
**BIDDING DOCUMENTS
FOR THE**

**VILLAGE OF MAYVILLE
DPW BUILDING RENEWABLE ENERGY**

TUSCOLA COUNTY, MICHIGAN

Prepared By:
SPICER GROUP, INC.
SAGINAW, MICHIGAN
MARCH 2011

TABLE OF CONTENTS

BIDDING AND CONTRACT REQUIREMENTS

Page Nos.

Advertisement.....	AD - 1
Instructions to Bidders.....	IB-1 - 6
Bid Form (Proposal).....	P-1 - 5
Act 524 (Retainage Rules).....	A-1 - 5
Agreement	AGREE-1 - 5
Construction Performance Bond	
Construction Payment Bond	
General Conditions.....	GC-1 - 51
Supplementary Conditions.....	SC-1
Insurance Coverage	I-1

DIVISION 1 - GENERAL REQUIREMENTS

SECTION

01010 Summary of Work.....	1010-1
01019 Contract Considerations	1019-1 - 2
01039 Coordination and Meetings	1039-1 - 2
01300 Submittals.....	1300-1 - 3
01400 Quality Control.....	1400-1
01500 Construction Facilities and Temporary Controls.....	1500-1 - 2
01570 Traffic Regulation	1570-1 - 2
01600 Material and Equipment	1600-1 - 3
01650 Starting of Systems.....	1650-1 - 2
01700 Contract Closeout.....	1700-1 - 4

DIVISION 16 – ELECTRICAL

SECTION

16010 Basic Electrical Requirements.....	16010-1 - 2
16111 Conduit.....	16111-1 - 4
16123 Building Wire and Cable.....	16123-1 - 3
16130 Boxes.....	16130-1 - 2
16800 Solar Power	16800-1 - 3

ADVERTISEMENT

**VILLAGE OF MAYVILLE
DPW BUILDING RENEWABLE ENERGY**

TUSCOLA COUNTY, MICHIGAN

Bids will be received by **Village of Mayville** (OWNER) at the Village Offices, 5950 Fox Street, Mayville MI, 48744, until **April 6, 2011, 11:00 AM**. Bids will be opened and read aloud to the public at this time. The construction of the **Village of Mayville DPW Building Renewable Energy** consists of the following approximate quantities with appurtenances:

Install 2580 watt ground mounted grid tied solar electric system, complete.

A Mandatory Pre-Bid meeting will be held at the Village Offices, 5950 Fox Street, Mayville MI, 48744 on **March 30, 2011 at 10:00 AM**. This will be followed by a site visit to the location of the solar electric system installation.

Please submit all questions by **March 31, 2011 by 12:00 PM** by email to **Darrick Huff** at darrickh@spicergroup.com

Each proposal shall be accompanied by certified check or bidder's bond in the amount of 5% of the bid. Checks shall be made payable to **Village of Mayville** as security for the acceptance of the Contract and subject to the conditions stated in the Instructions to Bidders. The Owner reserves the right to waive an informality in any bid, to reject any or all bids, or accept any bid which is considered most favorable to the Owner.

Proposal forms and specifications may be obtained by qualified Bidders on Tuscola's website at: <http://www.villageofmayville.org/> and the office of the **Village of Mayville, 5950 Fox Street, Mayville, MI 48744** at a non-refundable reproduction charge of **\$25.00** for each document if picked up, or **\$30.00** if mailed.

OWNER: Village of Mayville
BY: Don Beavers

INSTRUCTIONS TO BIDDERS

I. Defined Terms:

Terms used in these Instructions to Bidders, which are defined in the Standard General Conditions of the Construction Contract, have the meanings assigned to them in General Conditions. The term "Bidder" means one who submits a Bid directly to OWNER, as distinct from a sub-bidder, who submits a bid to a Bidder. The term "Successful Bidder" means the lowest, qualified, responsible and responsive Bidder to whom OWNER (on the basis of OWNER's evaluation as hereinafter provided) makes an award. The term "Bidding Documents" includes the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid Form, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids). The term "Issuing Office" means the office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

II. Copies of Bidding Documents:

- A. Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Advertisement or Invitation to Bid may be obtained from Professional. The deposit will not be refunded.
- B. Complete sets of the Bidding Documents must be used in preparing Bids; neither OWNER nor Professional assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- C. OWNER and Professional in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

III. Qualifications of Bidders:

To demonstrate qualifications to perform Work, each Bidder must be prepared to submit within five days of OWNER's request written evidence, such as financial data, previous experience, present commitments and other such data as may be called for below (or in the Supplementary Conditions). Each bid must contain evidence of Bidder's qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of contract.

IV. Examination of Contract Documents and Site:

- A. It is the responsibility of each Bidder before submitting a Bid to:
 - 1. To examine the Contract Documents thoroughly and other related data identified in the Bidding Documents (including "technical data" referred to below);
 - 2. To visit the site and to become familiar with and satisfy Bidder as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work;
 - 3. To consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work;
 - 4. To study and carefully correlate Bidder's knowledge and observations with the Contract Documents and such other related data and;

5. To promptly notify Professional of all conflicts, errors, ambiguities, or discrepancies, which Bidder has discovered in or between the Contract Documents and such other related documents.
- B. Information and data reflected in the Contract Documents with respect to Underground Facilities at or contiguous to the site is based upon information and data furnished to OWNER and Professional by owners of such Underground Facilities or others, and OWNER does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.
- C. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, underground facilities and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in Paragraphs 4.2 and 4.3 of the General Conditions.
- D. Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, test and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto or which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of the Contract Documents.
- E. On request in advance, OWNER will provide each Bidder access to the site to conduct such explorations, examinations, investigations, studies, and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes, clean up and restore the site to its former condition upon completion of such activities.
- F. The lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by CONTRACTOR in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by CONTRACTOR. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by OWNER unless otherwise provided in the Contract Documents.
- G. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and the specific means, methods, techniques, sequences or procedures of construction as may be shown or indicated in or expressly required by the Contract Documents, and the Bidder has given Professional written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Contract Documents and the written resolutions thereof by Professional is acceptable to Bidder, and that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

V. **Interpretations and Addenda:**

- A. All questions about the meaning or intent of the Contract Documents are to be directed to Professional. Interpretations or clarifications considered necessary by Professional in response to such questions will be issued by Addenda via U.S. Postal Service First Class Mail, other package courier such as United Parcel Service (U.P.S.), or delivered to all parties recorded by Professional as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda

will be binding. Oral and other interpretations or clarifications will be without legal effect.

- B. OWNER or Professional may also issue addenda to modify the Bidding Documents as deemed advisable.

VI. Bid Security:

- A. Each Bid must be accompanied by Bid security made payable to Tuscola Township in an amount of five percent of the Bidder's maximum Bid price and in the form of a certified check or a Bid Bond issued by a surety meeting requirements of Article 5, Bonds and Insurance, Paragraph 5.1, of the General Conditions section of the Bidding Documents.
- B. The Bid security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required contract security within fifteen days after the Notice of Award, OWNER may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom OWNER believes to have a reasonable chance of receiving the award may be retained by OWNER until the earlier of the seventh day after the Effective Date of the Agreement or one day longer than Bid hold period after the Bid opening, whereupon Bid security furnished by such Bidders may be returned.

VII. Contract Time:

The numbers of days within which, or the dates by which, the Work is to be substantially completed and also completed and ready for final payment (the Contract Time is defined in the General Conditions) are set forth in the Bid Form and the Agreement.

VIII. Liquidated Damages:

Provisions for liquidated damages, if any, are set forth in the Agreement.

IX. Substitute or "Or-Equal" Items:

- A. The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to Professional, application for such acceptance will not be considered by Professional until after the Effective Date of the Agreement. The procedure for submission of any such application by CONTRACTOR and consideration by Professional is set forth in Paragraphs 6.7.1, 6.7.2 and 6.7.3 of the General Conditions and may be supplemented in the General Requirements.

IX. Subcontractors, Suppliers and Others:

- A. If the OWNER requires the identity of certain Subcontractors, Suppliers and other persons and organizations (including those who are to furnish the principal items of material and equipment) to be submitted to OWNER in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall, within seven days after the Bid opening, submit to OWNER a list of all such Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work for which such identification is required. An experience statement shall accompany such list with pertinent information regarding similar projects and other evidence of qualifications for each such Subcontractor, Supplier, person, or organization if requested by OWNER. An OWNER or Professional who, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, other person or organization, may on or before the Notice of Award is given, request the

apparent Successful Bidder to submit an acceptable substitute, in which case the apparent Successful Bidder shall submit an acceptable substitute, that Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution and OWNER may consider such price adjustment in evaluating Bids and making the contract award. If apparent Successful Bidder declines to make any such substitutions, OWNER may award the contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers and other persons and organizations. The declining to make requested substitutions will not constitute grounds for sacrificing the Bid security of any Bidder. Any Subcontractor, Suppliers, or other person or organization listed and to whom OWNER and Professional do not make written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER and Professional subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.8 of the General Conditions.

- B. In contracts where the Contract Price is on the basis of Cost-of-the-Work Plus a Fee, the apparent Successful Bidder, prior to the Notice of Award, shall identify in writing to OWNER those portions of the Work that such Bidder proposes to subcontract and after the Notice of Award may only subcontract other portions of the Work with OWNER's written consent.
- C. No CONTRACTOR shall be required to employ any Subcontractor, Supplier, other person or organization against whom CONTRACTOR has reasonable objection.

X. Bid Form:

- A. The Bid Form is included with the Bidding Documents; additional copies may be obtained from Professional (or the issuing office). Unless noted otherwise in the Bid Form, only the Bid Form and its specified documents shall be submitted.
- B. All blanks on the Bid Form must be completed in ink or by typewriter.
- C. Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature. Evidence of authority to conduct business as an out-of-state corporation in the state where the Work is to be performed shall be provided. State contractor license number, if any, must also be shown.
- D. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.
- E. All names must be typed or printed below the signature.
- F. The Bid shall contain an acknowledgment of receipt of all issued Addenda (the numbers of which must be filled in on the Bid Form).
- G. The address and telephone number for communications regarding the Bid must be shown.
- H. The "Legal Status of Bidder" data must be filled out and included with the Bid Form.

XI. Submission of Bids:

- A. Bids shall be submitted at the time and place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted) and name and address of the Bidder and accompanied by the Bid security and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a

separate envelope with the notation "BID ENCLOSED" on the face of it. Each prospective Bidder is furnished one copy of Bidding Documents with one separate unbound copy of each of the Bid Form and the Bid Bond. Bidder may retain the Bidding Documents. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and other required documents. Faxed bids shall not be accepted.

XII. Modification and Withdrawal of Bids:

- A. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.
- B. If, within twenty-four hours after Bids are opened, any Bidder files a duly signed, written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid and the Bid security will be returned. Thereafter, that Bidder will be disqualified from further bidding on the Work to be provided under the Contract Documents.

XIII. Opening of Bids:

Bids will be opened and (unless obviously non-responsive) read aloud publicly at the place indicated in the Advertisement or Invitation to Bid. An abstract of the amounts of the base Bids and major alternatives (if any) will be made available to Bidders after the opening of Bids.

XIV. Bids to Remain Subject to Acceptance:

All bids will remain subject to acceptance for 60 days after the day of the Bid opening, but OWNER may, in its sole discretion, release any Bid and return the Bid security prior to that date.

XV. Award of Contract:

- A. OWNER reserves the right to reject any and all Bids, including without limitation the rights to reject any or all nonconforming, nonresponsive, unbalanced or conditional Bids and to reject the Bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by OWNER. OWNER also reserves the right to waive all informalities not involving price, time or changes in the Work and to negotiate contract terms with the Successful Bidder. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.
- B. In evaluating Bids, OWNER will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- C. OWNER may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Bid Form. OWNER also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

- D. OWNER may conduct such investigations as OWNER deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of Bidders, proposed Subcontractors, Suppliers and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to OWNER's satisfaction within the prescribed time.
- E. If the contract is to be awarded, it will be awarded to the lowest Bidder whose evaluation by OWNER indicates to OWNER that the award will be in the best interests of the Project.
- F. If the contract is to be awarded, OWNER will notify the Successful Bidder during the Bid hold period.

XVI. Contract Security and Insurance:

Article 5.1 of the Bonds and Insurance section of the General Conditions set forth OWNER's requirements as to Performance and Payment Bonds and Insurances. When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by the required performance and payment Bonds and Insurance papers.

XVII. Signing of Agreement:

When OWNER gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within fifteen days thereafter CONTRACTOR shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER with the required Bonds and Insurances. Thereafter, OWNER shall deliver one fully signed counterpart to CONTRACTOR.

XVIII. Retainage:

Provisions concerning retainage and CONTRACTOR's rights to deposit securities in lieu of retainage are set forth in the Agreement.

BID FORM
(Proposal)

- A. PROJECT IDENTIFICATION: **DPW BUILDING RENEWABLE ENERGY**
- B. CONTRACT IDENTIFICATION AND NUMBER: **119005SG2011**
- C. THIS BID IS SUBMITTED TO: **VILLAGE OF MAYVILLE
Tuscola County, Michigan**

- 1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in the Contract Documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
- 2. BIDDER accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance during the Bid hold period. BIDDER will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within fifteen days after the date of OWNER's Notice of Award.
- 3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:
 - a. BIDDER has examined copies of all the Bidding Documents and of the following Addenda. There is no Addendum Acknowledgment sheet; therefore, please acknowledge receipt of Addenda below:

(BIDDER NOTE: Bidder shall fill in date and number of all addenda. Bidder shall submit signed copies of Addendum acknowledge receipt form with each Addendum with the completed bid. If no addenda have been issued, insert "N/A".)

Date of Issue	Addendum No.
_____	_____
_____	_____
_____	_____

- b. BIDDER has visited the site and conducted an examination of the area and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the Work;
- c. BIDDER is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.
- d. BIDDER has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.2.1 of the General Conditions. BIDDER accepts the determination set forth in paragraph 4.2 of the General Conditions of the extent of the "technical data" contained in such reports and drawings upon which BIDDER is entitled to rely as provided in paragraph 4.2 of the General Conditions. BIDDER acknowledges that such reports and drawings are not Contract Documents and may not be complete for

BIDDER's purposes. BIDDER acknowledges that OWNER and Professional do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to Underground Facilities at or contiguous to the site. BIDDER has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by BIDDER and safety precautions and programs incident thereto. BIDDER does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the times, price and other terms and conditions of the Contract Documents.

- e. BIDDER is aware of the general nature of Work to be performed by OWNER and others at the site that relates to Work for which the Bid is submitted as indicated in the Contract Documents.
- f. BIDDER has correlated the information known to BIDDER, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.
- g. BIDDER has given PROFESSIONAL written notice of all conflicts, errors, ambiguities or discrepancies that BIDDER has discovered in the Contract Documents and the written resolution thereof by PROFESSIONAL is acceptable to BIDDER, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
- h. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

4. BIDDER will complete the Work in accordance with Contract Documents for the following price (s):

Item No.	Estimated Quantity	Unit	Description	Material Unit Price	Labor Unit Price	Total Amount
<u>Mayville DPW</u>						
1.	1	Each	Solar System	\$ _____	\$ _____	\$ _____
<u>DTE Energy</u>						
2.	1	Each	Utility Company Cost to Replace Meter with Bi-Direction Meter (Allowance)	\$ _____	\$ _____	\$ _____
TOTAL AMOUNT OF BID-----						\$ _____

Unit prices have been computed in accordance with paragraph 11.9.2 of the General Conditions.

BIDDER acknowledges that quantities are not guaranteed and final payment will be based on actual quantities determined as provided in the Contract Documents. BIDDER acknowledges that progress payments will be based on the Payment Schedule as detailed in the Agreement.

5. BIDDER agrees that the Work:
- a. will be substantially complete on or before June 10, 2011 and completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions on or before June 24, 2011.

BIDDER accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.

6. In addition, BIDDER accepts:
- a. That the CONTRACTOR will provide through the PROFESSIONAL reference points and laying out (staking) the work sufficient for construction purposes in accordance with applicable parts of paragraph 4.4 of the General Conditions and the Supplementary Conditions.

7. The following documents are attached to and made a condition of this Bid:

- a. Required 5% Bid Security in the form of Bid Bond or Certified Check.
- b. A tabulation of Subcontractors, suppliers and other persons or organizations whose separate/individual work value exceeds 15% required to be identified in this bid.
- c. If required, BIDDER's Qualification Statement with supporting data.

8. Communications concerning this Bid shall be addressed to: **Darrick Huff, Spicer Group, Inc., 230 S. Washington Avenue, Saginaw, MI 48607-1286, Phone: (989) 754-4717; Fax: (989) 754-4440; Email: darrikh@spicergroup.com. Last date for questions is March 31, 2011, by 12:00pm.**

9. Terms used in this Bid which are defined in the General Conditions or Instructions will have the meanings indicated in the General Conditions or Instructions.

10. Dated and signed at _____ State of ____ this _____ day of _____, 2010.

Name of Bidder: _____

By: _____
(Authorized Officer's Name)

Its: _____
(Officer's Title)

Business Address: _____

(Zip Code)

Telephone Number: _____ Fax Number: _____

Federal I.D. Number: _____

If BIDDER is: (Note to BIDDER - Fill out appropriate section.)

AN INDIVIDUAL

By _____ (SEAL)
(Individual's Name)

doing business as

A PARTNERSHIP

By _____ (SEAL)
(Firm Name)

(General Partner)

A CORPORATION

By _____ (SEAL)
(Corporation Name)

(State of Incorporation)

By _____ (SEAL)
(Name of Person Authorized to Sign)

(Title)

(Corporate Seal)

Attest _____
(Secretary)

Date of Qualification to do business is _____

A JOINT VENTURE

By _____ (SEAL)
(Name)

(Address)

By _____ (SEAL)
(Name)

(Address)

(Each joint venturer must sign. The manner of signing for each individual, partnership and corporation that is a party to the joint venture should be in the manner indicated above).

4. BIDDER will complete the Work in accordance with the Contract Documents for the following price(s):

Item No.	Estimated Quantity	Unit	Description	Material Unit Price	Labor Unit Price	Total Amount
<u>Mayville DPW</u>						
1.	1	Each	Solar System	\$ _____	\$ _____	\$ _____
<u>DTE Energy</u>						
2.	1	Each	Utility Company Cost to Replace Meter with Bi-Direction Meter (Allowance)	\$ _____	\$ 3,500.00	\$ 3,500.00
TOTAL AMOUNT OF BID-----						\$ _____

PROJECTS UNDER ACT NO. 524 OF PUBLIC ACTS OF 1980

General Information

1. Interest will be paid on retainage in accordance with the Act.
2. The Contractor may request reasonable interest on accounts past due on prior progress payments which can be included in the next request for payment.
3. Retainage will be in accordance with the Act, Subsections 3 and 4.
4. All matters described in Subsection 3 of the Act shall be submitted to the decision of an agent at the option of the Owner.

Retainage. The retainage for the project shall be as follows:

1. For projects with Payment Schedule No. 1, the retainage shall be in accordance with Act No. 524.
2. For projects with Payment Schedule No. 2, the retainage shall be ten percent (10%) of the contract price.

Payment. All requests for payment shall be in compliance with Act No. 524 of Public Acts of 1980. Construction contracts having a dollar value of less than \$30,000 or a contract that provides for three or fewer payments shall be exempt from the Act.

The requests for payments shall be made in accordance with one of the following Payment Schedules:

Payment Schedules

1. Not later than the 25th day of each calendar month, the Owner will make partial payment to the Contractor on the basis of a duly certified, approved estimate of the work performed during the preceding calendar month by the Contractor, but the Owner will retain a percentage as stated in Act No. 524 of the amount of each such estimate until final completion and acceptance of all work covered by this contract.
2. Payment requests shall be limited to three or fewer payments less ten percent (10%) retained on each payment request, except for the final payment, which shall include all amounts previously retained. Payment requests will only be permitted after completion of fifty percent (50%) of the project, after seventy-five percent (75%) of the project and after one hundred percent (100%) of the project is completed and accepted. No payment request will be made within 30 consecutive days of a previous request.

Act No. 524

Public Acts of 1980

Approved by Governor

January 29, 1981

STATE OF MICHIGAN

80TH LEGISLATURE

REGULAR SESSION OF 1980

Introduced by Rep. Ryan

ENROLLED HOUSE BILL NO. 5541

AN ACT to provide for the terms of certain construction contracts with certain public agencies; to regulate the payment and retainage of payments on construction contracts with certain public agencies; and to provide for the resolution of certain disputes.

The People of the State of Michigan enact:

Sec. 1. As used in this act:

(a) "Agent" means the person or persons agreed to or selected by the contractor and the public agency pursuant to section 4(2).

(b) "Architect or professional engineer" means an architect or professional engineer licensed under Act No. 299 of the Public Acts of 1980, being sections 339.10 to 339.2601 of the Michigan Compiled Laws, and designated by a public agency in a construction contract to recommend progress payments.

(c) "Construction contract" or "contract" means a written agreement between a contractor and a public agency for the construction, alternation, demolition, or repair of a facility, other than a contract having a dollar value of less than \$30,000.00 or a contract that provides for 3 or fewer payments.

(d) "Contract Documents" means the Construction Contract; Instructions To Bidders, Proposal; Conditions of the Contract; Performance Bond; Labor and Material Bond; Drawings; Specifications; all Addenda issued before execution of the construction contract and all modifications issued subsequently.

(e) "Contractor" means an individual, sole proprietorship, partnership, corporation, or joint venture that is a party to a construction contract with a public agency.

(f) "Facility" means a building, utility, road, street, boulevard, parkway, bridge, ditch, drain, levee, dike, sewer, park, playground, or other structure or work that is paid for with public funds or a special assessment.

(g) "Progress payment" means a payment by a public agency to a contractor work in place under the terms of a construction contract.

(h) "Public agency" means this state, or a county, city, township, village, assessment district, or other political subdivision, corporation, commission, agency, or authority created by law. However, public agency does not include the state transportation department, a school district, junior or community college, the Michigan state housing development authority created in Act No. 346 of the Public Acts of 1966, as amended, beings sections 125.1401 to 125.1496 of the Michigan Compiled Laws, and a municipal electric utility or agency. "Assessment district" means the real property within a distinct area upon which special assessments are levied or imposed for the construction, reconstruction, betterment, replacement or repair of a facility to be paid for by funds derived from those special assessments imposed or levied on the benefited real property.

(i) "Retainage" or "retained funds" means the amount withheld from a progress payment to a contractor pursuant to section 3.

Sec. 2

(1) The construction contract shall designate a person representing the contractor who will submit written requests for progress payments, and a person representing the public agency to whom requests for progress payments are to be submitted. The written requests for progress payments shall be submitted to the designated person in a manner and at such times as provided in the construction contract.

(2) The processing of progress payments by the public agency may be deferred by the public agency until work having a prior sequence, as provided in the contract documents, is in place and is approved.

(3) Each progress payment requested, including reasonable interest if requested under subsection (4), shall be paid within 1 of the following time periods, whichever is later.

(a) Thirty days after the architect or professional engineer has certified to the public agency that work is in place in the portion of the facility covered by the applicable request for payment in accordance with the contract documents.

(b) Fifteen days after the public agency has received the funds with which to make the progress payment from a department or agency of the federal or state government, if any funds are to come from either of those sources.

(4) Upon failure of a public agency to make a timely progress payment pursuant to this section, the person designated to submit requests for progress payments may include reasonable interest on amounts past due in the next request for payment.

Sec. 3

(1) To assure proper performance of a construction contract by the contractor, a public agency may retain a portion of each progress payment otherwise due as provided in this section.

(2) The retainage shall be limited to the following:

(a) Not more than 10% of the dollar value of all work in place until work is 50% in place.

(b) After the work is 50% in place, additional retainage shall not be withheld unless the public agency determines that the contractor is not making satisfactory progress, or for other specific cause relating to the contractor's performance under the contract. If the public agency so determines, the public agency may retain not more than 10% of the dollar value of work more than 50% in place.

(3) The retained funds shall not exceed the pro rata share of the public agency's matching requirement under the construction contract and shall not be commingled with other funds of the public agency and shall be deposited in an interest bearing account in a regulated financial institution in this state wherein all such retained funds are kept by the public agency which shall account for both retainage and interest on each construction contract separately. A public agency is not required to deposit retained funds in an interest bearing account if the retained funds are to be provided under a state or federal grant and the retained funds have not been paid to the public agency.

(4) Except as provided in section 4(7) and (8), retainage and interest earned on retainage shall be released to a contractor together with the final progress payment.

(5) At any time after 94% of work under the contract is in place and at the request of the original contractor, the public agency shall release the retainage plus interest to the original contractor only if the original contractor provides to the public agency an irrevocable letter of credit in the amount of the retainage plus interest, issued by a bank authorized to do business in this state, containing terms mutually acceptable to the contractor and the public agency.

Sec. 4

(1) The construction contract shall contain an agreement to submit those matters described in subsection (3) to the decision of an agent at the option of the public agency.

(2) If a dispute regarding a matter described in subsection (3) arises, the contractor and the public agency shall designate an agent who has background, training, and experience in the construction of facilities similar to that which is the subject of the contract, as follows:

(a) In an agreement reached within 10 days after a dispute arises.

(b) If an agreement cannot be reached within 10 days after a dispute arises, the public agency shall designate an agent who has background, training, and experience in the construction of facilities similar to that which is the subject of the contract and who is not an employee of the agency.

(3) The public agency may request dispute resolution by the agent regarding the following:

(a) At any time during the term of the contract, to determine whether there has been a delay for reasons that were within the control of the contractor, and the period of time that delay has been caused, continued, or aggravated by actions of the contractor.

(b) At any time after 94% of work under the contract is in place, whether there has been an unacceptable delay by the contractor in performance of the remaining 6% of work under the contract. The agent shall consider the terms of the contract and the procedures normally followed in the industry and shall determine whether the delay was for failure to follow reasonable and prudent practices in the industry for completion of the project.

(4) This dispute resolution process shall be used only for the purpose of determining the rights of the parties to retained funds and interest earned on retained funds and is not intended to alter, abrogate, or limit any rights with respect to remedies that are available to enforce or compel performance of the terms of the contract by either party.

(5) The agent may request and shall receive all pertinent information from the parties and shall provide an opportunity for an informal meeting to receive comments, documents, and other relevant information in order to resolve the dispute. The agent shall determine the time, place and procedure for the informal meeting. A written decision and reasons for the decision shall be given to the parties within 14 days after the meeting.

(6) The decision of the agent shall be final and binding upon all parties. Upon application of either party, the decision of the agent may be vacated by order of the circuit court only upon a finding by the court that the decision was procured by fraud, duress, or other illegal means.

(7) If the dispute resolution results in a decision.

(a) That there has been a delay as described in subsection (3)(a), all interest earned on retained funds during the period of delay shall become the property of the public agency.

(b) That there has been unacceptable delay as described in subsection (3)(b), the public agency may contract with a subsequent contractor to complete the remaining 6% of work under the contract, and interest earned on retained funds shall become the property of the public agency. A subsequent Contractor under this subdivision shall be paid by the public agency from the following sources until each source is depleted, in the order listed below:

(i) The dollar value of the original contract, less the dollar value of funds already paid to the original contractor and the dollar value of work for which the original contractor has not received payment.

(ii) Retainage from the original contractor, or funds made available under a letter of credit provided under section 3(5).

(iii) Interest earned on retainage from the original contractor, or funds made available under a letter of credit provided under section 3(5).

(8) If the public agency contracts with a subsequent contractor as provided in subsection (7)(b), the final progress payment shall be payable to the original contractor within the time period specified in section 2(3). The amount of the final progress payment to the original contractor shall not include interest earned on retained funds. The public agency may deduct from the final progress payment all expenses of contracting with the subsequent contractor. This act shall not impair the right of the public agency to bring an action or to otherwise enforce a performance bond to complete work under a construction contract.

Sec. 5

(1) Except as provided in subsection (2), this act shall apply only to a construction contract entered into after the effective date of this act.

(2) For a construction contract entered into before the effective date of this act, the provisions of this act may be implemented by a public agency, through a contract amendment, upon the written request of the contractor, with such consideration as the public agency considers adequate.

Sec. 6

This act shall take effect January 1, 1983. AGREEMENT

AGREEMENT
BETWEEN OWNER AND CONTRACTOR
ON THE BASIS OF A STIPULATED PRICE

THIS AGREEMENT is dated as of the ____ day of _____ in the year 20____ by and between
VILLAG OF MAYVILLE (hereinafter called OWNER) and
_____ (hereinafter called CONTRACTOR).

OWNER and CONTRACTOR in consideration of the mutual covenants hereinafter set forth, agree as follows:

DPW BUILDING RENEWABLE ENERGY

Article 1. WORK

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Work - The entire completed construction of the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work includes and is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents.

The Project for which the Work under the Contract Documents is being done may be the whole or only a part is generally described as follows: Project - The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

Article 2. PROFESSIONAL

The Project has been designed by: **Spicer Group, Inc.**

who is hereinafter called PROFESSIONAL and who is to act as OWNER's representative, assume all duties and responsibilities and have the rights and authority assigned to PROFESSIONAL in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

Article 3. CONTRACT TIME

3.1 The Work will be substantially completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions per the times as indicated in the Bid Form, Section 5.

3.2 *Liquidated Damages.* OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 3.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER **five hundred dollars (\$500.00)** for each day that expires after the time specified in Section 3.1 for Substantial Completion until the Work is substantially complete. After Substantial Completion if CONTRACTOR shall neglect, refuse or fail to complete the remaining Work

within the Contract Time specified in Section 3.1 or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER **five hundred dollars (\$500.00)** for each day that expires after the time specified in Section 3.1 for completion and readiness for final payment.

Article 4. CONTRACT PRICE

OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraph 4.1 below:

- 4.1 for all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in this paragraph 4.1:

EXHIBIT "A"

As provided in paragraph 11.9 of the General Conditions estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by PROFESSIONAL as provided in paragraph 9.10 of the General Conditions. Unit prices have been computed as provided in paragraph 11.9 of the General Conditions.

Article 5. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. PROFESSIONAL will process applications for Payment as provided in the General Conditions.

- 5.1 In accordance with Payment Schedule No. 1 of Act No. 524 of Public Acts of 1980, OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment as recommended by PROFESSIONAL, on or about the 25th day of each month during construction. All such payments will be measured by the schedule of values established in paragraph 2.9 of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.
- 5.2 *Final Payment.* Upon final completion and acceptance of the Work in accordance with paragraph 14.13 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by PROFESSIONAL as provided in Section 14.13.

Article 6. INTEREST

All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest as allowed by law at the place of the Project.

Article 7. CONTRACTOR'S REPRESENTATIONS

In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

- 7.1 CONTRACTOR has examined and carefully studied the Contract Documents (including the Addenda) and other related data identified in the Bidding Documents including "technical data".
- 7.2 CONTRACTOR has visited the site, conducted an alert, heads-up, eyes-open reasonable examination of the area, and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work.

- 7.3 CONTRACTOR is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.
- 7.4 CONTRACTOR has carefully studied all reports of explorations and tests of subsurface or physical conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified, if any, in the General Conditions as provided in paragraph 4.2.1. CONTRACTOR accepts the determination set forth in paragraph 4.2.2 of the General Conditions of the extent of the "technical data" contained in such reports and drawings upon which CONTRACTOR is entitled to rely as provided in paragraph 4.2 of the General Conditions. CONTRACTOR acknowledges that such reports and drawings are not Contract Documents and may not be complete for CONTRACTOR's purposes. CONTRACTOR acknowledges that OWNER and Professional do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to Underground Facilities at or contiguous to the site. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the times, price and other terms and conditions of the Contract Documents.
- 7.5 CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the Work as indicated in the Contract Documents.
- 7.6 CONTRACTOR has correlated the information known to the CONTRACTOR, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.
- 7.7 CONTRACTOR has given PROFESSIONAL written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written resolution thereof by PROFESSIONAL is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

Article 8. CONTRACT DOCUMENTS.

The Contract Documents, which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work, consist of the following:

- 8.1 This Agreement.
- 8.2 Exhibits to this Agreement.
- 8.3 Performance and Payment Bonds.
- 8.4 Notice to Proceed.
- 8.5 General Conditions.
- 8.6 Specifications contained herein.
- 8.7 Drawings as listed on this document's Title Page.
- 8.8 Addenda.
(Those Addenda which pertain exclusively to the bidding process need not be listed.)
- 8.9 CONTRACTOR's Bid.
(Attach actual Bid only in special circumstances.)
- 8.10 Documentation submitted by CONTRACTOR prior to Notice of Award.
- 8.11 The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying or supplementing the Contract Documents pursuant to paragraphs 3.5 and 3.6 of the General Conditions.

The documents listed in paragraphs 8.2 et seq. above are deemed attached to this Agreement.

There are no Contract Documents other than those listed above in this Article 8. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.5 and 3.6 of the General Conditions.

Article 9. MISCELLANEOUS

- 9.1 Terms used in this Agreement, which are defined in Article 1 of the General Conditions, will have the meanings indicated in the General Conditions.
- 9.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 9.3 OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.
- 9.4 Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in triplicate. One counterpart each has been delivered to OWNER, CONTRACTOR and PROFESSIONAL. All portions of the Contract Documents have been signed, initialed or identified by OWNER and CONTRACTOR or identified by PROFESSIONAL on their behalf.

This Agreement will be effective on _____, 20____ (which is the Effective Date of the Agreement).

OWNER: **VILLAGE OF MAYVILLE**

CONTRACTOR:

By: _____

By: _____

Attest: _____

Attest: _____

Address for giving notices:

Address for giving notices:

**Village of Mayville
5950 Fox Street
Mayville, MI 48744**

Construction Performance Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

Village of Mayville
5950 Fox Street
Mayville, MI 48744

CONSTRUCTION CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Date (Not earlier than Construction Contract Date):

Amount:

Modifications to this Bond Form:

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

EJCDC No. 1910-28A (1984 Edition)

Prepared through the joint efforts of The Surety Association of America, Engineers' Joint Contract Documents Committee. The Associated General Contractors of America, and the American Institute of Architects.

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the

performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.

3. If there is no Owner Default, the Surety's obligation under this Bond shall arise after:

3.1 The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below, that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and

3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and

3.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.

4. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1 Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or

4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or

4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or

4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

1. After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner; or

2. Deny liability in whole or in part and notify the Owner citing reasons therefor.

5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4 and the Owner refuses the payment tendered or the Surety had denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

6. After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:

6.1 The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

6.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and

6.3 Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

7. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, or successors.

8. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

12.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amount received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

12.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

12.3 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.

12.4 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY - Name, Address and Telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE (Architect, Professional or other party):

Construction Payment Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

Village of Mayville
5950 Fox Street
Mayville, MI 48744

CONSTRUCTION CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Date (Not earlier than Construction Contract Date):

Amount:

Modifications to this Bond Form:

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

CONTRACTOR AS PRINCIPAL

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

SURETY

Company: _____ (Corp. Seal)

Signature: _____

Name and Title:

EJCDC No. 1910-28B (1984 Edition)

Prepared through the joint efforts of The Surety Association of America, Engineers' Joint Contract Documents Committee, The Associated General Contractors of America, American Institute of Architects, American Subcontractors Association, and the Associated Specialty Contractors.

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for

labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.

2. With respect to the Owner, this obligation shall be null and void if the Contractor:

- 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
- 2.2 Defends, indemnifies and holds harmless the Owner from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.

3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.

4. The Surety shall have no obligation to Claimants under this Bond until:

- 4.1 Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
- 4.2 Claimants who do not have a direct contract with the Contractor:
 1. Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
 2. Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.

5. If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.

6. When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

- 6.1 Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
- 6.2 Pay or arrange for payment of any undisputed amounts.

7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

9. The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2 (iii), or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions.

15.1 Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

15.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY - Name, Address and Telephone)

AGENT or BROKER: OWNER'S REPRESENTATIVE (Architect, Professional or other party):

SUPPLEMENTARY CONDITIONS

SC 1 Not Used.

INSURANCE COVERAGES

The insurance required by Article 5 of the General Conditions shall be for the following coverages and shall be not less than the following amounts or greater where required by Laws and Regulations but shall not prevent the CONTRACTOR from requiring additional coverage is necessary and prudent for the particular situation.

<u>WORKERS' COMPENSATION</u>	<u>MINIMUM LIMITS(000's)</u>
Part One: Compensation	Statutory
Part Two: Employers' Liability:	
accident	\$ 100
disease	\$ 100
aggregate disease	\$ 500
Other: _____	

COMMERCIAL GENERAL LIABILITY

General Aggregate Limit	\$1,000
Products/Completed Operations Aggregate Limit	\$1,000
Personal/Adverse Injury	\$1,000
Each Occurrence Limit	\$1,000

COMPREHENSIVE AUTOMOBILE LIABILITY

Bodily Injury-Each Occurrence Limit	\$ 500
Property Damage-Each Occurrence Limit	\$ 250

OR

Combined Single Limit	\$1,000
No Fault	Statutory

OWNER'S AND CONTRACTOR'S PROTECTIVE LIABILITY

Aggregate Limit	\$1,000
Each Occurrence Limit	\$1,000

OR

In lieu of the Owner's and Contractor's Protective Liability, the Contractor may provide an endorsement to their policy for a per project aggregate coverage with the following limits:

Aggregate Limit	\$1,000
Each Occurrence Limit	\$1,000
(ISO form CG2503 or it's equivalent)	

A copy of this endorsement must accompany the Certificate of Insurance, the Certificate will clearly state the additional insured requirement and the policy contains the per project aggregate endorsement.

UMBRELLA or EXCESS LIABILITY

\$2,000

Insurance required by paragraphs 5.4.3 through 5.4.6 inclusive of the General Conditions shall name as named additional insureds:

Spicer Group, Inc., AKT Peerless, Village of Mayville

SECTION 01010
SUMMARY OF WORK

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Scope of Work
- B. Contractor use of site and premises.
- C. Owner occupancy.
- D. Work Sequence.
- E. Utilities Constructed Within Public Streets.
- F. Federal Compliance and Reporting

1.2 SCOPE OF WORK

- A. Furnish labor, tools, equipment, and materials except as noted in paragraph "WORK BY OWNER" required for the construction of the Project as shown on the drawings and described in the specification.
- B. The Owner will obtain easements and rights-of-way needed for construction.
- C. The Contractor is responsible for all permits.

1.3 CONTRACTOR USE OF SITE AND PREMISES

- A. Contractor shall coordinate all work with the Village of Mayville a minimum of 48 hours in advance.
- B. Limit use of site and premises to allow:
 - 1. Owner occupancy.
 - 2. Work by Others and Work by Owner.
- C. Construction Operations: Limited to areas described in the specifications.
- D. Utility Outages and Shutdown: Schedule temporary shutdowns of active utilities and equipment at times, which will cause the least interference with service and as approved by the Owner and Engineer.

1.4 OWNER OCCUPANCY

- A. The Owner will occupy all facilities during entire period of construction for the conduct of normal operations.
- B. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.
- C. Schedule the Work to accommodate this requirement.

1.5 LAND OWNER OCCUPANCY

- A. Cooperate with Land Owners to minimize conflict. If disputes arise, contact the Engineer immediately.

1.6 UTILITIES CONSTRUCTED WITHIN PUBLIC STREETS

- A. Conform to the requirements of the City, County, and Township, MDOT or authority having jurisdiction over the road.
- B. Obtain and pay for construction permits from the authority having jurisdiction in order to work in the public road right-of-way.
- C. Notify the authority 2 working days in advance of the intention to perform work within a road Right of Way.
- D. Install and maintain traffic control devices in accordance with Section 01570 Traffic Regulation.
- E. Contractor shall be liable for all accidents and damage occasioned in any way by his acts or neglect or by the acts or neglect of his sub contractors, agents, employees or workmen.

1.7 FEDERAL COMPLIANCE AND REPORTING

Tuscola County, in partnership with Huron and Sanilac Counties, were awarded an Energy Efficiency and Conservation Block Grant (EECBG) through the Michigan Department of Energy Labor and Economic Growth's Bureau of Energy Systems. The EECBG program is funded through the American Recovery and Reinvestment Act (ARRA). The funding for this project is provided by the ARRA.

The Contractor agrees to ensure all federal compliance for the EECBG program and ARRA is met. Please refer to the following website for general compliance requirements: <http://www1.eere.energy.gov/wip/guidance.html>. Please refer to the General Provisions following Section 01010. Additionally, the Contractor agrees to provide all the necessary information to meet monthly and quarterly reporting requirements. The federal compliance requirements include, but are not limited to, the following:

- A. Davis Bacon Act/Prevailing Wage: Contractor agrees to comply with the requirements of the Davis-Bacon Act as it applies to contractors and subcontractors performing on federally funded or assisted contracts in excess of \$2,000.00 for the construction, alteration, or repair (including painting and decorating) of public building or public works. All laborers and mechanics on projects funded directly by or assisted in whole or in part and through funding appropriated by the Act are paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by subchapter IV of Chapter 31 of title 40, United States Code (Davis-Bacon Act). For information on Davis Bacon Wage Determination please reference the Department of Energy's (DDE) EECBG Notice 10-004A and/or currently effective DDE notices. For more information and currently effective EECBG notices, please visit: http://www1.eere.energy.gov/wip/davis-bacon_act.html#eecbg
- B. American Recovery and Reinvestment Act (AARA): The Contractor shall comply with the provisions of the AARA for EECBG projects. The Buy American provision in the American Recovery and Reinvestment Act of 2009 (section 1605 of Title XVI), provides that, subject to three listed exceptions (non-availability, unreasonable cost, and inconsistent with the public interest), none of the funds appropriated or otherwise made

available by the Act may be used for a project for the construction, alternation, maintenance, or repair of a public building or public work unless all the iron, steel, and manufactured goods used are produced in the United States. The law also requires this provision be applied in a manner consistent with U.S. obligations under International Agreements.

The provisions of the guidance apply to all recipients, sub-recipients and Contractor working on projects using Recovery Act funding. The Buy American Recovery Act for the construction alternation, maintenance or repair of public building or public work. The guidance below is designed to help applicants and recipients determine if their Recovery Act funded project is for the construction, alternation, maintenance or repair of a public building or public work.

More information can be found at the following links:

http://www1.eere.energy.gov/recovery/buy_american_provision.html

http://www1.eere.energy.gov/recovery/pdfs/eer_program_guidance_buy_american.pdf

- C. Waste Stream Management: The Contractor shall satisfy Waste Stream Condition by obtaining and supplying waste management plans to support NEPA reviews for EECBG projects. The waste management plan shall be supplied by the contractor on company letterhead indicating the disposal plan and disposal facility meeting. The Contractor shall provide the Municipality with disposal tickets at the time a request for payment is issued. Waste management plans are not required for projects that do not generate waste (e.g., hiring a contractor, conducting an energy audit). Waste management plans are also not required for projects that generate only insignificant quantities of non-hazardous waste. For example, a waste management plan would not be necessary for a retrofit project with a waste stream comprising only small quantities of caulking and associate materials. Where it is not obvious that a project will generate only insignificant quantities of waste, the Grantee should submit (or, in the case of sub grant programs, keep on file) waste management plans or seek guidance from a DOE NEPA Compliance Officer (NCO) to determine whether a waste management plan is necessary

More Information can be found at the following links:

http://www1.eere.energy.gov/wip/nepa_guidance.html

http://www1.eere.energy.gov/wip/pdfs/10-010_eeecbg_waste_stream_guidance.pdf

2. PART 2 PRODUCTS

1. Not Used.

3. PART 3 EXECUTION

1. Not Used.

END OF SECTION

Addendum to Part II – General Provisions

SOLICITATION & AWARD TERMS FOR GRANT AGREEMENTS THAT INCLUDE FUNDS UNDER THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009, PUBLIC LAW 111-5

Grant Agreements must require recipients and sub-recipients to:

- 1. Maintain current registrations in the Central Contractor Registration (CCR) database.**
<http://www.ccr.gov/>
- 2. Report quarterly on project activity status in addition to any reporting requirements that currently apply to recipients of federal funds**
- 3. Follow Buy American guidelines (Sec. 1605 of ARRA Act and Sec. 5.020 of this document)**
- 4. Implement wage rate requirements (Sec. 1606 of ARRA Act and Sec. 5.030 of this document)**
- 5. Ensure proper accounting and reporting of Recovery Act expenditures in Single Audits.**

Terms and Conditions for American Recovery and Reinvestment (ARRA) of 2009 Funded Grants.....	14
5.000 Sub-Recipients Requirements.....	14
5.010 Reporting & Registration Requirements (Section 1512).....	14
5.020 Buy American Requirement (Section 1605).....	14
5.022 REQUIRED Use of American Iron, Steel, and Other Manufactured Goods	14
5.024 Notice of Required Use of American Iron, Steel, and Other Manufactured Goods	16
5.030 Wage Rate Requirement (Section 1606)	17
5.040 Inspection & Audit of Records.....	17
5.050 Whistle Blower Protection for Recipients of Funds	17
5.060 Funding of Programs.....	18
5.070 Fixed Price – Competitively Bid.....	18
5.080 Segregation of Costs	18
5.090 Publication	18
5.100 Buy Michigan Preference	18
5.110 Non-Discrimination	18
5.120 Prohibition on Use of Funds	18
5.130 False Claims Act.....	18
5.140 Conflicting Requirements	18
5.150 Job Opportunity Posting Requirements	18

Terms and Conditions for American Recovery and Reinvestment (ARRA) of 2009 Funded Grants

5.000 Sub-Recipients Requirements

Grantee shall include these terms, including this requirement, in any of its subcontracts or subgrants in connection with projects funded in whole or in part with funds available under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5.

5.010 Reporting & Registration Requirements (Section 1512)

Division A, Title XV, Section 1512 of the ARRA outlines reporting requirements. Not later than ten calendar days after the end of each calendar quarter, the State must submit a report that, at a minimum, contains the information specified in Section 1512 of the ARRA. It is imperative all grants involving the use of ARRA funds include requirements that the Grantee supply the State with the necessary information to provide these reports (see RFP Section 1.042 Reports) in a timely manner. More detail will follow regarding the timing and submission of reports.

The Grantee's failure to provide complete, accurate, and timely reports shall constitute an "Event of Default". Upon the occurrence of an Event of Default, the state department or agency may terminate this grant upon 30 days prior written notice if the default remains uncured within five calendar days following the last day of the calendar quarter, in addition to any other remedy available to the state department or agency in law or equity.

5.020 Buy American Requirement (Section 1605)

5.022 REQUIRED Use of American Iron, Steel, and Other Manufactured Goods

(a) **Definitions.** As used in this Section 5.020 —

"Designated Country" means Aruba, Australia, Austria, Belgium, Bulgaria, Chile, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea (Republic of), Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, and United Kingdom.

"Designated country iron, steel, and/or manufactured goods" mean iron, steel and/or a manufactured good that:

- (1) Is wholly the growth, product or manufacture of a Designated Country; or
- (2) In the case of a manufactured good that consists in whole or in part of materials from another country, has been substantially transformed in a Designated Country into a new and different manufactured good distinct from the materials from which it was transformed.

"Domestic iron, steel and/or manufactured good" is iron, steel and/or a manufactured good that:

- (1) Is wholly the growth, product or manufacture of the United States; or
- (2) In the case of a manufactured good that consists in whole or in part of materials from another county, has been substantially transformed in the United States into a new and different manufactured good distinct from the materials from which it was transformed. There in no requirement with regard to the origin of components or subcomponents in manufactured goods or products, as long as the manufacture of goods occurs in the United States.

"Federal Agency" means the department or agency of the federal government that awarded funds to the State of Michigan from the ARRA that finance the project described in this RFP.

"Foreign iron, steel and/or manufactured good" means iron, steel and/or manufactured good that is not domestic or Designated country iron, steel and/or manufactured goods.

"Manufactured good" means a good brought to the construction site for incorporation into the building or work that has been--

- (1) Processed into a specific form and shape; or
- (2) Combined with other raw material to create a material that has different properties than the properties of the individual raw materials.

"Public building" and "public work" means a public building of, and a public work of, a governmental entity (the United States; the District of Columbia; commonwealths, territories, and minor outlying islands of the United States; State and local governments; and multi-State, regional, or interstate entities which have governmental functions). These buildings and works may include, without limitation, bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, pumping stations, heavy generators, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals, and the construction, alteration, maintenance, or repair of such buildings and works.

"Steel" means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements.

(b) *Domestic preference.*

(1) This term and condition implements:

(i) Section 1605(a) of Division A, Title XVI of the ARRA by requiring that all iron, steel, and manufactured goods used in the public building or public work are produced in the United States; and

(ii) Section 1605(d) of Division A, Title XVI of the ARRA, which requires the application of the Buy American requirement in a manner consistent with U.S. obligations under international agreements. The restrictions of Section 1605 of the ARRA do not apply to Designated country iron, steel, and/or manufactured goods procured for projects with an estimated value of \$7,433,000 or more.

(2) The Grantee shall use only domestic or Designated country iron, steel and/or manufactured goods in performing work funded in whole or in part with funds available under the ARRA, except as provided in subparagraphs (3) and (4) of this paragraph (b).

(3) The requirement in paragraph (2) of this Section 5.022(b) does not apply to the material listed by the Federal Agency as follows: none

(4) The Federal Agency may add other iron, steel, and/or manufactured goods to the list in paragraph (b) (3) of this Section if the Federal government determines that—

(i) The cost of the domestic iron, steel, and/or manufactured goods would be unreasonable. The cost of domestic iron, steel, or manufactured goods used in the project is unreasonable when the cumulative cost of such material will increase the cost of the overall project by more than 25 percent;

(ii) The iron, steel, and/or manufactured good is not produced, or manufactured in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

(iii) The application of section 1605 of the ARRA would be inconsistent with the public interest.

(c) *Request for determination of inapplicability of Section 1605 of the ARRA.*

(1)(i) Any Bidder's request to use foreign iron, steel, and/or manufactured goods in accordance with paragraph (b) (4) of this Section shall include adequate information for Federal Agency evaluation of the request, including—

(A) A description of the foreign and domestic iron, steel, and/or manufactured goods;

(B) Unit of measure;

(C) Quantity;

(D) Cost;

(E) Time of delivery or availability;

(F) Location of the project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign iron, steel, and/or manufactured goods cited in accordance with paragraph (b)(3) of this term and condition.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed cost comparison table in the format in paragraph (d) of this Section.

(iii) The cost of iron, steel, and/or manufactured goods material shall include all delivery costs to the construction site and any applicable duty.

(iv) Any Grantee's request for a determination submitted after ARRA funds have been obligated for a project for construction, alteration, maintenance, or repair shall explain why the Grantee could not reasonably foresee the need for such determination and could not have requested the determination before the funds were obligated. If the Grantee does not submit a satisfactory explanation, the Federal Agency need not make a determination.

(2) If the Federal Agency determines after funds have been obligated for a project for construction, alteration, maintenance, or repair that an exception to section 1605 of the ARRA applies, the State will

amend the grant to allow use of the foreign iron, steel, and/or relevant manufactured goods. When the basis for the exception is nonavailability or public interest, the amended grant shall reflect adjustment of the grant amount, redistribution of budgeted funds, and/or other actions taken to cover costs associated with acquiring or using the foreign iron, steel, and/or relevant manufactured goods. When the basis for the exception is the unreasonable cost of the domestic iron, steel, or manufactured goods, the State shall adjust the award amount or redistribute budgeted funds by at least the differential established in 2 CFR 176.110(a).

(3) Unless the Federal Agency determines that an exception to section 1605 of the ARRA applies, use of foreign iron, steel, and/or manufactured goods is noncompliant with section 1605 of the American Recovery and Reinvestment Act.

(d) Data. To permit evaluation of requests under subparagraph (b)(4) of this Section based on unreasonable cost, the Bidder shall include the following information and any applicable supporting data based on the survey of suppliers:

FOREIGN AND DOMESTIC ITEMS COST COMPARISON				
Description	Unit of Measure	Quantity	Cost (Dollars)*	
Item 1:				
Foreign steel, iron, or manufactured good	_____	_____	_____	
Domestic steel, iron, or manufactured good	_____	_____	_____	
Item 2:				
Foreign steel, iron, or manufactured good	_____	_____	_____	
Domestic steel, iron, or manufactured good				
<p>[List name, address, telephone number, email address, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.] [Include other applicable supporting information.] [* Include all delivery costs to the construction site.]</p>				

5.024 Notice of Required Use of American Iron, Steel, and Other Manufactured Goods

REQUIRED USE OF AMERICAN IRON, STEEL, AND MANUFACTURED GOODS—SECTION 1605 OF THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009

(a) Definitions. "Designated country iron, steel and/or manufactured goods," "domestic iron, steel and/or manufactured goods", "Federal Agency", "Foreign iron, steel and/or manufactured good", "Manufactured good," "public building and public work," and "steel," as used in this Section, are defined in Section 5.022(a).

(b) **Requests for determinations of inapplicability.** A prospective Bidder requesting a determination regarding the inapplicability of section 1605 of the ARRA should submit the request to the Federal Agency in time to allow a determination before submission of applications or proposals. Bidders should provide a copy of this request to DELEG. The prospective applicant shall include the information and applicable supporting data required by paragraphs (c) and (d) of Section 5.022 of this RFP in the request. If Bidder has not requested a determination regarding the inapplicability of Section 1605 of the ARRA before submitting its application or proposal, or has not received a response to a previous request, the applicant shall include the information and supporting data in the application or proposal. The Federal Agency is sole entity authorized to make determinations regarding the inapplicability of Section 1605 of the ARRA.

(c) *Evaluation of project proposals.*

If the Federal Agency determines that an exception based on unreasonable cost of domestic iron, steel, and/or manufactured goods applies, the State will evaluate a project requesting an exception to the requirements of section 1605 of the ARRA by adding to the estimated total cost of the project 25 percent of the project cost, if foreign iron, steel, or manufactured goods are used in the project based on unreasonable cost of comparable manufactured domestic iron, steel, and/or manufactured goods.

(d) *Alternate project proposals.*

(1) When a project proposal includes foreign iron, steel, and/or manufactured goods, other than Designated country iron, steel and/or manufactured goods, not listed in paragraph (b)(3) of the Section 6.022, the Bidder also may submit an alternate proposal based on use of equivalent domestic iron, steel, and/or manufactured goods.

(2) If an alternate proposal is submitted, the Bidder shall submit a separate cost comparison table prepared in accordance with paragraphs (c) and (d) of Section 5.022 of this RFP for the proposal that is based on the use of any foreign iron, steel, and/or manufactured goods for which the Federal Agency has not yet determined an exception applies.

(3) If the Federal Agency determines that a particular exception requested in accordance with paragraph (b) of Section 5.022 of this RFP does not apply, the State will evaluate only those proposals based on use of the equivalent domestic or designated country iron, steel, and/or manufactured goods, and the Grantee shall be required to furnish such domestic or designated country items.

5.030 Wage Rate Requirements (Section 1606)

All laborers and mechanics employed by grantees, subgrantees, contractors and subcontractors on projects funded in whole or in part with funds available under the ARRA shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality, as determined by the United States Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40 of the United States Code. (See ARRA Sec. 1606 & RFP Section 2.204 Prevailing Wage). The Secretary of Labor's determination regarding the prevailing wages applicable in Michigan is available at <http://www.gpo.gov/davisbacon/mi.html>.

5.040 Inspection & Audit of Records

The Grantee shall permit the United States Comptroller General or his representative or the appropriate inspector general appointed under section 3 or 8G of the Inspector General Act of 1998 or his representative (1) to examine any records that directly pertain to, and involve transactions relating to, this grant; and (2) to interview any officer or employee of the Grantee or any of its subcontractors/subgrantees regarding the activities funded with funds appropriated or otherwise made available by the ARRA.

5.050 Whistle Blower Protection for Recipients of Funds

Grantee shall not discharge, demote or otherwise discriminate against an employee for disclosures by the employee that the employee reasonably believes are evidence of: (1) gross mismanagement of a contract or grant relating to Covered Funds; (2) a gross waste of Covered Funds; (3) a substantial and specific danger to public health or safety related to the implementation or use of Covered Funds; an abuse of authority related to implementation or use of Covered Funds; or (5) a violation of law, rule, or regulation related to an agency grant (including the competition for or negotiation of a grant) or grant, awarded or issued relating to Covered Funds. In this Subsection, "Covered Funds" shall have the same meaning as set forth in Section 1553(g)(2) of Division A, Title XV of the ARRA.

(a) Recipient must post notice of the rights and remedies available to employees under Section 1553 of Division A, Title XV of the ARRA. (For the Michigan Civil Service Whistle Blowers Rule 2-10 link to: http://www.michigan.gov/mdcs/0,1607,7-147-6877_8155-72500--,00.html)

(b) The Grantee shall include the substance of this clause including this paragraph (b) in all subcontracts and subgrants.

5.060 Funding of Programs

The Grantee acknowledges that the programs supported with temporary federal funds made available by the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, will not be continued with state financed appropriations once the temporary federal funds are expended.

5.070 Fixed Price- Competitively Bid

Grantee, to the maximum extent possible, shall award any subgrants or subcontracts funded, in whole or in part, with ARRA funds as fixed-price contracts through the use of competitive procedures.

5.080 Segregation of Costs

Grantee shall segregate obligations and expenditures of ARRA funds from other funding. No part of funds made available under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, may be comingled with any other funds or used for a purpose other than that of making payments for costs allowable under the ARRA.

5.090 Publication

All grant solicitations funded in whole or in part with ARRA funds will be posted on the respective DELEG bureau website. All grants resulting from the ARRA will be published on the State of Michigan's Recovery Web site, www.michigan.gov/recovery.

Grantee shall include the Michigan Recovery logo on all signage or other publications in connection with the activities funded by the State of Michigan through funds made available by the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5.

5.100 Buy Michigan Preference

A preference is given to products manufactured or services offered by Michigan-based firms if all other things are equal and if not inconsistent with federal statute (see MCL 18.1261).

5.110 Non- Discrimination

The Grantee shall comply with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, the Age Discrimination Act of 1975, and other civil rights laws applicable to recipients of Federal financial assistance (see RFP Section 2.201 Non-Discrimination).

5.120 Prohibition on Use of Funds

None of the funds made available under this grant may be used for any casino or other gambling establishment, aquarium, zoo, golf course, swimming pools, or similar projects.

5.130 False Claims Act

The Grantee shall promptly refer to an appropriate federal inspector general any credible evidence that a principal, employee, agent, contractor, sub-grantee, subcontractor or other person has committed a false claim under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict of interest, bribery, gratuity, or similar misconduct involving those funds.

5.140 Conflicting Requirements

Where ARRA requirements conflict with existing state requirements, ARRA requirements control.

5.150 Job Opportunity Posting Requirements

Grantee shall post notice of job opportunities created in connection with activities funded in whole or in part with ARRA funds in the Michigan Talent Bank, www.michworks.org/mtb.

ADDENDUM II TO PART II – GENERAL PROVISIONS

5.020.1 Buy American Requirement (Section 1605)

-Designated country means:

- (1) A World Trade Organization Government Procurement Agreement country,
- (2) A Free Trade Agreement (FTA) country, or
- (3) A United States-European Communities Exchange of Letters country

Countries not in the Addendum to Part II include Bahrain, Canada, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Morocco, Nicaragua, Oman and Peru.

5.090.1 Publication

- a. You are encouraged to publish or otherwise make publicly available the results of the work conducted under the award.
- b. An acknowledgement of Federal support and a disclaimer must appear in the publication of any material, whether copyrighted or not, based on or developed under this project as follows:

Acknowledgement: "This material is based upon work supported by the Department of Energy under Award Number(s) *DE-EE0000753*."

Disclaimer: "This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, make any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof."

SECTION 01019

CONTRACT CONSIDERATIONS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Schedule of Values.
- B. Application for Payment.
- C. Change procedures.
- D. Alternates

1.2 RELATED SECTIONS

- A. Section 01300 – submittals
- B. Section 01600 - Material and Equipment: Product substitutions
- C. Document General Conditions

1.3 SCHEDULE OF VALUES

- A. Submit typed schedule on EJCDC 1910-8-E. Contractor's standard form or electronic media printout will be considered.
- B. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- C. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the major specification Section. Identify site mobilization, bonds and insurance.
- D. Include in each line item, the amount of Allowances specified in this Section.
- E. Include separately from each line item, a directly proportional amount of Contractor's overhead and profit.
- F. Revise schedule to list approved Change Orders, with each Application For Payment.

1.4 APPLICATIONS FOR PAYMENT

- A. Content and Format: Utilize Schedule of Values as listed on the Bid Form for listing items in Application for Payment.
- B. Payment Period: Submit at intervals stipulated in the Agreement.
- C. Submit paid invoices for stored materials.
- D. Submit substantiating data justifying dollar amounts when requested by the Engineer.

E. FORMAT

1. For each item, provide a column for listing: Item number; Description of work; Scheduled Value, Previous Applications: Work in Place and Stored Materials under this Application: Authorized Change Orders; Total Completed and stored to Date of Application; Percentage of Completion; Balance to Finish; and Retainage.

F. PREPARATION OF APPLICATIONS

1. Present required information on electronic media printout.
2. Execute certification by signature of authorized officer.
3. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
4. List each authorized Change Order as an extension on continuation sheet, listing Change Order number and dollar amount as for an original item of work.
5. Prepare Application for Final Payment as specified in Section 01700.

G. SUBMITTAL PROCEDURES

1. Submit three copies of each Application for Payment.
2. Submit an updated construction schedule with each Application for Payment.
3. Payment Period: Submit at intervals stipulated in the Agreement.
4. Submit under transmittal letter specified in Section 01300.
5. Submit waivers.

H. SUBSTANTIATING DATA

1. When Engineer requires substantiating information, submit data justifying dollar amounts in question.
2. Provide one copy of data with cover letter for each copy of submittal. Show Application number and date, and line item by number and description.
3. Submit invoices for stored materials.

1.5 CHANGE PROCEDURES

- A. The Engineer will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time as authorized by issuing supplemental instructions on a Field Order.
- B. The Engineer may issue a Bulletin which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change. Contractor will prepare and submit an estimate within 10 days.
- C. The Contractor may propose a change by submitting request for change to the Engineer, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01600.
- D. Unit Price Change Order: For pre-determined unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of work which are not pre-determined, execute Work under a Work Directive Change. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.

- E. Work Directive Change: Engineer may issue a directive, on EJCDC 1910-8-F Work Directive Change signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute the change.
- F. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract. Engineer will determine the change allowable in Contract Sum/Price and Contract Time as provided in the Contract Documents.
- G. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
- H. Change Order Forms: Engineer's Change Order.
- I. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

2. PART 2 PRODUCTS

- 1. Not Used.

3. PART 3 EXECUTION

- 1. Not Used.

END OF SECTION

SECTION 01039

COORDINATION AND MEETINGS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Coordination.
- B. Field engineering.
- C. Preconstruction conference.
- D. Progress meetings.
- E. Pre-Installation Conferences

1.2 COORDINATION

- A. Coordinate scheduling, submittals, and Work of the various Sections of specifications to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate space requirements and installation of mechanical and electrical work, which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Coordinate completion and clean up of Work of separate Sections in preparation for Substantial Completion.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION CONFERENCE

- A. Contractor will schedule a conference after Notice of Award.
- B. Attendance Required: Owner, Engineer, applicable governmental agencies, applicable public and private utilities, sub-contractors with substantial portions of the work and Contractor.
- C. Agenda:

1. Introductions
2. Utility Representatives comments and requirements.
3. Execution of Owner-Contractor Agreement.
4. Submission of executed bonds and insurance certificates.
5. Distribution of Contract Documents.
6. Submissions of list of Subcontractors, list of products, Schedule of Values, and progress schedule.
7. Designation of personnel representing the parties in Contract, along with contact phone numbers and the Engineer.
8. Submission of list of supervisory personnel representing the Contractor and Subcontractor along with daytime and emergency phone numbers.
9. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders and Contract closeout procedures.
10. Scheduling.
11. Discussion of required permits – Electrical Permit and Road Commission.
12. Discussion of Important project requirements.
13. Use of premises by Owner and Contractor
14. Owner's requirements.
15. Temporary utilities provided by Owner.
16. Federal reporting requirements.
17. Security and housekeeping procedures.
18. Requirements for start-up of equipment.
19. Inspection and acceptance of equipment put into service during construction period.
20. Traffic control.

1.4 PROGRESS MEETINGS

- A. Contractor will schedule and administer meetings throughout progress of the Work at bi-weekly intervals at the request of the Contractor, Owner, or Engineer.
- B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings, record minutes, and distribute copies within two working days to Engineer, Owner, participants, and those affected by decisions made.
- C. Attendance Required: Job superintendent, major Subcontractors and suppliers, Owner, Engineer, as appropriate to agenda topics for each meeting.
- D. Agenda:
 1. Review minutes of previous meetings.
 2. Review of Work progress.
 3. Field observations, problems, and decisions.
 4. Identification of problems that impede planned progress.
 5. Review of submittals schedule and status of submittals.
 6. Review of off-site fabrication and delivery schedules.
 7. Maintenance of progress schedule.
 8. Corrective measures to regain projected schedules.
 9. Planned progresses during succeeding work period.
 10. Coordination of projected progress.
 11. Maintenance of quality and work standards.
 12. Effect of proposed changes on progress schedule and coordination.
 13. Other business relating to Work.

1.5 PRE-INSTALLATION CONFERENCES

- A. When required in individual specification section, convene a pre-installation conference at work site prior to commencing work of the section.
- B. Require attendance of parties directly affecting or affected by work of the specific section.
- C. Notify engineer four days in advance of meeting date.
- D. Prepare agenda, preside at conference, record minutes, and distribute copies within two days after conference to participants with two copies to Engineer.
- E. Review conditions of installation, preparation and installation procedures and coordination with related work.
- F. Invite and coordinate with electric utility representative.

2. PART 2 PRODUCTS

- 1. Not Used

3. PART 3 EXECUTION

- 1. Not Used

END OF SECTION

SECTION 01300

SUBMITTALS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Shop drawings.
- D. Product data.
- E. Manufacturers' instructions.
- F. Manufacturers' certificates.

1.2 RELATED SECTIONS

- A. Section 01019 – Contract Consideration: Schedule of Values.
- B. Section 01400 - Quality Control: Manufacturers' field services and reports.
- C. Section 01700 - Contract Closeout: Contract

1.3 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Engineer accepted form.
- B. Sequentially number the transmittal forms. Resubmittals to have original number with an alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and specification Section number, as appropriate.
- D. Apply Contractor's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite the Project, and deliver to Engineer at business address. Coordinate submission of related items.
- F. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
- G. Provide space for Contractor and Engineer review stamps.
- H. Revise and resubmit submittals as required, identify all changes made since previous submittal.

- I. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.4 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial progress schedule in duplicate within 15 days after date of Owner-Contractor Agreement for Engineer review.
- B. Revise and resubmit as required.
- C. Submit a computer generated horizontal bar chart with separate line for each major section of Work or operation identifying first work day of each week.
- D. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
- E. Indicate estimated percentage of completion for each item of Work at each submission.
- F. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates, including those furnished by Owner and under Allowances.

1.5 SHOP DRAWINGS

- A. Submit the number of opaque reproductions which Contractor requires, plus two copies which will be retained by Engineer up to seven copies.
- B. After review, distribute in accordance with Article on Procedures above and for Record Documents described in Section 01700 - Contract Closeout.

1.6 PRODUCT DATA

- A. Submit the number of copies that the Contractor requires, plus three copies that will be retained by the Engineer. The Engineer will mark up no more than eight copies.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.
- C. After review, distribute in accordance with Article on Procedures above and provide copies for Record Documents described in Section 01700 - Contract Closeout.

1.7 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.
- B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.8 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification Sections, submit manufacturers' certificate to Engineer for review, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference date, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Engineer.

2. PART 2 PRODUCTS

- 1. Not Used

3. PART 3 EXECUTION

- 1. Not used

END OF SECTION

SECTION 01400

QUALITY CONTROL

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality assurance and control of installation.
- B. References.
- C. Manufacturers' field services and reports.

1.2 QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply fully with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from the Engineer before proceeding.
- D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce workmanship of specified quality.
- F. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.3 REFERENCES

- A. Conform to reference standard by date of issue current on date of Contract Documents.
- B. Should specified reference standards conflict with Contract Documents, request clarification from the Engineer before proceeding.
- C. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.4 MANUFACTURERS' FIELD SERVICES AND REPORTS

- A. When specified in individual specification Sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance of equipment as applicable, and to initiate instructions when necessary.

- B. Individuals to report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- C. Submit report in duplicate within 30 days of observation to Engineer for review.

2. PART 2 PRODUCTS

- 1. Not Used

3. PART 3 EXECUTION

- 1. Not Used.

END OF SECTION

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities and Construction Facilities.
- B. Temporary Controls: Protection of the Work.
- C. Construction Facilities: Access roads, parking, progress cleaning.

1.2 RELATED SECTIONS

- A. Section 01700 - Contract Closeout: Final cleaning.

1.3 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification Sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.

1.4 PROTECTION OF EXISTING

- A. Field locate existing utilities prior to construction and notify Engineer where possible conflicts exist. Protect utilities encountered during the work. Replace or repair damaged utilities.
- B. Protect utilities encountered during the work. Replace or repair damaged utilities.
- C. Utilities must remain in service. If it becomes necessary to interrupt a utility service, Owner must be notified immediately and steps taken to restore temporary or permanent service as soon as possible.
- D. Protect interior surfaces such as floors, carpeting, countertops, desktops, furniture, computer equipment, and all other equipment and surfaces to prevent damage and soiling from dust and debris during construction. Floors are to be protected by covering with protective material to prevent scratches or indentation from construction dust and debris, or moving of equipment.

1.5 SECURITY

- A. Contractor shall be responsible for securing and protecting the site throughout construction.

1.6 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures.

1.7 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a reasonably clean and orderly condition throughout construction.
- B. Clean hallways and rooms daily to the Owner's satisfaction.
- C. Remove waste materials, debris, and rubbish from building daily, and dispose off-site.

2. PART 2 PRODUCTS

- A. Not Used

3. PART 3 EXECUTION

- A. Not Used

END OF SECTION

SECTION 01570

TRAFFIC REGULATION

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Construction Parking Control.
- B. Flagmen.
- C. Flares and Lights.
- D. Traffic Signs and Signals.
- E. Removal.
- F. Traffic Control

1.2 RELATED SECTIONS

- A. Section 01010 - Summary of Work
- B. Section 01039 - Coordination and Meetings.
- C. Section 01500 - Construction Facilities and Temporary Controls.

1.3 TRAFFIC CONTROL

- A. Comply with the rules and regulations of the County, City, Township, Village, or MDOT having jurisdiction over the road.
- B. Install and maintain traffic control devices.
- C. Control devices shall conform to the Michigan Manual of Uniform Traffic Control Devices and the MDOT Standard Specifications for Highway Construction.
- D. Maintain through traffic unless written permission to do otherwise is obtained from the authority having jurisdiction over the road.

1.4 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Owner's operations.
- B. Monitor parking of construction personnel's vehicles. Maintain vehicular access to and through parking areas.
- C. Prevent parking on or adjacent to access roads or in non-designated areas.

1.5 REMOVAL

- A. Remove equipment and devices when no longer required.
- B. Repair damage caused by installation.

2. PART 2 PRODUCTS

- 1. Not Used

3. PART 3 EXECUTION

- 1. Not Used

END OF SECTION

SECTION 01600

MATERIAL AND EQUIPMENT

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Transportation and handling.
- C. Storage and protection.
- D. Product options.
- E. Substitutions.

1.2 RELATED SECTIONS

- A. Section 01400 - Quality Control: Product quality monitoring.

1.3 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse as indicated in the Contract Documents.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- C. Provide interchangeable components of the same manufacturer, for similar products.

1.4 TRANSPORTATION AND HANDLING

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.5 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate controlled enclosures.
- B. For exterior storage of fabricated products, place on sloped supports, above ground.

- C. Provide off-site storage and protection when site does not permit on-site storage or protection.
- D. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- E. Store loose granular materials on solid flat surfaces in a well-drained area. Avoid mixing with foreign matter.
- F. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- G. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.

1.6 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

1.7 SUBSTITUTIONS

- A. Instructions to Bidders specify time restrictions for submitting requests for Substitutions after the effective date of the Agreement to requirements specified in this Section.
- B. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that the Contractor:
 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 2. Will provide the same warranty for the Substitution as for the specified product.
 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 4. Waives claims for additional costs or time extension which may subsequently become apparent.
 5. Will reimburse Owner for review or redesign services associated with re-approval by authorities.

- E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
 - 1. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
 - 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence.
 - 3. The Engineer will notify Contractor, in writing, of decision to accept or reject request.

2. PART 2 PRODUCTS

- 1. Not Used.

3. PART 3 EXECUTION

- 1. Not used.

END OF SECTION

SECTION 01650

STARTING OF SYSTEMS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Starting systems.
- B. Demonstration and instructions.

1.2 RELATED SECTIONS

- A. Section 01400 - Quality Control: Manufacturers field reports.
- B. Section 01700 - Contract Closeout: System operation and maintenance data and extra materials.

1.3 STARTING SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- C. Verify wiring and support components for equipment are complete and tested.
- D. Execute start-up under supervision of responsible manufacturer's representative in accordance with manufacturers' instructions.
- E. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- F. Submit a written report in accordance with Section 01400 that equipment or system has been properly installed and is functioning correctly.

1.4 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to Owner's personnel two weeks prior to date of final inspection or when manufacturer's representative is on site for start up.
- B. Demonstrate Project equipment by a qualified manufacturers' representative who is knowledgeable about the Project.
- C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owners' personnel in detail to explain all aspects of operation and maintenance.

- E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled times, at equipment location.
- F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

2. PART 2 PRODUCTS

- 1. Not Used

3. PART 3 EXECUTION

- 1. Not Used

END OF SECTION

SECTION 01700
CONTRACT CLOSEOUT

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Closeout procedures.
- B. Punchlist procedures.
- C. Final cleaning.
- D. Adjusting.
- E. Project record documents.
- F. Operation and maintenance data.
- G. Warranties.
- H. Spare parts and maintenance materials.
- I. Correction period.

1.2 RELATED SECTIONS

- A. Section 01500 – Construction Facilities and Temporary Controls.

1.3 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's inspection.
- B. Provide submittals to Engineer that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and remaining sum due.
- D. Owner will occupy all portions of the project as specified in Section 01010.

1.4 PUNCHLIST PROCEDURES

- A. Contractor shall notify Engineer when the work is substantially complete in accordance with Contract Documents.
- B. Owner and Engineer will each appoint one Punchlist Representative who will conduct an inspection of the work and compile a list of items that are incomplete or do not comply with the requirements of the Contract Documents. Contractor may accompany the inspection.

- C. Contractor shall acknowledge that subsequent to the initial issuance of the punchlist, more items may be added to the list which will be deemed amended but only by the punchlist representatives.
- D. Contractor shall proceed immediately to address the items on the list.
- E. Contractor shall notify Engineer when listed items are completed and corrected.
- F. Contractor shall make arrangements with the Owner and Punchlist Representative for final inspection and acceptance. Should items still be deficient, they will remain on the list until accepted by the Owner and Engineer.
- G. Money will be retained under the Contract to cover items not accepted by the Owner and Engineer.

1.5 FINAL CLEANING

- A. Execute final cleaning prior to final inspection.
- B. Remove sediment from water main, storm sewers, and catch basins.
- C. Clean equipment and fixtures to a sanitary condition.
- D. Clean debris from drainage systems.
- E. Clean site; sweep paved areas, rake clean landscaped surfaces.
- F. Remove waste and surplus materials, rubbish, and construction facilities from the site.
- G. Waste shall be handled in accordance with EECBG funding requirements as outlined in Specification 01010 Section 1.7.
- H. Restore roads, driveways, parking areas, lawns, drainage, and other items disturbed during construction to original condition or as required by the documents.

1.6 ADJUSTING

- A. Adjust operating Products and equipment to ensure smooth and unhindered operation in accordance with manufacturer's standards.

1.7 PROJECT RECORD DOCUMENTS

- A. Maintain on site, one set of the following record documents; record actual revisions to the Work:
 - 1. Contract Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other Modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
- B. Store Record Documents separate from documents used for construction.
- C. Record information concurrent with construction progress.

- D. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 1. Manufacturer's name and product model and number.
 2. Product substitutions or alternates utilized.
 3. Changes made by Addenda and Modifications.
- E. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
 1. Measured depths of foundations in relation to finish floor datum.
 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 4. Field changes of dimension and detail.
 5. Details not on original Contract Drawings.
- F. Submit documents to Engineer with claim for final Application for Payment.

1.8 OPERATION AND MAINTENANCE DATA

- A. Submit three sets prior to final inspection, bound in 8-1/2 x 11 inch text pages, binders with durable plastic covers.
- B. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.
- C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified.
- E. Part 1: Directory, listing names, addresses, and telephone numbers of Engineer, Contractor, Subcontractors, and major equipment suppliers.
- F. Part 2: Operation and maintenance instructions, arranged by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 1. Significant design criteria.
 2. List of equipment.
 3. Parts list for each component.
 4. Operating instructions.
 5. Maintenance instructions for equipment and systems.
 6. Maintenance instructions for finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
- G. Part 3: Project documents and certificates, including the following:
 1. Shop drawings and product data.
 2. Air and water balance reports.
 3. Certificates.
 4. Photocopies of warranties.

- H. Submit one copy of completed volumes in final form 15 days prior to final inspection. This copy will be returned after final inspection, with Engineer comments. Revise content of documents as required prior to final submittal.
- I. Submit final volumes revised, within ten days after final inspection.

1.9 WARRANTIES

- A. Provide duplicate notarized copies dated to commence the day placed into operation and accepted by the Owner.
- B. Execute and assemble documents from Subcontractors, suppliers, and manufacturers.
- C. Provide Table of Contents and assemble in binder with durable plastic cover.
- D. Submit prior to final Application for Payment.
- E. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

1.10 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.
- B. Deliver to Owner obtain receipt prior to final payment.

1.11 CORRECTION PERIOD

- A. For a period of one year from the date of Final Completion, promptly correct work or replace equipment that is found to be defective.
- B. Where equipment or structures are accepted by the Owner and placed in service on a date different from the date of Substantial Completion, the correction period for that item of work shall begin on a date mutually agreed upon by Contractor and Owner.

2. PART 2 PRODUCTS

- 1. Not used.

3. PART 3 EXECUTION

- 1. Not used.

END OF SECTION

SECTION 16010

BASIC ELECTRICAL REQUIREMENTS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Basic Electrical Requirements.

1.2 WORK SEQUENCE

- A. Contractor shall coordinate with Owner on removal and installation timing to allow the facilities to remain in operation at all times.
- B. Contractor shall coordinate replacement of existing electric meter with a bi-directional meter to allow the solar system to be grid tied.
- C. Contractor shall coordinate with suppliers to assure all equipment and material will be on site before removal is started

1.3 ALTERNATES

- A. No alternate shall be allowed on the bid form. Owner will only consider alternates after the bid has been awarded.
- B. Coordinate related work and modify surrounding work as required.

1.4 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code.
- B. DTE Energy requirements.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Submit shop drawings and product data grouped to include complete submittals of related systems, products, and accessories in a single submittal.
- C. Mark dimensions and values in units to match those specified.
- D. Submit shop drawings indicating layout of completed assemblies, interconnecting cabling, dimensions, weights, and external power requirements.
- E. Submit product data under provisions of Section 01300.
- F. Submit product data for each component specified.
- G. Submit manufacturer's installation instructions under provisions of Section 01300.
- H. Provide completed "As Builts" plans of work performed (including wire numbers) to Owner prior to final payment.

1.6 REGULATORY REQUIREMENTS

- A. Conform to all applicable Building Codes.
- B. Electrical: Conform to NFPA 70.
- C. Furnish products listed and classified by Underwriters Laboratories, Inc. or testing firm acceptable to authority having jurisdiction as suitable for purpose specified and shown.
- D. Obtain permits, and request inspections from authority having jurisdiction.

1.7 PROJECT/SITE CONDITIONS

- A. Install Work in locations coordinated with Owner, unless prevented by Project conditions, or directed by engineer.
- B. Prepare drawings showing proposed rearrangement of Work to meet Project conditions, including changes to Work specified in other Sections. Obtain permission of Owner before proceeding.

1.8 SEQUENCING AND SCHEDULING

- A. Construct Work in sequence under provisions of Section 01010.

2. PART 2 PRODUCTS

- 1. Not Used.

3. PART 3 EXECUTION

- 1. Not Used.

END OF SECTION

SECTION 16111

CONDUIT

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Metal conduit.
- B. Liquidtight flexible metal conduit.
- C. Nonmetal conduit.
- D. Fittings and conduit bodies.
- E. Removal of existing abandoned conduit

1.2 RELATED SECTIONS

- A. Section 16130 - Boxes.
- B. Section 16170 - Grounding and Bonding.
- C. Section 16190 - Supporting Devices.
- D. Section 16195 - Electrical Identification.

1.3 REFERENCES

- A. ANSI C80.1 - Rigid Steel Conduit, Zinc Coated.
- B. ANSI C80.3 - Electrical Metallic Tubing, Zinc Coated.
- C. ANSI C80.5 - Rigid Aluminum Conduit.
- D. ANSI/NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies.
- E. ANSI/NFPA 70 - National Electrical Code.
- F. NECA "Standard of Installation."
- G. NEMA RN 1 - Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit.
- H. NEMA TC 2 - Electrical Plastic Tubing (EPT) and Conduit (EPC-40 and EPC--80).
- I. NEMA TC 3 - PVC Fittings for Use with Rigid PVC Conduit and Tubing.

1.4 DESIGN REQUIREMENTS

- A. Conduit Size: ANSI/NSPA 70.

1.5 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of Section 01700.
- B. Accurately record actual routing of conduits larger than 1 inches.

1.6 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc., or testing firm acceptable to authority having jurisdiction as suitable for purpose specified and shown.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and handle Products to site under provisions of Section 01600.
- B. Accept conduit on site. Inspect for damage.
- C. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.
- D. Protect PVC conduit from sunlight.

1.8 PROJECT CONDITIONS

- A. Verify that field measurements are as shown on Drawings.
- B. Verify routing and termination locations of conduit prior to rough-in.
- C. Conduit routing is shown on Drawings in approximate locations unless dimensioned. Route as required to complete wiring system.

2. PART 2 PRODUCTS

2.1 CONDUIT REQUIREMENTS

- A. Minimum Size: 3/4 inch unless otherwise specified.
- B. Underground Installations:
 - 1. Rigid Steel conduit, plastic coated conduit, or thickwall nonmetallic conduit.
 - 2. Minimum Size: 1 inch.
- C. Outdoor Locations, Above Grade: Rigid steel.
- D. In Slab Above Grade:
 - 1. Rigid steel conduit, plastic coated conduit, or thickwall nonmetallic conduit.
- E. Wet and Damp Locations:
 - 1. Rigid steel conduit, plastic coated conduit, or thickwall nonmetallic conduit.
- F. Dry Locations:
 - 1. Concealed: Rigid steel conduit, or thickwall nonmetallic conduit.

2.2 METAL CONDUIT

- A. Rigid Steel Conduit: ANSI C80.1.
- B. Fittings and Conduit Bodies: ANSI/NEMA FB 1: material to match conduit.

2.3 PVC COATED METAL CONDUIT

- A. Description: NEMA RN 1; rigid steel conduit with external PVC coating, 20 mil thick.
- B. Fittings and Conduit Bodies: ANSI/NEMA FB 1; steel fittings with external PVC coating to match conduit.

2.4 LIQUID TIGHT FLEXIBLE METAL CONDUIT

- A. Description: Interlocked steel construction with PVC jacket.
- B. Fittings: ANSI/NEMA FB 1.

2.5 NONMETALLIC CONDUIT

- A. Description: NEMA TC 2; Schedule 80 PVC.
- B. Fittings and Conduit Bodies: NEMA TC 3.

3. PART 3 EXECUTION

3.1 INSTALLATION

- A. Install conduit in accordance with NECA "Standard of Installation."
- B. Install non metallic conduit in accordance with manufacturer's instructions.
- C. Arrange supports to prevent misalignment during wiring installation.
- D. Support conduit using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.
- E. Group related conduits; support using conduit rack. Construct rack using steel channel; provide space on each for 25 percent additional conduits.
- F. Fasten conduit supports to building structure and surfaces under provisions of Section 16190.
- G. Do not support conduit with wire or perforated pipe straps. Remove wire used for temporary supports.
- H. Arrange conduit to maintain headroom and present neat appearance.
- I. Route exposed conduit parallel and perpendicular to cabinets, walls, etc.
- J. Route conduit in and under slab from point-to-point.
- K. Do not cross conduits in slab.

- L. Maintain adequate clearance between conduit and piping.
- M. Cut conduit square using saw or pipe cutter; de-burr cut ends.
- N. Bring conduit to shoulder of fittings; fasten securely.
- O. Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area inserted in fitting. Allow joint to cure for 20 minutes, minimum.
- P. Use conduit hubs or sealing locknuts to fasten conduit to sheet metal boxes in damp and wet locations.
- Q. Install no more than equivalent of three 90-degree bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams. Use hydraulic one-shot bender to fabricate or factory elbows for bends in metal conduit larger than 2 inch (50 mm) size.
- R. Avoid moisture traps; provide junction box with drain fitting at low points in conduit system.
- S. Provide suitable fittings to accommodate expansion and deflection where conduit crosses control and expansion joints.
- T. Provide suitable pull string in each empty conduit except sleeves and nipples.
- U. Use suitable caps to protect installed conduit against entrance of dirt and moisture.
- V. Ground and bond conduit under provisions of Section 16170.
- W. Identify conduit under provisions of Section 16195.

END OF SECTION

SECTION 16123

BUILDING WIRE AND CABLE

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Building wire and cable.
- B. Wiring connectors and connections.

1.2 RELATED SECTIONS

- A. Section 16111 - Conduit.
- B. Section 16130 - Boxes.
- C. Section 16195 - Identification.

1.3 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code.

1.4 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years experience.

1.5 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc., or testing firm acceptable to authority having jurisdiction as suitable for purpose specified and shown.

1.6 PROJECT CONDITIONS

- A. Verify that field measurements are as shown on Drawings.
- B. Conductor sizes are based on copper unless indicated as aluminum or "AL".
- C. Wire and cable routing shown on Drawings is approximate unless dimensioned. Route wire and cable as required to meet Project Conditions.
- D. Where wire and cable routing is not shown, and destination only is indicated, determine exact routing and lengths required.

1.7 COORDINATION

- A. Coordinate Work under provisions of Section 01039.
- B. Determine required separation between cable and other work.

- C. Determine cable routing to avoid interference with other work.

2. PART 2 PRODUCTS

2.1 BUILDING WIRE AND CABLE

- A. Conductor: Copper.
- B. Insulation Voltage Rating: 600 Volts.
- C. Insulation: ANSI/NFPA 70, Type THHN/THWN.

2.2 WIRING CONNECTORS

- A. Split Bolt Connectors:
- B. Solderless Pressure Connectors:
- C. Spring Wire Connectors:
- D. Compression Connectors:

3. PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that interior of building or cabinet has been protected from weather.
- B. Verify that mechanical work likely to damage wire and cable has been completed.

3.2 PREPARATION

- A. Completely and thoroughly swab raceway before installing wire.

3.3 WIRING METHODS

- A. Exterior Locations: Rigid steel conduit, plastic coated conduit, or thickwall nonmetallic conduit.
- B. Underground Installations: Rigid steel conduit, plastic coated conduit, or thickwall nonmetallic conduit.
- C. Use wiring methods indicated on Drawings.

3.4 INSTALLATION

- A. Install products in accordance with manufacturers' instructions.
- B. Use solid conductor for feeders and branch circuits 10 AWG and smaller.
- C. Use stranded conductors for control circuits.
- D. Use conductor not smaller than 12 AWG for power and lighting circuits.
- E. Use conductor not smaller than 14 AWG for control circuits.

- F. Use 10 AWG conductors for 20 ampere, 120 volt branch circuits longer than 75 feet.
- G. Use 10 AWG conductors for 20 ampere, branch circuits longer than 200 feet.
- H. Pull all conductors into raceway at same time.
- I. Use suitable wire pulling lubricant for building wire 4 AWG and larger.
- J. Protect exposed cable from damage.
- K. Use suitable cable fittings and connectors.
- L. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- M. Clean conductor surfaces before installing lugs and connectors.
- N. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.
- O. Terminate aluminum conductors with tin-plated aluminum-bodied compression connectors only. Fill with anti-oxidant compound before installing conductor.
- P. Use suitable reducing connectors or mechanical connector adaptors for connecting aluminum conductors to copper conductors.
- Q. Use split bolt connectors for copper conductor splices and taps, 6 AWG and larger. Tape un-insulated conductors and connector with electrical tape to 150 percent of insulation rating of conductor.
- R. Use solderless pressure connectors with insulating covers for copper conductor splices and taps, 8 AWG and smaller.
- S. Use insulated spring wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller.

3.5 INTERFACE WITH OTHER PRODUCTS

- A. Identify wire and cable under provisions of Section 16195.
- B. Identify each conductor with its circuit number or other designation indicated on drawings.

3.6 FIELD QUALITY CONTROL

- A. Perform field inspection and testing under provisions of Section 01400.
- B. Inspect wire and cable for physical damage and proper connection.
- C. Measure tightness of bolted connections and compare torque measurements with manufacturer's recommended values.
- D. Verify continuity of each branch circuit conductor.

END OF SECTION

SECTION 16130

BOXES

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Pull and junction boxes.

1.2 RELATED SECTIONS

- A. Section 16160 - Cabinets and Enclosures.

1.3 REFERENCES

- A. ANSI/NEMA FB 1 - Fittings and Supports for Conduit and Cable Assemblies.
- B. ANSI/NEMA OS 1 - Sheet-steel Outlet Boxes, Device Boxes, Covers and Box Supports.
- C. ANSI/NEMA OS 2 - Nonmetallic Outlet Boxes, Device Boxes, Covers and Box Supports.
- D. ANSI/NFPA 70 - National Electrical Code.
- E. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

1.4 PROJECT RECORD DOCUMENTS

- A. Accurately record actual locations and mounting heights of outlet, pull, and junction boxes.

1.5 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc., or testing firm acceptable to authority having jurisdiction as suitable for purpose specified and shown.

1.6 PROJECT CONDITIONS

- A. Verify field measurements are as shown on Drawings.
- B. Electrical boxes are shown on Drawings in approximate locations unless dimensioned. Install at location required for box to serve intended purpose.

2. PART 2 PRODUCTS

2.1 OUTLET BOXES

- A. Sheet Metal Outlet Boxes: ANSI/NEMA OS 1, galvanized steel.
- B. Nonmetallic Outlet Boxes: ANSI/NEMA OS 2.

- C. Cast Boxes: NEMA FB 1, Type FD, cast ferrous alloy. Provide gasketed cover by box manufacturer. Provide threaded hubs.

2.2 PULL AND JUNCTION BOXES

- A. Sheet Metal Boxes: NEMA OS 1, galvanized steel.
- B. Surface-Mounted Cast Metal Box: NEMA 250, Type 4; flat-flanged, surface-mounted junction box.
 - 1. Material: Galvanized cast iron.
 - 2. Cover: Furnish with ground flange, neoprene gasket, and stainless steel cover screws.
- C. Fiberglass Handholes: Die-molded fiberglass handholes.
 - 1. Cable Entranced: Pre-cut 6 x 6 inch (150 x 150 mm) cable entrance at center bottom of each side.
 - 2. Cover: Fiberglass weatherproof cover with nonskid finish.

3. PART 3 EXECUTION

3.1 INSTALLATION

- A. Install electrical boxes as shown on Drawings, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.
- B. Support boxes independently of conduit, except cast box that is connected to two rigid metal conduits both supported within 12 inches of box.
- C. Use gang box where more than one device is mounted together. Do not use sectional box.
- D. Use cast outlet box in exterior locations and wet locations.
- E. Large Pull Boxes: Boxes larger than 100 cubic inches (1 600 cubic centimeters) in volume or 12 inches (300 mm) in any dimension.
 - 1. Interior Dry Locations: Use hinged enclosure under provisions of Section 16160.
 - 2. Other locations: Use surface-mounted cast metal box.

3.2 INTERFACE WITH OTHER PRODUCTS

- A. Coordinate locations and sizes of required access doors.
- B. Locate flush mounting box in masonry wall to require cutting of masonry unit corner only. Coordinate masonry cutting to achieve neat opening.

END OF SECTION

SECTION 16800

SOLAR POWER

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Rack Mounted Solar Panels.
- B. Power Inverter.

1.2 RELATED SECTIONS

- A. Section 16130 – Boxes.

1.3 REFERENCES

- A. NEMA WD 1 - General Purpose Wiring Devices.
- B. NEMA WD 6 - Wiring Device Configurations.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Provide shop drawings of manufacturer's catalog information showing dimensions, colors, and configurations for all materials listed in this section.
- C. Indicate application conditions and limitations of use stipulated by product testing agency specified under regulatory requirements.
- D. Include instructions for storage, handling, protection, examination, preparation, operation and installation of product.

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years experience.

1.6 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc. or testing firm acceptable to authority having jurisdiction as suitable for purpose specified and shown.

1.7 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. Rack Mounted Solar Panels:
 - 1. Basis of Measurement: Included in the lump sum price bid for installation of Rack Mounted Solar Panels.
 - 2. Basis of Payment: Includes disconnection and/or removal of necessary components from existing electrical power system, mounting and installation of new devices on required structure, and any required hardware (such as fasteners, wire or fittings) as stated in the specifications, indicated on the drawings or specified per manufacturer's installation instructions.

- B. Power Inverter:
 - 1. Basis of Measurement: Included in the lump sum price bid for installation of Power Inverter.
 - 2. Basis of Payment: Includes disconnection and/or removal of necessary components from existing electrical power system, mounting and installation of new devices on required structure, and any required hardware (such as fasteners, wire or fittings) as stated in the specifications, indicated on the drawings or specified per manufacturer's installation instructions.

2. PART 2 PRODUCTS

2.1 RACK MOUNTED SOLAR PANELS

- A. Manufacturer: Sanyo
 - 1. "HIT" Series
 - 2. Model: HIT Power 215N

- B. Description: High Efficiency 215Watt Photovoltaic Module

- C. Warranty: 5 Years

- D. Device Body: Mono Crystalline Silicon with Amorphous Silicon Outer Layers

- E. MAX Power Ratings:
 - 1. Wattage: 215 Watts
 - 2. Voltage: 42.0 VDC
 - 3. Current: 5.13 Amps

- F. Installation:
 - 1. Location: Solar Panel Rack, South of Mayville DPW Building. Exact location to be determined during construction.
 - 2. Amount: 12 Panels in Total; All located on Single Ground Mounted Rack
 - 3. Interconnection: Input Power Feeds from each Panel to be wiring conjointly into the single Power Inverter per Manufacturer's Instruction.

- G. Substitutions must be approved by the Owner.

2.2 POWER INVERTER

- A. Manufacturer: Solar Access UK, LTD
 - 1. "Sunny Boy" Series
 - 2. Model: SB3000

- B. Description: High Efficiency DC to AC Power Inverter for Grid-Connected Solar Power Systems.
- C. Warranty: 5 Years
- D. Input Power Ratings (MAX):
 - 1. Wattage: 3200 Watts
 - 2. Voltage: 600 VDC
 - 3. Current: 12 Amps
- E. Output Power Ratings:
 - 1. Wattage:
 - a. Nominal: 2750 Watts
 - b. MAX: 3000 Watts
 - 2. Voltage:
 - a. Nominal: 220-240 VAC
 - b. Range: 180-260 VAC
 - 3. Current, MAX: 15 Amps
 - 4. Frequency: Self Adjusting
- F. Installation:
 - 1. Location: Solar Panel Rack, South of Mayville DPW Building
 - 2. Amount: 1 Power Inverter, Mounted to Solar Panel System Rack
 - 3. Interconnection: Input Power Feeds from 12 Panel Grid to be fed to Power Inverter. Contractor to coordinate with DTE Energy to install per requirements for Net Metering.
- G. Substitutions must be approved by the Owner.

3. PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify device boxes are installed at proper height.
- B. Verify branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.

3.2 PREPARATION

- A. Remove any obstructions in or on existing equipment to be serviced.
- B. Clean surfaces and affected areas prior to servicing.

3.3 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Connect wiring device grounding terminal to branch circuit equipment grounding conductor.
- C. Connect wiring devices by wrapping conductor around screw terminal.

- D. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets.

3.4 INTERFACE WITH OTHER PRODUCTS

- A. Connect outlets/switches to panel and circuit as provided by existing wiring at each location.

3.5 FIELD QUALITY CONTROL

- A. Inspect each wiring device for defects.
- B. After installation, operate each device and verify proper operations.

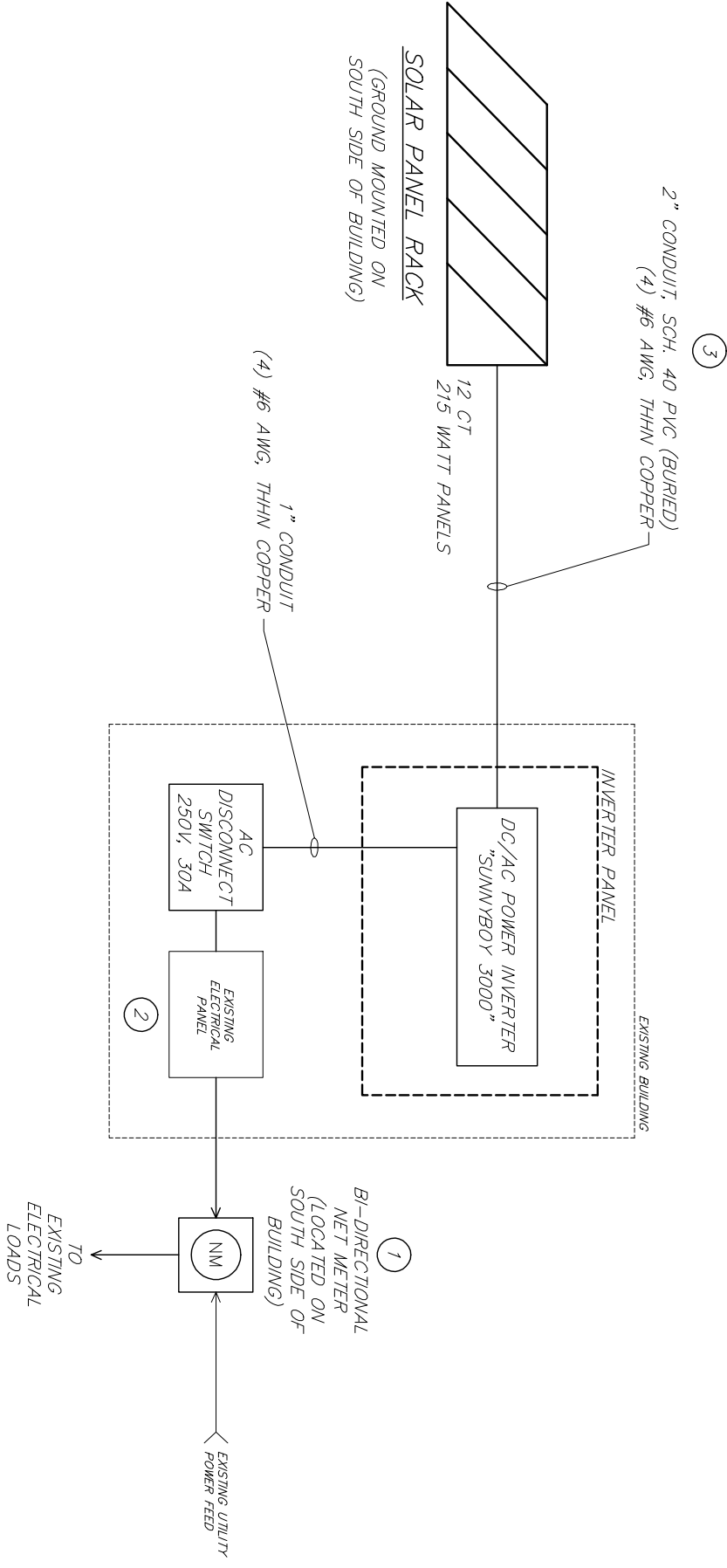
3.6 ADJUSTING

- A. Adjust devices to be flush and level.

3.7 PROPOSED ONE-LINE DIAGRAM

- A. See attached diagram.

END OF SECTION



- ① CONTRACTOR TO COORDINATE WITH DTE ENERGY TO INSTALL NEW NET-METER, REPLACING EXISTING ELECTRICAL METER.
- ② POWER INVERTER'S AC ELECTRICAL OUTPUT TO BE WIRED TO 2-POLE 30 AMP BREAKER IN EXISTING ELECTRICAL PANEL
- ③ CONDUIT/WIRE LENGTH NOT TO EXCEED 250 FEET