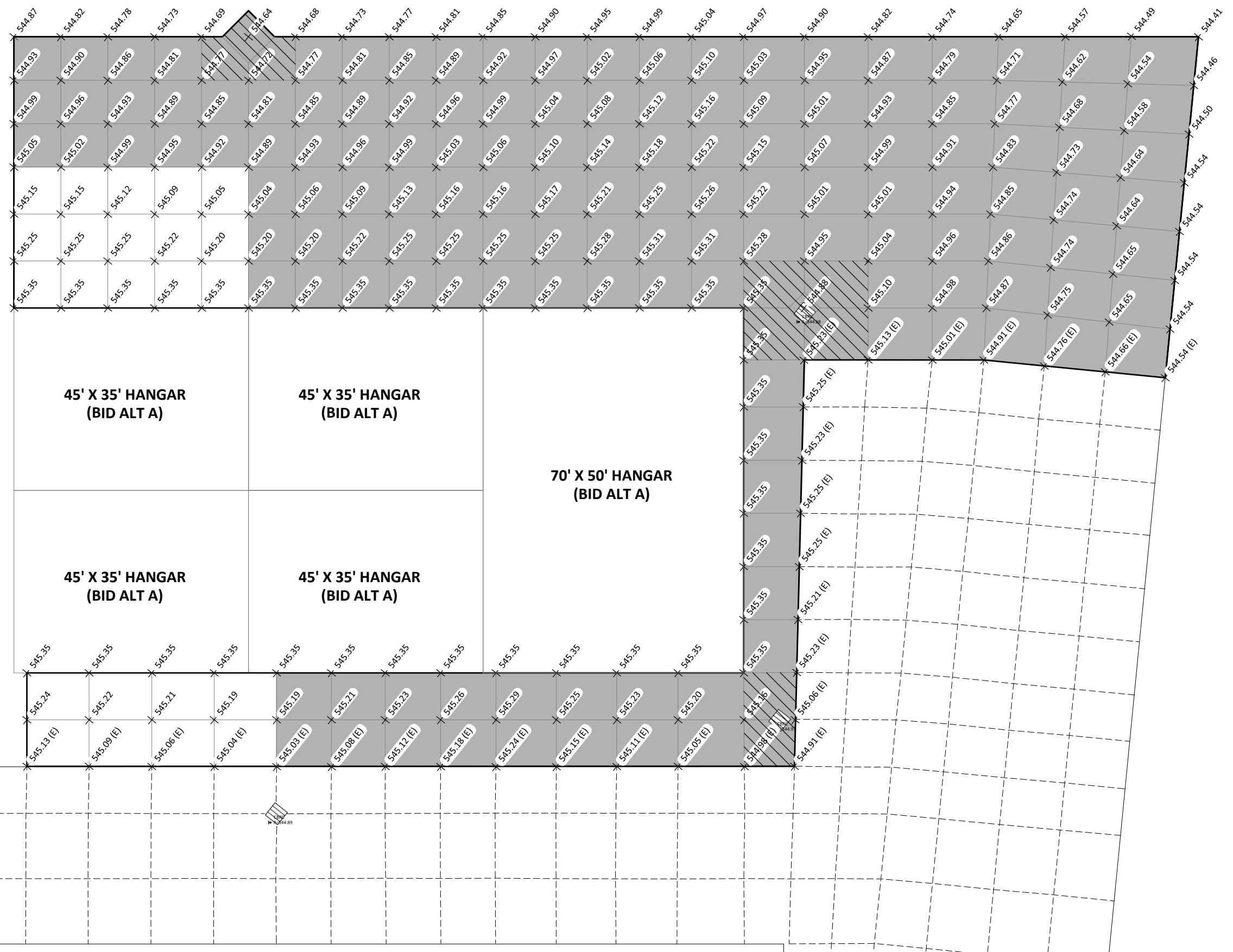


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MUSCATINE MUNICIPAL AIRPORT  
CONSTRUCT 3-UNIT HANGAR, TAXILANE & APRON  
GRADING, UTILITIES & EROSION CONTROL PLAN




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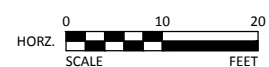


**NOTE:**

- JOINTING MAY VARY BASED ON PAVEMENT SEQUENCE, BUT SHALL MEET REQUIREMENTS OF NOTES ON 'JOINTING DETAILS' SHEET.

### LEGEND

-  MESH REINFORCED PANEL  
 BASE BID  
 BID ALTERNATE



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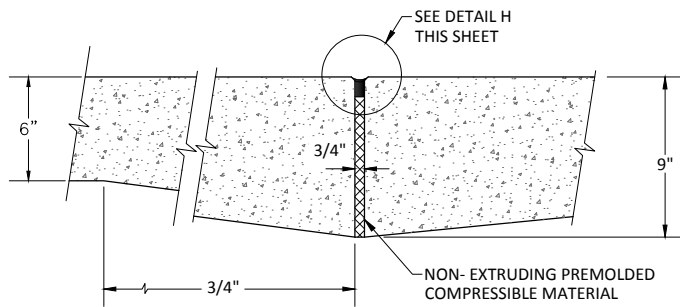
MUSCATINE MUNICIPAL AIRPORT  
CONSTRUCT 3-UNIT HANGAR, TAXILANE & APRON

## JOINTING PLAN

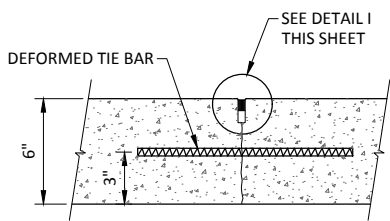
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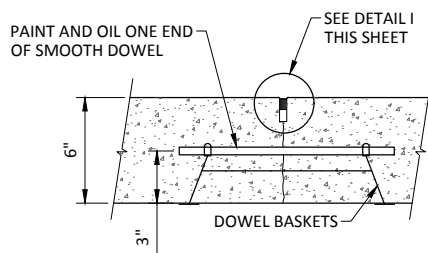




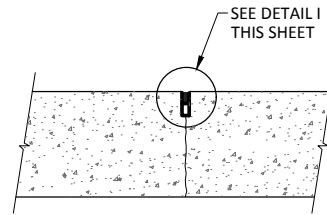
**A**  
8 TYPE A - THICKENED EDGE  
NOT TO SCALE



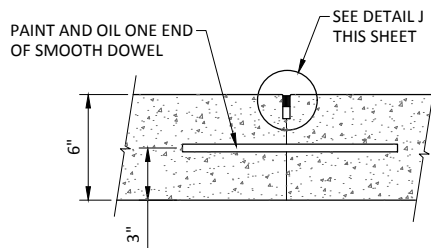
**B**  
8 TYPE B - HINGED CONTRACTION  
NOT TO SCALE



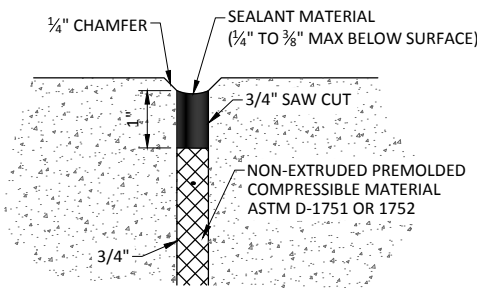
**C**  
8 TYPE C - DOWELED CONTRACTION JOINT  
NOT TO SCALE



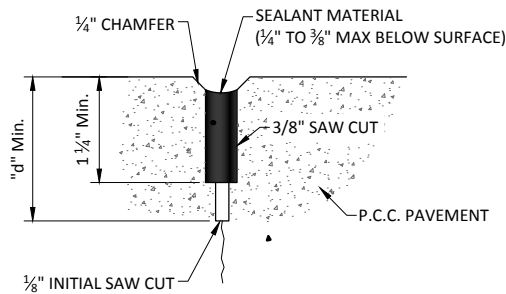
**D**  
8 TYPE D - DUMMY  
NOT TO SCALE



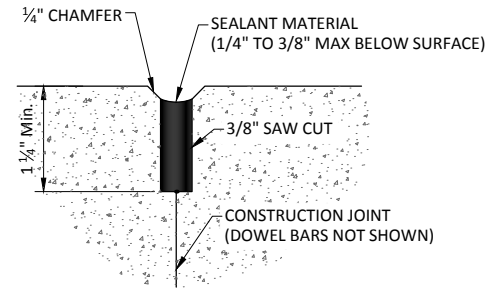
**E**  
8 TYPE E - DOWELED CONSTRUCTION JOINT  
NOT TO SCALE



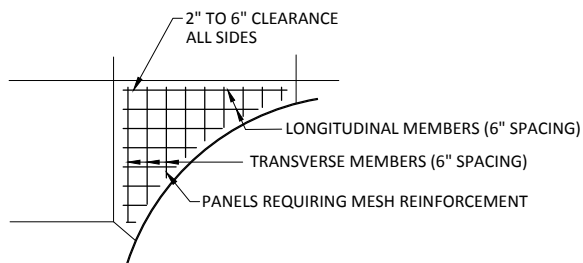
**F**  
8 ISOLATION JOINT DETAIL  
NOT TO SCALE



**G**  
8 CONSTRUCTION JOINT  
NOT TO SCALE



**H**  
8 CONSTRUCTION JOINT  
NOT TO SCALE



- NOTES:
- END LAPS SHALL BE AT LEAST 12"
  - SIDE LAPS SHALL BE AT LEAST 6"
  - PLACE MESH IN VERTICAL CENTER OF PAVEMENT

**I**  
8 MESH REINFORCEMENT DETAIL  
NOT TO SCALE

DOWEL BAR DIMENSION AND SPACING TABLE			
THICKNESS OF SLAB	DIAMETER	LENGTH	SPACING
6" - 7"	3/4"	18"	12"

#### NOTES:

1. ALL TIE BARS (TYPE B) SHALL BE EPOXY COATED #5 DEFORMED BARS, 30" LONG AND SPACED AT 30" CENTER TO CENTER.
2. WIRE MESH SHALL BE FURNISHED IN FLAT SHEETS AND EPOXY COATED. IN LIEU OF WIRE MESH AS SPECIFIED, CONTRACTOR MAY USE EPOXY COATED #3 (MIN.) DEFORMED BARS AT 12" SPACING IN EACH DIRECTION. STEEL MESH SHALL BE W6xW6 AS DETAILED ON THIS SHEET AND PLACED ON WIRE MESH SUPPORTS.
3. CONTRACTOR SHALL DRILL AND EPOXY ALL DOWEL BARS INTO EXISTING PAVEMENT OR INSTALL IN BASKETS. REFER TO DOWEL BAR DIMENSIONS AND SPACING TABLE THIS SHEET FOR DOWEL BAR SIZE AND SPACING.
4. "d" = MINIMUM T/4 ( $\pm 1/4$ ") FOR ALL JOINTS.
5. W/D FACTOR SHALL BE 1:1 UNLESS OTHERWISE SPECIFIED BY JOINT MATERIAL MANUFACTURER.
6. OUTSIDE LONGITUDINAL JOINTS TO BE TYPE 'B' HINGED
7. INNER LONGITUDINAL JOINTS BETWEEN PAVING PASSES (CONSTRUCTION JOINT) SHALL BE TYPE 'E'. IF WITHIN SLAB (NOT AT EDGE OF PAVING PASS), INNER LONGITUDINAL JOINTS MAY BE TYPE 'B'
8. IF PCC IS NOT PAVED CONTINUOUSLY, DOWELED CONSTRUCTION JOINT WILL BE REQUIRED.
9. TRAVERSE JOINTS SHALL BE TYPE 'C' DOWELED FOR FIRST 3 JOINTS EITHER SIDE OF AN EXPANSION JOINT OR FREE END, OR WHEN SHOWN ON PLANS.
10. ANY CONSTRUCTION JOINT (TRANSVERSE OR LONGITUDINAL) AT THE EDGE OR END OF A PAVING PASS SHALL BE TYPE 'E' UNLESS SHOWN OTHERWISE.
11. ALL IRREGULAR SHAPED SLABS OR PANELS WITH LENGTH TO WIDTH RATIOS OF 1.25 OR GREATER SHALL BE REINFORCED.



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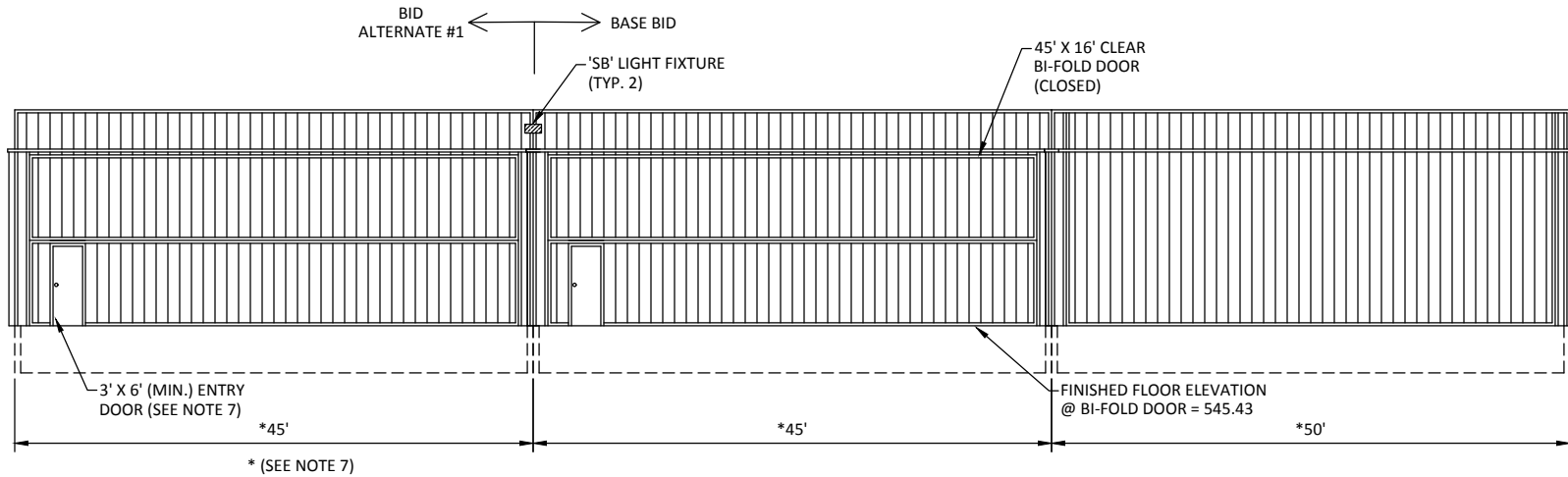
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MUSCATINE MUNICIPAL AIRPORT  
CONSTRUCT 3-UNIT HANGAR, TAXILANE & APRON

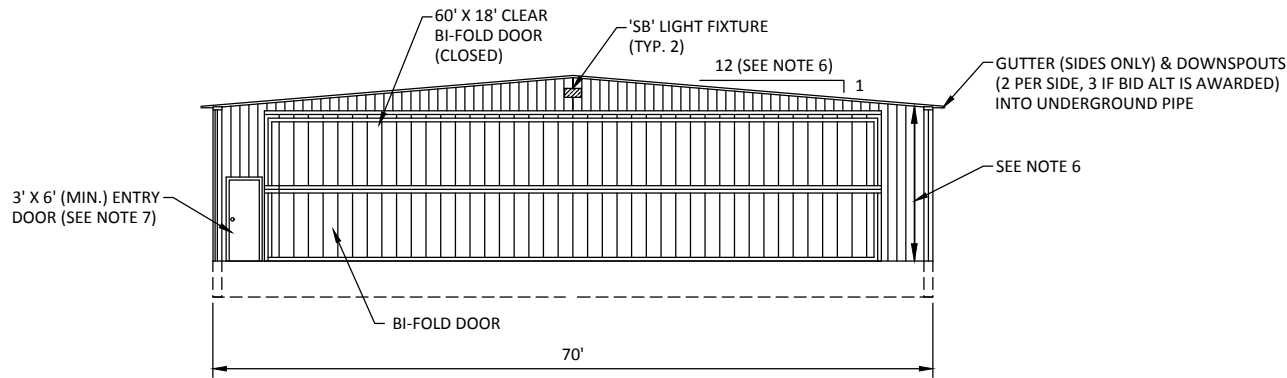
JOINTING DETAILS

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NORTHEAST ELEVATION - LOOKING SOUTHWEST  
NOT TO SCALE



NORTHWEST ELEVATION - LOOKING SOUTHEAST  
NOT TO SCALE

STRUCTURE NOTES:

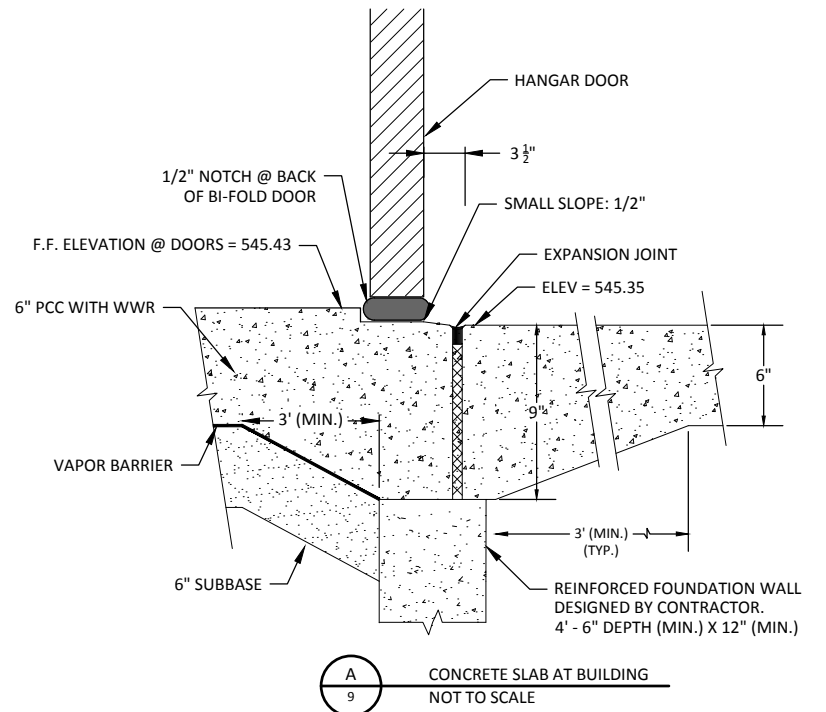
- CLEAR DOOR OPENING EACH UNIT AS SHOWN ON THE PLANS. (CLEAR WIDTH MAY BE AS LOW AS WIDTH SHOWN LESS 6", TO ALLOW FOR STRUCTURAL MEMBERS.)
- EXTERIOR EDGE OF FLOOR SHALL HAVE A 3 1/2" WIDE RECESSED NOTCH FOR SIDING AND FLASHING WHERE BI-FOLD DOORS ARE NOT LOCATED.
- BUILDING FLOOR SHALL BE A MINIMUM OF 6" PCC ON GRANULAR SUBBASE AND VAPOR BARRIER. ALL WORK ASSOCIATED WITH THE FLOOR PLACEMENT (INCLUDING THE SUBBASE AND SUBGRADE PREPARATION) SHALL BE INCLUDED IN THE REPRESENTATIVE BUILDING PRICE. 6" PCC FLOOR SHALL BE REINFORCED WITH 6" X 6" W10 X W10 WELDED WIRE FABRIC, FURNISHED IN SHEETS.
- PLAN REPRESENTS GENERAL REQUIREMENTS FOR HANGAR INSTALLATION AND DOES NOT CONSTITUTE ENGINEERED PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ENGINEERED PLANS FOR THE HANGAR BUILDING AS REQUIRED BY THE SPECIFICATIONS.
- FINISHED FLOOR ELEVATION IS AT THE DOOR, AT TOP OF 1/2" NOTCH.
- ROOF SLOPE SHALL ALLOW FOR MINIMUM INTERIOR CLEAR EQUAL TO DOOR HEIGHT SHOWN THROUGH ENTIRE INTERIOR.
- OVERALL BUILDING LENGTH MAY BE INCREASED AS REQUIRED TO MEET WIND LOADS, TO AN OVERALL MAXIMUM OF 150 FEET, WHILE MAINTAINING CLEAR DOOR OPENING SIZE. UNIT WIDTHS SHALL MAINTAIN TOTAL WIDTHS OF 45 FEET TO 50 FEET MAX EACH BAY. LARGE 'END' UNIT SHALL MAINTAIN WIDTH AS SHOWN (-0"/+6").

NOTES - (CONCRETE)

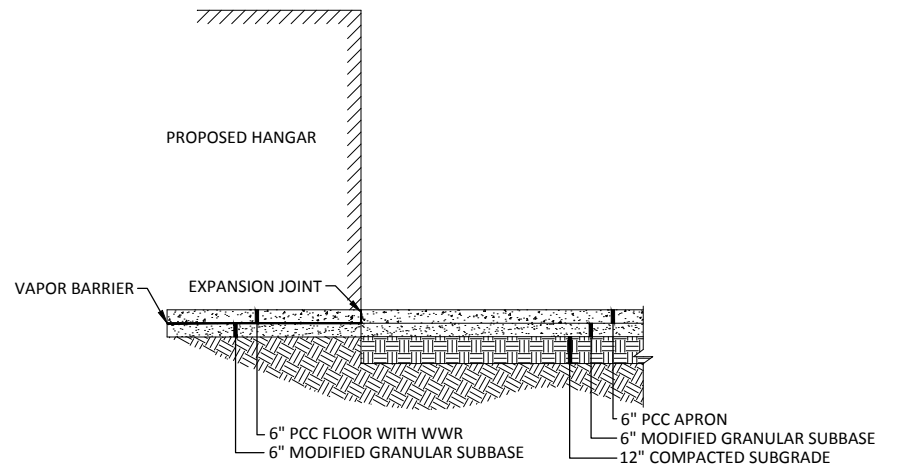
- CONCRETE MIX PROPERTIES: FOLLOW ACI 301.

	28 DAY COMP. STRENGTH	MAX SLUMP	ENTRAINED AIR CONTENT
FOOTINGS & FOUNDATION WALLS	4000 PSI	4"	0-3%
INTERIOR FLOOR SLABS	4000 PSI	4"	5-7%

- EXTERIOR APRONS SHALL USE IDOT CLASS C MIX WITH CLASS 3 AGGREGATE DURABILITY. FLEXURAL STRENGTH AT 7 DAYS SHALL BE 500 PSI.
- PROVIDE 3/4" X 3 1/2" SHEET NOTCH AROUND ENTIRE BUILDING.
- DEPRESS ISOLATION JOINT FILLER 3/8" & APPLY SONOMERIC CT 1 JOINT SEALANT.
- INTERIOR SLABS SHALL HAVE A FLOAT FINISH. PROVIDE 6" OF IDOT GRADATION #14 CRUSHED ROCK UNDER FLOOR SLAB. COMPACT TO 95% OF STANDARD PROCTOR MAXIMUM DENSITY. INCLUDE VAPOR BARRIER.
- SAW CUT INTERIOR FLOOR SLAB AT A MAXIMUM OF 10' O.C. SEAL IN ACCORDANCE WITH SPECS.



CONCRETE SLAB AT BUILDING  
NOT TO SCALE



TYPICAL SECTION  
NOT TO SCALE



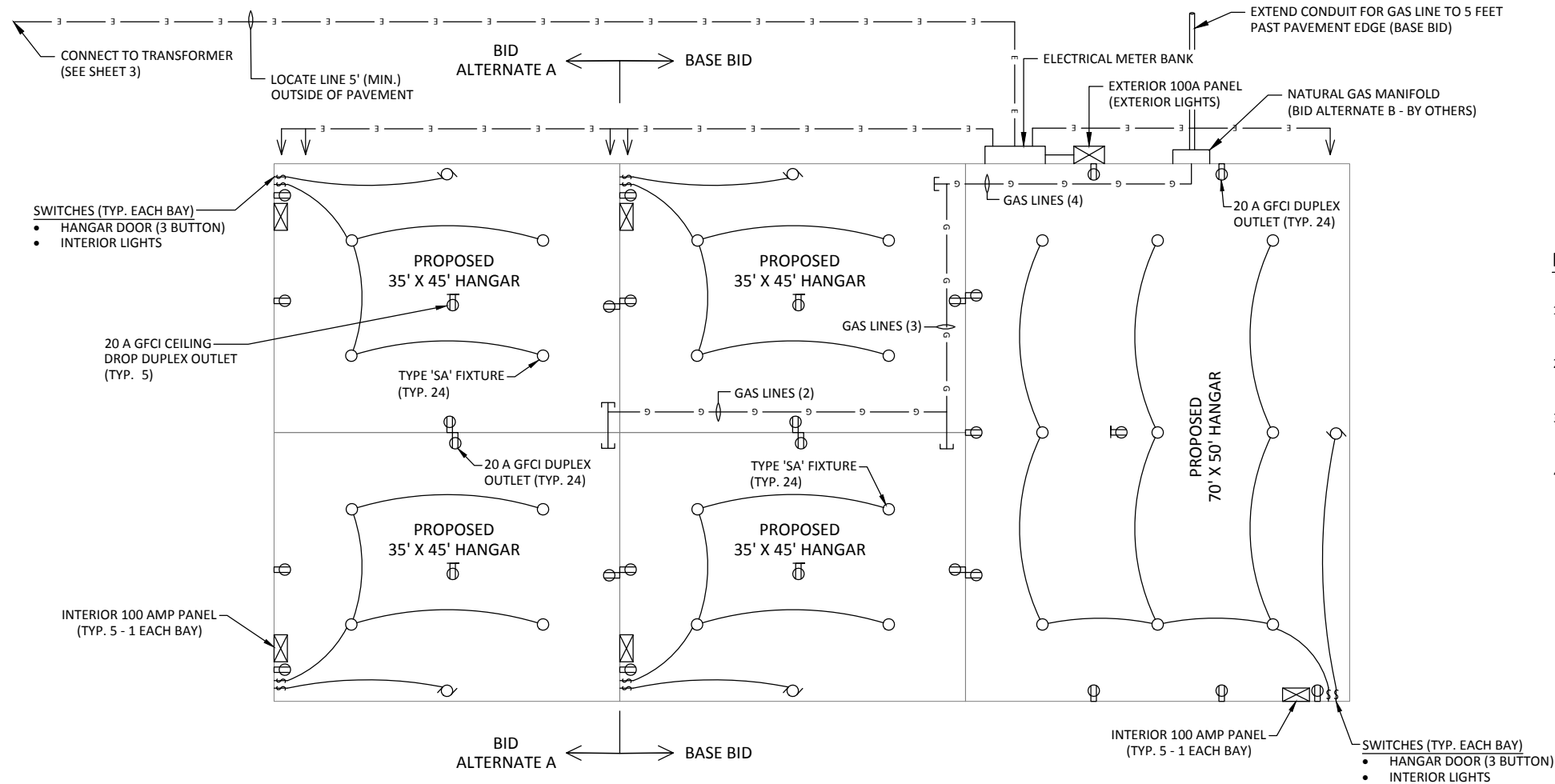
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& MENK**

855 WRIGHT BROTHERS BLVD SW, SUITE 2A  
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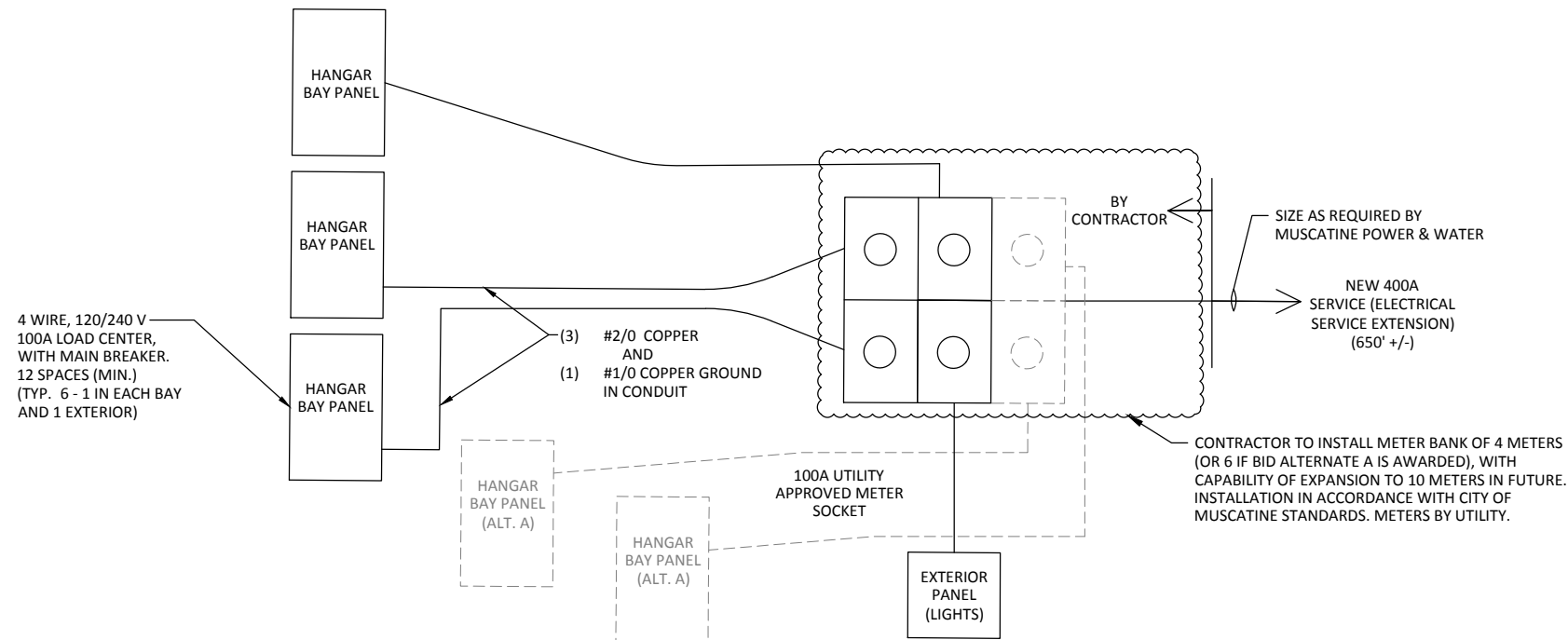
MUSCATINE MUNICIPAL AIRPORT  
CONSTRUCT 3-UNIT HANGAR, TAXILANE & APRON  
HANGAR ELEVATIONS & SLAB DETAIL

SHEET  
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**NOTES:**

1. THE 20A GFI OUTLETS SHOWN SHALL EACH BE ON NO MORE THAN 3 PER CIRCUIT WITH INDIVIDUAL CIRCUIT BREAKERS.
2. ALL LIGHTS SHALL BE SWITCHED. EXTERIOR LIGHTS SHALL INCLUDE PHOTOCELL CONTROL.
3. CONTRACTOR RESPONSIBLE FOR ALL ELECTRICAL BEGINNING JUST PRIOR TO METER BANK (INCLUDING METER BANK).
4. GAS LINES SHOWN IN HANGAR ARE BID ALTERNATE B. GAS MANIFOLD & SERVICE LINE BY ALLIANT ENERGY. CONDUIT FOR GAS LINE FROM 5 FEET BEYOND PAVEMENT TO MANIFOLD BY CONTRACTOR IN ACCORDANCE WITH ALLIANT ENERGY REQUIREMENTS AS PART OF BASE BID FOR HANGAR BUILDING.



LIGHTING FIXTURE SCHEDULE					
MARK	MANUFACTURER	CATALOG NO.	QTY/TYPE LAMPS	MOUNTING	REMARKS
SA	LITHONIA OR EQUAL	IBH-18000LM-L/LENS-MD-MV OLT-40K-70CRI	18,000 LUMEN LED 4000K, 70CRI	PURLIN	MOUNT AS HIGH AS POSSIBLE TO ROOF FRAMING. MOUNTING HEIGHT MUST EXCEED CLEAR DOOR HEIGHTS
SB	LITHONIA OR EQUAL	TWH-LED-30C-1000-40K-T3M	30 LED'S, 1 AMP DRIVER (100 MA), 4000K-CCT, TYPE 3 OPTICS WITH REFLECTOR	HANGAR FACE	MOUNT AS HIGH AS POSSIBLE ON THE HANGAR FACE ABOVE BI-FOLD DOORS. PROVIDE FLEXIBLE CONDUIT CONNECTION TO STEEL BUILDING FRAME.

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MUSCATINE MUNICIPAL AIRPORT  
CONSTRUCT 3-UNIT HANGAR, TAXILANE & APRON  
HANGAR ELECTRICAL PLAN

SHEET  
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