PUBLIC IMPROVEMENTS
CONTRACT DOCUMENTS

2020 TRAFFIC SIGNAL REPLACEMENT CONTRACT 2

ACTIVITY ID
042020008

PLAN FILE NO.
613-188/224

CITY COUNCIL APPROVAL

APPROVAL DATE
February 24, 2020

ROLL CALL NO.

CONTRACT NO.

CONTRACTOR

CONTRACT AMOUNT
$.00

ENGINEERING DEPARTMENT
Steven L. Naber, P.E.
Des Moines City Engineer

Funding Information
Object Code 543060
Organization No. C038EG99
Project No. TR091
ENGINEERING DEPARTMENT
CITY OF DES MOINES, IOWA

2020 Traffic Signal Replacement Contract 2

Activity ID 04-2020-008

The following documents are part of this contract:

Document
Instructions to Bidders
Official Publications
Proposal
Bid Bond
Contract
Performance, Payment and Maintenance Bond
Addenda:

Special Provisions:
Bidding Requirements
Contractual Requirements
Technical Specifications
Supplemental Specifications:
General Supplemental Specifications to SUDAS, 2019 Edition

April 22, 2019

PROJECT ENGINEER: Joseph Eddy
Phone Number: (515) 283-4034
INSTRUCTIONS TO BIDDERS

Activity ID 04-2020-008
Project Name 2020 Traffic Signal Replacement Contract 2

The work comprising the above referenced project 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 the contract documents. The Des Moines City Engineer is the Engineer. The terms used in the contract documents are defined in said SUDAS Standard Specifications. The City of Des Moines is the Contracting Authority on this project and shall hereinafter be referred to as the "Jurisdiction". Before submitting your bid, please review the SUDAS Standard Specifications, in particular, Division 1 - General Provisions and Covenants, including the sections regarding proposal requirements, bonding, contract execution and insurance requirements. Please be certain that all documents have been properly completed and submit them to the City Clerk, 1st Floor, City Hall, 400 Robert D. Ray Drive, Des Moines, Iowa, 50309.

I. BID SECURITY

The bid security must be in the minimum amount of 10% of the total bid amount including all add alternates (do not deduct the amount of deduct-alternates). Bid security shall be as defined in Section 26.8 of the Iowa Code and shall be in the form of a cashier's check or certified check drawn on a state-chartered or federally chartered bank, or a certified share draft drawn on a state-chartered or federally chartered credit union, or a bid bond executed by a corporation authorized to contract as a surety in Iowa or satisfactory to the Jurisdiction. The bid bond must be submitted on the enclosed Bid Bond form (DSM Urban 04/20/98) 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. Bid security other than said bid bond shall be made payable to the City of Des Moines. "Miscellaneous Bank Checks", and personal checks, as well as "Money Orders" and "Traveler's Checks" issued by persons, firms or corporations licensed under Chapter 533B of the Iowa Code, are not acceptable bid security. NOTE: If the Bidder submits Bid Security in the form of a Bid Bond, and the Bidder wishes to have their Bid Bond returned to them after an approved contract and bond has been executed or after there is a rejection of all bids (in accordance with Iowa Code 26.10), the Bidder shall include a self-addressed envelope with the Bid Bond.

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. Bidders must either utilize the two envelopes provided with the Bidding documents, or Bidders provide their own two envelopes, for their proposals and bid security for submission of their bids.

Sales Tax: The bidder should not include sales tax in the bid pursuant to Iowa Code. A sales tax exemption certificate will be available for all material purchased for incorporation in the project.

Accessibility for individuals with disabilities. The City of Des Moines is pleased to provide accommodations to individuals with disabilities or groups and encourages participation in City government. To better serve you, please notify us at least three business days in advance when possible at 515-283-4209, should special accommodations be required.
B. All pages of the Proposal must be returned. The following documents shall be completed, signed and returned in the Proposal envelope.

- **PROPOSAL.** - Complete each of the following parts:
  - **Part B** - Acknowledgement of Addenda, if any have been issued;
  - **Part C** - Bid Items, Quantities and Prices;
  - **Part F** - Additional Requirements; The following proposal attachment documents must be completed and attached:
    
    | ITEM NO. | DESCRIPTION OF ATTACHMENT                          |
    |----------|-----------------------------------------------------|
    | 1.       | Reciprocal Resident Bidder and Labor Force          |
    | 2.       | General                                             |

- **Part G** - Identity of Bidder.

The Bidder shall 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 **Bidder Status Form** (PROPOSAL Part F Item 2B), is required by the Iowa Labor Commissioner, pursuant to Iowa Admin. Code rule 875-156.2(1). The Bidder must complete and submit the **Bidder Status Form**, signed by an authorized representative of the Bidder, with their bid proposal. Under Iowa Admin. Code rule 875-156.2(1), failure to provide the **Bidder Status Form** with the bid may result in the bid being deemed non-responsive and may result in the bid being rejected. The **Worksheet: Authorization to Transact Business** from the Labor Commissioner is included on page 3 of 3 of the Instructions to Bidders, to assist Bidders in completing the **Bidder Status Form**.

C. Out-of-State Contractors:

1. 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 Iowa Department of Workforce Development. The contractor should contact 515-242-5871 for further information. Prior to contract execution, the City 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.

2. 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 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.

III. GENERAL

A. All bid documents must be submitted as printed. No alterations, additions, or deletions are permitted. If the Bidder notes a requirement in the contract documents that 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.

B. Additional information regarding addenda, plan holders, bid tabulations, etc. can be found on the Engineering Department web site at <http://www.dmgov.org/Departments/Engineering/Pages/BidsContracts.aspx>.
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.
NOTICE TO BIDDERS

CITY OF DES MOINES PUBLIC IMPROVEMENT PROJECT

Time and Place for Filing Sealed Proposals. Sealed bids for the work comprising each improvement as stated below must be filed at or before 11:00 a.m. on January 28, 2020, in the office of the City Clerk, 1st Floor, City Hall, 400 Robert D. Ray Drive, Des Moines, Iowa, 50309.

Accessibility for individuals with disabilities. The City of Des Moines is pleased to provide accommodations to individuals with disabilities or groups and encourages participation in City government. To better serve you, please notify us at least three business days in advance when possible at 515-283-4209, should special accommodations be required.

Time and Place Sealed Proposals Will be Opened and Considered. Sealed proposals will be opened and bids tabulated at 11:00 a.m., on January 28, 2020, in the City Council Chambers, 2nd Floor, City Hall, 400 Robert D. Ray Drive, Des Moines, Iowa, for consideration by the City Council (Council) at its meeting on February 24, 2020. The City of Des Moines (Jurisdiction) reserves the right to reject any and all bids.

Time for Commencement and Completion of Work. Work on each improvement shall be commenced upon approval of the contract by the Council, and completed as stated below.

Bid Security. Each bidder shall accompany its bid with bid security as defined in Section 26.8 of the Iowa Code and as specified by the Jurisdiction.

Contract Documents. Copies of the contract documents will be available after January 13, 2020, from the City Engineer’s Office, 2nd Floor, City Hall, 400 Robert D. Ray Drive, Des Moines, Iowa 50309, at no cost, phone (515) 283-4573.

Preference for Iowa Products and Labor. 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.

Sales Tax. The bidder should not include sales tax in the bid. A sales tax exemption certificate will be available for all material purchased for incorporation in the project.

General Nature of Public Improvement.  
2020 Traffic Signal Replacement Contract 2, 04-2020-008  
The improvement includes new traffic signals, vehicle loop detectors, Hot Mix Asphalt (HMA) pavement, Portland Cement Concrete (PCC) sidewalk, pavement markings, and other incidental items; all in accordance with the contract documents, including Plan File Nos. 613-188/224, located at the intersection of Lower Beaver Road and Madison Avenue and the intersection of 19th Street and Clark Street, Des Moines, Iowa.

This project shall be fully completed not later than September 18, 2020, and in accordance with the Completion Provisions.

Engineer’s Construction Estimate. $600,000.00

Preletting Conference.
NOTICE OF PUBLIC HEARING

CITY OF DES MOINES PUBLIC IMPROVEMENT PROJECT

Public Hearing on Proposed Contract Documents and Estimated Costs for Improvement. A public hearing will be held by the City Council on the proposed contract documents (plans, specifications and form of contract) on file in the City Engineer’s Office, and estimated cost for each improvement at its meeting on February 24, 2020, at 5:00 p.m., in the City Council Chambers, 2nd Floor, City Hall, 400 Robert D. Ray Drive, Des Moines, Iowa. The City Council Meetings are open to all individuals regardless of disability. To better serve you, please notify the City Clerk at least three business days in advance, when possible, should special accommodations be required.

General Nature of Public Improvement

2020 Traffic Signal Replacement Contract 2, 04-2020-008
The improvement includes new traffic signals, vehicle loop detectors, Hot Mix Asphalt (HMA) pavement, Portland Cement Concrete (PCC) sidewalk, pavement markings, and other incidental items; all in accordance with the contract documents, including Plan File Nos. 613-188/224, located at the intersection of Lower Beaver Road and Madison Avenue and the intersection of 19th Street and Clark Street, Des Moines, Iowa

Published in the Des Moines Register
February 5, 2020
PROPOSAL

To the Honorable Mayor and Members of the
City Council, City of Des Moines, Iowa

PROPOSAL: PART A - SCOPE

The City of Des Moines, hereinafter called the "Jurisdiction", has need of a qualified contractor to complete the work comprising the below referenced improvement. The undersigned Bidder hereby proposes to complete the work comprising the below referenced improvements or project as specified in the contract documents, which are officially on file with the Jurisdiction, in the Des Moines City Engineer's Office, at the prices hereinafter provided in Part C of this Proposal, for the following described improvements:

2020 Traffic Signal Replacement Contract 2, 04-2020-008

The improvement includes new traffic signals, vehicle loop detectors, Hot Mix Asphalt (HMA) pavement, Portland Cement Concrete (PCC) sidewalk, pavement markings, and other incidental items; all in accordance with the contract documents, including Plan File Nos. 613-188/224, located at the intersection of Lower Beaver Road and Madison Avenue and the intersection of 19th Street and Clark Street, Des Moines, Iowa

PROPOSAL: PART B - ACKNOWLEDGEMENT 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, QUANTITIES AND PRICES

UNIT BID PRICE CONTRACTS: The bidder must provide all unit prices, the amount, the total construction cost, any alternate price(s), and the total construction cost plus any add-altamtes if there are altarmates on the proposal on Proposal Attachment: Part C - Bid Items, Quantities, and Prices. The total construction cost plus any alterates selected by the Jurisdiction shall be used for comparison of bids. The total construction cost plus any add-altamtes shall be used for determining the sufficiency of the bid security.
BASE BID CONTRACTS: The bidder must provide any bid price(s), the total base bid price, any alternate price(s), and the total base bid plus any add-alternates if there are alternates on the proposal on Proposal Attachment: Part C - Bid Items, Quantities, and Prices. The total base bid plus any alternates selected by the Jurisdiction shall be used for comparison of bids. The total base bid plus any add-alternates 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 plus any selected 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 and provide the following documents:
   - Proof of registration with the Iowa Division of Labor in accordance with Chapter 91C of the Iowa Code by providing a valid Registration Number,
   - Proof of insurance by a Certificate(s) of Insurance,
   - 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 documents and information as requested in Item 1 above acceptable to the Des Moines City Engineer; and
3. Commence the work on this project on or before a date to be specified in a written notice to proceed by the Jurisdiction, and to fully complete the project not later than September 18, 2020, and in accordance with the Completion Provisions; and to pay liquidated damages for noncompliance with said completion provisions at the rate of five hundred and 00/100 dollars ($500.00) 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 paid 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 put in 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:

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION OF ATTACHMENT</th>
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<tbody>
<tr>
<td>1.</td>
<td>Reciprocal Resident Bidder and Labor Force</td>
</tr>
<tr>
<td>2.</td>
<td>General</td>
</tr>
</tbody>
</table>

PROPOSAL Page 3 of 4 Pages
PROPOSAL: PART G - IDENTITY OF BIDDER

The Bidder shall indicate whether the bid is submitted by a/an

☐ Individual,
    Sole Proprietorship

☐ Partnership

☐ Corporation

☐ Limited Liability Company

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

☐ Other

By

Bidder

Signature

Name (Print/Type)

Title

Street Address

City, State, Zip Code

Telephone Number / Email Address

A contract will not be executed until the apparent low Bidder is registered with the Iowa Commissioner of Labor pursuant to Section 91C.5 of the Iowa Code. The Bidder should contact 515-242-5871 for registration information.

Engineering Department Staff will contact the apparent low Bidder and obtain the name and title of the company's owner, president, CEO, etc. if a different person than entered above.

NOTE: The signature on this proposal must be an original signature in ink; copies or facsimile of any signature will not be accepted.
This is a unit bid price contract. The bidder must provide all unit prices, the amount, the total construction cost, any alternate price(s), and the total construction cost plus any add-altamtes if there are alternates on the proposal. The total construction cost plus any alternates selected by the Jurisdiction shall be used for comparison of bids. The total construction cost plus any add-altamtes shall be used for determining the sufficiency of the bid security.

**Activity ID 04-2020-008**

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<th>ITEM</th>
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<th>UNITS</th>
<th>QUANTITY</th>
<th>UNIT PRICE</th>
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TOTAL CONSTRUCTION COST $__________

*Item does not have to be included in 4-year maintenance bond but shall be covered by a 1-year maintenance bond.

NOTE: It is understood that the above quantities are estimated for the purpose of this bid. All quantities are subject to revision by the City. Quantity changes which amount to twenty (20) percent or less of the total bid shall not affect the unit bid price of that item.
PROPOSAL ATTACHMENT: PART F - ADDITIONAL REQUIREMENTS
ITEM 1 - RECIPROCAL RESIDENT BIDDER AND LABOR FORCE

Iowa Code section 73A.21 provides for a Reciprocal Resident Bidder and Labor Force preference.

Because of the nature of this project (i.e. Federal-aid participation), the Reciprocal Resident Bidder and Labor Force preference,

☐ shall not apply to this project, and the bidder need not complete the Resident Bidder Information below.

☒ shall apply to this project, and the bidder shall complete the Resident Bidder Information below.

To implement section 73A.21, the Iowa Labor Commissioner adopted chapter 156 of the Iowa Administrative Code, “Bidder Preferences in Government Contracting”. Iowa Admin. Code rule 875-156.2(1) requires each bidder to complete the attached Bidder Status Form. The Bidder must complete and submit the Bidder Status Form, signed by an authorized representative of the bidder, with their bid Proposal. Under Iowa Admin. Code rule 875-156.2(1), failure to provide the statement with the bid may result in the bid being deemed nonresponsive and may result in the bid being rejected.
Bidder Status Form

To be completed by all bidders

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: Authorization to Transact Business”, on page 3 of the “Instructions to Bidders”.)

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 nonresident bidder. Please complete Parts C and D of this form.

To be completed by resident bidders

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

Dates: _____ / _____ / _____ to _____ / _____ / _____
Address: _____________________________
City, State, Zip: ______________________

Dates: _____ / _____ / _____ to _____ / _____ / _____
Address: _____________________________
City, State, Zip: ______________________

Dates: _____ / _____ / _____ to _____ / _____ / _____
Address: _____________________________
City, State, Zip: ______________________

You may attach additional sheet(s) if needed.

To be completed by non-resident bidders

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

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 a reason to reject my bid.

Firm Name:

Signature: _____________________________

Date: ________________________________

You must submit the completed form to the governmental body requesting bids per 875 Iowa Administrative Code Chapter 156.
This form has been approved by the Iowa Labor Commissioner.
309-6001 02-14

PROPOSAL ATTACHMENT: PART F: Page 2 of 3 Pages
PROPOSAL ATTACHMENT: PART F - ADDITIONAL REQUIREMENTS
ITEM 2 - GENERAL

1. The work under this proposal 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 the contract documents.

Alternate Sales Tax:
Section 1020, 1.08, B, of the Supplemental Specifications shall apply. The bidder should not include sales tax in the bid. A sales tax exemption certificate will be available for all material purchased for incorporation in the project.

2. The Bidder hereby acknowledges that the City of Des Moines in advertising for public bids for this work reserves the right to give a limited notice to proceed of a duration not longer than three months. This limited notice to proceed shall be given where all necessary right-of-way has not yet been acquired. The limited notice to proceed will allow construction to proceed as far as possible and practical on the right-of-way, which has been acquired.

3. The Bidder hereby acknowledged and agrees:
   • To comply with the Equal Employment Opportunity Program included in the City of Des Moines Contract Compliance Program, which is available at the following website
     or from the City Engineer’s Office.
   • To comply with any and all applicable provisions of the Des Moines Human Rights Ordinance, Chapter 62, of the Des Moines Municipal Code.
   • Not to discriminate against any employees, or applicants for employment, on the basis of age, race, religion, creed, color, sex, sexual orientation, national origin, ancestry, disability, familial status or gender identity.

4. The City’s Overall Annual DBE/TSB Goal for calendar year 2020 is 5.94%, which represents a target that the City would like to achieve in including DBE/TSB participation on City contracts; and is not a mandatory goal for this project. The Certified Directory of DBEs is available at the following website <https://secure.iowadot.gov/DBE/Directory/Index/>. The Certified Directory of TSBs is available at the following website <https://iowaeda.dynamics365portals.us/tsb-search/>

PROPOSAL ATTACHMENT: PART F - ADDITIONAL REQUIREMENTS
ITEM 3 - COMPLETION PROVISIONS

The bidder hereby agrees to commence and complete the work in accordance with the attached Completion Provisions.
PROPOSAL ATTACHMENT: PART F – ADDITIONAL REQUIREMENTS
ITEM 3 – COMPLETION PROVISIONS

The Bidder hereby agrees to:

1. Commence the work no earlier than June 1, 2020 and to fully complete all work no later than September 18, 2020; and to pay liquidated damages for noncompliance with said completion provision in the amount of five hundred and no/100 dollars ($500.00) for each calendar day thereafter.

2. Undertake and schedule work in compliance with intermediate completion provisions as described below. The work to be completed by the intermediate completion date shall be such work as required to satisfy the intermediate completion date description.

   Intermediate Completion Date:
   The Contractor shall complete construction of all work, including new traffic signals, vehicle loop detectors, Hot Mix Asphalt (HMA) pavement, PCC sidewalk and curb ramp construction, pavement markings, and all associated work by August 7, 2020.

   The following items do not need to be completed for the Intermediate Completion Date. This list includes but is not limited to the following:
   
   - Sod

   Liquidated damages for noncompliance with said completion provisions in the amount of one thousand five hundred and no/100 dollars ($1,500.00) per calendar day will be assessed for each day after August 7, 2020, that the work is not completed with the above described Intermediate Completion Date description and items.

3. Pay separate sums of liquidated damages that will be assessed for each of the conditions described hereinbefore, and they shall be cumulative if multiple conditions have not been satisfied.
BID BOND

KNOW ALL BY THESE PRESENTS:

That we, ____________________________________________, as Principal, and
______________________________________________________, as Surety, are held and firmly
bound unto the City of Des Moines, as Obligee (hereinafter the "Jurisdiction"), in the penal sum of

____________________________________________________ dollars

($___________________) lawful money of the United States, for which payment the Principal and Surety bind
themselves, their heirs, executors, administrators, successors, and assigns jointly and severally, firmly by
these presents.

The Principal has submitted to the Jurisdiction a proposal to enter into a contract in writing, for the following
described improvements:

2020 Traffic Signal Replacement Contract 2, 04-2020-008
The improvement includes new traffic signals, vehicle loop detectors, Hot Mix Asphalt (HMA) pavement,
Portland Cement Concrete (PCC) sidewalk, pavement markings, and other incidental items; all in accordance
with the contract documents, including Plan File Nos. 613-188/224, located at the intersection of Lower
Beaver Road and Madison Avenue and the intersection of 19th Street and Clark Street, Des Moines, Iowa

The Surety hereby stipulates and agrees that the obligations of the Surety and its Bond will be in no way impaired
or affected by any extension of the time within which the Jurisdiction may accept the Bid or execute a Contract;
and the 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 will be Polk County, State of Iowa. If legal action is required by the Jurisdiction against the Surety or
Principal to enforce the provisions of this bond or to collect the monetary obligation accruing to the benefit of the
Jurisdiction, the Surety or Principal agrees to pay the Jurisdiction all outlay and expense incurred by the
Jurisdiction in enforcing any of the provisions of this Bond. All rights, powers, and remedies of the Jurisdiction
are cumulative and not alternative and are in addition to all rights, powers and remedies given to the Jurisdiction
by law. The Jurisdiction may proceed against the Surety for any amount guaranteed hereunder whether action is
brought against Principal or whether or not the Principal is joined in the action. As used herein, the phrase “all
outlay and expense” is not to be limited in any way, but includes 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, 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.

DSM Urban 04/20/1998

BID BOND  Page 1 of 2 Pages
If the proposal by the Principal is accepted and the Principal enters into a contract with the Jurisdiction in accordance with the terms of the proposal, including the provision of insurance and bond as specified in the contract documents with good and sufficient surety for the faithful performance of the contract, for the prompt payment of labor and material furnished in the prosecution of the work, and for the maintenance of the improvements as may be required in the contract documents or, in the event the Principal does not enter into a contract and provide the required insurance and bonds, the Principal pays the penal sum to the Jurisdiction, then this obligation will become null and void; otherwise, the Surety 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:

______________________________
Surety Company

______________________________
By ____________________________
Signature Attorney-in-Fact/Officer

______________________________
Name of Attorney-in-Fact/Officer

______________________________
Company Name

______________________________
Company Address

______________________________
City, State Zip Code

______________________________
Company Telephone Number

PRINCIPAL:

______________________________
Bidder

______________________________
By ____________________________
Signature

______________________________
Name

______________________________
Title

______________________________
Address

______________________________
City, State Zip Code

______________________________
Telephone Number

NOTE:

1. All signatures on this bid bond must be original signatures in ink; copies or facsimile of any signature will not be accepted.

2. This bond must be sealed with the Surety’s raised, embossed seal.

3. 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 security watermark.

4. The name and signature of the Surety’s Attorney-in-Fact/Officer entered on this bond must be exactly as listed on the Certificate or Power of Attorney accompanying this bond.
CONTRACT

THIS CONTRACT, made and entered into at Des Moines, Iowa, on ________________, by and between the City of Des Moines, by its Mayor, upon order of its City Council, hereinafter the "Jurisdiction", and ________________________________, hereinafter the "Contractor".

WITNESSETH:

The Contractor hereby agrees to complete the work comprising the below referenced improvement as specified in the contract documents, which are officially on file with the Jurisdiction, in the Des Moines City Engineer's Office. This contract includes all contract documents. The 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 Attachments attached hereto. The Des Moines City Engineer is the Engineer. 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: Item 2: Bid Items, Quantities and Prices which were proposed by the Contractor in its proposal submitted in accordance with the Notice to Bidders for the following described improvements:

2020 Traffic Signal Replacement Contract 2, 04-2020-008
The improvement includes new traffic signals, vehicle loop detectors, Hot Mix Asphalt (HMA) pavement, Portland Cement Concrete (PCC) sidewalk, pavement markings, and other incidental items; all in accordance with the contract documents, including Plan File Nos. 613-188/224, located at the intersection of Lower Beaver Road and Madison Avenue and the intersection of 19th Street and Clark Street, Des Moines, Iowa

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, payment, and maintenance bond. The Contractor hereby agrees to commence work under this contract on or before a date to be specified in a written notice to proceed by the Jurisdiction and to fully complete the project not later than September 18, 2020, and in accordance with the Completion Provisions; and to pay liquidated damages for noncompliance with said completion provisions in the amount of five hundred and 00/100 dollars ($500.00), for each calendar day thereafter that the work remains incomplete.
IN WITNESS WHEREOF, the Parties hereto have executed this instrument, in triplicate on the date first shown written.

| JURISDICTION:                                                                 |
| By                                                                               |
| T. M. Franklin Cownie, Mayor                                                     |
| (Seal)                                                                           |
| ATTEST:                                                                         |
| P. Kay Cmelik, City Clerk                                                       |
| FORM APPROVED BY:                                                               |
| Kathleen Vanderpool, Deputy City Attorney                                        |

| CONTRACTOR:                                                                    |
| By                                                                               |
| Contractor                                                                     |
| By                                                                               |
| Signature                                                                       |
| Title                                                                           |
| Street Address                                                                  |
| City, State - Zip Code                                                          |
| Telephone Number / Email Address                                                |

**CONTRACTOR PUBLIC REGISTRATION INFORMATION To Be Provided By:**

1. **All Contractors:** The Contractor's Public Registration Number, issued by the Iowa Commissioner of Labor pursuant to Section 91C.5 of the Iowa Code, is as follows:
   Number

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 City 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 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.

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

State of ______________________ )
________________________ ) SS
________________________ County )

On this ______ day of ____________, 20 _____ , 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 ______________________

SUDAS 04/25/2016

CONTRACT Page 3 of 3 Pages
1. The Contractor acknowledges and agrees:
   • To comply with the Equal Employment Opportunity Program included in the City of Des
     Moines Contract Compliance Program, which is available at the following website
     or from the City Engineer’s Office.
   • To comply with any and all applicable provisions of the Des Moines Human Rights
     Ordinance, Chapter 62, of the Des Moines Municipal Code.
   • Not to discriminate against any employees, or applicants for employment, on the basis of
     age, race, religion, creed, color, sex, sexual orientation, national origin, ancestry, disability,
     familial status or gender identity.
   • To include this provision in all subcontracts for this project.

2. The Contractor agrees to comply with the requirements of the City of Des Moines Contract
   Compliance Program as referenced in the proposal. Final acceptance of the project will not be
   made until the Contractor has submitted to the City Engineer a notarized summary of payments
   to and scope of work by all DBE/TSB subcontractors.

3. The City of Des Moines Master Construction Safety Packet (Safety Plan) is available at
   and is also available upon request from the Engineering Department. The Engineering
   Department will make available a copy of the City of Des Moines Safety Plan to the Contractor
   when the contract is awarded. The Contractor understands and agrees that said Safety Plan is for
   the Contractor’s information only and that it is the Contractor’s sole responsibility to provide, or
   make available, this safety information to all its Subcontractors.

4. The Contractor understands and agrees that the construction of the work included in this contract
   is by its nature dangerous work. The Contractor agrees:
   • That the Contractor should have a safety program; however, the Contractor need not submit a
     safety program to the City of Des Moines, and City of Des Moines staff will not review or
     approve the Contractor’s safety program. The City of Des Moines assumes that the
     Contractor will maintain a safe worksite; however, City of Des Moines staff will not intrude
     in the Contractor’s responsibility for safety issues.
   • That until the work is accepted by the Jurisdiction; the work shall be in the custody of and
     under the charge, care, and control of the Contractor.
   • That the Contractor is responsible for the project area or work site.
   • That the Contractor is solely responsible for the safety of everyone on its work site.
   • That it is the Contractor’s sole responsibility to provide as safe a working site as possible
     given the nature of the work.
   • That it is the Contractor’s responsibility to notify and advise its employees, subcontractors,
     suppliers, and everyone on the worksite of the dangers associated with the work, and provide
     them with appropriate safety information to protect them from those dangers.
5. The Contractor acknowledges and agrees that no contract shall be binding upon the City of Des Moines until said contract has been executed by the Bidder, and shall have been approved by the City Council and executed by the Mayor and attested to by the City Clerk.

6. The Contractor agrees that sixty (60) days shall constitute a reasonable time within which it shall be required to make progress payments or final payment to subcontractors after each subcontractor's satisfactory performance of its work, all as required by Section 573.12 2.b.(2) of the Code of Iowa.
This contract is awarded and executed for completion of the work specified in the contract documents for the bid price tabulated below as proposed by the contractor in its proposal submitted in accordance with notice to bidders and notice of of public hearing. All quantities are subject to revision by the Jurisdiction. Quantity changes which amount to twenty (20) percent or less of the amount bid shall not affect the unit bid price of that item.

Activity ID 04-2020-008

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TOTAL CONSTRUCTION COST

* Item does not have to be included in 4-year maintenance bond but shall be covered by a 1-year maintenance bond.

NOTE: It is understood that the above quantities are estimated for the purpose of this bid. All quantities are subject to revision by the City. Quantity changes which amount to twenty (20) percent or less of the total bid shall not affect the unit bid price of that item.
CONTRACT ATTACHMENT: ITEM 3 – COMPLETION PROVISIONS

The Contractor hereby agrees to:

1. Commence the work no earlier than June 1, 2020 and to fully complete all work no later than September 18, 2020; and to pay liquidated damages for noncompliance with said completion provision in the amount of five hundred and no/100 dollars ($500.00) for each calendar day thereafter.

2. Undertake and schedule work in compliance with intermediate completion provisions as described below. The work to be completed by the intermediate completion date shall be such work as required to satisfy the intermediate completion date description.

**Intermediate Completion Date:**

The Contractor shall complete construction of all work, including new traffic signals, vehicle loop detectors, Hot Mix Asphalt (HMA) pavement, PCC sidewalk and curb ramp construction, pavement markings, and all associated work by August 7, 2020.

The following items do not need to be completed for the Intermediate Completion Date. This list includes but is not limited to the following:

- Sod

Liquidated damages for noncompliance with said completion provisions in the amount of one thousand five hundred and no/100 dollars ($1,500.00) per calendar day will be assessed for each day after August 7, 2020, that the work is not completed with the above described Intermediate Completion Date description and items.

3. Pay separate sums of liquidated damages that will be assessed for each of the conditions described hereinbefore, and they shall be cumulative if multiple conditions have not been satisfied.
PERFORMANCE, PAYMENT & MAINTENANCE BOND

KNOW ALL BY THESE PRESENTS:

That we, ________________________________, as Principal (the "Contractor" or "Principal"), and ________________________________, as Surety, are held and firmly bound unto the City of Des Moines, as Obligee (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 and severally, firmly by these presents.

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

2020 Traffic Signal Replacement Contract 2, 04-2020-008

The improvement includes new traffic signals, vehicle loop detectors, Hot Mix Asphalt (HMA) pavement, Portland Cement Concrete (PCC) sidewalk, pavement markings, and other incidental items; all in accordance with the contract documents, including Plan File Nos. 613-188/224, located at the intersection of Lower Beaver Road and Madison Avenue and the intersection of 19th Street and Clark Street, Des Moines, Iowa

and to faithfully perform all the terms and requirements of the Contract within the time specified, in a good and workmanlike manner, and in accordance with the Contract Documents. Provided however, that one year after the date of acceptance by the Jurisdiction as complete, of the work under the above referenced Contract, the maintenance portion of this Bond shall continue in force but the penal sum for maintenance shall be reduced to ________________________________ dollars ($ ________________), which is the cost associated with those items shown on the Proposal and in the Contract which require a maintenance bond period in excess of one year.

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

1. PERFORMANCE: The Contractor shall well and faithfully observe, perform, fulfill and abide by each and every covenant, condition and part of the Contract and Contract Documents, by reference made a part hereof, and shall indemnify and save harmless the Jurisdiction from all outlay and expense incurred by the Jurisdiction by reason of the Contractor's default or 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.
2. **PAYMENT:** The Contractor and Surety on this bond hereby agree to pay all just claims submitted by persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the performance of the Contract, 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 unless the claims have been established as provided by law. The Contractor and Surety hereby bind themselves to the obligations and conditions set forth in Iowa Code Chapter 573.

3. **MAINTENANCE:** The Contractor and the Surety shall, at their own expense:
   A. Remedy any and all defects that may develop in or result from work to be performed under the Contract within the period of four (4) year(s) from the date of acceptance of the work under the Contract, by reason of defects in workmanship or materials used in construction of the work;
   B. Keep all work in continuous good repair; and
   C. Pay the Jurisdiction's reasonable costs of monitoring and inspecting 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 obligation extends to defects in workmanship or materials not discovered or known to the Jurisdiction at the time the work was accepted.

4. **GENERAL:** Every Surety on this Bond shall be deemed and held bound, any contract to the contrary notwithstanding, to the following provisions:
   A. To consent without notice to any extension of time to the Contractor in which to perform the Contract;
   B. To consent without notice to any change in the Contract or Contract Documents, that 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
   C. 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 liquidated damages are being charged against the Contractor.

The Contractor and every Surety on this Bond shall be deemed and held bound, any contract to the contrary notwithstanding, to the following provisions:
   A. 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.
B. 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 as 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.

C. 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 Polk 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 accruing to the benefit of the Jurisdiction, the Contractor and Surety agree, jointly and severally, to pay the Jurisdiction all outlay and expense incurred 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 the Surety for any amount guaranteed hereunder whether action is brought against the Contractor or whether or not the Contractor is joined in the action.

NOW THEREFORE, the condition of this obligation is such that if the Principal shall faithfully perform all of 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 word, 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.

Witness our hands, in triplicate, this ______ day of ______________________, 20_____

PRINCIPAL:

________________________________________
Contractor

By ______________________________________
Signature

________________________________________
Title

FORM APPROVED BY:

________________________________________
Kathleen Vanderpool
Deputy City Attorney

SURETY:

Surety Company

By ______________________________________
Signature Attorney-in-Fact/Officer

________________________________________
Name of Attorney-in-Fact/Officer

________________________________________
Company Name

________________________________________
Company Address

________________________________________
City, State Zip Code

________________________________________
Company Telephone Number

NOTE:

1. All signatures on this performance, payment & maintenance bond must be original signatures in ink; copies or facsimile of any signature will not be accepted.

2. This bond must be sealed with the Surety’s raised, embossed seal.

3. The Certificate or Power of Attorney accompanying this bond must be valid on its face and sealed with the Surety’s raised, embossing seal.

4. The name and signature of the Surety’s Attorney-in-Fact/Officer entered on this bond must be exactly as listed on the Certificate or Power of Attorney accompanying this bond.

5. This bond form must be utilized as printed; no additions/deletions/alterations are permitted, other than providing the required information.
1) AWARD OF CONTRACT

The apparent low Bidder on this project will be required to furnish executed contract; Performance, Payment, and Maintenance Bond; Certificate of Insurance; and NPDES Certification Statements, if required, in substantial compliance with the contract documents to the Engineering Department before 12:00 noon on Friday, February 21, 2020. Completed documents in accordance with the contract documents and acceptable to the City of Des Moines Engineering and Legal Departments will be presented to the City Council for award of this contract on Monday, February 24, 2020. This would allow construction to begin upon issuance of the Notice to Proceed by the City Engineer.

By submission of a bid, the Bidder agrees that if the Bidder fails to furnish said executed contract; Performance, Payment, and Maintenance Bond; Certificate of Insurance; and NPDES Certification Statements, if required, in substantial compliance with the contract documents to the Engineering Department before 12:00 noon on Friday, February 21, 2020; the amount of the Bidder’s bid security may become the property of the City and may be retained—not as a penalty but as liquidated damages. The award of the contract may then, at the discretion of the City, be made to the next-lowest responsible Bidder, or the work may be re-advertised or may be constructed by the City in any legal manner. Notice to Proceed will not be issued until the Contractor’s insurance is in compliance with the specifications.

The Bidder is reminded that all subcontractors must be approved by the City Council. The Council policy is that subcontractors be approved at the time the contract is awarded, if possible. The Bidder should submit a letter requesting approval of any subcontractors along with the subcontractor’s NPDES Certification Statement, if required, at the time its executed contracts are submitted for approval.

2) CONTRACT COMPLIANCE PROGRAM


a. EEO Program – Complaints of discrimination in violation of the Des Moines Human Rights Ordinance, or corresponding state or federal law, should still be filed with the appropriate city, state, or federal agency. If a Contractor is found by one of these agencies to be engaging in illegal discrimination, the Contractor will be in breach of its contract with the City of Des Moines and appropriate action will be taken.

b. DBE/TSB Program: Certification – The City of Des Moines’ program is a DBE/TSB Program whereby both certified DBEs and certified TSBs are equally eligible under the program. All DBEs shall be certified by the Iowa Department of Transportation (IDOT), and the Certified Directory of DBEs is available at the following website https://secure.iowadot.gov/DBE/Directory/Default.aspx.
All TSBs shall be certified by the Iowa Economic Development Authority, and the Certified Directory of TSBs is available at the following website https://iowaeda.microsoftcrmportals.com/tsb-search/. The TSB website allows the user to search by name or other keyword. If the user enters the keyword "CONST" in the space next to Service Description and clicks SEARCH, the database will provide a listing of all TSBs that have identified various forms of construction as their type of work. The Directories will not be printed in the contract documents. Copies of the DBE and TSB Directories are available from the Engineering Department upon request.

c. DBE/TSB Program: Annual and Contract Goals – The City’s overall annual DBE/TSB goal will be based on the IDOT DBE overall annual goal established for the corresponding federal fiscal year as further adjusted and established by the Engineering Department to consider such factors as the current capacity of DBEs/TSBs to perform work, differences in the DBE versus TSB market, etc. By utilizing the IDOT overall annual DBE goal as the City’s overall annual DBE/TSB goal, the goal will be independently reviewed annually and updated regarding the availability of the DBEs that are ready, willing, and able to perform work. Many DBEs are also certified as TSBs and the availability is similar. The City’s overall annual DBE/TSB goal represents a target that the City would like to achieve by including DBE/TSB participation on City contracts; and is not a mandatory goal for this project. The Bidder is encouraged to use its best efforts to meet, and if possible exceed, the City’s overall annual DBE/TSB goal.

3) ALTERNATE SALES AND USE TAX

Section 1020, 1.08, B, of the General Supplemental Specifications shall apply to this contract. The Bidder should not include sales tax in the bid pursuant to Iowa Code. A sales tax exemption certificate will be available for all material purchased for incorporation in the project. Complete information on qualifying materials and supplies can be found at www.state.ia.us/tax, the Iowa Department of Revenue and Finance’s (IDRF) web site. Links are found in the Business Taxes and Local Government categories. Contact the IDRF at idrf@idrf.state.ia.us if you have questions on this requirement.
SPECIAL PROVISION
CONTRACTUAL REQUIREMENTS
FOR FLAGGERS, UNIFORMED POLICE OFFICER
ON
2020 Traffic Signal Replacement Contract 2
ACTIVITY ID 04-2020-008

1) GENERAL

The Contractor shall use Uniformed Police Officer(s) for flagging services for lane closures without MUTCD traffic control devices and/or for securing open building sites and/or as determined by the City’s Project Engineer.

The Contractor shall contact Jon Nablo at 515-777-6980 (24-hour voice mail) a minimum of 48 hours in advance of needing service to schedule Uniformed Police Officer(s). Should the Contractor not receive a response from Officer Jon Nablo within nine (9) business hours (business hours mean between 8:00 A.M. and 5:00 P.M.), the Contractor shall notify the Engineer immediately.

Effective January 1, 2016, the hourly rate for Uniformed Police service will be charged at $45.00 per hour, with a three (3) hour minimum. Christmas Day, New Year’s Eve Day, New Year’s Day, Memorial Day, Independence Day, Labor Day, and Thanksgiving Day, are considered major holidays and shall be paid at the premium rate of two times (2x) the normal rate. When the Contractor provides less than 48 hours of notice in scheduling, the hourly rate charged for Uniformed Police service will be an additional $10.00 per hour. The City cannot guarantee availability of Uniformed Police service when less than 48 hours of scheduling notice is provided by the Contractor.

Cancellation of a Uniformed Police service due to inclement weather shall be made no later than 12 hours prior to the scheduled date/time of service, but no later than 7:00 P.M. the day before the scheduled service. Cancellation of service due to inclement weather less than 12 hours prior to date/time of service or later than 7:00 P.M. the day before the scheduled service is subject to a cancellation fee of $135 per officer per shift.

Cancellation of a Uniformed Police service for reasons other than inclement weather prior to a scheduled date/time of service must be made no later than 48 hours prior to the scheduled date/time of service. Cancellation of service less than 48 hours prior to date/time of service is subject to a cancellation fee of $135 per officer per shift.

Emergency scheduling or cancellation of Uniformed Police services shall be coordinated with the Project Engineer. Emergency is defined as an unforeseen condition or utility issue as approved by the Engineer. Emergency scheduling or cancellation shall not be subject to an additional hourly service rate or a cancellation fee and shall be initiated by the Engineer to Jon Nablo. Emergency scheduling of Uniformed Police service shall remain the responsibility of the Contractor.

2) METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Work shall be paid at a rate of $550.00 per day for Flagger, Uniformed Police Officer when performing flagging services as approved by the Engineer. Half day increments shall be the method of measurement for Flagger, Uniformed Police Officer. Holiday service shall be measured at two times (2x) per day. The Contractor shall collect and keep, as records for payment, the invoices received from the Uniformed Police Officer(s) for services performed. Payment shall be made within one (1) week from the date of service by an agreed to means between the Contractor and Jon Nablo.
ENGINEERING DEPARTMENT
CITY OF DES MOINES, IOWA

SPECIAL PROVISION
TECHNICAL SPECIFICATIONS
ON

2020 TRAFFIC SIGNAL REPLACEMENT CONTRACT 2

LOWER BEAVER ROAD & MADISON AVENUE AND
19TH STREET & CLARK STREET TRAFFIC SIGNAL REPLACEMENTS

ACTIVITY ID 04-2020-008
TRAFFIC SIGNAL SPECIFICATIONS

TABLE OF CONTENTS

I  GENERAL REQUIREMENTS
   1.1 RELATED SPECIFICATIONS AND STANDARDS
   1.2 LOCAL REQUIREMENTS
   1.3 REMOVALS

II INSTALLATION REQUIREMENTS
   2.1 FOUNDATIONS
   2.2 CONDUIT
   2.3 WIRING AND CABLE
   2.4 FIBER OPTIC CABLE
   2.5 BONDING AND GROUNDING
   2.6 TRAFFIC SIGNAL DISPLAYS
   2.7 CONTROLLER CABINET
   2.8 PAINTING
   2.9 LOOP DETECTORS
   2.10 LOCATE BOX

III MATERIAL REQUIREMENTS
   3.1 TRAFFIC SIGNAL CABLE
   3.2 SIGNS
   3.3 FIBER OPTIC CABLE AND ACCESSORIES
   3.4 STREETLIGHTING

IV EQUIPMENT REQUIREMENTS
   4.1 2070 ADVANCED TRAFFIC CONTROLLER WITH CLS
   4.2 FIBER OPTIC DATA LINK
   4.3 TRAFFIC SIGNAL CABINET
   4.4 ETHERNET SWITCH
   4.5 VEHICULAR TRAFFIC SIGNAL HEADS
   4.6 PEDESTRIAN TRAFFIC SIGNAL HEADS
   4.7 ALUMINUM TRAFFIC SIGNAL PEDESTAL
   4.8 GALVANIZED STEEL TRAFFIC SIGNAL SUPPORT
   4.9 PEDESTRIAN PUSH BUTTON DETECTORS

V POLE FINISH
   5.1 GENERAL
   5.2 SURFACE PREPARATION
   5.3 ZINC COATING
   5.4 EXTERIOR COATING
   5.5 QUALITY CONTROL
   5.6 PACKAGING
   5.7 FIELD REPAIR PROCEDURE
   5.8 METHOD OF MEASUREMENT

VI ADDITIONAL BIDDING ATTACHMENTS
   6.1 SCHEDULE OF UNIT PRICES
PART I
GENERAL REQUIREMENTS

This part consists of the general provisions necessary when furnishing a traffic signal installation complete, in place and operational as described in the project plans and these special provisions.

1.1 RELATED SPECIFICATIONS AND STANDARDS

Unless otherwise specified in the project plans and special provisions the traffic signal installed under this specification shall comply with:

B. Iowa Department of Transportation Standard Specifications
C. Specifications of the Underwriters Laboratories Inc.
D. National Electrical Code.

1.2 LOCAL REQUIREMENTS

The Contractor shall notify and receive approval from the City prior to any operational shutdown of any existing traffic signal installation. Adherence to the City Electrical Code shall be required for service to the Controller.

The Contractor is responsible for locating all equipment installed as part of the project within the City right-of-way until project acceptance. Any damage as a result of failure to locate this equipment shall be the responsibility of the Contractor to replace with no additional cost to the City. The Contractor shall receive delivery of traffic signal poles and equipment and assumes responsibility for delivery and installation in the field.

The Contractor shall provide at least 48 hours notice to the City of Des Moines Signal Shop prior to placing the permanent traffic signals into operation.

Contractor shall provide to the City “as-built” drawings that identify all changes made to the contract plans.

1.3 REMOVALS

All existing traffic signal pole foundations that become unused for the new traffic signal shall be removed. Foundations three feet or less in depth shall be removed completely. Foundations greater than three feet in depth shall be removed to one foot below grade.

All existing traffic signal handholes that become unused for the new traffic signal shall be removed and discarded by the contractor.

Unless otherwise indicated on the plans, all existing wiring that becomes unused in this project shall be removed and discarded by the contractor.

All holes shall be filled and surface restored.

Removals and restoration are incidental to the other pay items unless otherwise specified in the contract documents.
PART II
INSTALLATION REQUIREMENTS

This part consists of the installation details necessary during the construction of a traffic signal complete, in place, and operational as described in the project plans and these special provisions.

An anti-seize compound shall be used in the installation of all mechanical connections and fasteners, including all nuts and bolts.

2.1 FOUNDATIONS

The Contractor shall be responsible for the proper elevation, offset, and level of each foundation.

The top elevation of the traffic signal footing must be square and two inches above finished grade.

The foundations must be given seven days to cure before poles are erected.

The contractor shall provide designs for all concrete bases where mast arms are longer than 70 feet or when it is called for on the plans. The cost for the design shall be considered as part of the cost of the mast arm pole. This design would then be used as a substitute for footing design as shown on the signal detail sheet of the plans. The use of the ground rod and the number of conduits as indicated on the signal detail sheet of the plans shall remain the same.

When installing a conduit bend in an existing base the conduit size shall be equivalent to the conduit in the ground. The steel in the base shall not be cut or damaged and the concrete shall be broken away in the shape of a “U” with an approximate depth of at least 12 inches below the depth of the surrounding ground surface. Enough concrete shall be removed so the conduit will be inside the anchor bolts of the foundation. The conduit shall be placed in the “U” with concrete added in the “U” and finished to match the base.

2.2 CONDUIT

Conduit buried in open trenches shall be placed a minimum of 36 inch deep and a minimum of 2’ from the back of curb unless otherwise directed by the Engineer. Open trench methods of placing conduit will be permitted except where the conduit is to be placed under existing pavement. Conduit in pavement areas shall be placed to a minimum depth of 48 inches below the finished pavement surface or as directed by the Engineer.

When underground conduits parallel an existing facility, maintain at least 1’ of separation.

All conduit shall include one, ½ inch wide, polyester cable pulling tape with a minimum 1200 lb. tensile strength when installation is complete. All conduits shall include a tracer wire as specified in the Wiring and Cable section.

All conduit will be proofed by the Contractor upon completion to verify continuity and integrity of the duct.

2.3 WIRING AND CABLE

Each vehicle and pedestrian signal head shall have a separate cable from the signal head to the pole base. A 7-conductor cable shall be used for all four or five section vehicle heads. A 5-conductor cable shall be used for all three section vehicle heads unless otherwise specified in the plans. All signal head cables shall be spliced in the pole base. Within the cabinet, all signal cables shall be labeled as to their direction of origin.
All splices in the handhole compartment of a signal pole shall be made using silicone filled, screw-on wire connectors. Wires shall be twisted before the connector is added. Cable connections in signal heads and controller cabinets shall be made at the terminal blocks provided for that purpose, without using crimp-on connectors.

The Contractor shall also provide and install all wiring and luminaires as shown in the plans. The Contractor shall connect the cables in the pole to the intersection lighting cable using fused connectors. Breakaway, fused connectors shall be used for all connections.

A continuous orange tracer wire (1c #10) shall be included from each pole base to the controller cabinet. A separate orange tracer wire (1c #10) shall be included in all conduits with all fiber optic communication cable. A yellow tracer wire shall be used in conduits with only streetlight circuits. Tracer wire for the signal system shall terminate in the controller cabinet and shall be labeled with the direction of origin. Tracer wire for the communication/fiber system shall terminate in the locate box. The Contractor shall install, splice, and test the tracer wire for continuity. Every tracer wire run shall be grounded at one end.

The Contractor shall coil 50 feet of power service cable at the base of the secondary service pole. The Contractor is responsible for coordinating power service locations with MidAmerican Energy prior to conduit/cable installation. The Contractor is responsible for the cost of the secondary service riser installed by MidAmerican Energy and all associated power service connection costs and fees until acceptance of the project.

2.4 Fiber Optic Cable

The cable end shall be secured inside the controller cabinet so that no load is applied to the exposed fiber strands. The minimum bend radius for static storage shall not be less than ten times the diameter of the cable measuring the cable on the outside, or as recommended by the manufacturer.

The minimum bend radius during installation shall not be less fifteen times the diameter of the cable measuring the cable on the outside, or as recommended by the manufacturer. The Contractor should not use tie wrap devices on fiber optic cable.

A. Cable Slack: Slack shall be left in each handhole, at the top of any conduit riser, in each junction box, in each controller cabinet, and at each equipment rack or other point of termination. Slack in handholes shall be 100 feet in Type II, Type III or Type IV handholes, 30 feet in Type I handholes, and ten feet in 18 inch handholes. This slack cable requirement may be deleted where existing handholes or through points lack sufficient area to maintain the minimum bend requirements. Where slack has been deleted, extra slack equal to the amount that would have been distributed in the through points shall be equally divided between the two controller cabinets and shall be in addition to the slack mandated at the cabinets. Slack in each handhole type shall be provided as designated on the plans. Slack cable shall be coiled and the coils bound at three points around the coil perimeter and supported in their static storage position.

B. Cable Installation in Conduits:

At each handhole or through point and at the cabinet, the cable shall be visibly and durably marked or tagged with the type of cable (single mode or multi-mode), the fiber count, and "FIBER OPTIC CABLE, CITY OF DES MOINES". Additionally, each cable shall be marked with the adjacent intersection of origin and destination. In cases where cables are spliced in a splice enclosure only the intersection of origin is needed.
C. **Fiber Optic Termination Unit:**
All fibers, unless stated otherwise in the plans, shall be terminated in the fiber optic termination unit.

The enclosure shall be mounted on an EIA 19 inch rack in an area that does not interfere with the normal maintenance of the cabinet electronics.

The field cable shall be secured to the enclosure in a manner that does not degrade the fiber optic cable but insures a firm and secure mount. Sufficient lengths of every loose fiber shall be coiled within the enclosure to provide spare distance and reach the fiber interface panel. Spiral wrap each individual fiber in the fan out kit.

Each fiber shall be labeled on the bulkhead by direction and intersection of origin.

Example:

| A – North – |
| B – South – 63rd & Univ. |
| C – East – MH & Hick. |
| D - West |

2.5 **Bonding and Grounding**

Metal conduit, service equipment, anchor bolts, metal poles, pedestals, controller cabinets, interconnect cable shields, and all other electrical equipment shall be made mechanically and electrically secure to form a continuous system, and shall be effectively grounded. The grounding conductor shall be a No. 6 AWG copper, non-insulated wire.

Grounding shall be accomplished by bonding the grounding circuits to copper clad metal, driven electrodes. The electrodes shall be driven vertically until the top of the rod is minimum of 4 inches below grade. Bonding to the ground rod shall be made by means of suitable screw type positive ground rod clamps. The controller cabinet ground shall measure 10 ohms or less.

Grounding to existing water lines will not be permitted.

Bonding of standards and pedestals shall be by means of a bonding strap attached to an anchor bolt or to 1 inch, or longer, brass or bronze bolt installed in the lower portion of the shaft.

The service meter and socket shall be bonded to a ground electrode by use of a ground clamp and a No. 6 AWG copper wire.

Bonding of metallic conduit in concrete pull boxes and manholes shall be by means of galvanized grounding bushings and bonding jumpers. Where there is a change, at a pull box or manhole, from non-metallic conduit to metallic conduit, the grounding wire in the non-metallic conduit shall be bonded to the metallic conduit. Saddle clamps are not acceptable.
Existing ungrounded metal poles on which cabinets are mounted shall be grounded by means of a driven ground rod.

The interconnect cable shield shall be bonded to the controller ground buss at one controller termination point for each interconnect run.

2.6 TRAFFIC SIGNAL DISPLAYS

All overhead traffic signal heads shall have backplates. Universally adjustable brackets and cable banding shall be used to mount all pole-mounted and mast arm-mounted overhead signals. All overhead displays located on each mast arm shall have each red indication set at approximately the same elevation, unless otherwise directed by the Engineer. All optically limited signal heads shall be properly masked to limit their field of view as directed by the Engineer.

During the course of construction and until the signals are placed in operation, signal faces shall be covered or turned away from approaching traffic. When ready for operation, they shall be securely fastened in position facing toward approaching traffic.

2.7 CONTROLLER CABINET

The aluminum rack edge shall be labeled for each detector amplifier, load switch, and isolator.

The cabinet shall be oriented with the back of the cabinet toward the intersection such that the signal heads can be viewed while facing the controller unless otherwise directed by the project engineer.

2.8 PAINTING

If the painted surface of any equipment is damaged in shipping or installation, such equipment shall be retouched or repainted in a manner satisfactory to the Engineer.

2.9 LOOP DETECTORS

All loop detectors in new pavement shall be preformed. No saw-cut loops will be accepted in new pavement.

Detector loops shall have three turns of wire in the loop, unless otherwise specified in the plans.

2.10 LOCATE BOXES

An outdoor-rated, single gang box to house communications/interconnect tracer wire shall be installed on the exterior of the controller cabinet. The location on the cabinet shall be determined by the project engineer. The locate box shall be constructed of die-cast aluminum with a die-cast zinc weatherproof cover and self-closing lid. The box shall be 2 ¾ inches x 4 ½ inches x 2 5/8 inches D. A 12 inch long ground wire shall be attached to a lug within the box.
PART III
MATERIAL REQUIREMENTS

This part consists of material requirements necessary for the construction of a traffic signal installation complete, in place, and operational as described in the project plans and these special provisions.

3.1 TRAFFIC SIGNAL CABLE

Detector lead-in cable shall be No. 14AWG.

3.2 SIGNS

A. Traffic Sign Blanks: All sign blanks shall be aluminum allow 6061-T6 conversion coated with Alodine 1200. 5052-H38 alloy is an acceptable alternative.

1. All blanks shall be 0.08 inches thick will the following exceptions:
   a. If either the length or width dimension of a sign is 36 inches or greater, the blank shall be 0.125 inches thick.
   b. Overhead mounted street name signs shall be 0.125 inches thick.

2. Blanks shall be finished free of any surface or edge burrs, cut marks, or other irregularities.

3. Standard signs shall be pre-drilled with standard hardware holes (C.375 inch diameter) and have no burrs or excess material retained in or around the hole. Holes placement and radii shall conform to the Standard Highway Signs Manual, current edition.

4. A diagram showing the location of holes for specialty signs will be provided at the time of order.

5. Street name signs shall not be pre-drilled.


The background sheeting used on all signs, with the exception of pedestrian pushbutton signs, shall be 3M DG3 material. Any other applied material, including legends, letters, numbers, or borders, again with the exception of pedestrian push-button signs, shall also be 3M DG3 material. Pedestrian pushbutton signs shall be 3M Engineer Grade Prismatic reflective sheeting.

This material shall have a standard warranty to be free from any defects for a period of not less than seven (7) years from the date of manufacture. A copy of the standard warranty shall be provided as a part of the bid package.

C. Street Name Signs:

6. All street name signs shall be single-sided

7. The length of the street name sign shall be in 6 inch increments and will vary based on the legend.

8. Lettering shall be white and the background shall be blue or green “EC” film. The background color will be specified at the time of order.


10. All 12 inch or larger signs shall have a white border as shown in the attached detail.

11. Letter size and spacing shall conform to the MUTCD and the attached details. In cases where descending lower-case letters (g, j, p, q, and y) cannot be accommodated on the specified blank, the next larger blank size shall be used.

12. Twelve (12) inch or larger street name signs shall be made of 3M Diamond Grade DG3 reflective sheeting. Eight (8) inch street name signs shall be made of 3M High Intensity Prismatic reflective sheeting.
D. **Completed Signs:** Sign faces shall be firmly attached to the aluminum sign blanks, with no air bubbles, wrinkles, creases, tears or other surface blemishes. The faces shall be neatly trimmed to match the edge of the sign blank. The sign faces shall be properly positioned to provide a uniform border around all sides of the sign.

The signs shall be handled carefully and packaged to prevent any damage to the sign faces. Any sign faces which are damaged at the time of delivery will be rejected and returned to the manufacturer. Undamaged replacement signs shall then be promptly sent, at no extra cost to the City of Des Moines.

E. **Sign Mounting Brackets:** All signs shall be supplied with a sign bracket. The traffic sign bracket shall be an articulated serrated bracket assembly that includes top, middle, and bottom sign mounting brackets and provides a rigid-mount for the traffic sign. All necessary hardware for a complete installation on a mast arm shall be included. The mounting assembly shall be of a cable type. Approval of other bracket supports shall be based on specifications and/or test data about their physical properties and performance properties.

All pedestrian pushbutton signs shall be mounted to the signal pole using stainless steel bolts. Bolts shall be 5/16 inch flanged with plastic washer. Holes shall be drilled and tapped.

### 3.3 FIBER OPTIC CABLE AND ACCESSORIES

A. **Fiber Optic Termination Unit:** The unit shall be a rack mount, drawer type enclosure that is dust and moisture repellent. The unit shall provide easy front access with removable rear tray for easy rear access and shall have a maximum dimension of 3.5 inchesH x 18.5 inchesW x 11.25 inchesD. The size of the unit shall be adequate for the number of fibers, proper winding area, and splices. The unit shall provide for cable entry from the side and be capable of accommodating up to 48 connections. All fibers entering the traffic signal controller cabinet shall be terminated in the fiber optic termination unit within the traffic controller cabinet.

B. **Connectors:** Only SC or LC type connectors of ceramic ferrule and Physical Contact end finish shall be used to terminate fibers to equipment. SC, LC or mechanical connectors shall not be used to splice cables. All multimode fibers shall be terminated with ST connectors. All single mode fibers shall be terminated with LC connectors.

Maximum attenuation per connector shall be 0.75 dB.

C. **Splice Enclosure:** Ends of continuous fiber cable runs and/or traffic signal controller branch circuit points will be spliced in an outside plant splice enclosure located in handholes as shown on plans.

Enclosure shall accept a minimum of six cables and provide enough trays to splice all fibers. All fiber cables shall enter the enclosure at one end.

Enclosure shall be watertight and re-enterable using gel-compressed cable connections and a re-enterable gasket.

### 3.4 STREETLIGHTING

A. **Luminaires:** Luminaires shall be Autobahn Series wattage equivalent as shown in the plans.
   - 100 watt equivalent = ATB0 20BLEDE53 MVOLT R2
   - 150 watt equivalent = ATB0 20BLEDE10 MVOLT R2
   - 250 watt equivalent = ATB2 40BLEDE10 MVOLT R2

B. **Disconnect:** Contractor shall provide and install a disconnect breaker in the signal cabinet for the streetlighting. The disconnect shall be a QOU120 or approved equal.
PART IV
EQUIPMENT REQUIREMENTS

This part consists of the equipment requirements necessary for the construction of a traffic signal installation complete, in place, and operative as described in the project plans and these Special Provisions.

4.1 2070 ADVANCED TRAFFIC CONTROLLER WITH CLS

This part consists of the equipment requirements necessary for furnishing a 2070 Advanced Traffic Controller (ATC) system on vendor matching 1C CPU module and traffic signal Controller Local Software (CLS) as described in the project plans and these special provisions.

4.1a RELATED SPECIFICATIONS AND STANDARDS

Unless otherwise specified in the project plans and special provisions the 2070 ATC system furnished and installed under this specification shall comply with:

D. California Department of Transportation (Caltrans) TEES 2009 with Errata
E. Caltrans Qualified Products List
F. Institute of Transportation Engineers (ITE) ATC Standard 5.2b
G. NTCIP Base Standards
H. National Electrical Code.

4.1b GENERAL SPECIFICATIONS

A. Equipment Certification
   a. The Contractor shall furnish the Engineer with a certification from the equipment manufacturer or supplier stating that the equipment furnished under this specification complies with all provisions of this specification. With prior approval of the Jurisdictional Engineer, minor exceptions to this specification may be allowed, provided these exceptions are detailed on the certification.

B. Warranty
   a. All 2070 ATC controllers, 1C CPU Module, software, and auxiliary equipment furnished under this specification shall be provided with a standard industry warranty. Any parts found to be defective shall, upon concurrence of the defect by the manufacturer, be replaced free of charge.

C. Delivery and Coordination
   a. A minimum of one week prior to the scheduled “turn-on”, the Contractor or supplier shall deliver the necessary components to the Traffic Signal Shop located at 1551 E Martin Luther King Jr Pkway. It is the responsibility of the deliverer to call ahead to schedule delivery.
   b. The City of Des Moines will install and verify the specified software and timings. Should any controllers be found faulty at the shop, the person/company who delivered the equipment will be contacted. The Signal Shop is not responsible for trouble shooting this equipment nor is any part of this process intended to replace “burn-in” responsibility of the manufacturer.
   c. The Contractor/Supplier is responsible for picking up the controller(s) from the Signal Shop and is solely responsible for bringing the controller(s) to full operation at the intersection(s). No assistance will be provided by the Signal crew once the software is working correctly and the signal timings have been verified in the Signal Shop. Having a knowledgeable representative at the project site(s) when the controller(s) is ready to be turned on is paramount to the safety and efficiency of this operation.
4.1c **CONTROLLER CHASSIS**

A. The ATC Controller Chassis shall comply with TEES 2009 with latest Errata and be listed on Caltrans Qualified Products List. The product shall be McCain 2070LX or City of Des Moines Project Manager approved equal.

B. ATC Controller Chassis shall be equipped with Linux Operating System with serial motherboard.

C. ATC Controller Chassis Microprocessors shall be Freescale Power QUICC II Pro.

D. ATC Controller Chassis shall include the following memory:
   a. 16MB Flash memory
   b. 128MB DDR RAM (expandable)
   c. 2MB Non-volatile SRAM

E. ATC Controller Chassis shall include Backup Real-Time Clock (RTC).

F. ATC Controller Chassis shall include the following Communication Interfaces:
   a. Two SDLC ports
   b. Four asynchronous Serial ports
   c. ENET 1: 100 Base-T Ethernet switch, 1 uplink port, and 3 additional port
   d. ENET 2: 100 Base-T Ethernet port dedicated for local communications
   e. Two USB ports

G. ATC Controller Chassis shall include a Front Panel Interface with:
   a. One Display: 8 lines x 40 characters
   b. One Keyboard: 3 x 4 navigation and 4 x 4 data entry keypads

H. ATC Controller Chassis shall include the following Cabinet Interfaces:
   a. Rear Connections: TEES C1S, C11S, C12S

I. ATC Controller Chassis dimensions shall be 7"H x 19"W x 13"D and shall be EIA rack mount compatible.

J. ATC Controller Chassis power requirements shall be: 89 VAC to 135 VAC, 60 Hz (±3 Hz).

K. ATC Controller Chassis shall be capable of operating in the following environment:
   a. Temperature: -37°C to + 74°C
   b. Humidity: 0 to 95% (non-condensing)

4.1d **CONTROLLER MODULES**

2070 ATC System shall be furnished with the 2070 ATC Controller Modules listed within this section.

A. ATC Controller Modules shall comply with TEES 2009 form factor for 2070 components.

B. ATC Controller Modules shall be capable of operating in the following environment:
   a. Temperature: -37°C to + 74°C
   b. Humidity: 0 to 95% (non-condensing)

C. The 1C CPU Module shall be 2070-ATC with the following:
   a. 400MH Core Speed
   b. Linux OS
   c. 128MB DDR RAM
   d. 16MB Flash Memory
   e. 2MB non-volatile SRAM
   f. Up to five SDLC ports
   g. Up to 7 ACIA ports
   h. Four 10/100MBPS Ethernet ports
   i. Two USB ports

D. I/O Module shall be 2070-2E for Caltrans 170/2070 cabinets. I/O Module shall comply with TEES 2009 with latest Errata and be on Caltrans Qualified Products List.

E. Front Panel Display shall be 2070-3B small font LCD panel module with 8 lines x 40 characters, 3 x 4 navigation keypad, 4 x 4 data entry keypad.
F. Power Supply Module shall be 2070-4A. Power Supply Module shall comply with TEES 2009 with latest Errata and be on Caltrans Qualified Products List.

4.1e CONTROLLER LOCAL SOFTWARE (CLS)

2070 ATC 1C CPU module shall be furnished with vendor matching Controller Local Software (CLS) which shall include the following functions/features:

A. Phases
   a. 16 volume/density vehicle phases
   b. 16 pedestrian phases
   c. 4 rings
   d. Automatic barrier calculation based on compatible phases
   e. Variable phase sequence
   f. Exclusive pedestrian-phase operation
   g. Alternate timing for special vehicles, bicycles or pedestrians
   h. Advanced and delayed walk
   i. Texas diamond operation
   j. 32 output channels
   k. 4 unique sets of phase timing and options selectable by pattern

B. Overlaps
   a. 16 vehicle overlaps
   b. 16 pedestrian overlaps
   c. Negative (excluded) vehicle and pedestrian phases
   d. Delayed start of green
   e. Flashing yellow or red arrow overlaps
   f. Detector call phases and locking
   g. 4 unique sets of overlap configurations selectable by pattern

C. Coordination
   a. 250 free or coordinated patterns
   b. Automatic or manual permissive
   c. Fixed or floating force off
   d. Reference beginning or end of green
   e. Change virtually all operational parameters by pattern
   f. 16 phase sequence selection by pattern

D. Cabinet Inputs and Outputs
   a. Support all cabinet types
   b. Individually assignable input and output functions (I/O mapping)
   c. Internal multi-input Boolean logic gates with delay, extend and latch, and flashing output features
   d. 16 generic alarm inputs
   e. 16 special functions
   f. External pattern selection
   g. Pulsing preempt and transit priority input discrimination

E. Detection
   a. 128 local/system detectors
   b. Single or dual detector speed calculation
   c. Phase assignments configurable per detector, multiple phases per detector
   d. Direct detector actuation for vehicle and pedestrian overlaps
   e. All NTCIP detector options
   f. Delay and extend timing
   g. Alternate passage, minimum green and pedestrian timing detection
   h. Vol/Occ configurable per detector
   i. Detector failure monitoring configurable by time-of-day
j. Connect directly to video detection

F. Communications
   a. Support all industry standard communication
   b. Fully NTCIP 1201 and 1202 compliant (mandatory and optional objects)
   c. NTCIP MIB and block objects for all vendor-specific parameters
   d. Data validation during download
   e. Network time client and/or server
   f. GPS, WWV, NMEA, and NTP time synchronization
   g. California AB3418E with master function for time and pattern broadcast
   h. USB for database upload/download, firmware upgrades, log retrieval
   i. Peer to peer sharing of I/O between intersections
   j. Web browser support
   k. Connected vehicle SPaT interface

G. Preemption
   a. 8 preemption sequences
   b. Each sequence configurable for railroad or emergency vehicle operation
   c. Definable priority and linking
   d. User configurable overlap enable/disable during all preempt intervals
   e. Flashing and limited service options
   f. User assignable status options

H. Transit Priority
   a. Estimated time of arrival
   b. 16 priority strategies in 4 sets, selectable by pattern
   c. Options to support any type of vehicle detection
   d. Configurable headway and preempt lockdown times
   e. Queue jump
   f. Intelligent phase time adjustment based on expected vehicle arrival
   g. Remotely actuation or enable/disable of priority strategies
   h. Support for user configurable special logic and advanced operations
   i. Programmable logic for advanced TSP applications

I. Time-of-Day Scheduler
   a. 64 schedule
   b. 64 day plans
   c. 48 events
   d. 128 actions
   e. Operational parameters changeable by time-of-day

J. Logs
   a. High resolution logging
   b. Extensive event log for management and diagnostic purposes
   c. Cycle-based measures of effectiveness
   d. Detector volume, occupancy and speed
   e. Speed trap data
   f. NTCIP global reporting conformance group for user-defined event logging
   g. User access logs

The 1C module and CLS software shall be McCain Omni EX (version 1.11.3 or City accepted version) or City of Des Moines Project Manager approved equal.

4.2 FIBER OPTIC DATA LINK

A. Fiber Optic Data Link

When specified in the plans, a fiber optic data link shall be provided. It shall be of the type that will install in Type 170 controller chassis and provide a dual mode, double duplex, multi-drop communications link designed to interconnect traffic control equipment. Data links shall include the following functional requirements:
1. Master or Local operation mode set by board mounted switch.

2. Two sets of front mounted fiber optic receptacles with ST type connectors.

3. Accommodate 850nm, Multimode fiber optic cable.

4. Complies with 170 and NEMA Environmental specifications.

5. Includes a rechargeable NiCad battery backup to maintain communications in case of power disruption. Battery assembly shall be secured to board and charge circuit shall be built in.

6. Expansion port, which will allow for up to two additional fiber optic ports for directional branching of communication circuits.

7. Status LED’s which provide visual signal indicators associated with communications between the modems and can be easily viewable by a maintenance technician. Signals displayed shall include:
   a. Transmit Data 1 (TD-1)
   b. Receive Data 1 (RD-1)
   c. Transmit Data 2 (TD-2)
   d. Receive Data 2 (RD-2)
   e. Power (PWR)
   f. Built-In Test Fail (Fault)

4.3 TRAFFIC SIGNAL CABINET

When specified, the Model 332A Cabinet furnished for the project shall meet the requirements of Chapter 11 "Specifications for Cabinet Model 332A," and the Model 336 Cabinet shall meet the requirements of "Specifications for Cabinet Model 336" dated February 1982, except that the color specified in Section 1, paragraph 3 shall be changed to silver. Molotex Flash Blocks shall be provided for all eight vehicle phases to program either red or yellow flashing indications. A detector input panel shall be provided on the rear left side of the cabinet. Cabinet locks shall Corbin Type 2 locks. An aluminum cabinet shall be furnished. The aluminum surface shall have an anodic coating applied. The anodic coating and anodic coating process shall meet the requirements of Section 2.4.1 and 2.4.2 of the "Traffic Signal Control Equipment Specifications," California Business, Transportation and Housing Agency, Department of Transportation, January 1989. Alternative aluminum surface treatments, which produce an equivalent uniformly textured surface, may be substituted as approved by the Jurisdictional Engineer.

Each cabinet shall include 2 fluorescent lighting fixtures mounted inside the front and back portion of the cabinet. These fixtures shall include a cool white lamp with protective cover and shall operate by a normal power UL listed ballast. Two door actuated switches shall be installed to turn on the cabinet light when the door is open, front door front light back door back light. Each switch should work each individual light.

Each cabinet shall be provided with devices to protect the control equipment from surges and over voltages. This shall include incoming power lines, the Input File, the Output File, and communication lines. Each inductive loop detector input wire shall be protected with a 30V MOV with (30 Joule Rating) P/n ERZ-C20 KE 470 or equal. The output of all load switch outputs shall be protected with a 150V MOV (80 Joule Rating). P/n ERZ-C20 DK 241U or equal. The MOVs shall be connected from the AC positive field terminal to the chassis ground. For the 332A or 332D cabinet, appropriate input surge protection shall be mounted on the Lower Input Termination Panel (LIP). The power distribution assembly (PDA#2) of each controller cabinet shall include a
surge protection unit on the AC Service Input. The protector shall be installed between the applied line voltage and earth ground. The surge protector shall be capable of reducing the effect of lightning transient voltages applied to the AC line. The protection device shall be a two stage series parallel device. It shall include the following features and functions:

A. Maximum AC line voltage: 140 VAC.

B. Twenty pulses of peak current, each of which will rise in 8 microseconds and fall in 20 microseconds to 1/2 the peak: 20,000 Amperes.

C. The protector shall be provided with the following terminals:

1. Main line (AC line first stage terminal).
2. Main Neutral (AC Neutral input terminal).
3. Equipment Line Out (AC Line second stage output terminal, 10 Amps.).
4. Equipment Neutral Out (Neutral terminal to protected equipment).
5. GND (Earth connection).
6. The Main AC line in and the Equipment Line out terminals shall be separated by a 200 Microhenry (minimum) inductor rated to handle 10 Amp AC Service. The first stage clamp shall be between Main Line and Ground terminals.
7. The second stage clamp shall be between Equipment Line out and Equipment Neutral.
8. The protector for the first and second stage clamp must have a MOV or similar solid state device rate at 20 KA and be of a completely solid stage design (i.e., no gas discharge between tubes allowed).
9. The Main Neutral and Equipment Neutral Out shall be connected together internally and shall have an MOV similar solid state device or gas discharge tubes rated at 20 KA between Main Neutral and Ground terminals.
11. The Protector shall be epoxy encapsulated in a flame retardant material.
12. Continuous service current, 10 Amps at 120 VAC RMS.
13. The Equipment Line Out shall provide power to the Type 170 and to the 24 V power supply.
14. Provide communications line protector with a mounting connector for incoming and outgoing communication line.

Cabinets shall be furnished with all necessary auxiliary control equipment to properly operate twelve signal phases and six pedestrian phases, which includes conflict monitor unit, isolation modules, detector sensing units as specified on contract documents, and load switch packs.

Cabinets shall include 14” aluminum riser.

Contractor shall provide/install/integrate conflict monitor/malfunction management unit, flasher, load switches, terminals and facilities, and miscellaneous equipment and materials as necessary to provide for a complete and operational traffic signal system. Specific notes include:

a. Loop Detector Amplifier: All loop detector amplifier units furnished for this project shall be Model 222, Two-Channel Loop Detector Sensor Units meeting the requirements of Chapter 4 with the following exceptions:

A. Digital design capable of normal operation when operated with a grounded loop.

B. Shall comply with all performance requirements when connected to an inductance of from 50 to 1500 microhenries.
C. Each detector channel shall respond to an absolute inductance change (Delta L) rather than as a percentage of the total inductance (Delta L/L).

D. Unit must have optically isolated outputs.

b. Switch Pack: Each vehicular and each pedestrian phase shall be provided with a separate switch pack.

A. A model 412C prom module shall be provided, configured to the following table:

<table>
<thead>
<tr>
<th>Memory Socket</th>
<th>Address Range</th>
<th>Device Type</th>
<th>Chip No.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>U1</td>
<td>8000-FFFFF</td>
<td>32K EPROM</td>
<td>INT 27256A</td>
</tr>
<tr>
<td>U2</td>
<td>3000-4FFFFF</td>
<td>8K ZPRAM</td>
<td>DAL 1225</td>
</tr>
<tr>
<td>U3</td>
<td>7010-7FFFFF</td>
<td>8K ZPRAM</td>
<td>DAL 1225</td>
</tr>
<tr>
<td>U4</td>
<td>1000-2FFFFF</td>
<td>8K RAM</td>
<td>HD 6264</td>
</tr>
</tbody>
</table>

*or approved equal

c. Isolator: A Model 242 Two-Channel Isolator shall be provided to introduce stop timing to the controller from the conflict monitor and the manual flash switch.

d. Conflict Monitor: The Model 2010ECLip (w/ Ethernet Port) Monitor Unit shall be provided. The conflict monitor provided shall have broad fault coverage, full intersection display, event logging and RMS voltage reporting. It shall include support for flashing yellow arrow operation. The monitor shall include an Ethernet port for communication with a personal computer or traffic management center. Downloadable information shall include monitor status, event logs, and five signal sequence history logs, which are stored in the monitor's nonvolatile memory.

e. Power Supply: A "PDA-2" Power Distribution Assembly shall be provided.

f. Shelf: A standard print shelf drawer shall be provided and installed above the input file.

An outdoor-rated, single gang box to house communications / interconnect tracer wire shall be installed on the exterior of the controller cabinet. The location on the cabinet shall be determined by the project engineer. The locate box shall be constructed of die-cast aluminum with a die-cast zinc weatherproof cover and self-closing lid. The box shall be 2 3/4 inches x 4 1/2 inches x 2 5/8 inches D. A 12 inch long ground wire shall be attached to a lug within the box.

4.4 Ethernet Switch

When specified for on the plans, the Contractor shall coordinate with the City Traffic & Transportation Department to have a Cisco IE-4000 Ethernet Switch procured for the project. The City Information Technology Department will purchase and configure the switch. Once configured, the City Traffic & Technology Department will coordinate with the project Contractor to install the Ethernet switch into the cabinet. Contractor shall provide all necessary jumpers, small form-factor pluggable (SFPs) and any other equipment necessary to install and integrate the Ethernet switch into the traffic signal cabinet.

4.5 Vehicular Traffic Signal Heads

The purpose of the specification is to describe minimum acceptable design and operating requirements for vehicular traffic signal heads with including all fittings and brackets as specified on the Plans. All vehicular signal heads shall be light emitting diode (LED).
A. **Main body Assembly:**
Each section shall be complete with a one-piece, hinged door with water tight gaskets and two stainless steel locking devices. All screws, latching bolts, and hinge pins shall be stainless steel to prohibit rust and corrosion.

All sections of the vehicle signal head housings shall be of the black in color including the visor and door. The black color shall be permanently molded into the components.

B. **Traffic Signal Mounting Brackets:**
The traffic signal mounting bracket shall universally adjustable. Rigid mounted, consisting of both top and bottom brackets and easily adjustable in both horizontal and vertical planes. The mounting assembly shall be of a cable type.

### 4.6 PEDESTRIAN TRAFFIC SIGNAL HEADS

The purpose of this specification is to describe minimum acceptable design and operating requirements for pedestrian traffic signal heads including all fittings and brackets, as specified on the plans.

All pedestrian signal heads shall be light emitting diode (LED).

The signal head shall be designed so that all components are readily accessible from the front by opening the signal door.

The housing shall be one piece, 16 inch x 16 inch (nominal) in size. The housing case shall include four integrally- cast, hinged lug pairs; two at the top and two at the bottom of each case. The case, when properly mated to other pedestrian signal components and mounting hardware, shall provide a dustproof and weatherproof enclosure and shall provide for easy access to and replacement of all components.

The door frame shall be one piece, complete with two hinged lugs cast at the bottom and two latch slots cast at the top of each door. The door shall be attached to the case by means of two, type 304 stainless steel spring pins.

All screws, latching bolts, and hinge pins shall be stainless steel to prohibit rust and corrosion.

The countdown pedestrian indicator unit shall fit in a traditional 16 inch X 16 inch pedestrian signal head housing.

All pedestrian signal heads shall be mounted using a clamshell-style mounting bracket.

### 4.7 ALUMINUM TRAFFIC SIGNAL PEDESTALS

The purpose of this specification is to describe minimum acceptable design, material, and fabrication requirements for aluminum traffic signal pedestals and/or aluminum shafts.

Bases shall have a four (4) bolt pattern uniformly spaced on a 13-3/4 inches diameter bolt circle.

### 4.8 GALVANIZED STEEL TRAFFIC SIGNAL SUPPORTS

The purpose of this specification is to describe minimum acceptable design, material, and fabrication requirements for galvanized steel traffic signal supports.
The mast arms shall be of the length specified and shall be designed to support traffic signals as shown in the standard load detail on the plans. All mast-arms shall have a 4 percent rise when in-place and fully loaded.

Mast arms shall be continuous to 50 feet in length. Vertical pole configuration shall provide for two-piece combination pole with internal tapped plate connection to allow for addition or removal of luminaire pole extension. Poles shall be vertical under normal load.

4.9 **PEDESTRIAN PUSH-BUTTON DETECTORS**

The purpose of this specification is to describe minimum acceptable design and operating requirements for side-of-pole mount, pedestrian push-button detectors, including all fittings and brackets as specified on the plans.

A. **Construction**: Pedestrian push-button detectors shall be of the direct push type without levers, handles, or toggle switches. Each detector shall consist of a solid state electronic switch with no moving plunger or moving electrical contacts. The case shall have one (1) outlet for a 1/2 inch pipe. The operating button shall be made of stainless steel and shall be of sturdy design. This button shall not protrude out from the case. The entire assembly shall be weather tight, secure against electrical shock and of such construction as to withstand continuous hard usage. The contact shall be normally open and no current flowing except at the moment of actuation. The push-buttons supplied shall be ADA accessible push button assembly with momentary LED indicator. The push-button casing shall be black in color, oval with a raised directional arrow.

B. **Accessible Pedestrian Signal Pushbutton (APS)**: When APS pushbuttons are specified in the plans they shall meet the following specification. Pushbutton assembly shall be black in color, have an integrated R10-3 sign and ADA compliant pushbutton with raised directional arrow. The pushbutton shall provide confirmation through latching LED light, sound and tactile bounce. Pushbutton shall provide both sounds and message options during the WALK interval as well as vibration, sounds during the clearance interval, adjustable volume locator tone during the DON'T WALK interval, direction of travel messages, and special messages determined by the user. The pushbuttons shall have a control unit that mounts in the controller cabinet to operate all pushbuttons for the intersection. All wiring and components to create a functional system are included in the unit price for this item.
5.1 GENERAL

This section specifies requirements for coating systems for certain items on the project; including light poles, light pole mast arms, and luminaires.

5.2 SURFACE PREPARATION

Prior to being incorporated into an assembled product, steel plates 3/4 inch or more in thickness shall be blast cleaned to removed rolled-in mill scale, impurities and non-metallic foreign materials. After assembly, all weld flux shall be mechanically removed. The iron or steel product shall be degreased by immersion in an agitated 4.5%-6% concentrated caustic solution elevated to a temperature ranging from 150 to 190 °F. It shall then be pickled by immersion in a heated sulfuric acid solution of 6%-13% concentration, with a controlled temperature between 150-190°F. It shall next be rinsed clean from any residual effects of the caustic or acid solutions by immersion in a circulating fresh water bath. Final preparation shall be accomplished by immersion in a concentrated zinc ammonium chloride flux solution heated to 130°F. The solution's acidity content shall be maintained between 4.5-5.0 pH. The assembly shall be air dried to remove any moisture remaining in the flux coat and/or trapped within the product.

5.3 ZINC COATING

The product shall be hot-dip galvanized to the requirements of either ASTM A 123 (fabricated products) or ASTM A 153 (hardware items) by immersion in a molten bath of prime western grade zinc maintained between 810-850°F. The entire product shall be totally immersed with no part of it protruding out of the zinc (no double dipping). This is to limit a risk of trapped contaminants containing chlorides and reduce the risk of bare spots (bare spots can occur when flux on the steel surface is burned away by heat of the first dip). Maximum aluminum content of the bath shall be 0.01%. Flux ash shall be skimmed from the bath surface prior to immersion and extraction of the product to assure a debris free zinc coating.

5.4 EXTERIOR COATING

All galvanized exterior surfaces shall be coated with a Urethane or Triglycidyl isocyanurate (TGIC) Polyester Powder to a minimum film thickness of 0.002 inch or a combination Urethane base primer / Polyurea finish top coat as approved by the Engineer. Prior to application, the surfaces to be powder coated shall be mechanically etched by brush blasting (Ref. SSPC-SP7) and the zinc coated substrate preheated to 450°F for a minimum of one hour in a gas fired convection oven by heating the zinc coated substrate to a minimum of 350°F and a maximum of 400°F. The thermosetting powder resin shall provide both intercoat as well as substrate fusion adhesion that meets 5A or 5B classifications of ASTM D 3359.

5.5 QUALITY CONTROL

The galvanizing, powder coating, and/or finish painting facilities shall be owned and operated by the pole manufacturer to ensure a quality coating system.

5.6 PACKAGING

Prior to shipment, small poles shall be wrapped in 0.188 inch thick Ultraviolet-inhibiting plastic backed foam. Larger poles shall be cradled in a 1.0 inch rubberized foam base.

5.7 FIELD REPAIR PROCEDURES

Where factory applied coatings have become damaged or abraded due to handling, transport, installation, welding or other circumstances, they shall be repaired by the field painting crew or miscellaneous metal contractor.
All damaged areas shall be thoroughly wire brushed. All dirt, oil, grease, or other contaminants shall be removed in accordance with SSPC-SP1 and SP5. Touch-up paint supplied the galvanizer or steel fabricator, identical in color and composition to that used in the plant, shall be applied to all prepared surfaces to a dry film thickness of at least 4.0 mils.

5.8 METHOD OF MEASUREMENT AND BASIS OF PAVEMENT

Combination Coating – Galvanized-Powder Top Coat and Galvanized-Polyurea Top Coat shall be considered incidental to the price bid per each pole and shall be considered incidental to the lump sum bid for the traffic
### Part VI

#### Additional Bidding Attachments

### 6.1 Schedule of Unit Prices

<table>
<thead>
<tr>
<th>No.</th>
<th>Item Description</th>
<th>Lower Beaver &amp; McPherson Quantity</th>
<th>19th Street &amp; South Avenue Quantity</th>
<th>Total Quantity</th>
<th>Unit Price</th>
<th>Unit Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3-Section, 12&quot; R/L/G Signal Head, without Blip</td>
<td>EA 4 4 8</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3-Section, 12&quot; R/L/G Signal Head, with Blip</td>
<td>EA 4 4 8</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4-Section, 12&quot; R/L/Y/G Left Arrow Signal Head, w/ Blip</td>
<td>EA 2 0 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3-Section, 18&quot; Handicap Crosswalk pedestrian head</td>
<td>EA 8 8 16</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Handbook, Type 1 3/4&quot; Poured or Precast, Ring and Groove</td>
<td>EA 4 4 8</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Handbook, Type 3 3/4&quot; x 3/4&quot; x 30&quot; Groove Stockcable</td>
<td>EA 1 2 3</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Handbook, Type 4 3/4&quot; x 3/4&quot; x 48&quot; Groove Stockcable</td>
<td>EA 1 1 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Conduit - 1&quot; PVC Trenched</td>
<td>LF 10 153 163</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Conduit - 2&quot; PVC Trenched</td>
<td>LF 210 132 342</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
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<td>Conduit - 3&quot; PVC Trenched</td>
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<tr>
<td>12</td>
<td>Conduit - 5&quot; PVC Trenched</td>
<td>LF 425 447 767</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Detector Saw Cut</td>
<td>LF 589 440 1020</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Cable - Signal 3' #14</td>
<td>LF 1365 625 1920</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Cable - Signal 5' #14</td>
<td>LF 499 515 1014</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
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<tr>
<td>16</td>
<td>Cable - Signal 7' #14</td>
<td>LF 142 156 300</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
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<tr>
<td>17</td>
<td>Cable - Signal 16' #14</td>
<td>LF 874 405 1009</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
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<tr>
<td>18</td>
<td>Cable - Ground 1' #6</td>
<td>LF 731 704 1437</td>
<td>$</td>
<td></td>
<td>$</td>
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<tr>
<td>19</td>
<td>Cable - Tracer #10</td>
<td>LF 1418 1680 3134</td>
<td>$</td>
<td></td>
<td>$</td>
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<tr>
<td>20</td>
<td>Pull Rope</td>
<td>LF 1389 1423 2815</td>
<td>$</td>
<td></td>
<td>$</td>
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</tr>
<tr>
<td>21</td>
<td>Tran Power Supply Cable</td>
<td>LF 288 221 409</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
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<tr>
<td>22</td>
<td>3ft Luminare Cable</td>
<td>LF 756 662 1418</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Install City Supplied 12 Strand Multi-Mode Fiber Optic Cable</td>
<td>LS 0 1 1</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Fiber Optic Splice Enclosure and Associated Work (CO Fusion Splices)</td>
<td>LS 0 1 1</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Cable - 24 #14 Shielded Detector Lead-in Cable</td>
<td>LF 1444 1019 2463</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
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<tr>
<td>26</td>
<td>Cable - 14 #14 Loop Wire in Tunnel</td>
<td>LF 1578 1685 3650</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
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<tr>
<td>27</td>
<td>Wye Connectors - Type U (15A Fuses)</td>
<td>EA 1 1 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
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<tr>
<td>28</td>
<td>Wye Connectors - Type 3/8 (6A Fuses)</td>
<td>EA 2 2 3</td>
<td>$</td>
<td></td>
<td>$</td>
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<tr>
<td>29</td>
<td>Wye Connectors - Type 1/2</td>
<td>EA 1 1 2</td>
<td>$</td>
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<td>$</td>
<td></td>
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<tr>
<td>30</td>
<td>Wye Connectors - Type V3</td>
<td>EA 2 0 2</td>
<td>$</td>
<td></td>
<td>$</td>
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<tr>
<td>31</td>
<td>LED Luminare Fixture</td>
<td>EA 3 2 5</td>
<td>$</td>
<td></td>
<td>$</td>
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<tr>
<td>32</td>
<td>Concrete Base - Controller Cabinet Foundation</td>
<td>EA 1 1 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Concrete Base - Signal Poles - 3.0'-3.5' Dia. x 11.0'-18.0' Deep Footing</td>
<td>EA 4 3 7</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Concrete Base - Pedestal Poles Basic - 2.0' Dia. x 3.0' Deep Footing</td>
<td>EA 0 1 1</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Concrete Base - Push Button-Poles Basic - 1.5' Dia. x 3.0' Deep Footing</td>
<td>EA 1 0 1</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>Pole (Steel) - Combination Mast Arm Pole - 22' Arm</td>
<td>EA 0 1 1</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>Pole (Steel) - Combination Mast Arm Pole - 29' Arm</td>
<td>EA 1 0 1</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>Pole (Steel) - Combination Mast Arm Pole - 36' Arm</td>
<td>EA 0 1 1</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>Pole (Steel) - Combination Mast Arm &amp; Twin Luminare Arm Pole - 36' Arm</td>
<td>EA 1 0 1</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Pole (Steel) - Signal Mast Arm Pole - 25' Arm</td>
<td>EA 1 1 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
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<tr>
<td>41</td>
<td>Pole (Steel) - Signal Mast Arm Pole - 40' Arm</td>
<td>EA 1 0 1</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>Pole (Aluminum) - Pedestal Poles</td>
<td>EA 0 1 1</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>Pole (Aluminum) - Push Button-Poles</td>
<td>EA 1 0 1</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>Traffic Sign (R3-3L) 30x38' x 29' x 29' x 29' x 29' x 29' Mast Arm Mounting</td>
<td>EA 2 0 2</td>
<td>$</td>
<td></td>
<td>$</td>
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<tr>
<td>45</td>
<td>Traffic Sign (5-3-1-3-3-3' x 33') Mast Arm Mounting</td>
<td>EA 4 3 7</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
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<tr>
<td>46</td>
<td>Traffic Sign (R6-L1) 18'x18' x 18' Mast Arm Mounting</td>
<td>EA 0 1 1</td>
<td>$</td>
<td></td>
<td>$</td>
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<tr>
<td>47</td>
<td>Traffic Sign (R6-L1) 12'x30' Mast Arm Mounting</td>
<td>EA 0 2 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
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<tr>
<td>48</td>
<td>Traffic Sign (R6-L1) 18'x30' Mast Arm Mounting</td>
<td>EA 0 1 1</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>Traffic Sign (R6-L1) 12'x30' Mast Arm Mounting</td>
<td>EA 0 2 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>Street Name Sign -&quot;Lower Beaver Rd 3400N&quot; (18&quot; x 18&quot;) Mast Arm Mounting (Green)</td>
<td>EA 0 0 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>Street Name Sign -&quot;Madison Av 4000N&quot; (18&quot; x 18&quot;) Mast Arm Mounting (Green)</td>
<td>EA 0 0 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
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<tr>
<td>52</td>
<td>Street Name Sign -&quot;10th St 1500N&quot; (18&quot; x 18&quot;) Mast Arm Mounting (Green)</td>
<td>EA 0 0 2</td>
<td>$</td>
<td></td>
<td>$</td>
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<tr>
<td>53</td>
<td>Pedestrian Pushbutton with Sign R10-3</td>
<td>EA 8 4 12</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>3070 ATC Controller, Cabinet, and Accessories - Complete</td>
<td>EA 1 1 2</td>
<td>$</td>
<td></td>
<td>$</td>
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<tr>
<td>55</td>
<td>Install-City Supplied Ethernet Switch w/ Contractor Supplied SFPs - Complete</td>
<td>EA 1 1 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>Control-Cabinet Reader</td>
<td>EA 1 1 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
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<tr>
<td>57</td>
<td>2-Channel Industrial Loop Detector, Card Rack Style</td>
<td>EA 8 0 14</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>Cabinet Modifications &amp; FO Data Link Card - Complete System</td>
<td>LS 0 1 1</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>59</td>
<td>FO Termination Unit w Terminations - Complete System</td>
<td>LS 1 1 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Uninterruptible Power Supply/Battery Back-up System - Complete System</td>
<td>LS 1 1 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>61</td>
<td>Local Box</td>
<td>EA 1 1 2</td>
<td>$</td>
<td></td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>62</td>
<td>Power Service Connection</td>
<td>EA 1 1 2</td>
<td>$</td>
<td></td>
<td>$</td>
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</tr>
<tr>
<td>63</td>
<td>Removal of Existing Traffic Signal System</td>
<td>LS 1 1 2</td>
<td>$</td>
<td></td>
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</tr>
</tbody>
</table>
CITY OF DES MOINES GENERAL SUPPLEMENTAL SPECIFICATIONS TO THE SUDAS STANDARD SPECIFICATIONS, 2019 EDITION
Effective Date: April 22, 2019

This project will be constructed in accordance with the SUDAS Standard Specifications, 2019 Edition, which were adopted by the City of Des Moines on April 22, 2019, under Roll Call No. 19-0621, as amended by these City of Des Moines General Supplemental Specifications.

The SUDAS Standard Specifications, 2019 Edition, may be viewed at the Iowa SUDAS website https://iowasudas.org/manuals/specifications-manual/, or can be purchased online from the Iowa SUDAS website at: https://iowasudas.org/order-the-manuals/.

Said SUDAS Standard Specifications are hereby amended as follows:

SECTION 1010 – DEFINITIONS

1010, 1.03 DEFINITIONS AND TERMS. Add the following new definition:

PRIVATE CONSTRUCTION CONTRACT. A contract awarded by a private agency or individual for construction of a publicly owned or privately-owned improvement, which by agreement of the parties is subject to these specifications.

SECTION 1020 – PROPOSAL REQUIREMENTS AND CONDITIONS

1020, 1.01 QUALIFICATION OF THE BIDDERS: Add the following new E.

*E. The City of Des Moines may disqualify a Contractor from bidding on future work or from participating as a subcontractor for a period of up to 3 years in accordance with Section 94-198 of the Municipal Code of the City of Des Moines.

1020, 1.03 QUANTITIES AND UNIT PRICES: Delete B. and replace with the following new B.

B. When unit prices are requested in the proposal form, the quantities indicated on the proposal form are approximate only, and do not constitute a warranty or guarantee by the Jurisdiction as to the actual quantities involved in the work. Such quantities are to be used for the purpose of comparison of bids and determining the amount of bid security, contract, and performance, payment, and maintenance bond. In the event of discrepancies between unit prices and unit price extensions listed in a bidder’s proposal, unit prices shall govern and unit price extensions shall be corrected, as necessary, for agreement with unit prices; except in the case of an obvious, serious, clerical error where the Engineer is able to determine the bidder’s intent from the proposal; in which case, the Jurisdiction may waive irregularities that are in best interest of the Jurisdiction, as long as the integrity of the bid process can be maintained. The Jurisdiction expressly reserves the right to increase or decrease the quantities during construction as outlined in Section 1040, 1.06 - Increase or Decrease of Work, and to make reasonable changes in design, provided such changes do not materially change the intent of the contract. The amount of work to be paid for shall be based upon the actual quantities performed.

*This highlighted language and Section 94-198 of the Municipal Code of the City of Des Moines are not the current law of the State of Iowa and not applicable to the City’s current bidding process.
1020, 1.09 PREPARATION OF THE PROPOSAL: Delete D. and replace with the following D:

D. When unit prices are requested, they shall be submitted on each and every item of work included for which bids are requested. The format for unit prices will be in dollars and whole cents only. In the case of discrepancy, the unit price shall govern; except in the case of an obvious, serious, clerical error where the Engineer is able to determine the bidder’s intent from the proposal; in which case, the Jurisdiction may waive irregularities that are in best interest of the Jurisdiction, as long as the integrity of the bid process can be maintained.

1020, 1.15 LIMITATION ON WITHDRAWAL OF PROPOSALS AFTER OPENING OF PROPOSALS:
Add the following new C:

C. After bids are opened, if the low bidder claims that it has made a serious error in the preparation of its bid, and can support such a claim with evidence satisfactory to the Jurisdiction, said bidder shall be allowed to withdraw its bid and its bid security shall be returned; *provided however, as a condition for return of its bid security, said bidder shall be required to agree that it will not be allowed to again bid on the project, either as a prime bidder or as a subcontractor, if the project, or a substantial portion of the project, is rebid within six months of the first bid opening. Under no circumstances should said bidder be permitted to alter or adjust its bid, as this would undermine the entire system of competitive bidding and be an open invitation to abuse.

SECTION 1040 – SCOPE OF WORK

1040, 1.05 PLANS: Delete the 2nd paragraph and replace with the following:

Electronic support files, will not be provided prior to letting and may be provided to the low bidder and are for information only. Should there be a discrepancy between an electronic support file and a contract document, the contract documents shall govern. No guarantee is made that the data systems used by the Engineer will be directly compatible with the systems the Contractor uses.

1040, 1.07 CHANGE ORDERS, B. Written Orders: Add the following to the end of the section:

Formal approval by the Jurisdiction shall be defined as follows:
The authority of the Des Moines City Manager and the Engineer to approve change orders shall be limited to those change orders which will cost $50,000 or less. Change orders for work to cost more than $50,000 shall be approved by the City Council prior to the payment of the work provided for under the change order.

*This highlighted language is not the current law of the State of Iowa and not applicable to the City's current bidding process.*

1040, 1.09 CHANGED SITE CONDITIONS, A. Latent or Subsurface Conditions: Delete 1. and 2. in their entirety and replace with the following 1. and 2.; and add the following new 3.

1. If the Contractor encounters latent or subsurface conditions differing materially from those indicated in the contract documents which the Contractor could not have discovered by a reasonable site investigation and examination of the type customarily undertaken by prudent and competent contractors, and if these changed conditions are considered by the Contractor as a basis for compensation in addition to the contract price, the Contractor shall within three working days after discovery thereof notify the Engineer of its claim by written notice as sent forth herein. Before disturbing the site at which the latent or subsurface condition is alleged to exist, the Contractor shall give the Engineer the opportunity to inspect the same.
a. For claims greater than $50,000 the Contractor shall notify the Engineer by written notice either (i) personally delivered, (ii) sent by certified mail, return receipt requested, or (iii) delivered by a nationally recognized prepaid overnight courier service (receipt requested), to the address below:

City of Des Moines
Engineering Department
400 Robert D. Ray Drive
Des Moines, IA 50309-1891
Attention: Steve Naber, P.E., City Engineer

Under no circumstance will an email, text message, verbal communication or any other informal communication, be considered acceptable or satisfactory written notice required by this section. The written notice shall:

1) Expressly state that it is a request for a contract change under Section 1040, 1.09;
2) Expressly identify the latent or subsurface conditions that the Contractor alleges differ materially from those indicated in the contract documents which the Contractor could not have discovered by a reasonable site investigation and examination of the type customarily undertaken by prudent and competent contractors;
3) Expressly state the reason the Contractor believes extra compensation is due;
4) Identify work that Contractor alleges will be impacted.

b. For claims less than $50,000 the Contractor shall notify the Project Engineer by written notice sent as set forth above or sent by email providing the same detail as identified in a.1) through 4) above. Under no circumstances will a text message, verbal communication or any other informal communication be considered acceptable or satisfactory written notice required by this section.

2. After inspection by the Engineer, the Jurisdiction may, in its discretion, authorize the Contractor to proceed with or abandon the work. The Contractor shall resume construction operations pending a decision regarding its claim by the Jurisdiction. Failure of the Contractor to give written notice within three working days of discovering the conditions and to give the Engineer full opportunity to inspect the condition before disturbing the site shall be deemed a waiver by the Contractor of all claims for extra compensation arising out of the alleged condition.

3. Latent or subsurface conditions that do not materially differ from those shown on the plans shall not form the basis for additional compensation. No additional compensation or extension of time shall be provided for conditions that do not materially differ, regardless of the nature of the condition encountered.

1040, 1.10 DISPUTED CLAIMS FOR EXTRA COMPENSATION: Delete 1.10 in its entirety and replace with the following:

A. Basis of Claim for Extra Compensation:

1. In any case where the Contractor believes extra compensation is due for work or material beyond the scope of the Work under the contract and not ordered by the Engineer as Extra Work as defined in Section 1010, 1.03, the Contractor shall provide written notice to the Engineer, as set forth herein, of its intention to make claim for such extra compensation within thirty (30) days of discovering the circumstances regarding the claim and before beginning the work on which the claim is based (hereinafter referred to as a “Claim”).

a. For claims greater than $50,000 the Contractor shall notify the Engineer by written notice either (i) personally delivered, (ii) sent by certified mail, return receipt requested, or (iii)
delivered by a nationally recognized prepaid overnight courier service (receipt requested) to the address below:

City of Des Moines
Engineering Department
400 Robert D. Ray Drive
Des Moines, IA 50309-1891
Attention: Steve Naber, P.E., City Engineer

Under no circumstance will an email, text message, verbal communication or any other informal communication, be considered acceptable or satisfactory written notice required by this section. The written notice shall:

1) Expressly state that it is a request for a contract change under Section 1040, 1.10;
2) Expressly state the reason the Contractor believes extra compensation is due;
3) Identify the underlying work or material that Contractor claims is beyond the scope of the Work under the contract and not ordered by the Engineer as Extra Work as defined in Section 1010, 1.03;
4) Identify any work that will be impacted.

b. For claims less than $50,000 the Contractor shall notify the Project Engineer by written notice sent as set forth above or sent by email providing the same detail as identified in a 1) through 4) above. Under no circumstances will a text message, verbal communication or any other informal communication be considered acceptable or satisfactory written notice required by this section.

The Contractor shall not proceed with that work until the Contractor and the Jurisdiction have executed a change order with respect to the Claim. The Contractor shall have no right to submit a Claim for any matter which is exclusively reserved to authority of the Engineer under the Contract Documents.

2. The Jurisdiction shall not be responsible for damages attributable to the performance, nonperformance, or delay, of any other contractor, governmental agency, utility agency, firm, corporation, or individual authorized to do work on the project, except if such damages result from negligence on the part of the Jurisdiction, its Engineer, or any of its officers or employees.

3. For any Claim, if such written notification is not given, or if after such written notification is given the Engineer is not allowed facilities for keeping strict account of actual costs as defined for force-account construction, the Contractor thereby agrees to waive the Claim for extra compensation for such work. Such written notice by the Contractor, and the fact the Engineer has kept account of the cost as aforesaid, shall not be construed as establishing the validity of the Claim.

4. The Claim, when filed, shall be in writing and in sufficient detail to permit auditing and an evaluation by the Jurisdiction. The Claim shall be supported by such documentary evidence as the Contractor has available and shall be verified by affidavit of the Contractor or other person having knowledge of the facts.

B. Presentation and Consideration of Claim: If the Contractor wishes an opportunity to present its Claim in person, the Claim shall be accompanied by a written request to do so. Where the Contractor asks an opportunity to present its Claim in person, the Jurisdiction, within thirty (30) calendar days of the filing of the Claim, shall fix a time and place for a meeting between the Contractor and the Jurisdiction or its designated representatives or representative. The Jurisdiction shall, within a reasonable time after the filing of the Claim or the meeting above referred to, whichever is later, rule upon the validity of the Claim and notify the Contractor, in writing, of its ruling together with the reasons therefore. In case the Claim is found to be just, in whole or in part, it shall be allowed and paid to the extent so found.
C. **Request for Claim Review:** In the event a Contractor’s Claim as outlined in the above procedure in Sections 1040, 1.10(A) and (B) has been disallowed in whole or in part, the Contractor may, within thirty (30) calendar days from the date the ruling of the Jurisdiction is mailed, make a written request to the Jurisdiction that its Claim or Claims be submitted to a board of review. The written request shall be either (i) personally delivered, (ii) sent by certified mail, return receipt requested, or (iii) delivered by a nationally recognized prepaid overnight courier service (receipt requested) addressed as follows:

City of Des Moines  
Engineering Department  
400 Robert D. Ray Drive  
Des Moines, IA 50309-1891  
Attention: City Engineer

The Jurisdiction shall decide if the matter is subject to further review and shall, within thirty (30) calendar days of the receipt of the request for review, grant or deny the request for review. The Jurisdiction’s decision shall be final. In the event the Contractor fails to make a timely written demand for review of its Claim as provided by this Section 1040, 1.10(C), the decision of the Jurisdiction shall be deemed to be final and the Contractor shall have no right to pursue arbitration or litigation of its Claim.

D. **Board of Review:**

1. The Board shall have jurisdiction to pass upon questions involving compensation to the Contractor for work actually performed or materials furnished and upon claims for extra compensation that have not been allowed by the Jurisdiction. The Board’s jurisdiction shall not extend to matters exclusively reserved to the Engineer, to a determination of quality of workmanship or materials furnished, or to an interpretation of the intent of the Plans and Specifications except as to matters of compensation. Jurisdiction of the Board shall not extend to setting aside or modifying the terms or requirements of the contract.

2. Following the timely written demand for review of the Claim and the decision of the Jurisdiction to grant the request, a board of review shall be appointed to review the Claim. The board of review shall consist of three (3) members as follows: the Engineer, or designated representative; and two persons to be appointed by the Engineer (hereinafter the “Board”).

3. The Board shall set a date for the Contactor to present its Claim for review within sixty (60) days of the date the Jurisdiction issued its decision granting the Contractor’s request for review. The presentation before the Board shall not be in accordance with the Iowa rules of civil procedure and the Contractor shall not have the right to conduct discovery or compel the testimony of witnesses as part of the presentation. The Contractor shall submit three (3) copies of a written Claim summary and all documents it considers to be relevant to its Claim at least fourteen (14) days prior to the date set for the presentation before the Board. The presentation before the Board is intended to be an informal process to allow the Contractor to further explain its Claim and why it believes it is entitled to additional compensation. The Board reserves the right to impose such rules as it deems reasonably necessary to allow for a fair and efficient presentation.

4. Following the presentation before the Board, the Board shall render a written decision regarding the Claim within ten (10) days of the presentation. In the event the Board renders a decision in favor of the Contractor for some or all of the Claim, the Contractor and the Jurisdiction shall promptly proceed in good faith to prepare a change order consistent with the decision of the Board. If the Board denies the Claim, in part or in full, the Contractor’s sole and exclusive remedy is to demand final resolution of the Claim that has been denied subject to the procedure provided below.
E. **Final Resolution by Binding Arbitration or Litigation:** For any Claim denied by the Board, the Jurisdiction shall have the sole and exclusive right to determine whether final resolution of the Claim shall be through Binding Arbitration or litigation. The Contractor shall not have the right to pursue final resolution of any Claim that the Contractor did not submit to the Board. The Contractor must make a written demand for final resolution of the Claim upon the Jurisdiction within thirty (30) days of the date when the Board rendered its decision or it will be deemed to have waived this right and the decision of the Board will be final. The written demand shall be either (i) personally delivered, (ii) sent by certified mail, return receipt requested, or (iii) delivered by a nationally recognized prepaid overnight courier service (receipt requested) addressed as follows:
- City of Des Moines
- Engineering Department
- 400 Robert D. Ray Drive
- Des Moines, IA 50309-1891
- Attention: Steve Naber, P.E., City Engineer

The Jurisdiction shall notify the Contractor within thirty (30) days of the date of receiving the Contractor’s written demand for final resolution of the Claim, whether the Jurisdiction will elect to use binding arbitration or litigation to reach a final resolution of the Claim. The decision to pursue binding arbitration or litigation, shall be the sole and exclusive decision of the Jurisdiction. The decision of the Jurisdiction on whether to pursue binding arbitration or litigation is final.

1. **Arbitration.**

   (a) If the Jurisdiction elects to use binding arbitration for final resolution of the Claim, the sole and exclusive remedy for final resolution of the Claim shall be binding arbitration (the “Arbitration”). The Arbitration shall be submitted to a single arbitrator as is mutually agreed upon by the Contractor and Jurisdiction. If the Contractor and Jurisdiction cannot agree upon a single arbitrator within twenty-one (21) days of the date of the Jurisdiction’s notification to the Contractor of the Jurisdiction’s decision to pursue binding arbitration, the Arbitration shall be submitted to a three (3) member panel appointed as follows: the Contractor shall appoint one arbitrator; the Jurisdiction shall appoint one arbitrator; and the third arbitrator shall be chosen by the first two appointed arbitrators (for the sake of convenience, the arbitrator, or arbitrators as the case may be, shall be referred to hereinafter as the “Arbitrator”). The parties agree to work toward appointment of a three (3) member Arbitration panel within twenty-one (21) days after not being able to agree on a single arbitrator. The Arbitration shall be conducted in general accord with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect. The parties reserve the right to alter and amend the rules for the Arbitration as they may mutually agree in writing.

   (b) The Arbitrator shall have jurisdiction to pass upon questions involving compensation to the Contractor for work actually performed or materials furnished and upon claims for extra compensation that have not been allowed by the Jurisdiction. The Arbitrator’s jurisdiction shall not extend to matters exclusively reserved to the Engineer, to a determination of quality of workmanship or materials furnished, or to an interpretation of the intent of the Plans and Specifications, except as to matters of compensation. Jurisdiction of the Arbitrator shall not extend to setting aside or modifying the terms or requirements of the contract.

   (c) Subject to agreement of the parties and the Arbitrator, the parties shall work in good faith to schedule the Arbitration and allow for the decision of the Arbitrator within two hundred forty (240) days after appointment of the Arbitrator.
(d) The Arbitrator shall render a written decision within twenty (20) days after the Claim has been fully submitted. For Arbitrations before more than one arbitrator, the decision of a majority of the panel shall govern. The Arbitrator’s decision shall provide a basis for the findings and legal conclusions and shall determine how the cost of the proceedings shall be borne by the parties.

(e) The decision of the Arbitrator shall be binding and final. There shall be no further appeal or judicial review, except under the limited circumstances as allowed by Iowa law.

2. Litigation. If the Jurisdiction elects not to use arbitration as the means to reach final resolution of the claim, then the sole and exclusive remedy for final resolution of the Claim shall be litigation which must be brought in Iowa District Court in and for the County where the Jurisdiction is located or in the United Stated District Court in and for the District where the Jurisdiction is located.

SECTION 1050 – CONTROL OF WORK

1050, 1.10 PROTECTION OF LINE AND GRADE STAKES: Add the following new D.

D. The Jurisdiction shall provide all construction survey staking on projects funded by the Jurisdiction unless otherwise indicated on the plans or in the Contract Documents. On Private Construction Contracts, the Owner, in accordance with the Private Construction Contract, shall hire a Licensed Surveyor for all survey work.

SECTION 1060 – CONTROL OF MATERIALS

1060, 1.03 SAMPLES AND TESTING: Add the following new D.

D. All on-site inspection and testing, as well as testing of materials, will be provided by the Jurisdiction unless otherwise indicated on the plans or by special provisions.

SECTION 1070 – LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

1070, 1.03 PERMITS AND LICENSES: Delete and replace with the following:

The Contractor shall procure and pay for all necessary permits and licenses for the construction of the work and for temporary excavations, obstructions, enclosures, and street openings arising from the construction and completion of the work described in the Contract Documents. The Contractor shall be responsible for all violations of the law for any cause in connection with the construction of the work or caused by the obstruction of roads, streets, highways or sidewalks, and shall give all requisite notices to the Jurisdiction or other public authorities in connection therewith.

1070, 2.02 CONVENIENCE AND SAFETY: E. Project Area or Work Site Safety: Add the following new 6.

6. The City of Des Moines, Engineering Department, Master Construction Safety Packet is available at http://www.dmgov.org/Departments/Engineering/PDF/MasterConstructionSafetyPacket.pdf and is also available upon request from the Engineering Department. The Engineering Department will make available a copy of the City of Des Moines Master Construction Safety Plan to the Contractor when the contract is awarded. Said Safety Plan is for the Contractor’s information only and it is the Contractor’s sole responsibility to provide, or make available, this safety information to all its Subcontractors.
DISPUTE RESOLUTION AND CONSENT TO JURISDICTION OF IOWA DISTRICT COURT OR FEDERAL DISTRICT COURT IN IOWA

A. The Contractor agrees any claims, disputes, causes of action that accrue to it, or which by subrogation or assignment accrue to its sureties or insurers, arising out of or connected with this contract, and that the Jurisdiction has determined in writing is not subject to Section 1040, 1.10, shall be resolved by arbitration or litigation as elected by the Jurisdiction. As to any such causes of action, Contractor shall provide written notice to Jurisdiction requesting that Jurisdiction make its election as to whether the dispute shall be settled by arbitration or litigation. The written notice shall be either (i) personally delivered, (ii) sent by certified mail, return receipt requested, or (iii) delivered by a nationally recognized prepaid overnight courier service (receipt requested) addressed as follows:

City of Des Moines
Engineering Department
400 Robert D. Ray Drive
Des Moines, IA 50309-1891
Attention: Steve Naber, P.E., City Engineer

Jurisdiction shall notify Contractor in writing as to its election within thirty (30) days of receipt of Contractor's written notice requesting a determination by Jurisdiction.

1. Arbitration

(a) If the Jurisdiction elects to use binding arbitration for final resolution, the sole and exclusive remedy for final resolution of the dispute shall be binding arbitration (the "Arbitration"). The Arbitration shall be submitted to a single arbitrator as is mutually agreed upon by the Contractor and Jurisdiction. If the Contractor and Jurisdiction cannot agree upon a single arbitrator within twenty-one (21) days of the date of the Jurisdiction's notification to the Contractor of the Jurisdiction's decision to pursue binding arbitration, the Arbitration shall be submitted to a three (3) member panel appointed as follows: the Contractor shall appoint one arbitrator; the Jurisdiction shall appoint one arbitrator; and the third arbitrator shall be chosen by the first two appointed arbitrators (for the sake of convenience, the arbitrator, or arbitrators as the case may be, shall be referred to hereinafter as the "Arbitrator"). The parties agree to work toward appointment of a three (3) member Arbitration panel within twenty-one (21) days after not being able to agree on a single arbitrator. The Arbitration shall be conducted in general accord with the Construction Industry Arbitration Rules of the American Arbitration Association then in effect. The parties reserve the right to alter and amend the rules for the Arbitration as they may mutually agree in writing.

(b) Jurisdiction of the Arbitrator shall not extend to setting aside or modifying the terms or requirements of the contract.

(c) Subject to agreement of the parties and the Arbitrator, the parties shall work in good faith to schedule the Arbitration and allow for the decision of the Arbitrator within two hundred forty (240) days after appointment of the Arbitrator.

(d) The Arbitrator shall render a written decision within twenty (20) days after the matter has been fully submitted. For Arbitrations before more than one
arbitrator, the decision of a majority of the panel shall govern. The Arbitrator's decision shall provide a basis for the findings and legal conclusions and shall determine how the cost of the proceedings shall be borne by the parties.

(e) The decision of the Arbitrator shall be binding and final. There shall be no further appeal or judicial review, except under the limited circumstances as allowed by Iowa law.

2. Litigation. If the Jurisdiction elects not to use arbitration as the means to reach final resolution of the claim or fails to notify Contractor in writing within thirty (30) days of its election, then the sole and exclusive remedy for final resolution of the Claim shall be litigation which must be brought in Iowa District Court in and for the County where the Jurisdiction is located or in the United States District Court in and for the District where the Jurisdiction is located.

B. Contractor further consents that it will require its subrogees and assigns to enter into an agreement to comply with the terms of Section, 1.12, and consent to the jurisdiction of either the Iowa District Court in and for the County where the Jurisdiction is located or the United States District Court in and for the District where the Jurisdiction is located, as to any causes of action brought against it arising out of this contract or any work performed under it by Contractor or its subcontractors, and further agrees, on behalf of itself, its subrogees and assigns, to waive any and all objections to the jurisdiction of said court as to any such cause of action. Contractor shall make such consent a condition of the retention of subrogees and assigns.

1070, 2.10 DUST CONTROL: Add the following paragraph:

The Contractor shall be responsible to remove any project-related construction materials deposited on a public street as well as related dust control measures. The Contractor shall employ all means necessary to prevent tracking soil, or loss of material, onto public streets; including but not limited to, rocking private access roads and removing excess material from equipment before leaving the construction site. The Contractor shall promptly remove any material deposited on a public street utilizing mechanical scraping and street sweeping, or other means as required by the Jurisdictional Engineer.

1070, 2.16 READY MIX CONCRETE WASTE: New Section - Add the following 2.16:

2.16 READY MIX CONCRETE WASTE

Concrete trucks will be allowed to washout or discharge excess concrete only in specifically designated areas which have been prepared to minimize contact between the concrete and storm water discharge from the site. The hardened product from the concrete washout areas will be disposed of by the Contractor as other non-hazardous waste materials or may be broken up and used on the site for other appropriate uses.

1070, 3.02 INSURANCE REQUIREMENTS, A: Delete A and replace them with the following A.

A. The contractor shall not purchase liability insurance in the name of the jurisdiction unless such purchase is allowed by special provision.
1070, 3.02 INSURANCE REQUIREMENTS, 2. Commercial General Liability Insurance: Revise the following limits on the Commercial General Liability Insurance:

- The Each Occurrence Limit shall be changed from $1,000,000 to $2,000,000.
- The Personal and Advertising Injury Limit, under Commercial General Liability, changed from $1,000,000 to $2,000,000.
- All other limits shall remain unchanged.

1070, 3.02 INSURANCE REQUIREMENTS, 3. Automobile Liability Insurance: Revise the following limits on the Automobile Liability Insurance:

- Minimum combined single limit per accident shall be changed from $1,000,000 to $2,000,000.

1070, 3.02 INSURANCE REQUIREMENTS, C: Add the following sentence at the end of 1, 2, 3, and 5: “Waiver of Subrogation in favor of Jurisdiction is required.”

1070, 3.02 INSURANCE REQUIREMENTS, C, 6. Additional Insured Endorsements: Replace “Except for Workers Compensation, the insurance specified shall:”, with “Except for Workers Compensation and Railroad Protective Liability Insurance, the insurance specified shall.”.

1070, 3.02 INSURANCE REQUIREMENTS, C: Add the following new 8.

8. WAIVER OF SUBROGATION: To the fullest extent permitted by law, Contractor hereby releases the Jurisdiction, including their respective elected and appointed officials, agents, employees and volunteers and others working on their behalf from and against any and all liability or responsibility to the Contractor or anyone claiming through or under the Contractor by way of subrogation or otherwise, for any loss arising out of liability or occupational injury without regard to the fault of the Jurisdiction or the type of loss involved. This provision shall be applicable and in full force and effect only with respect to loss or damage occurring during the time of this Agreement. The Contractor’s policies of insurance shall contain a clause or endorsement to the effect that such releases shall not adversely affect or impair such policies or prejudice the right of the Contractor to recover thereunder.

1070, 3.03 CONTRACTOR’S INDEMNITY – CONTRACTUAL LIABILITY INSURANCE: Delete B; and replace with the following B.

B. Except to the extent caused by or resulting from the negligent act or omission of the Jurisdiction or the Jurisdiction’s employees, consultants, agents or other for whom the Jurisdiction is responsible, to the fullest extent permitted by law, the Contractor shall defend, indemnify, and hold harmless the Jurisdiction and its officers, agents, employees, and consultants from and against all claims, damages, losses, and expenses, including but not limited to, attorney’s fees, arising out of or resulting from the performance or prosecution of the work by the Contractor, its subcontractors, agents, or employees; or arising from any neglect, default, or mismanagement or omissions by the Contractor, its subcontractors or consultants, suppliers, third parties, or the agents, officers, or employees of any of them in the performance of any duties imposed by the contract or by law; provided any such claim, damage, loss, or expense:

1. is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including economic damages and the loss of use resulting therefrom, and

2. is caused in whole or in part by any act or omission of the Contractor, its subcontractors or consultants, suppliers, third parties, or the agents, officers, or employees of any of them, or anyone for whose acts any of them may be liable.
Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity that would otherwise exist as to any party or person described in this subsection.

**1070, 3.04 CONTRACTORS INSURANCE FOR OTHER LOSSES; WAIVER OF SUBROGATION, B:**
Delete B and replace with the following B.

B. Contractor shall cause each of its subcontractors, consultants, suppliers, third parties, or the agents of any of them, to carry insurance sufficient to cover all loss to such materials, tools, motor vehicles, and equipment. All insurance carried by the Contractor, or its subcontractors, consultants, suppliers, third parties or the agents of any of them, covering risk of loss or damage to materials, tools, motor vehicles, and equipment used in the performance of the Work, shall provide a waiver of subrogation against the Jurisdiction, as specified in Section 1070, 3.02 Insurance Requirements, C.8. To the extent that any subcontractors, consultants, suppliers, third parties or the agents of any of them, do not provide such coverage, any uninsured loss shall be the sole responsibility of the Contractor.

**1070, 3.05 PROPERTY INSURANCE:** Delete A, D, and M; and replace them with the following A, D, and M.

A. Property Insurance Required: The Contractor shall purchase and maintain property insurance, being either Builder’s Risk Insurance or an Installation Floater, for the period of the contract until final acceptance of the work by the Jurisdiction, on all construction contracts where a building, electrical, mechanical, or plumbing permit is required by the permitting entity.

1. Builder’s Risk Insurance by Contractor: On contracts for construction of new buildings or on contracts when Builder’s Risk Insurance is applicable to the contract by definition, the Contractor shall purchase and maintain Builder’s Risk Insurance for the duration of the contract; unless the Jurisdiction states by special provision that the Jurisdiction shall purchase and maintain the Builder’s Risk Insurance. This property insurance, Builder's Risk Insurance, provided by the Contractor shall be in the amount of the initial bid amount, or in an amount equal to the estimated value of actual building construction, whichever is less, as well as applicable modifications thereto for the entire work at the site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in the contract documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final acceptance of the work by the Jurisdiction. The insurance shall include interests of the Jurisdiction, the Contractor, subcontractors, and sub-subcontractors in the work. If the Contractor’s property insurance covering the work has any deductible, the Contractor shall be responsible to pay the cost associated with the deductible. Flood and Earthquake Insurance shall be required as part of the Builder’s Risk Policy, and the minimum required policy limits shall be not less than 10% of the full amount of the contract. If Boiler and Machinery Insurance is required by the contract documents or by law, the Contractor shall purchase the Boiler and Machinery Insurance if the Contractor is required to purchase the Builder’s Risk Insurance. If Boiler and Machinery Insurance coverage is included in the Contractor’s Builders Risk Insurance policy, it may be used to satisfy the Boiler and Machinery Insurance requirement to the extent such coverage specifically covers such objects during installation, testing, and until final acceptance by the Jurisdiction.

2. Builder’s Risk Insurance by the Jurisdiction: When stated in the special provisions, the Jurisdiction shall purchase and maintain property insurance, a.k.a. Builder's Risk Insurance in the amount of the initial bid amount, or in an amount equal to the estimated value of actual building construction, whichever is less, as well as applicable modifications thereto for the entire work at the site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in the contract documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final acceptance of the work by the Jurisdiction. The insurance shall include interests of the Jurisdiction, the Contractor, subcontractors, and sub-subcontractors in the work. This property insurance covering the work will have a deductible of $5,000 for each occurrence, or as stated in the special provisions, which will be the responsibility of the Contractor. Flood
and Earthquake Insurance shall be required as part of the Builder’s Risk Policy, and the minimum required policy limits shall be not less than 10% of the full amount of the contract. If Boiler and Machinery Insurance is required by the contract documents or by law, the Jurisdiction shall purchase the Boiler and Machinery Insurance if the Jurisdiction is required to purchase the Builder’s Risk Insurance. If Boiler and Machinery Insurance coverage is included in the Jurisdiction’s Builders Risk Insurance policy, it may be used to satisfy the Boiler and Machinery Insurance requirement to the extent such coverage specifically covers such objects during installation, testing, and until final acceptance by the Jurisdiction.

3. Installation Floater: On the remainder of these contracts where Builder’s Risk Insurance is not applicable to a contract by definition and an Installation Floater is applicable by definition, the Contractor shall purchase and maintain an Installation Floater for the duration of the contract. This Installation Floater shall cover all materials, fixtures, equipment, and supplies provided for the job. Such insurance shall be on an “all risk” form in an amount equal to the maximum value of such materials, equipment, or supplies covered on the job site, off-premises at any temporary storage location, or in transit, and shall include coverage for hoisting and rigging. The Installation Floater shall be maintained until final acceptance of the work by the Jurisdiction. If the Contractor’s Installation Floater covering the equipment and work has any deductible, the Contractor shall be responsible to pay the cost associated with the deductible. If Boiler and Machinery Insurance is required by the contract or by law, the Contractor shall purchase the Boiler and Machinery Insurance; the Installation Floater may be used to satisfy this requirement to the extent the Boiler and Machinery Insurance coverage specifically covers such objects during installation, testing, and until final acceptance by the Jurisdiction.

D. Boiler and Machinery Insurance: When required by the contract documents or by law, Boiler and Machinery Insurance shall specifically cover such insured objects during installation, testing, and until final acceptance by the Jurisdiction; this insurance shall include interest of the Jurisdiction, Contractor, subcontractors, and sub-subcontractors in the work, and the Jurisdiction and Contractor shall be named insureds. A Builders Risk Insurance policy or an Installation Floater, when also required by the contract documents or by law, may satisfy this requirement as indicated in 1070, 3.05 A.1, 2. and 3. above. If Boiler and Machinery Insurance is required by the contract documents or by law, the Contractor shall purchase the Boiler and Machinery Insurance. However, if the contract, requires the Jurisdiction to purchase the Builder’s Risk Insurance, the Jurisdiction shall also purchase the Boiler and Machinery Insurance.

M. Installation Floater: See Section 1070, 3.05, A.3 above.

1070, 3.06 ENDORSEMENT NAMING JURISDICTION AS AN ADDITIONAL INSURED / CANCELLATION AND MATERIAL CHANGE/ GOVERNMENTAL IMMUNITIES
ENDORSEMENT: Under C. delete the first full paragraph regarding the Cancelation and Material Change Endorsement language and replace it with the following:

Thirty (30) days Advance Written Notice of Cancellation, ten (10) days Written Notification of Cancellation due to non-payment of premium and forty-five (45) days Advance Written Notification of Non-Renewal shall be sent to the Jurisdiction at the office and attention of the Certificate Holder. This endorsement supersedes the standard cancellation statement on the Certificate of Insurance to which this endorsement is attached.

1070, 3.06 ENDORSEMENT NAMING JURISDICTION AS AN ADDITIONAL INSURED / CANCELLATION AND MATERIAL CHANGE/ GOVERNMENTAL IMMUNITIES
ENDORSEMENT: Replace first sentence under E. with the following: If allowed, as specified in Section 1070, 3.02 Insurance Requirements A., all liability policies purchased in the Jurisdiction’s name shall include a Governmental Immunities Endorsement, pursuant to Iowa Code Section 670.4, which endorsement shall include the following provisions:
1070, 3.07 PROOF OF INSURANCE: Add the following sentence at the end of A: “Mail Certificate of Insurance to: Engineering Department, City of Des Moines, City Hall, 400 Robert D. Ray Drive, Des Moines, Iowa 50309.”

SECTION 1080 – PROSECUTION AND PROGRESS

1080, 1.03 WORK PROGRESS AND SCHEDULE: Add the following new D:

D. No person shall operate or permit the operation of any tools or equipment in construction, drilling or demolition work or in preventive maintenance work for public service utilities between the hours of 10:00 p.m. and 7:00 a.m. without the written permission of the Engineer.

1080, 1.09 EXTENSION OF TIME, B. – Request for Extension of Time: Add the following sentence before the last sentence in the first paragraph: “The request for an extension of time is the sole and exclusive remedy of the Contractor for the events listed below.

SECTION 1090 – MEASUREMENT AND PAYMENT

1090, 1.04 PAYMENT FOR CHANGE ORDERS, B: Add the following new 4:

4. Extra Work Performed by the Subcontractor: The percentage markup to be allowed to the Contractor for extra performed by a Subcontractor shall be a maximum of 10%.

1090, 1.05 PROGRESS PAYMENTS, B. Retainage: Delete B. in its entirety and replace with the following B.

B. Retainage: The Jurisdiction shall retain from each monthly progress payment 3% of the amount determined to be due according to the estimate of the Engineer. Early release of retained funds may be requested by the Contractor according to Iowa Code Section 573.28.

SECTION 2010 – EARTHWORK, SUBGRADE, AND SUBBASE

2010, 3.06 SUBGRADE PREPARATION, A. Uniform Composition: 1. Subgrade Compaction in Fill Sections: Add the following new c.

  c. Proof roll subgrade as specified in Section 3.06, B to locate soft or yielding areas prior to placement of top six-inch lift.

2010, 3.06 SUBGRADE PREPARATION, A. Uniform Composition: 2. Subgrade Compaction in Cut Sections: Add the following new d.

  d. Prior to scarify, mix, and re-compact the bottom six inches of subgrade (paragraph 2.b above), proof roll subgrade as specified in Section 3.06, B to locate soft or yielding areas.

2010, 3.06 SUBGRADE PREPARATION, B. Subgrade Stability: Delete 1. in its entirety and replace with the following 1.

  1. Perform proof rolling with a fully loaded single axle or tandem axle truck. Operate trucks at less than 10 mph. Make multiple passes for every lane. The subgrade will be considered to be unstable if, under the operation of the loaded truck, the surface shows yielding (soil wave in front of the loaded tires) or rutting of more than 2 inches, measured from the top to the bottom of the rut at the outside edges.
SECTION 3010 – TRENCH EXCAVATION AND BACKFILL

3010, 3.02 ROCK OR UNSTABLE SOILS IN TRENCH BOTTOM: Delete B. and replace with the following new B.
   B. The Engineer will review the contractor’s request for the need for over-excavation and trench foundation stabilization and authorize the work prior to installation of pipes and structures.

3010, 3.05 PIPE BEDDING AND BACKFILL, E. Final Trench Backfill: 3. Class I and Class II Backfill Material: Delete a. and replace with the following new a.
   a. Compact to at least 65% relative density within right-of-way or under any paved surface or within two feet thereof.

3010, 3.05 PIPE BEDDING AND BACKFILL, E. Final Trench Backfill: 4. Class III and Class IVA Backfill Material: Delete a. and replace with the following new a.
   a. Compact to at least 95% of Standard Proctor Density within right-of-way or under any paved surface or within two feet thereof.

SECTION 4010 – SANITARY SEWERS

4010, 3.06 SANITARY SEWER SERVICE STUBS, C: Add the following new 7:
   7. Mark the location of all sanitary sewer service stubs at the time of installation by a two-inch wide detectable marking tape installed at a depth of 18 inches to 24 inches below finished grade, directly over the service stub, for its entire length and brought up to the surface at the end of the service stub adjacent to the post marking the stub location. The tape shall be green in color and marked “Sanitary Sewer Service Stub Buried Below”.

4010, 3.10 SANITARY SEWER CLEANOUT: Delete in its entirety and replace with the following:
   Cleanouts are not allowed on sanitary sewer mains in the City of Des Moines. Figure 4010.203 shall apply to services only.

SECTION 4020 – STORM SEWERS

4020, 2.01 STORM SEWERS, Parts A-L: Reinforced Concrete Pipe shall be required for storm sewer construction in the Right-Of-Way or Public Easement areas. Minimum size of storm sewer pipe in the Right-Of-Way and Public Easement areas shall be 15-inch minimum diameter.

SECTION 4030 – PIPE CULVERTS

4030, 2.01 Pipe Culverts, Parts A-D: Reinforced Concrete Pipe shall be required for pipe culvert construction in the Right-Of-Way or Public Easement areas. Minimum size of pipe culverts in the Right-Of-Way and Public Easement areas shall be 15-inch minimum diameter.

SECTION 4040 – SUBDRAINS AND FOOTING DRAIN COLLECTORS

4040, 2.01 FOOTING DRAIN COLLECTORS: Use material for pipe and fittings complying with the current Adopted Edition of the Uniform Plumbing Code (UPC). In addition to the materials identified in the UPC, the pipe shall comply with ASTM D 3034, SDR 23.5 pipe will be allowed.
4040, 2.02 TYPE 1 SUBDRAINS (LONGITUDINAL SUBDRAIN), C. Corrugated Polyethylene Tubing and Fittings (Corrugated PE): Delete Type C and Type CP. Only Type S or Type SP are allowed in the City of Des Moines.

4040, 2.03 TYPE 2 SUBDRAINS (COMBINATION SUBDRAIN/FOOTING DRAIN COLLECTOR), B.3. HDPE Pipe: Delete Type CP. Only Type SP is allowed in the City of Des Moines.

4040, 2.09 FOOTING DRAIN SERVICE STUBS - Add this new 2.09 and the following note: Use material for pipe and fittings complying with the current Adopted Edition of the Uniform Plumbing Code (UPC). In addition to the materials identified in the UPC, the use of SDR 23.5 pipe will be allowed.

4040, 3.02 FOOTING DRAIN COLLECTORS, C: Add the following new 3:

3. Type B cleanouts should be used for footing drain collectors less than 5 feet in depth in the City of Des Moines. Footing drain collectors greater than 5 feet deep, a Type A cleanout shall be used.

4040, 3.03 FOOTING DRAIN SERVICE STUBS: Add the following new D and E.

D. Mark the location of all footing drain service stubs at the time of installation by a two-inch wide detectable marking tape installed at a depth of 18 inches to 24 inches below finished grade, directly over the service stub, for its entire length and brought up to the surface at the end of the service stub adjacent to the post marking the stub location. The tape shall be green in color and marked “Footage Drain Service Stub Buried Below”.

E. ABS, PVC and SDR 23.5 pipe shall be installed with a minimum bedding of 4” below and up all side with 3/8” clean smooth gravel or a bedding product approved by the Engineer.

4040, FIGURE 4040.232, SUBDRAIN CLEANOUTS: Add the following new Note 7 to Figure 4040.232.

7. Type B cleanouts should be used for footing drain collectors or combination subdrain/footing drain collectors less than 5 feet in depth in the City of Des Moines. Footing drain collectors greater than 5 feet deep, a Type A cleanout shall be used.

SECTION 4060 – CLEANING, INSPECTION, AND TESTING OF SEwers

4060, 3.03 VIDEO INSPECTION, A. General: Delete 1. and replace with the following new 1.

1. Conduct video inspection of all new and rehabilitated sanitary sewers, storm sewers, pipe culverts, and footing drain collectors after all backfill and compaction operations are completed, but prior to paving, unless otherwise specified in the contract documents.

SECTION 6010 – STRUCTURES FOR SANITARY AND STORM SEwers

6010, PARTS 1, 2, 3, and Figures: Delete all references in this entire section to “precast rectangular intakes”. Only circular precast intakes and manholes are allowed in the City of Des Moines. All square or rectangular shaped intakes and manholes shall be cast-in-place.

6010, 2.03, B. REINFORCEMENT: Add the following second sentence: All reinforcement for cast-in-place structures shall be epoxy coated.

6010, 2.09 MANHOLE OR INTAKE ADJUSTMENT RINGS (Grade Rings): Add the following new C.

C. Manhole adjustment rings are not required to have pre-formed or pre-drilled holes for the anchor bolts.
CASTINGS (Ring, Cover, Grate, and Extensions), D. Casting Types: 2. - Intakes: Delete b. and replace it with the following b.

b. Castings shall include design shown in this General Supplemental for lids on Type E, F, and G storm sewer castings shown for Figure 6101.602.

6010, 2.13 STEPS: Delete entire Section as manhole steps are not allowed in the City of Des Moines.

ANCHOR BOLTS AND WASHERS, B. Diameter: Delete B. and replace it with the following B.: Provide bolts and washers 1/8 inch smaller than hole or slot in the casting frame but not less than 7/8 inch diameter.

6010, 3.01 GENERAL REQUIREMENTS FOR INSTALLATION OF MANHOLES AND INTAKES, J. Castings: Delete J. and replace with the following J.: Install the type of casting specified in the contract documents and adjust to proper grade. Where a manhole or intake is to be in a paved area, adjust the casting to match the slope of the finished surface. When castings with a bolt down cover (Type C or D) are specified, attach casting frame to the structure with four anchor bolts.

SECTION 7010 – PORTLAND CEMENT CONCRETE PAVEMENT

7010, 3.02 PAVEMENT CONSTRUCTION, E. Bar and Reinforcement Placement, 1. Tie Bars: Delete a. and replace it with the following a.

a. Place bars prior to vibration. Bars shall be supported by approved chairs. Placement in position by a machine is not allowed.

7010, 3.02 PAVEMENT CONSTRUCTION, E. Bar and Reinforcement Placement: Add the following new 5:

5. PCC pavement slabs with manhole castings, with or without boxouts, shall have reinforcement similar to PV-103 around the castings.

7010, 3.02 PAVEMENT CONSTRUCTION, F. Concrete Pavement Placement: Delete 1. and replace it with the following 1.

1. Use paving machine for all full-width paving, pavement widening, and pavement reconstruction 100 feet or more in length.

7010, 3.07 CURB AND GUTTER CONSTRUCTION: Delete B. and replace it with the following B.

B. Use curb and gutter machine for all curb and gutter construction 100 feet or more in length.

7010, 3.07 QUALITY CONTROL, D. Pavement Thickness: Add the following as the first sentences under 1: Coring of pavement will not be required by the City of Des Moines if depth checks of the plastic thickness of the pavement are within one-half inch of the design thickness. If the variance exceeds one-half inch this section shall apply.

7010, FIGURE 7010.101, JOINTS: On Sheet 2 of 8 under ‘C’ Joint in Curb add the following: The entire curb shall be sealed with Joint Sealant Material.

7010, FIGURE 7010.101, JOINTS: On Sheet 3 of 8 delete Note 11 and replace with the following Note 11.

11. Sawing and sealing of the joint is required. See Detail D-2.

On Sheet 3 of 8 Joint Types KT-1, KT-2, and KT-3 shall not be used.
7010, FIGURE 7010.901, PCC PAVEMENT JOINTING: Add Note 6 with the following:

6. All new roadway pavements shall be a minimum width of 27 feet back to back with parking on one side and 33 feet with parking on two sides.

SECTION 7020 – HOT MIX ASPHALT PAVEMENT

7020, 3.01 HMA PAVEMENT, Add the following new H.:
H. The paver shall be capable of paving a minimum continuous width of twenty (20) foot wide strip without seam. Pavers in tandem will be acceptable; however, an adequate number of personnel shall be available to operate both pavers simultaneously.

7020, FIGURE 7020.901, HMA PAVEMENT: Add Note 3 with the following:

3. All new roadway pavements shall be a minimum width of 27 feet back to back with parking on one side and 33 feet with parking on two sides.

SECTION 7030 – SIDEWALKS, SHARED USE PATHS, AND DRIVEWAYS

7030, 2.07 DETECTABLE WARNINGS: Add the following sentence at the end: Only cast iron detectable warnings are allowed in the City of Des Moines.

7030, 3.04 PCC SIDEWALKS, SHARED USE PATHS, AND DRIVEWAYS, A. Form Setting: Add the following new 6:
6. The turning space for a sidewalk or shared use path shall be formed separately from the adjoining ramps and sidewalk or shared use path.

7030, 3.04 PCC SIDEWALKS, SHARED USE PATHS, AND DRIVEWAYS, B. Concrete Pavement Placement, 1. Shared Use Path: Add the following sentence at the end: “When the Portland Cement Concrete is delivered to the project on the prepared subgrade or subbase, the loads shall be limited to 5 tons for single axle vehicles or 10 tons for tandem axle or larger vehicles.”

7030, 3.04 PCC, SIDEWALKS, SHARED USE PATHS, AND DRIVEWAYS, B. Concrete Pavement Placement, 2. Sidewalk: Add the following new g:

   g. The turning space for a sidewalk or shared use path shall be placed separately from the adjoining ramps and sidewalk or shared use path.

7030, 3.04 PCC SIDEWALKS, SHARED USE PATHS, AND DRIVEWAYS, F. Jointing: 4. Isolation Joints: Delete b. and replace it with the following new b.

   b. For a sidewalk constructed with a driveway, install a ½” expansion joint on the property side of the sidewalk and a ½” expansion joint on the street side of the sidewalk.

7030, 3.05 HMA SHARED USE PATHS AND DRIVEWAYS: Add the following second sentence: When Hot Mix Asphalt is delivered to the project on the prepared subgrade or subbase, the loads shall be limited to 5 tons for single axle vehicles or 10 tons for tandem axle or larger vehicles.

7030, FIGURE 7030.101, CONCRETE DRIVEWAY, TYPE A: Delete the references to “E Joint” on the property side of the sidewalk and “C or E Joint” on the street side of the sidewalk, and replace with “install a ½” expansion joint on the property side of the sidewalk and a ½” expansion joint on the street side of the sidewalk”.
In addition, install a ½” expansion joint in the sidewalk at the extension of both edges of the driveway. Delete 7 and replace with the following 7; “Install a ½” expansion joint at the back of curb.”
7030, FIGURE 7030.102, CONCRETE DRIVEWAY, TYPE B: Delete the references to “E Joint” on the property side of the sidewalk and “C or E Joint” on the street side of the sidewalk, and replace with “install a ½” expansion joint on the property side of the sidewalk and a ½” expansion joint on the street side of the sidewalk”. In addition, install a ½” expansion joint in the sidewalk at the extension of both edges of the driveway.

7030, FIGURE 7030.201, CLASSES OF SIDEWALKS: The detail for CLASS A SIDEWALK shall be revised to delete the “4” min.” thickness dimension of the sidewalk and replace with “5” min.”.

7030, FIGURE 7030.202, CURB DETAILS FOR CLASS A SIDEWALK: On Detail 3 delete the note “Sealed ‘E’ joint” and replace it with the following note “Sealed ‘B’ joint”. On Detail 1, 2, and 3 delete the “4 min.” thickness dimension of the sidewalk and replace with “5” min.”.

SECTION 9020 – SODDING

9020, 3.03 – SOD INSTALLATION: Delete A. and replace it with the following new A.
A. Do not install sod between the dates of June 1 and August 31, unless authorized by the Engineer.

SECTION 9040 – EROSION AND SEDIMENT CONTROL

9040, 1.03 – SUBMITTALS: Add the following sentences: The Jurisdiction will not approve the contractor’s Stormwater Pollution Prevention Plan (SWPPP) or revisions to the SWPPP; instead, the Jurisdiction will only review and comment on the SWPPP and any revisions. The contractor shall submit to the Engineer a copy of the Iowa Department of Natural Resources authorization prior to the Jurisdiction’s issuance of the Notice to Proceed for the work.

9040, 1.08 – MEASUREMENT FOR PAYMENT, A. Stormwater Pollution Prevention Plan (SWPPP): Delete A. in its entirety and replace with the following A.

A. Stormwater Pollution Prevention: Item will be paid for as a lump sum for the project based on the following formula: 30% of the bid amount after review of the SWPPP by the Engineer and filing a Notice of Intent by the contractor, an additional 20% of the bid amount: when 25% of the total original contract amount is earned, an additional 20% of the bid amount when 50% of the total original contract amount is earned, an additional 20% of the bid amount when 75% of the total original contract amount is earned, and the remaining 10% of the bid amount upon filing the Notice of Discontinuation by the contractor. Item shall include the following activities and work:

1. Stormwater Pollution Prevention Plan (SWPPP) Preparation: Item includes reviewing and preparation of any modifications necessary to the general SWPPP provided by the Jurisdiction based on the Contractor’s proposed scheduling and construction methods, filing a Notice of Intent for coverage of the project under the Iowa DNR NPDES General Permit No. 2, and payment of associated NPDES permit fees. The Jurisdiction will publish the Public Notice of Storm Water Discharge and provide an affidavit of publication to the contractor.

2. Management: Item includes all work required to comply with the administrative provisions of the Iowa DNR NPDES General Permit No. 2; including record keeping, documentation, updating the SWPPP, filing the Notice of Discontinuation, etc. Item also includes weekly inspections required to satisfy the provisions of General Permit No. 2, unless otherwise stated in the contract documents.

3. Inspection: Item includes inspection of the disturbed areas, and erosion and sediment control measures performed by the contractor, at least once every seven (7) calendar days until the disturbed areas have been stabilized with a perennial vegetative cover of sufficient density to preclude erosion.
4. **Additional Erosion and Sediment Control Measures:** Item includes the cost of erosion and sediment control measures included in the contractor's modifications to the general SWPPP provided by the Jurisdiction that are either not included as bid items on the proposal or exceed 20% of the proposal unit quantity for the measure, as well as replacement of these measures if needed. The contractor will be paid at the unit bid price for additional erosion and sediment control measures constructed that are included in the contractor's modifications to the general SWPPP provided by the Jurisdiction when the quantity of these additional measures is less than or equal to 20% of the contract quantity for the measure.

**9040, 3.01 – SWPPP PREPARATION:** Delete in its entirety and replace with the following.

A. Review and prepare any modifications necessary to the general SWPPP provided by the Jurisdiction based on the Contractor’s proposed scheduling and construction methods. Prepare a Stormwater Pollution Prevention Plan (SWPPP) according to the requirements of the Iowa DNR NPDES General Permit No. 2.

B. Have the SWPPP prepared by an individual experienced in erosion and sediment control.

C. Ensure that controls utilized in the SWPPP conform to the type and quantity of erosion and sediment controls shown in the contract documents. See 9040,1.08, 4 above for measurement for payment of any erosion and sediment control measure used that is not shown in the contract documents or exceeds 20% of the contract quantity for the measure.

D. Submit the completed SWPPP to the Engineer for review and comment prior to filing the Notice of Intent.

E. The Jurisdiction will publish the Public Notice of Storm Water Discharge, as required by the NPDES General Permit No. 2 and provide an affidavit of publication to the contractor.

F. File the Notice of Intent and fee, as required by the NPDES General Permit No. 2.

G. Prior to beginning grading, excavation, or clearing and grubbing operations, all erosion and sediment control measures identified in the SWPPP shall be installed or constructed.

**9040, 3.02 – SWPPP MANAGEMENT:** Delete C. in its entirety and replace with the following C.

C. Submit all SWPPP revisions to the Engineer for review and comment.

**SECTION 9080 – CONCRETE STEPS AND HANDRAIL**

**9080, 2.01 – MATERIALS, B. Reinforcing Steel:** Add the following sentence at the end: “All reinforcement shall be epoxy coated.”
LID SHALL BE USED FOR TYPE E, TYPE F, AND TYPE G APPLICATIONS AS REFERENCED BY SUDAS FIGURE 6010.502.

RAISED LETTERS Flush WITH TOP SURFACE

PICKHOLES

RAISED LETTERS Flush WITH TOP SURFACE

LETTERED "USA" OR "MADE IN USA"

MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 358
FINISH: NO PAINT

STORM SEWER LID
FOR THE CITY OF DES MOINES, IOWA