MANDATORY PRE-BID MEETING – Wednesday, January 15, 2020 at 10:00 a.m.
Kalamazoo Water Reclamation Plant -1415 North Harrison Street, Kalamazoo, MI 49007
Conference Room B

INVITATION FOR BID (IFB)

The City of Kalamazoo, Michigan is soliciting sealed bids for:

PROJECT: Central Station #1 Generator Upgrades       BID REFERENCE #: 28537-006.0

IFB ISSUE DATE:  January 8, 2020

BID DUE/OPENING DATE:  January 29, 2020 @ 3:00 p.m. Local Time
Facsimile Bids Will Not Be Accepted.

MAILING ADDRESS & INSTRUCTIONS

Mail to: Purchasing Division
241 W. South Street
Kalamazoo, MI 49007

Questions about this IFB should be directed to: Department Contact: Tom Koporetz, Public Services
Engineering Supervisor at (269) 337-8319

Include on the Envelope the Project Name and Bid Reference Number. All Envelopes Must Be Sealed.

You are invited to submit a bid for this project. Specifications, terms, conditions and instructions for submitting bids are contained herein. This Invitation for Bid with all pages, documents and attachments contained herein, or subsequently added to and made a part hereof, submitted as a fully and properly executed bid shall constitute the contract between the City and the successful bidder when approved and accepted on behalf of the City by an authorized official or agent of the City.

All bidders shall complete and return the Bid and Award page(s) and submit all information requested herein in order for a bid to be responsive. **FAILURE TO DO SO MAY RESULT IN THE BID BEING REJECTED AS NON-RESPONSIVE.** The bid document shall be returned in its entirety, in a properly identified and sealed envelope to the Purchasing Division at the above address. **BIDS MUST BE RECEIVED BEFORE THE DUE DATE - LATE BIDS WILL NOT BE CONSIDERED.** The City reserves the right to postpone the bid opening for its own convenience.

**TABLE OF CONTENTS**

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement of No Bid</td>
<td>1</td>
</tr>
<tr>
<td>Instructions to Bidders</td>
<td>2 – 7</td>
</tr>
<tr>
<td>Bid &amp; Award Pages</td>
<td>8 – 9</td>
</tr>
<tr>
<td>Indemnity and Insurance</td>
<td>10 – 13</td>
</tr>
<tr>
<td>Specifications</td>
<td>14 – 16</td>
</tr>
<tr>
<td>General Conditions</td>
<td>17 – 20</td>
</tr>
<tr>
<td>Terms &amp; Conditions</td>
<td></td>
</tr>
</tbody>
</table>

**APPENDICES**

Appendix A
Drawings/Plans
STATEMENT OF NO BID

NOTE: If you DO NOT intend to bid on this commodity or service, please complete and return this form immediately. Your response will assist us in evaluating all responses for this important project and to improve our bid solicitation process.

The Purchasing Division of the City of Kalamazoo wishes to keep its bidders list file up-to-date. If, for any reason you cannot supply the commodity/service noted in this bid solicitation, this form must be completed and returned to remain on the particular bid list for future projects of this type.

If you do not respond to this inquiry within the time set for the bid opening date and time noted, we will assume that you can no longer supply this commodity/service, and your name will be removed from this bid list.

_____ Specifications too "tight", i.e. geared toward one brand or manufacturer only (explain below).
_____ Specifications are unclear (explain below).
_____ We are unable to meet specifications.
_____ Insufficient time to respond to the Invitation for Bid.
_____ Our schedule would not permit us to perform.
_____ We are unable to meet bond requirements.
_____ We are unable to meet insurance requirements.
_____ We do not offer this product or service.
_____ Remove us from your bidders list for this commodity or service.
_____ Other (specify below).

REMARKS: ______________________________________________________________________________________
____________________________________________________________________________________________

SIGNED: ___________________________ NAME: ___________________________  (Type or Print)
TITLE: ___________________________ DATE: ___________________________
FIRM NAME: ___________________________  (if any)
ADDRESS: ___________________________  (Street address)  (City)  (State)  (Zip)
PHONE: ___________________________  FAX: ___________________________
EMAIL: ___________________________
SECTION I
INSTRUCTIONS TO BIDDERS

1. EXAMINATION OF BID DOCUMENT—Before submitting a bid, bidders shall carefully examine the specifications and shall fully inform themselves as to all existing conditions and limitations. The bidder shall indicate in the bid the sum to cover the cost of all items included on the bid form.

2. PREPARATION OF BID—The bid shall be legibly prepared in ink or typed. If a unit price or extension already entered by the bidder on the Bid and Award form is to be altered, it shall be crossed out and the new unit price or extension entered above or below and initialed by the bidder with ink. The bid shall be legally signed and the complete address of the bidder given thereon.

All bids shall be tightly sealed in an envelope plainly marked SEALED BID and identified by project name, bid opening date and time. Bids opened by mistake, due to improper identification, will be so documented and resealed. The Purchasing Division will maintain and guarantee confidentiality of the contents until the specified opening date and time. Facsimile bids will not be accepted.

3. EXPLANATION TO BIDDERS—Any binding explanation desired by a bidder regarding the meaning or interpretation of the Invitation for Bid (IFB) and attachments must be requested in writing, at least 5 days before the bid opening so a reply may reach all prospective bidders before the submission of bids. Any information given to a prospective bidder concerning the IFB will be furnished to all prospective bidders as an amendment or addendum to the IFB if such information would be prejudicial to uninformed bidders. Receipt of amendments or addenda by a bidder must be acknowledged in the bid by attachment, or by letter or fax received before the time set for opening of bids. Oral explanation or instructions given prior to the opening will not be binding.

4. CASH DISCOUNTS—Discount offered for payment of less than thirty (30) days will not be considered in evaluating bids for award. Offered discounts of less than thirty (30) days will be taken if payment is made within the discount period, even though not considered in evaluation of the bid.

5. WITHDRAWAL OF BIDS—Bids may be withdrawn in person by a bidder or authorized representative, provided their identity is made known and a receipt is signed for the bid, but only if the withdrawal is made prior to the exact time set for receipt of bid. No bid may be withdrawn for at least ninety (90) days after bid opening.

6. ALTERNATE BIDS—Bidders are cautioned that any alternate bid, unless specifically requested or any changes, insertions or omissions to the terms and conditions, specifications or any other requirement of this IFB may be considered non-responsive, and at the option of the City, result in rejection of the alternate bid.

7. LATE BIDS—Any bid received at the office designated herein after the exact time specified for receipt will not be considered. (Note: The City reserves the right to consider bids that have been determined by the City to be received late due to mishandling by the City after receipt of the bid and no award has been made.)

8. UNIT PRICES—If there is a discrepancy between unit prices and their extension, unit prices shall prevail.
SECTION II
BID AND AWARD

The undersigned having become thoroughly familiar with all of the bid/contract documents incorporated herein, the project site and the location conditions affecting the work, hereby proposes to perform everything required to be performed in strict conformity with the requirements of these documents, and to provide and furnish all the equipment, labor and materials necessary to complete in a professional manner the furnishing and installing of all of the following, meeting or exceeding the specifications as set forth herein for the prices as stated below.

CENTRAL STATION #1 GENERATOR UPGRADES

<table>
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<tr>
<th>TOTAL LUMP SUM BID</th>
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<tr>
<td>Furnish all labor, materials, tools, equipment and services necessary to complete the generator upgrades at Central Station#1 as stated in the Specifications and Drawings/Plans.</td>
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Work shall start within __________ working days after receipt of notification by Contractor of Notice to Proceed. All work is to be completed by 90 days after issued NOTICE TO PROCEED.

Days of week work will be performed ______________________________________________

Hours of the day work will be done     ______________________________________________

Bidder/Contractor has examined and carefully studied the bidding documents and attachments, and acknowledges receipt of the following addenda:

Addendum No:   ________________   ________________   ________________   ________________

Dated: ________________   ________________   ________________   ________________   ________________

Bidder shall provide all of the information as requested herein with their bid. Failure to do so and/or failure to provide post-bid requested information may be cause for rejecting the bid as non-responsive.

The City encourages the use of local labor in fulfilling the requirements of this contract.

By my signature below, I certify that the firm bidding on this contract, when making hiring decisions, does not use a past criminal conviction as a bar to or preclude a person with a criminal conviction from being considered for employment with the bidding firm unless otherwise precluded by federal or state law. I further certify that I have read and agree to be bound by the provisions of the City’s Non-Discrimination Clause found in Appendix A as updated by City Ordinance 1856.

Signed:________________________________________Name: _________________________________
Title:  _________________________________________
CITY OF KALAMAZOO
LOCAL PREFERENCE POLICY AND CERTIFICATION

The lowest responsive Kalamazoo County bidder whose bid is not low but falls within 2% of the lowest responsive bid is afforded the opportunity to become the successful bidder if it agrees to reduce its bid to match the lowest responsive bid. The City of Kalamazoo is the sole determiner whether a bidder is responsible, qualifies as a Kalamazoo County bidder, and if its bid is responsive to the City’s specifications, terms and conditions.

If the lowest Kalamazoo County bidder chooses not to match the lowest bid, the next lowest responsive Kalamazoo County bidder whose bid falls within 2% of the lowest bid, is given the opportunity to match the lowest responsive bid.

To qualify as a Kalamazoo County bidder, the bidder must meet both the following criteria:

1. Have a physical presence in Kalamazoo County by maintaining a permanent office, factory or other facility in Kalamazoo County with employees working in Kalamazoo County.

2. Have paid real or personal property taxes related to said business to the City of Kalamazoo, County of Kalamazoo or other municipal corporation within Kalamazoo County in the previous tax year, except that a non-profit entity need not meet this requirement.

This local preference policy applies only to purchases for materials, supplies, capital outlay, and services for maintenance, repair or operation of City facilities that are over $25,000. If more than 50% of the contract is subcontracted to firms located outside of Kalamazoo County that bid does not qualify for the local preference policy outlined above. The local preference policy will not apply if prohibited by law. The Purchasing Agent has the authority to finally determine if the bidder qualifies as a Kalamazoo County bidder as set forth herein. The Purchasing Agent may take into account the permanency of the business in Kalamazoo, and whether the business appears to be claiming to be a Kalamazoo County business solely or primarily to qualify as a Kalamazoo County business under this Resolution, and any other material factors.

CERTIFICATION

If you qualify as a Kalamazoo County bidder and wish to be considered for the local preference provisions as provided above please certify that fact by providing the information requested below and attesting to its accuracy.

Firm Name: ________________________________________________________________

Street Address of Business: ___________________________________________________

City, State, and Zip Code: ____________________________________________________

Number of employees working in Kalamazoo County: ____________________________

Name the city or township to which business real and/or personal property taxes are paid or provide non-profit status: ____________________________________________________________

The above information is accurate:

Signature: ___________________________________________ Date: __________________________

Title: __________________________________________________________

Revised April 2008
SUB-CONTRACTING INFORMATION

Using the table below provide information regarding the sub-contractors that will be working to fulfill the requirements of this contract. Submit as complete a list as possible at the time of your proposal. You will have two business days after the proposal opening to update the list as needed. The information provided will be used for evaluating your proposal and to assist in determining if you qualify as a Kalamazoo County Bidder.

INSTRUCTIONS:
Nature of Contract - State a brief description of the work or product that will be provided.
BIDDER – Provide the percentage of services or construction activity that will be provided by your firm.
Subcontractors:
• Provide the Name and Address for each subcontractor providing services or construction activities for this contract.
• Indicate with YES or NO under the “Local?” box if they qualify as a “Kalamazoo County bidder” (see local preference certification page)
• Provide the percentage for the dollar amount of the contract work they will be performing.

If there are not enough lines in the table below make additional copies as needed.

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<th>Nature of Contract:</th>
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<tr>
<th>Subcontractor Name/Address</th>
<th>Local?</th>
<th>% Of Total Contract</th>
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Does this List of Subcontractors need to be updated after the proposal opening? Yes __ No __

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CITY OF KALAMAZOO – INVITATION FOR BID
Central Station #1 Generator Upgrades

Bid Reference #: 28537-006.0
CITY OF KALAMAZOO EX-OFFENDER POLICY CHECKLIST

As part of the City’s commitment to reducing unacceptable poverty, encouraging rehabilitation, reducing recidivism and strengthening families in Kalamazoo, the City has updated its Purchasing Policy to ensure that firms with whom the City does business share in this commitment by utilizing hiring practices that do not unfairly deny people with arrest and conviction records gainful employment. *(Important: This requirement also extends to any subcontractors the bidder intends to use to fulfill the contract for goods or services being sought from the City.)*

**Part I: Proof that the bidder does not inquire about an individual’s past arrest or criminal history on the bidders employment application form**

☐ Attach a copy of the current application for employment being used by the bidder

**Part II: Certification that the bidder does not use an individual’s past arrest or criminal history to unlawfully discriminate against them by checking one or more of the following:**

☐ That pursuant to federal or state law bidder is precluded from hiring persons with certain criminal records from holding particular positions or engaging in certain occupations by providing a cite to the applicable statute or regulation; if checking this box, provide a citation to the applicable statute or rule upon which the bidder is relying:__________________________

☐ That bidder conducts criminal history background checks only as necessary, and only after making a conditional offer of employment; that any withdrawal of an offer of employment to an individual because of a past criminal history is job-related and consistent with business necessity after the individual has been provided an individualized assessment opportunity to review and challenge or supplement the history of past criminal conduct being relied upon by the bidder;

☐ That the use by bidder of criminal history background checks complies with the U.S. Equal Employment Opportunity Commission’s Enforcement Guidance on the Consideration of Arrest and Conviction Records in Employment Decisions and that the bidder has not had a determination rendered against it in past 7 years that it discriminated against a person through the use of an individual’s arrest or criminal history

I CERTIFY THAT THE ABOVE STATEMENTS ARE TRUE.

______________________________
Date

______________________________
Signature

______________________________
Printed Name

______________________________
Position
REFERENCE QUESTIONNAIRE

Please answer the following questions completely.

1. Firm name: ______________________________________________________________________________________

2. Established: Year ________ Number of Employees: __________

3. Type of organization:
   a. Individual: ________
   b. Partnership: ________
   c. Corporation: ________
   d. Other: ________

4. Former firm name(s) if any, and year(s) in business:
   __________________________________________________________________
   __________________________________________________________________

5. Include at least 3 references of contracts for similar work performed over the last three (3) years.
Include: owner, contact person and phone number and description of work performed.

5.1 Company Name: ____________________________
Address: ____________________________
Phone: ____________________________
Contact: ____________________________

5.2 Company Name: ____________________________
Address: ____________________________
Phone: ____________________________
Contact: ____________________________

5.3 Company Name: ____________________________
Address: ____________________________
Phone: ____________________________
Contact: ____________________________

I hereby certify that all of the information provided is true and answered to the best of my ability.

Signed: ________________________________ Name: ____________________________
(title or print)

Title: ____________________________ Date: ____________________________
I hereby state that all of the information I have provided is true, accurate and complete. I hereby state that I have the authority to submit this bid which will become a binding contract if accepted by the City of Kalamazoo. I hereby state that I have not communicated with nor otherwise colluded with any other bidder, nor have I made any agreement with nor offered/accepted anything of value to/from an official or employee of the City of Kalamazoo that would tend to destroy or hinder free competition.

The firm’s identification information provided will be used by the City for purchase orders, payment and other contractual purposes. If the contractual relationship is with, or the payment made to, another firm please provide a complete explanation on your letterhead and attach to your bid. Please provide for accounts payable purposes:

Tax Identification Number (Federal ID): ________________________________

Remittance Address: ________________________________________________

I hereby state that I have read, understand and agree to be bound by all terms and conditions of this bid document.

SIGNED: ___________________________ NAME: ___________________________

TITLE: ___________________________ DATE: ___________________________

FIRM NAME: ___________________________

ADDRESS: ___________________________

(Street address) (City) (State) (Zip)

PHONE: ___________________________ FAX: ___________________________

EMAIL ADDRESS: ___________________________

FOR CITY USE ONLY - DO NOT WRITE BELOW
SECTION III
INDEMNITY AND INSURANCE

Contractor, or any of their subcontractors, shall not commence work under this contract until they have obtained the insurance required under this paragraph, and shall keep such insurance in force during the entire life of this contract. All coverage shall be with insurance companies licensed and admitted to do business in the State of Michigan and acceptable to the City of Kalamazoo within ten (10) days of the Notice of Award. The requirements below should not be interpreted to limit the liability of the Contractor. All deductibles and SIR’s are the responsibility of the Contractor.

The Contractor shall procure and maintain the following insurance coverage:

**Workers’ Compensation Insurance** including Employers’ Liability Coverage, in accordance with all applicable statutes of the State of Michigan.

**Commercial General Liability Insurance** on an “Occurrence Basis” with limits of liability not less than $1,000,000 per occurrence and aggregate. Coverage shall include the following extensions: (A) Contractual Liability; (B) Products and Completed Operations; (C) Independent Contractors Coverage; (D) Broad Form General Liability Extensions or equivalent, if not already included and (E) XCU coverage if the nature of the contract requires XC or U work.

**Automobile Liability** including Michigan No-Fault Coverages, with limits of liability not less than $1,000,000 per occurrence, combined single limit for Bodily Injury, and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.

**Additional Insured**: Commercial General Liability and Automobile Liability, as described above, shall include an endorsement stating that the following shall be Additional Insureds: The City of Kalamazoo, all elected and appointed officials, all employees and volunteers, all boards, commissions, and/or authorities and board members, including employees and volunteers thereof. It is understood and agreed that by naming the City of Kalamazoo as additional insured, coverage afforded is considered to be primary and any other insurance the City of Kalamazoo may have in effect shall be considered secondary and/or excess.

To the fullest extent permitted by law the Contractor agrees to defend, pay on behalf of, indemnify, and hold harmless the City of Kalamazoo, its elected and appointed officials, employees, agents and volunteers, and others working on behalf of the City of Kalamazoo against any and all claims, demands, suits, or loss, including all costs connected therewith, and for any damages which may be asserted, claimed, or recovered against or from the City of Kalamazoo, by reason of personal injury, including bodily injury or death and/or property damage, including loss of use thereof, which arises out of, or is in any way connected or associated with this contract.

**Cancellation Notice**: All policies, as described above, shall include an endorsement stating that it is understood and agreed that thirty (30) days, or ten (10) days for non-payment of premium, Advance Written Notice of Cancellation, Non-Renewal, Reduction, and/or Material Change shall be sent to: City of Kalamazoo, Purchasing Division, 241 W. South Street, Kalamazoo, MI 49007.

**Proof of Insurance Coverage**: The Contractor shall provide the City of Kalamazoo at the time that the contracts are returned by him/her for execution, or within 10 days of Notice of Award, whichever is earlier, a Certificate of Insurance as well as the required endorsements. In lieu of required endorsements, if applicable, a copy of the policy sections where coverage is provided for additional insured and cancellation notice would be acceptable. Copies or certified copies of all policies mentioned above shall be furnished, if so requested.
INDEMNITY AND INSURANCE
Continued

If any of the above coverages expire during the term of this contract, the Contractor shall deliver renewal certificates and/or policies to City of Kalamazoo at least ten (10) days prior to the expiration date.

Scope of Coverage: The above requirements and conditions shall not be interpreted to limit the liability of the Contractor under this Contract, but shall be interpreted to provide the greatest benefit to the City and its officers and employees. The above listed coverages shall protect the Contractor, its employees, agents, representatives and subcontractors against claims arising out of the work performed. It shall be the Contractor’s responsibility to provide similar insurance for each subcontractor or to provide evidence that each subcontractor carries such insurance in like amount prior to the time such subcontractor proceeds to perform under the contract.
SECTION IV
SPECIFICATIONS

1. INTENT

It is the intent of the City of Kalamazoo, Public Services Department, to hire a licensed contractor to upgrade the generator, at Public Services Central Station #1, located at 215 West Stockbridge, Kalamazoo, MI.

2. SCOPE OF WORK

The scope of work for Central Station #1 Generator Upgrades is stated in the attached Tetra Tech drawings/plans.

3. PART OR DETAIL

Bidders shall not omit any part or detail which is normally considered to be standard even though such part or detail may not be mentioned in the specifications.

4. MANDATORY PRE-BID MEETING AND SITE INSPECTION

A MANDATORY PRE-BID MEETING is scheduled for Wednesday, January 15, 2020 at 10:00 AM at Kalamazoo Water Reclamation Plant, 1415 North Harrison Street, Kalamazoo, MI 49007 in Conference Room B. A mandatory site inspection will follow the mandatory pre-bid meeting. The bidder shall thoroughly examine and become familiar with the drawings, specifications and all other bid/contract documents. The Contractor, by the execution of this contract, shall in no way be relieved of any obligation under it due to his/her failure to receive or examine any form of legal instrument, or to visit the site and acquaint himself/herself with the conditions there existing.

Prospective bidders shall investigate and become familiar with conditions relating to the work to be performed according to the contract sections; shall verify all measurements, material and equipment required and shall be responsible for the correctness of same. No extra charge or compensation shall be allowed for any errors, omissions or miscalculations, or because of failure on the part of the Contractor to investigate or inspect the site.

No plea of ignorance of conditions that exist or that may hereafter exist, or any of the differences that may be encountered will be accepted as the basis for any failure or omission on the part of the Contractor to fulfill all of the requirements of this contract, nor will such failure or omission be accepted as the basis for any claims of any nature for extra compensation or extension of time. The submission of a bid shall be considered as conclusive evidence of compliance with this section.

5. PRODUCT SUBSTITUTIONS

Submit a written request, to be received not later than 15 days prior to the scheduled bid opening, for Substitution of any Product not named. If no substitutions are submitted, it will be reasonably concluded by the Project Manager that the specified product will be incorporated into the Work and the Bidder will be committed to supplying the specified product.

5.1 Describe in detail any variance to the Product specified. All proposed substitutions for specified items shall be substantially the same size (height, length, width, diameter, etc.), type, color, construction quality and shall meet the design intent to be considered for substitution for the Product specified.
PRODUCT SUBSTITUTIONS (cont.)

5.2 Document each request with complete data substantiating compliance of proposed Substitution with Product specified, including written certification that Product conforms to or exceeds all requirements of the Product specified.

5.3 Document all coordination information, including a list of changes or modifications needed to the Contract Documents or other parts of the Work and to construction performed by the Owner and Separate Contractors that will become necessary to accommodate the proposed substitution.

5.4 Provide name, address and telephone number of manufacturer’s authorized representative.

5.5 Submit three copies of all documents for each request for Substitution for consideration.

Approval of the Substitution request, if given, will be in the form of an addendum issued prior to the scheduled opening date and hour at local time.

6. CONTRACTOR'S RESPONSIBILITY

The Contractor shall assume full responsibility for all materials, workmanship and accessories used in the complete unit, whether of his/her manufacture or by others.

All work must be performed by licensed mechanical/plumbing contractor(s) and must meet all local, and State regulations and/or ordinances.

Work must be performed in a manner as to minimize service and water interruption.

7. INSPECTION OF WORK

The City may maintain inspectors on the job who shall, at all times, have access to work.

8. GUARANTEE

The Contractor shall guarantee, in writing, all of his/her work for a period of two (2) years following the date of final acceptance of the completed work and shall replace all broken parts and make all repairs that may be required by reason of defective design, workmanship or material in any part of the assembly of the equipment specified herein without cost to the City.

9. PRICE

The lump sum price shall represent the total bid and shall be held firm for the life of this contract. Any bid not conforming to this requirement may be rejected as non-responsive. The bid amounts shall include all costs associated with the completion of this work at both sites.

10. AWARD

The following award criteria shall be used and considered in evaluating and awarding the contract:

10.1 Bidders experience on similar type projects, i.e., size, type, cost and location.

10.2 Capacity of firm to start and complete a project of this size on target.

10.3 Price.
11. **PROGRESS SCHEDULE**

11.1 After receipt of Notice to Proceed, work shall start within 10 days unless otherwise agreed to by the Project Manager.

11.2 **Project shall have a final completion date 90 days after issued Notice to Proceed.**

11.3 Work of a similar nature may be added to this contract if agreed to by the City and the Contractor. In the event that work is added, the progress schedule for the work will remain unchanged. Any contract time added for additional work will be applied to that additional work only and cannot be added to items in the original contract. Any work done on the items in the original contract past the number of working days stated herein will be subject to liquidated damages regardless of any work that may be added at a later date.

11.4 The Contractor will be required to meet with the Public Services representatives to work out a detailed progress schedule. The schedule for this meeting will be within two weeks after contract award has been made.

11.5 The named sub-contractor(s) for all items shall also be present at the scheduled meeting and they will be required to sign the Progress Schedule to indicate their approval of the scheduled dates of work set forth in the Progress Schedule.

11.6 The Progress Schedule shall include, as a minimum, the starting and completion dates for major items as well as the final project completion date specified in the bid documents. The Progress Schedule shall be coordinated with all aspects of the work occurring at the site.

11.7 Failure on the part of the Contractor to carry out the provisions of the Progress Schedule as established may be considered sufficient cause to prevent bidding future projects until a satisfactory rate of progress is again established.

11.8 The starting date and the contract time to the completion date for this project may be adjusted by Public Services without imposing liquidated damages upon the receipt of satisfactory documented evidence that unforeseen delayed delivery of critical materials will prevent the orderly prosecution of the work.

12. **QUESTIONS**

Questions relative to the terms and conditions and bidding procedures may be addressed to Monica Johnson, Buyer, at (269) 337-8603. Questions relative to the specifications may be addressed to Tom Koporetz, Public Services Engineering Supervisor at (269) 337-8319. This does not, however, relieve the requirements of Page 1, Item 3.
SECTION V
GENERAL CONDITIONS

1. PROJECT MANAGER

1.1 The Project Manager or his/her duly authorized representative shall have the duties and responsibilities as provided in the contract.

1.2 The Project Manager shall have the authority to reject any work or materials that do not conform to the contract and to decide questions or make interpretations that may arise from the contract documents.

1.3 The Contractor shall immediately report to the Project Manager any questionable or obvious error or omission that may be apparent in the contract documents and shall not proceed with work until the Project Manager or his/her representative has resolved the error or omission.

1.4 The Project Manager shall have authority to stop work whenever such stoppage may be necessary to ensure the proper execution of the contract.

2. CONSTRUCTION SCHEDULE AND COORDINATION

2.1 TIME IS OF THE ESSENCE in respect to the work contemplated herein, and the Contractor agrees to do the work covered by the contract in conformity with the provisions set forth herein. Failure on the part of the Contractor to complete the work within the stated time he/she has set for and agreed to herein, shall constitute default by the Contractor. Regardless of any other provision of this contract, if Contractor fails to complete the work within the time he/she has set forth and agreed to herein, the Contractor may be liable to the owner(s) for any damages incurred by the owner(s).

2.2 The Contractor shall supply the City with an agreeable work schedule before commencing work on this contract. This schedule shall detail beginning and completion dates for each major component of the project.

2.3 The Contractor shall coordinate and cooperate with all other contractors who may be working on the site in order to allow for the orderly progress of work being done.

2.4 The Contractor is required to keep the Project Manager fully informed of any proposed work that will tend to interfere with the existing operations at the site.

2.5 The Contractor shall schedule all work to accommodate the City's schedule. In the event Contractor's schedule falls on weekends, nights or overtime work is required, no additional compensation will be allowed. All work shall be part of this contract without regard to when it is done.

3. PROTECTION OF WORK

The Contractor shall maintain adequate protection of all his/her work from damage and shall protect all public and private abutting property from injury or loss arising in connection with this contract. He/She shall provide and maintain all barricades, lights, fences, watchpersons or other facilities necessary to protect all persons from danger or hazardous conditions resulting from the work in the contract.
4. PROTECTION OF PROPERTY

4.1 The Contractor shall confine his/her equipment and operations to those areas of the work site necessary for the completion of the work, or as authorized by the Project Manager. The Contractor shall protect and preserve from damage any facilities, utilities or features including trees, shrubs and turf that are not required to be disturbed by the scope of work.

4.2 The Contractor shall be responsible for determining the location of and for protecting from damage any utilities or other improvements.

5. REMOVAL OF RUBBISH

The Contractor shall daily remove all rubbish and accumulated materials due to his/her construction.

6. RESPONSIBILITY OF CONTRACTOR

6.1 Contractor shall be responsible for his/her own work and every part thereof and all work of every description used in connection with this contract. He/She shall specifically and distinctly assume and does assume all risk of damage from any action or operations under the contract or in connection with his/her work. He/She undertakes and promises to protect and defend the owner(s) against all claims due to any such damage or injury.

6.2 The contractor shall be held responsible for the satisfactory and complete execution of the work in accordance with the true intent of the specifications. He/She shall provide, without extra cost, incidental items required as a part of his/her work even though not particularly specified or indicated.

6.3 The contractor shall personally superintend the work or shall have a competent person at the site at all times to act for him/her.

7. SITE SECURITY

The Contractor shall be responsible for job site security of all materials and tools provided by him/her and no claim for loss or damage will be considered by the City.

8. SITE ACCESS

The City will provide fair and reasonable access to the job site within the working schedules of both parties.

9. TEMPORARY UTILITIES

Temporary utilities will not be required.
10. MATERIALS INSPECTION AND RESPONSIBILITY

10.1 The Project Manager shall have the right to inspect any materials to be used in carrying out the terms of the contract.

10.2 The City does not assume any responsibility for the contracted quality and standard of all materials, equipment, components or completed work furnished under this contract.

10.3 Any materials, equipment, components or completed work which does not comply with contract specifications or applicable city and state codes may be rejected by the City, and shall be replaced by the Contractor at no cost to the City.

10.4 Any materials, equipment or components rejected shall be removed within a reasonable period of time from the premises of the City at the entire expense of the Contractor after written notice has been mailed by the City to the Contractor that such materials, equipment or components have been rejected.

10.5 Installation shall comply with the applicable rules of the industry or industries which shall be considered as included in these specifications and shall comply with all local and state codes.

10.6 Any reference in these documents to standard specifications shall mean the latest revisions of these specifications and shall become a part of this contract. Any part of the work not completely detailed in these documents, or referenced to a standard specification, shall be governed by the latest edition of the proper industry document.

11. SAFETY

The Contractor shall comply with all applicable OSHA and MIOSHA regulations.
SECTION VI
TERMS AND CONDITIONS

1. AWARD OF CONTRACT

   A. This contract will be awarded to that responsible bidder whose bid, conforming to this solicitation, will be most advantageous to the City, price and other factors considered. The City reserves the right to accept or reject any or all bids and waive informalities and minor irregularities in bids received. Other factors include, as an example but not limited to, delivery time, conformance to specifications, incidental costs such as demurrage and deposits, etc.

   Notification of award will be in writing by the Purchasing Agent. Upon notification, the Contractor shall submit to the Purchasing Division all required insurance certificates (if required) and such other documentation as may be requested or required hereunder. Upon their receipt and subsequent approval by the City, the Purchasing Agent will forward to the Contractor a written NOTICE TO PROCEED. Work shall NOT be started until such NOTICE TO PROCEED is received by the Contractor.

   B. Unilateral changes in bid prices by the bidder shall not be allowed. However, the City, at its sole option, reserves the right to negotiate with bidders in the event of, but not limited to:

   1) No bids received;
   2) A single bid being received; or
   3) Prices quoted are over budget and/or unreasonable.

2. COMPLETE CONTRACT

   This bid document together with its addenda, amendments, attachments and modifications, when executed, becomes the complete contract between the parties hereto, and no verbal or oral promises or representations made in conjunction with the negotiation of this contract shall be binding on either party.

3. SUBCONTRACTORS - NON ASSIGNMENT

   Bidders shall state in writing any and all sub-contractors to be associated with this bid, including the type of work to be performed. The Contractor shall cooperate with the City of Kalamazoo in meeting its commitments and goals with regard to maximum utilization of minority and women-owned business enterprises.

   The Contractor hereby agrees and understands that the contract resulting from this solicitation shall not be transferred, assigned or sublet without prior written consent of the City of Kalamazoo.

4. TAXES

   The City of Kalamazoo is exempt from all federal excise tax and state sales and use taxes. However, depending upon the situation, the vendor or contractor may not be exempt from said taxes and the City of Kalamazoo is making no representation as to any such exemption.
5. **INVOICING**

All original invoice(s) will be sent to the Finance Division, 241 W. South Street, Kalamazoo, MI 49007 or via email at apinvoice@kalamazoo.org. Faxed copy of invoice(s) will not be accepted, unless it is to replace an original invoice that was lost in the mail. The Finance Division processes payments after receipt of an original invoice from the Contractor and approval by the department.

The City of Kalamazoo policy is to pay invoice(s) within 30 days from the receipt of the original invoice, if the services or supplies are satisfactory and the proper paper work and procedures have been followed. In order to guarantee payment to the vendor on a timely basis, the vendor needs to receive a purchase order number before supplying the City of Kalamazoo with goods or services. All original, and copies of original invoice(s), will clearly state which purchase order they are being billed against.

The City of Kalamazoo is a government municipality and therefore is tax exempt from all sales tax. Our tax exempt number is 38-6004627.

The vendor is responsible for supplying the Finance Division with a copy of their W-9 if they are providing a service to the City of Kalamazoo.

6. **PAYMENTS**

Unless otherwise specified by the City in this contract, the Contractor will be paid in not more than thirty (30) days after receipt of a properly executed invoice, the sum stipulated herein for supplies delivered and accepted, or service rendered and accepted. Payments are processed by the Budget & Accounting Division after receipt of an original invoice from the Contractor and approval by the department.

7. **CHANGES AND/OR CONTRACT MODIFICATIONS**

The City reserves the right to increase or decrease quantities, service or requirements, or make any changes necessary at any time during the term of this contract, or any negotiated extension thereof. Price adjustments due to any of the foregoing changes shall be negotiated and mutually agreed upon by the Contractor and the City.

Changes of any nature after contract award which reflect an increase or decrease in requirements or costs shall not be permitted without prior approval by the Purchasing Agent. City Commission approval may also be required. SUCH CHANGES, IF PERFORMED IN ADVANCE OF PURCHASING AGENT APPROVAL, MAY BE SUBJECT TO DENIAL AND NON-PAYMENT.

8. **LAWS, ORDINANCES AND REGULATIONS**

The Contractor shall keep himself/herself fully informed of all local, state and federal laws, ordinances and regulations in any manner affecting those engaged or employed in the work and the equipment used. Contractor and/or employees shall, at all times, serve and comply with such laws, ordinances and regulations.

Any permits, licenses, certificates or fees required for the performance of the work shall be obtained and paid for by the Contractor.

This contract shall be governed by the laws of the State of Michigan.
9. **RIGHT TO AUDIT**

The City or its designee shall be entitled to audit all of the Contractor's records, and shall be allowed to interview any of the Contractor's employees, throughout the term of this contract and for a period of three years after final payment or longer if required by law to the extent necessary to adequately permit evaluation and verification of:

A. Contractor compliance with contract requirements,
B. Compliance with provisions for pricing change orders, invoices or claims submitted by the Contractor or any of his payees.

10. **HOLD HARMLESS**

If the acts or omissions of the Contractor/Vendor or its employees, agents or officers, cause injury to person or property, the Contractor/Vendor shall defend, indemnify and save harmless the City of Kalamazoo, Wightman, Engineering Plus, Inc., its agents, officials, and employees against all claims, judgments, losses, damages, demands, and payments of any kind to persons or property to the extent occasioned from any claim or demand arising therefrom.

11. **DEFAULT**

The City may at any time, by written notice to the Contractor, terminate this contract and the Contractor's right to proceed with the work, for just cause, which shall include, but is not limited to the following:

A. Failure to provide insurance and bonds (when called for), in the exact amounts and within the time specified or any extension thereof.
B. Failure to make delivery of the supplies, or to perform the services within the time specified herein, or any extension thereof.
C. The unauthorized substitution of articles for those bid and specified.
D. Failure to make progress if such failure endangers performance of the contract in accordance with its terms.
E. Failure to perform in compliance with any provision of the contract.
F. **Standard of Performance** - Contractor guarantees the performance of the commodities, goods or services rendered herein in accordance with the accepted standards of the industry or industries concerned herein, except that if this specification calls for higher standards, then such higher standards shall be provided.

Upon notice by the City of Contractor's failure to comply with such standards or to otherwise be in default of this contract in any manner following the Notice to Proceed, Contractor shall immediately remedy said defective performance in a manner acceptable to the City. Should Contractor fail to immediately correct said defective performance, said failure shall be considered a breach of this contract and grounds for termination of the same by the City.

In the event of any breach of this contract by Contractor, Contractor shall pay any cost to the City caused by said breach including but not limited to the replacement cost of such goods or services with another Contractor.
DEFAULT (cont.)

The City reserves the right to withhold any or all payments until any defects in performance have been satisfactorily corrected.

In the event the Contractor is in breach of this contract in any manner, and such breach has not been satisfactorily corrected, the City may bar the Contractor from being awarded any future City contracts.

G. All remedies available to the City herein are cumulative and the election of one remedy by the City shall not be a waiver of any other remedy available to the City either listed in this contract or available by operation of law.

12. TERMINATION OF CONTRACT

The City may, at any time and without cause, suspend the work of this contract for a period of not more than ninety days after providing notice in writing to the Contractor. The Contractor shall be allowed an adjustment in the contract price or an extension of the contract times, or both, directly attributable to the suspension if Contractor makes an approved claim.

The City may, without prejudice to any other right or remedy of the City, and with or without cause, terminate the contract by giving seven days written notice to the Contractor. In such case the Contractor shall be paid, without duplication, for the following items:

A. Completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such work;

B. Expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials or equipment as required by the contract documents in connection with uncompleted work, plus fair and reasonable sums for overhead and profit on such expenses;

C. All documented claims, costs, losses and damages incurred in settlement of terminated contracts with Subcontractors, Suppliers and others; and

D. Reasonable expenses directly attributable to termination.

The Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

13. INDEPENDENT CONTRACTOR

At all times, the Contractor, any of his/her employees, or his/her sub-contractors and their subsequent employees shall be considered independent contractors and not as City employees. The Contractor shall exercise all supervisory control and general control over all workers' duties, payment of wages to Contractor's employees and the right to hire, fire and discipline their employees and workers. As an independent contractor, payment under this contract shall not be subject to any withholding for tax, social security or other purposes, nor shall the Contractor or his/her employees be entitled to sick leave, pension benefit, vacation, medical benefits, life insurance or workers' unemployment compensation or the like.

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental disability, family status, sexual orientation or gender identity that is unrelated to the individual’s ability to perform the duties of the particular job or position. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment advertising, layoff or termination; rates of pay or other forms of compensations; and selection for training, including apprenticeship.

2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental disability family status, sexual orientation or gender identity that is unrelated to the individual’s ability to perform the duties of the particular job or position.

3. If requested by the City, the Contractor shall furnish information regarding practices, policies and programs and employment statistics for the Contractor and subcontractors. The Contractor and subcontractors shall permit access to all books, records and accounts regarding employment practices by agents and representatives of the City duly charged with investigative duties to assure compliance with this clause.

4. Breach of the covenants herein may be regarded as a material breach of the contract or purchasing agreement as provided in the Elliott-Larson Civil Rights Act and City Ordinance 1856.

5. The Contractor will include or incorporate by reference the provisions of the foregoing paragraphs 1 through 4 in every subcontract or purchase order unless exempted by the rules, regulations or orders of the Michigan Civil Rights Commission* and will provide in every subcontract or purchase order that said provision will be binding upon each subcontractor or seller.

6. The Contractor will not preclude a person with a criminal conviction from being considered for employment unless otherwise precluded by federal or state law. (for contracts over $25,000)

The Elliott-Larson Civil Rights Act, Sec. 202 of Act. No. 453 of 1976 reads in part as follows:

Sec. 202. (1) An employer shall not:

(a) Fail or refuse to hire, or recruit, or discharge or otherwise discriminate against an individual with respect to employment, compensation, or a term condition or privilege of employment because of religion, race, color, national origin, age, sex, height, weight or marital status.

(b) Limit, segregate or classify an employee or applicant for employment in a way which deprives or tends to deprive the employee or applicant of an employment opportunity or otherwise adversely affects the status of an employee or applicant because of religion, race, color, national origin, age, sex, height, weight or marital status.

(c) Segregate, classify or otherwise discriminate against a person on the basis of sex with respect to a term, condition or privilege of employment, including a benefit plan or system.

* Except for contracts entered into with parties employing less than three employees.
DRAWSINGS/PLANS

Central Station #1 Generator Upgrades

Bid Reference #: 28537-006.0

January 2020
KALAMAZOO, MICHIGAN
KALAMAZOO CENTRAL STATION NO.1
GENERATOR UPGRADE

PROJECT LOCATION:
KALAMAZOO CENTRAL STATION NO.1
GENERATOR UPGRADE

PROJECT No.:
200-19743-19003

OWNER REVIEW 7-25-19
OWNER REVIEW 8-16-19
OWNER REVIEW 9-12-19
FOR BIDDING AND CONSTRUCTION 10-1-19

VICINITY MAP:
### GENERAL CONSTRUCTION NOTES:

1. **Electrical Materials and Equipment Items Shown in Heavy Line Weights on the Drawings Are New This Contract.** Materials and equipment items shown in heavy line weights are new in this contract.

2. **Items Shown or Noted to Be Demolished on the Drawings Are Existing Items to Be Removed.** Items shown or noted to be demolished on the drawings are existing items to be removed from site by contractor. Contractor shall be responsible for system coordination and installation of new electrical materials and equipment.

3. **Control Wires Shall Be Tagged with the PLC I/O Address in the Field and at the Panel.** All control wires shall be tagged with PLC I/O addresses in the field and at the panel. This includes control wires entering control panels, electrical equipment, and panels.

4. **The Cable Manufacturer's Recommendations for Minimum Bend Radius for Fiber Optic Cables Shall Be Followed.** The cable manufacturer’s recommendations for minimum bend radius for fiber optic cables shall be followed. This includes fiber optic cables entering control panels, electrical equipment, and panels.

5. **Coordinating Controls, Cables, and Raceway Systems to Be Installed Will Be Structured Steel Channel, 4" X 4" X 1/2".** All raceway systems to be installed shall be structured steel channel, 4" X 4" X 1/2". This includes raceways, pull boxes, and junction boxes.

6. **Conduit/ Raceway Systems, Pull Boxes, and Junction Boxes to Be Installed Will Be 316 Stainless Steel Materials.** Conduit/raceway systems, pull boxes, and junction boxes to be installed shall be 316 stainless steel materials. This includes conduit/raceway systems, pull boxes, and junction boxes.

7. **Wire Numbers (1, 3, 5, Etc.) Shall Be Prefixes with Starter Tag Numbers.** Wire numbers (1, 3, 5, etc.) shall be prefixed with starter tag numbers. This includes wire numbers entering control panels, electrical equipment, and panels.

8. **Pumps Selected Shall Be Compatible with Isolation Transformers.** Pumps selected shall be compatible with isolation transformers.

9. **The Field Devices Shown on the P&ID's, Electrical Backgrounds, and Details Sheets Make-Up the Final System.** The field devices shown on the P&ID’s, electrical backgrounds, and details sheets make-up the final system.

10. **The Following Example Component Identification Shall Be Used As Appropriate.** The following example component identification shall be used as appropriate.

11. **Switching and Control Panels, Starters, and Transformer Locks for Pump Circuits (MCP) and Main Panel Breakers.** Switching and control panels, starters, and transformer locks for pump circuits (MCP) and main panel breakers.

12. **Starter and Control Panels, Transformers, and Other Equipment Shall Be Installed Per Manufacturer’s Specifications.** All starter and control panels, transformers, and other equipment shall be installed per manufacturer’s specifications.

13. **Engineered shop drawings for all starters shown to be wired.** All starter shop drawings shall be engineered.

14. **Equipment Shall Be Installed Per Manufacturer’s Specifications.** All equipment shall be installed per manufacturer’s specifications.

15. **The Following Example Component Identification Shall Be Used As Appropriate.** The following example component identification shall be used as appropriate.

16. **Pumps, Motors, and Starters Shall Be Tested Before Being Installed.** Pumps, motors, and starters shall be tested before being installed.

17. **Relays Shall Be Installed Separately From the Control Panels.** All relays shall be installed separately from the control panels.

18. **Field Wiring Shall Be Terminated to Terminals, Connectors, or Other Equipment Without First Verifying Wiring Connections With Literature.** Field wiring shall be terminated to terminals, connectors, or other equipment without first verifying wiring connections with literature.

19. **Equipment Shall Be Installed Per Manufacturer’s Specifications.** All equipment shall be installed per manufacturer’s specifications.

20. **The Following Example Component Identification Shall Be Used As Appropriate.** The following example component identification shall be used as appropriate.

### GENERAL NOTES:

1. **Core Holes As Required to Suit Installation of Conduit and Wiring As Shown.** Core holes shall be as required to suit installation of conduit and wiring as shown.

2. **Pumps Shall Be Installed on Pump Supports, and Threaded Rod, Etc.** All pump supports, and threaded rod, etc. shall be installed.

3. **Within Control Panels, Nameplates Shall Be Provided to Indicate Different Voltage Levels.** Within control panels, nameplates shall be provided to indicate different voltage levels.

4. **Multimode Fiber Optic Patch Cables, and Ethernet Patch Cables Supplied in the Project Shall Be Terminated To Match Surrounding Area.** Multimode fiber optic patch cables, and ethernet patch cables supplied in the project shall be terminated to match surrounding area.

5. **Remote Devices Shall Be Installed With Phenolic Tags (At Beginning to End) To Indicate the Number of Strands, Origination and Destination.** Remote devices shall be installed with phenolic tags (at beginning to end) to indicate the number of strands, origination, and destination.

6. **The Following Example Component Identification Shall Be Used As Appropriate.** The following example component identification shall be used as appropriate.

7. **For Terminals and Connectors, Stirrup Fittings Shall Be Used.** Stirrup fittings shall be used for terminals and connectors.

8. **Within Control Panels, Nameplates Shall Be Provided to Indicate Different Voltage Levels.** Within control panels, nameplates shall be provided to indicate different voltage levels.

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### TYPICAL 120V 3 POLE CONTACTOR

<table>
<thead>
<tr>
<th>Example Pump</th>
<th>MCC Legend Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>STARTER NAMEPLATE</td>
<td>RELAY INTERLOCK FROM COIL FOR MOTOR A</td>
</tr>
<tr>
<td>STARTER CONTACT</td>
<td>FIELD MOUNTED PILOT DEVICES</td>
</tr>
<tr>
<td>STARTER CONTACT</td>
<td>CONDUIT ROUTINGS SHOWN IN BACKGROUND PLANS ARE INTENDED ROUTINGS ONLY. EXACT CONDUIT ROUTINGS SHALL BE DETERMINED DURING INSTALLATION.</td>
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</tr>
</tbody>
</table>

### 120V 3 POLE CONTACTOR

1. **ELONGATED TRUNCATED DIAMOND WITH COMPASS POINTS.** Elongated truncated diamond with compass points.

2. **TRIANGULAR WITH RIGHT ANGLES.** Triangular with right angles.

3. **CIRCULAR WITH CENTER HOLE.** Circular with center hole.

4. **RECTANGULAR WITH CORNERS.** Rectangular with corners.

5. **OCTAGONAL WITH INTERIOR ANGLES.** Octagonal with interior angles.

6. **HEXAGONAL WITH INTERIOR ANGLES.** Hexagonal with interior angles.

7. **PENTAGONAL WITH INTERIOR ANGLES.** Pentagonal with interior angles.

8. **SQUARE WITH CORNERS.** Square with corners.

9. **PARALLELOGRAM WITH INTERIOR ANGLES.** Parallelogram with interior angles.

10. **TRAPEZOID WITHINTERIOR ANGLES.** Trapezoid with interior angles.

11. **RHOMBUS WITH INTERIOR ANGLES.** Rhombus with interior angles.

12. **CONVEX POLYGON WITH INTERIOR ANGLES.** Convex polygon with interior angles.

13. **CONCAVE POLYGON WITH INTERIOR ANGLES.** Concave polygon with interior angles.

14. **POLYGON WITH INTERIOR ANGLES.** Polygon with interior angles.

15. **HEXAGON WITH INTERIOR ANGLES.** Hexagon with interior angles.

16. **PENTAGON WITH INTERIOR ANGLES.** Pentagon with interior angles.

17. **QUADRILATERAL WITH INTERIOR ANGLES.** Quadrilateral with interior angles.

18. **TETRAHEDRON WITH INTERIOR ANGLES.** Tetrhedron with interior angles.

19. **HEXAHEDRON WITH INTERIOR ANGLES.** Hexahedron with interior angles.

20. **OCTAHEDRON WITH INTERIOR ANGLES.** Octahedron with interior angles.

21. **DODECAHEDRON WITH INTERIOR ANGLES.** Dodecahedron with interior angles.

22. **ICOSAHEDRON WITH INTERIOR ANGLES.** Icosahedron with interior angles.

23. **HEXAGON WITH INTERIOR ANGLES.** Hexagon with interior angles.

24. **PENTAGON WITH INTERIOR ANGLES.** Pentagon with interior angles.
REWORK, AND RECONNECT EXISTING GAS LINE TO NEW GENERATOR. SEE NOTE 1.

REMOVE EXISTING SHRUBS. RESEED EXISTING AREA TO MATCH. POUR NEW CONCRETE PAD FOR NEW GENERATOR. CORE HOLES THROUGH BLOCK/BRICK WALL AS REQUIRED FOR NEW CONDUITS. PATCH WALL WITH NON-SHRINK GROUT.

EXISTING ELECTRICAL SITE PLAN
PROPOSED WORK

NOTES:

PROPOSED PRIMARY TRANSFER TRANSFORMER LOCATION SHOWN AND DIMENSIONED.

PROPOSED PRIMARY TRANSFER TRANSFORMER LOCATION SHOWN AND DIMENSIONED.

PREFER TO DETAIL EX sheets FOR ALL TRONCH DETAILS.

PREFER TO DETAIL EX sheets FOR MINOR DETAILS.

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PROPOSED ONE-LINE DIAGRAM

EXISTING POWER DISTRIBUTION CENTER - PARTIAL ONE-LINE DIAGRAM - PROPOSED WORK

LOCATION: ELECTRICAL ROOM

- INSTALL NEW MOLDED CASE CIRCUIT BREAKERS WITHIN EXISTING POWER DISTRIBUTION CENTER. BREAKERS TO HAVE A 65 KA RMS SYM. BRACING. (TYP.)
- ISOLATION TRANSFORMER 480V, 25 KVA, 120/240V, SINGLE PHASE
- NEMA 4 ENCLOSURE. (SOUND PROOF ENCLOSURE)
- LP-PB-16, 18
- PLC PANEL
- 120/240V SINGLE PHASE UPS PANELBOARD (PB)
- 30 CIRCUITS
- 12 KVA
- ONLINE UPS
- Eaton Ferrups 12 KVA. UPS WITH EXTERNAL MAINTENANCE BYPASS SWITCH.
- MOUNT BYPASS SWITCH BESIDE UPS.
- PROVIDE SURGE PROTECTION WITH PANELBOARD.
- RECONNECT EXISTING CIRCUITS (1-12)
- UPS BYPASS SWITCH - PARTIAL WIRING DIAGRAM

UPS PANELBOARD - (PB)

- FILTER CONTROL PANEL #1
- OFFICE RECEPTACLES/TEMPERATURE CONTROL PANEL
- RECEPTACLE ON BOTTOM OF THIS PANEL
- FIBER OPTIC OUTLET
- MDS RECEPTACLE
- CL² DETECTOR
- SERVER ROOM LIGHTS
- NIGHT LIGHTS
- CARD ACCESS SYTEM OUTLET
- SPARE ELECTRICAL AREA LIGHTS
- SPARE
- SPARE
- SPARE
- SPARE
- SPD

- FILTER CONTROL PANEL #2
- MAIN CONTROL PANEL
- MCC-A CONTROL POWER
- MODEM RACK
- RADIO PANEL
- COMMUNICATION PANEL
- GENERATOR BATTERY CHARGER, CONTROL PANEL
- GENERATOR BLOCK HEATER
- CONTROL ROOM LIGHTS
- ELECTRICAL ROOM LIGHTS
- VEHICLE TRAFFIC CONTROLLERS OUTLET
- SPARE
- SPARE
- SPARE
- SPARE

PROPOSED ONE-LINE DIAGRAM
EXISTING ONE-LINE ELECTRICAL DIAGRAM

DEMOLITION

DEMOLISH EXISTING GENERATOR/ATS.
SEE PICS FOR ADDITIONAL INFORMATION.

RECONNECT EXISTING CIRCUITS TO NEW PANELBOARD. SEE SHEET E-004.
EXISTING ONE-LINE ELECTRICAL DIAGRAM
DEMOILITION

## PANELBOARD SCHEDULE

<table>
<thead>
<tr>
<th>Panel No.</th>
<th>Type</th>
<th>Description</th>
<th>Location</th>
<th>Voltage</th>
<th>Current</th>
<th>Breaker Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PB 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PANELBOARD SCHEDULE NOTE:
1. Panel No. 1 is a new panel, including all components. See drawing for locations.
2. Panel No. 2 is a replacement panel, including all components.

## LIGHTING FIXTURE SCHEDULE

- **EXISING DRAWING FROM PREVIOUS PROJECT.**
- **PROPOSED WORK SHOWN BOLD, CROSSHATCHED, AND/OR CIRCLED.**

## MARK DATE DESCRIPTION

- **BY**
- **9/26/2019 8:32:47 AM - TT.LOCAL\IER PROJECTS\ANN ARBOR\IER\19743\200-19743-19003\CAD\SHEETFILES\E-006_EX WIRDIA_DEMO_II.DWG  - SHANK, JASON**

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**KALAMAZOO CENTRAL STATION NO.1**

**GENERATOR UPGRADE**

**CITY OF KALAMAZOO, MICHIGAN**

**710 AVIS DRIVE**

**ANN ARBOR, MI 48108**

**PHONE: (734) 665-6000   FAX: (734) 213-3003**

**GCJ**

**JLS**

**E-006**

**EXISTING ONE-LINE DIAGRAM**

**DEMOLITION**
EXISTING LIGHTING PLAN - ELEVATION 769'-0"

DEMOLITION, PROPOSED WORK

SCALE: 1/8" = 1'-0" +/-

- Furnish ballast to allow lamp change for existing fixtures when repaired.
- Furnish with hardware for repair of existing fixtures.

LITHONIA LED STRIP LIGHT - 120V AC, NEMA 4 RATED
IN-LINE FUSING, ASYMETRIC LITHONIA - VAP LED 6000 LUMENS, CLEAR LENS WIDE DISTRIBUTION, 120V AC, WET LOCATION FITTING AS REQUIRED, WITH SURFACE MOUNT BRACKETS, COVER, AND GUARD AS REQUIRED, OR EQUIVALENT.

FURNISH WALL BRACKETS TO ALLOW FOR ADJUSTMENT OF FIXTURE. (TYP. ALL FIXTURES)

WHERE SHOWN, INSTALLATION AS PER MANUFACTURER'S INSTRUCTIONS. INSTALL 90 MINUTES DURATION, 9V ALKALINE BATTERY PACK, WITHIN ENCLOSURE. (TYP.)

EXISTING DRAWING FROM PREVIOUS PROJECT.

PROPOSED WORK SHOWN BOLD, CROSSHATCHED, AND/OR CIRCLED.

Pendant Mount from Ceiling 8' AFF. (Ceiling Height ≈ 30'). Field Verify Existing Ceiling Height.

Route conduit along wall. Mount with strut.

WALL MOUNT 10.5' AFF. MOUNT WITH STRUT RACK. DIRECT FIXTURES TOWARDS THE FLOOR. (TYP.)

Lithonia LED Strip Light - 120V AC, NEMA 4 RATED
In-Line Fusing, Asymmetric Lithonia - VAP LED 6000 LUMENS, Clear Lens Wide Distribution, 120V AC, Wet Location Fitting as Required, with Surface Mount Brackets, Cover, and Guard as Required, or Equivalent.

Furnish wall brackets to allow for adjustment of fixture. (Typ. all fixtures)

Where shown on drawings as "NL/BP" furnish fixture with integral battery pack (BP), 90 minute duration. (Typ.)

Furnish with hardware for pendant mounting when shown.

See partial plan at right for additional information.

Furnish wall brackets to allow for adjustment of fixture. (Typ. all fixtures)

Where shown on drawings as "NL/BP" furnish fixture with integral battery pack (BP), 90 minute duration. (Typ.)

Furnish with hardware for pendant mounting when shown.

See partial plan at right for additional information.

Orange colored duplex outlets for card access, and vehicle traffic controller communication equipment.

Existing radio, PLC communication panels.

Mount transformer, circuit breaker, and ATS on wall outside server room in hallway. Coordinate exact location with owner.

Field locate new UPS on 4" thick concrete pad. 32"W X 48"D X 4"H MIN.

Existing radio, PLC communication panels.
EXISTING POWER PLAN - ELEVATION 769'-0"

DEMOLITION, PROPOSED WORK

INSTALL NEW BREAKERS IN SPARE SPACE. INSTALL NEW DOOR FOR BREAKERS. MATCH EXISTING SHORT CIRCUIT WITHSTAND RATING. 65 KA RMS SYM. BRACING MINIMUM. (TYP.)

Checked By:
Drawn By:
Project No.:
Designed By:

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OPENING LOCATION, AND SIZE BY EQUIPMENT SUPPLIER. ADD 3#5 BOTT. AT OPENING.

PLAN
2' - 0" FIN. GR. #4 AT 18" EW, TOP.
2' - 4" 10" #4 AT 12" EW, EF.
7" (TYP.) #4 AT 12" EW, BOTT.
3#4 (TYP.)

SECTION
GENERATOR PAD
DISCONNECT SWITCH
ALTERNATE CONDUIT OUT.

EYD TYPE SEAL, AND DRAIN.
CONDUIT BODY TYPE FITTING.
FOR WIRE SIZE SMALLER THAN NO.4 ONLY.
PULL BOX. (SEE SPECS.) FOR WIRE SIZE NO.4, AND LARGER.
PROVIDE DRAIN.
CORE OUT OPENING IN EXISTING WALL, AND INSERT COMPRESSION SEALS.

CONDUIT CONDUIT
EYD TYPE SEAL, AND DRAIN.
CONDUIT BODY TYPE FITTING.
FOR WIRE SIZE SMALLER THAN NO.4 ONLY.
PULL BOX. (SEE SPECS.) FOR WIRE SIZE NO.4, AND LARGER.

SEALING BUSHING TYPE "CSBI".
WATERTIGHT SEALING HUB.
TYPE "WSK" OR "WDP" COMPRESSION NEOPRENE GROMMET SEAL FITTING WITH 316 STAINLESS STEEL SLEEVE.
SEALER. (EXT. ONLY.)
SEALING BUSHING TYPE. "CSMI".
BUILDING WALL.
BELOW GRADE CONDUIT ENTRANCE DETAIL
NOTE: ALL CONDUIT ENTRANCES SHALL HAVE SEAL, AND DRAIN.

ALL HARDWARE IS TO BE 316 STAINLESS STEEL INCLUDING NUTS, BOLTS, WASHERS, ANCHORS, STRUTS, ETC. THIS REQUIREMENT HAS PRECEDENCE OVER STANDARD DETAILS, AND PROJECT MANUAL/SPECIFICATIONS.

COORDINATE EXACT DIMENSIONS WITH GENERATOR MANUFACTURER.

2'-0" MIN. FINISH GRADE.

#4/0 BARE STRANDED COPPER CABLE. (TYP.) CONNECTION TO BE MADE WITH HEAVY DUTY EXOTHERMIC PROCESS OR ENGINEERS APPROVED COMPRESSION TYPE CONNECTORS.

3/4" X 20' - 0" MIN. COPPER CLAD STEEL RODS.
TO ADDITIONAL RINGS IF REQ'D. (TYP. OF 4 PLACES.)

EQUIPMENT GROUND BUS LUGS.

ALL WIRE #4/0 BARE STRANDED COPPER. (TYP.) ADDITIONAL CONCENTRIC RINGS SHALL BE ADDED AS REQ'D. TO MEET THE (5) OHM SPECIFIED RESISTANCE. EACH RING TO HAVE 4 GROUND RODS, AND SPACE 10 FEET FROM THE INNER RING.

NOTES:
GROUND MAT DETAIL
NO SCALE
HORIZONTAL RACKED SUSPENDED RUN
VERTICALLY RACKED SUSPENDED RUN

 nhắn tin ban kinh 1 inch