

**GENERAL SERVICES AGREEMENT BETWEEN
UTILITIES INSTRUMENTATION SERVICE
AND THE CITY OF ANN ARBOR
FOR ELECTRICAL PREVENTATIVE MAINTENANCE**

This agreement ("Agreement") is between the City of Ann Arbor, a Michigan municipal corporation, having its offices at 301 E. Huron St. Ann Arbor, Michigan 48104 ("City"), and Utilities Instrumentation Service ("Contractor"), a Michigan Corporation, with its address at 2290 Bishop Circle East, Dexter, MI 48103, agree as follows:

I. DEFINITIONS

Administering Service Area/Unit means Public Services Area Wastewater Treatment Services Unit.

Contract Administrator means Public Services Area Administrator, acting personally or through any assistants authorized by the Administrator/Manager of the Administering Service Area/Unit.

Deliverables means all Plans, Specifications, Reports, Recommendations, and other materials developed for and delivered to City by Contractor under this Agreement.

Project means WWTP Electrical Preventative Maintenance.

II. DURATION

Contractor shall commence performance on _____, 2020 ("Commencement Date"). This Agreement shall remain in effect until satisfactory completion of the Services specified below unless terminated as provided for in Article XII. The terms and conditions of this Agreement shall apply to the earlier of the Effective Date or Commencement Date.

III. SERVICES

- A. The Contractor agrees to provide Electrical Preventative Maintenance ("Services") and to furnish all materials, equipment and labor necessary and to abide by all the duties and responsibilities applicable to it for the Project in accordance with the requirements and provisions of the following documents ("Contract Documents"), including all written modifications incorporated into any of the documents, which are incorporated as part of this Agreement:

This Agreement and Exhibits
Invitation to Bid No. 4605 and all Addendum thereto (if any)
Bid Proposal of Contractor, dated November 22, 2019, and restated and attached as Exhibit A

The Contract Documents are complementary and what is called for by any one shall be binding. The intention of the documents is to include all labor and materials, equipment, and transportation necessary for the proper execution of the Project. Materials or work described in words that so applied have a well-known technical or trade meaning have the meaning of those recognized standards.

In case of a conflict among the Contract Documents, the requirement(s) of the document listed first above shall prevail over any conflicting requirement(s) of a document listed later.

The City retains the right to make changes to the quantities of service within the general scope of the Agreement at any time by a written order. If the changes add to or deduct from the extent of the services, the compensation shall be adjusted accordingly. All such changes shall be executed under the conditions of the original Agreement.

- B. Quality of Services under this Agreement shall be of the level of quality performed by persons regularly rendering this type of service. Determination of acceptable quality shall be made solely by the Contract Administrator.
- C. The Contractor shall perform its Services for the Project in compliance with all statutory, regulatory and contractual requirements now or hereafter in effect as may be applicable to the rights and obligations set forth in the Agreement. The Contractor shall also comply with and be subject to the City of Ann Arbor policies applicable to independent contractors
- D. The Contractor may rely upon the accuracy of reports and surveys provided to it by the City (if any) except when defects should have been apparent to a reasonably competent professional or when it has actual notice of any defects in the reports and surveys.

IV. INDEPENDENT CONTRACTOR

The Parties agree that at all times and for all purposes under the terms of this Agreement each Party's relationship to any other Party shall be that of an independent contractor. Each Party will be solely responsible for the acts of its own employees, agents, and servants. No liability, right, or benefit arising out of any employer/employee relationship, either express or implied, shall arise or accrue to any Party as a result of this Agreement.

Contractor does not have any authority to execute any contract or agreement on behalf of the City, and is not granted any authority to assume or create any obligation or liability on the City's behalf, or to bind the City in any way.

V. COMPENSATION OF CONTRACTOR

- A. The Contractor shall be paid on the basis of the bid price restated in Exhibit B. The total fee to be paid the Contractor for the Services shall not exceed one hundred forty three thousand seven hundred forty seven dollars (\$143,747.00). Payment shall be made monthly, unless another payment term is specified in Exhibit B, following receipt of invoices submitted by the Contractor, and approved by the Contract Administrator.
- B. The Contractor will be compensated for Services performed in addition to the Services described in Article III, only when the scope of and compensation for those additional Services have received prior written approval of the Contract Administrator.
- C. The Contractor shall keep complete records of work performed (e.g. tasks performed/hours allocated) so that the City may verify invoices submitted by the Contractor. Such records shall be made available to the City upon request and submitted in summary form with each invoice.

VI. INSURANCE/INDEMNIFICATION

- A. The Contractor shall procure and maintain from the Effective Date or Commencement Date of this Agreement (whichever is earlier) through the conclusion of this Agreement, such insurance policies, including those set forth in Exhibit C, as will protect itself and the City from all claims for bodily injuries, death, or property damage which may arise under this Agreement; whether the act(s) or omission(s) giving rise to the claim were made by the Contractor, any subcontractor, or anyone employed by them directly or indirectly. Prior to commencement of work under this Agreement, Contractor shall provide to the City documentation satisfactory to the City, through City-approved means (currently myCOI), demonstrating it has obtained the policies and endorsements required by Exhibit C. Contractor shall add registration@mycoitracking.com to its safe sender's list so that it will receive necessary communication from myCOI. When requested, Contractor shall provide the same documentation for its subcontractor(s) (if any).
- B. Any insurance provider of Contractor shall be authorized to do business in the State of Michigan and shall carry and maintain a minimum rating assigned by A.M. Best & Company's Key Rating Guide of "A-" Overall and a minimum Financial Size Category of "V". Insurance policies and certificates issued by non-admitted insurance companies are not acceptable unless approved in writing by the City.
- C. To the fullest extent permitted by law, Contractor shall indemnify, defend and hold the City, its officers, employees and agents harmless from all suits, claims, judgments and expenses, including attorney's fees, resulting or alleged to result, from any acts or omissions by Contractor or its employees and agents occurring in the performance of or breach in this Agreement, except to the extent that any

suit, claim, judgment or expense are finally judicially determined to have resulted from the City's negligence or willful misconduct or its failure to comply with any of its material obligations set forth in this Agreement.

VII. WAGE REQUIREMENTS

Under this Agreement, the Contractor shall conform to Chapter 14 of Title I of the Code of the City of Ann Arbor as amended; which in part states "...that all craftsmen, mechanics and laborers employed directly on the site in connection with said improvements, including said employees of subcontractors, shall receive the prevailing wage for the corresponding classes of craftsmen, mechanics and laborers, as determined by statistics for the Ann Arbor area compiled by the United States Department of Labor. At the request of the City, any contractor or subcontractor shall provide satisfactory proof of compliance with the contract provisions required by the Section."

Where the Agreement and the Ann Arbor City Code of Ordinance are silent as to definitions of terms required in determining compliance with regard to prevailing wages, the definitions provided in the Davis-Bacon Act as amended (40 U.S.C. 278-a to 276-a-7) for the terms shall be used.

If the Contractor is a "covered employer" as defined in Chapter 23 of the Ann Arbor City Code, the Contractor agrees to comply with the living wage provisions of Chapter 23 of the Ann Arbor City Code. The Contractor agrees to pay those employees providing Services to the City under this Agreement a "living wage," as defined in Section 1:815 of the Ann Arbor City Code, as adjusted in accordance with Section 1:815(3); to post a notice approved by the City of the applicability of Chapter 23 in every location in which regular or contract employees providing services under this Agreement are working; to maintain records of compliance; if requested by the City, to provide documentation to verify compliance; to take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee or person contracted for employment in order to pay the living wage required by Section 1:815; and otherwise to comply with the requirements of Chapter 23.

Contractor agrees that all subcontracts entered into by the Contractor shall contain similar wage provision covering subcontractor's employees who perform work on this Agreement.

VIII. NON-DISCRIMINATION

The Contractor agrees to comply, and to require its subcontractor(s) to comply, with the nondiscrimination provisions of MCL 37.2209. The Contractor further agrees to comply with the provisions of Section 9:158 of Chapter 112 of Title IX of the Ann Arbor City Code, and to assure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity.

IX. REPRESENTATIONS AND WARRANTIES BY THE CONTRACTOR

- A. The Contractor warrants that the quality of its Services under this Agreement shall conform to the level of quality performed by persons regularly rendering this type of service.

- B. The Contractor warrants that it has all the skills, experience and licenses (if applicable) necessary to perform the Services it is to provide pursuant to this Agreement.
- C. The Contractor warrants that it has available, or will engage, at its own expense, sufficient trained employees to provide the Services it is to provide pursuant to this Agreement.
- D. The Contractor certifies that it has no personal or financial interest in the Project other than the fee it is to receive under this Agreement. The Contractor further certifies that it shall not acquire any such interest, direct or indirect, which would conflict in any manner with the performance of the Services it is to provide pursuant to this Agreement. Further Contractor agrees and certifies that it does not and will not employ or engage any person with a personal or financial interest in this Agreement.
- E. The Contractor certifies that it is not, and shall not become overdue or in default to the City for any contract, debt, or any other obligation to the City including real and personal property taxes. Further Contractor agrees that the City shall have the right to set off any such debt against compensation awarded for Services under this Agreement.
- F. The Contractor warrants that its bid was made in good faith, it arrived at the costs of its bid independently, without consultation, communication or agreement, for the purpose of restricting completion as to any matter relating to such fees with any competitor for these Services; and no attempt has been made or shall be made by the Contractor to induce any other person or firm to submit or not to submit a bid for the purpose of restricting competition.

X. OBLIGATIONS OF THE CITY

- A. The City agrees to give the Contractor access to the Project area and other City-owned properties as required to perform the necessary Services under this Agreement.
- B. The City shall notify the Contractor of any defects in the Services of which the Contract Administrator has actual notice.

XI. ASSIGNMENT

- A. The Contractor shall not subcontract or assign any portion of any right or obligation under this Agreement without prior written consent from the City. Notwithstanding any consent by the City to any assignment, Contractor shall at all times remain bound to all warranties, certifications, indemnifications, promises and performances, however described, as are required of it under the Agreement unless specifically released from the requirement, in writing, by the City.
- B. The Contractor shall retain the right to pledge payment(s) due and payable under this Agreement to third parties.

XII. TERMINATION OF AGREEMENT

- A. If either party is in breach of this Agreement for a period of fifteen (15) days following receipt of notice from the non-breaching party with respect to a breach, the non-breaching party may pursue any remedies available to it against the breaching party under applicable law, including but not limited to, the right to terminate this Agreement without further notice. The waiver of any breach by any party to this Agreement shall not waive any subsequent breach by any party.
- B. The City may terminate this Agreement, on at least thirty (30) days advance notice, for any reason, including convenience, without incurring any penalty, expense or liability to Contractor, except the obligation to pay for Services actually performed under the Agreement before the termination date.
- C. Contractor acknowledges that, if this Agreement extends for several fiscal years, continuation of this Agreement is subject to appropriation of funds for this Project. If funds to enable the City to effect continued payment under this Agreement are not appropriated or otherwise made available, the City shall have the right to terminate this Agreement without penalty at the end of the last period for which funds have been appropriated or otherwise made available by giving written notice of termination to Contractor. The Contract Administrator shall give Contractor written notice of such non-appropriation within thirty (30) days after it receives notice of such non-appropriation.
- D. The provisions of Articles VI and IX shall survive the expiration or earlier termination of this Agreement for any reason. The expiration or termination of this Agreement, for any reason, shall not release either party from any obligation or liability to the other party, including any payment obligation that has already accrued and Contractor's obligation to deliver all Deliverables due as of the date of termination of the Agreement.

XIII. REMEDIES

- A. This Agreement does not, and is not intended to, impair, divest, delegate or contravene any constitutional, statutory and/or other legal right, privilege, power, obligation, duty or immunity of the Parties.
- B. All rights and remedies provided in this Agreement are cumulative and not exclusive, and the exercise by either party of any right or remedy does not preclude the exercise of any other rights or remedies that may now or subsequently be available at law, in equity, by statute, in any agreement between the parties or otherwise.
- C. Absent a written waiver, no act, failure, or delay by a Party to pursue or enforce any rights or remedies under this Agreement shall constitute a waiver of those rights with regard to any existing or subsequent breach of this Agreement. No waiver of any term, condition, or provision of this Agreement, whether by conduct or otherwise, in one or more instances, shall be deemed or construed as a

continuing waiver of any term, condition, or provision of this Agreement. No waiver by either Party shall subsequently effect its right to require strict performance of this Agreement.

XIV. NOTICE

All notices and submissions required under this Agreement shall be delivered to the respective party in the manner described herein to the address stated below or such other address as either party may designate by prior written notice to the other. Notices given under this Agreement shall be in writing and shall be personally delivered, sent by next day express delivery service, certified mail, or first class U.S. mail postage prepaid, and addressed to the person listed below. Notice will be deemed given on the date when one of the following first occur: (1) the date of actual receipt; (2) the next business day when notice is sent next day express delivery service or personal delivery; or (3) three days after mailing first class or certified U.S. mail.

If Notice is sent to the CONTRACTOR, it shall be addressed and sent to:

David Hite
2290 Bishop Circle East
Dexter, MI 48130

If Notice is sent to the CITY, it shall be addressed and sent to:

City of Ann Arbor
Craig Hupy
301 E. Huron St.
Ann Arbor, Michigan 48104

With a copy to: The City of Ann Arbor
ATTN: Office of the City Attorney
301 East Huron Street, 3rd Floor
Ann Arbor, Michigan 48104

XV. CHOICE OF LAW AND FORUM

This Agreement will be governed and controlled in all respects by the laws of the State of Michigan, including interpretation, enforceability, validity and construction, excepting the principles of conflicts of law. The parties submit to the jurisdiction and venue of the Circuit Court for Washtenaw County, State of Michigan, or, if original jurisdiction can be established, the United States District Court for the Eastern District of Michigan, Southern Division, with respect to any action arising, directly or indirectly, out of this Agreement or the performance or breach of this Agreement. The parties stipulate that the venues referenced in this Agreement are convenient and waive any claim of non-convenience.

XVI. OWNERSHIP OF DOCUMENTS

Upon completion or termination of this Agreement, all documents (i.e., Deliverables) prepared by or obtained by the Contractor as provided under the terms of this Agreement shall be delivered to and become the property of the City. Original basic survey notes, sketches, charts, drawings, partially completed drawings, computations, quantities and other data shall remain in the possession of the Contractor as instruments of service unless specifically incorporated in a deliverable, but shall be made available, upon request, to the City without restriction or limitation on their use.

XVII. SEVERABILITY OF PROVISIONS

Whenever possible, each provision of this Agreement will be interpreted in a manner as to be effective and valid under applicable law. However, if any provision of this Agreement or the application of any provision to any party or circumstance will be prohibited by or invalid under applicable law, that provision will be ineffective to the extent of the prohibition or invalidity without invalidating the remainder of the provisions of this Agreement or the application of the provision to other parties and circumstances.

XVIII. EXTENT OF AGREEMENT

This Agreement, together Exhibits A, B, and C, and the other Contract Documents, constitutes the entire understanding between the City and the Contractor with respect to the subject matter of the Agreement and it supersedes, unless otherwise incorporated by reference herein, all prior representations, negotiations, agreements or understandings whether written or oral. Neither party has relied on any prior representations, of any kind or nature, in entering into this Agreement. No terms or conditions of either party's invoice, purchase order or other administrative document shall modify the terms and conditions of this Agreement, regardless of the other party's failure to object to such form. This Agreement shall be binding on and shall inure to the benefit of the parties to this Agreement and their permitted successors and permitted assigns and nothing in this Agreement, express or implied, is intended to or shall confer on any other person or entity any legal or equitable right, benefit, or remedy of any nature whatsoever under or by reason of this Agreement. This Agreement may only be altered, amended or modified by written amendment signed by the Contractor and the City. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement.

XIX. ELECTRONIC TRANSACTION

The parties agree that signatures on this Agreement may be delivered electronically in lieu of an original signature and agree to treat electronic signatures as original signatures that bind them to this Agreement. This Agreement may be executed and delivered by facsimile and upon such delivery, the facsimile signature will be deemed to have the same effect as if the original signature had been delivered to the other party.

XX. EFFECTIVE DATE

This Agreement will become effective when all parties have signed it. The Effective Date of this Agreement will be the date this Agreement is signed by the last party to sign it.

[REMAINDER OF PAGE LEFT BLANK; SIGNATURE PAGE FOLLOWS]

FOR CONTRACTOR

By _____
Type Name

Its _____

This ___ day of _____, 20___

FOR THE CITY OF ANN ARBOR

By _____
Christopher Taylor, Mayor

By _____
Jacqueline Beaudry, City Clerk

This ___ day of _____, 20___

Approved as to substance

By _____
Howard S. Lazarus, City Administrator

Craig Hupy, P.E.
Public Services Area Administrator

Approved as to form and content

Stephen K. Postema, City Attorney

**EXHIBIT A
SCOPE OF SERVICES**

Electrical Preventative Maintenance WWTP

Any work requiring the de-energizing of system components shall be coordinated with and approved by WWTP staff with a minimum of two days' notice required. This Scope of Services includes the following equipment:

	<u>Quantity</u>	<u>Item</u>
13.2 Switchgear	1	5/15kV Switchgear Bus
	22	5/15kV Vacuum Breaker
	2	SEL 351
	20	SEL 551
	4	SEL 351A
	2	SEL 587Z
	1	Battery System
Unit Sub 1		
	2	5/15kV Switchgear Bus
	2	5/15kV Switchgear Bus
	2	Unit Substation Transformer (Dry Type)
	2	600V Switchgear Bus
	9	600V Air Power Breaker
Unit Sub 2		
	2	5/15kV Switchgear Bus
	2	5/15kV Air Switch
	2	Unit Substation Transformer (Dry Type)
	2	600V Switchgear Bus
	6	600V Air Power Breaker
Unit Sub 3		
	2	5/15kV Switchgear Bus
	2	5/15kV Air Switch
	2	Unit Substation Transformer (Dry Type)
	2	600V Switchgear Bus
	10	600V Air Power Breaker
Unit Sub 4		
	2	5/15kV Switchgear Bus
	2	5/15kV Air Switch
	2	Relay 50/51 Overcurrent
	2	Relay Voltage
	2	Unit Substation Transformer (Dry Type)
	2	600V Switchgear Bus
	11	600V Air Power Breaker
	2	Dry type transformers

	<u>Quantity</u>	<u>Item</u>
Unit Sub 5		
	2	5/15kV Switchgear Bus
	2	5/15kV Air Switch
	2	Unit Substation Transformer (Dry Type)
	2	600V Switchgear Bus
	22	600V Air Power Breaker
Unit Sub 6		
	2	5/15kV Switchgear Bus
	2	5/15kV Air Switch
	2	Unit Substation Transformer (Dry Type)
	2	600V Switchgear Bus
	9	600V Air Power Breaker
Unit Sub 7		
	2	5/15kV Switchgear Bus
	2	5/15kV Air Switch
	2	Unit Substation Transformer (Dry Type)
	2	600V Switchgear Bus
	11	600V Air Power Breaker
	2	Dry type transformers
Unit Sub 8		
	4	5/15kV Switchgear Bus
	11	5/15kV Vacuum Breaker
	2	5/15kV Air Switch
	2	Unit Substation Transformer (Dry Type)
	3	5/15kV Motor Starter
	2	SEL 587Z
	9	Sepam 524
Generator Switchgear		
	1	5/15kV Switchgear Bus
	3	5/15kV Vacuum Breaker
	1	SEL 551
	1	SEL587Z
	2	SEL 300G

	<u>Quantity</u>	<u>Item</u>
MCC Maintenance		
	4	Sub 1 Motor Control Centers
	74	MCC Buckets
	2	Sub 2 Motor Control Centers
	82	MCC Buckets
	4	Sub 3 Motor Control Centers
	85	MCC Buckets
	4	Sub 4 Motor Control Centers
	53	MCC Buckets
	6	Sub 5 Motor Control Centers
	165	MCC Buckets
	4	Sub 6 Motor Control Centers
	124	MCC Buckets
	2	Sub 7 Motor Control Centers
	36	MCC Buckets

This Scope of Services includes the following procedures for the referenced items:

Electrical Preventative Maintenance Schedule and Procedures

13.2kV Switchgear

Task	Procedure	Recommended Time Interval (Months)	Reference
1	Main Bus Compartment: <ul style="list-style-type: none"> • Inspection • Cleaning • General Maintenance 	12	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8- Inspection and Maintenance ¹
2	Cable Compartment: <ul style="list-style-type: none"> • Inspection and Cleaning 	12	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8- Inspection and Maintenance ¹
3	Circuit Breaker Compartment: <ul style="list-style-type: none"> • Inspection <ul style="list-style-type: none"> - Moving Mechanisms - Shutter Hardware - Primary Contacts • Cleaning • General Maintenance 	12	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8- Inspection and Maintenance ¹
4	Circuit Breaker Compartment: <ul style="list-style-type: none"> • Lubrication of Components 	Every 50 cycles of racking mechanism	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8- Inspection and Maintenance ¹
5	Type VR Circuit Breaker: <ul style="list-style-type: none"> • Inspection • Cleaning • Measuring E-Gap • Monitoring Contact Erosion • Hi-Pot (Dielectric) Testing • Resistance Measurement • Lubrication • General Maintenance 	<ul style="list-style-type: none"> • 12 • Every 1000 Operations • After severe fault operations 	Type VR Vacuum Circuit Breaker Instruction Bulletin 6055-31, Section 7
6	VT, CPT and Fuse Drawout Units: <ul style="list-style-type: none"> • Inspection • Cleaning • Lubrication • Fuse Replacement 	12	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8- Inspection and Maintenance ¹

Electrical Preventative Maintenance Schedule and Procedures

13.2kV Switchgear

Task	Procedure	Recommended Time Interval (Months)	Reference
7	Unit Compartments: <ul style="list-style-type: none"> • Inspection of Dielectric Stress • Corona • Tracking • Thermal Damage 	12	2016 NFPA 70B Chapter 15.2 for Switchgear Assemblies
8	Vacuum Circuit Breakers: <ul style="list-style-type: none"> • Inspection • Testing 	12	2016 NFPA 70B Chapter 15.5 for Vacuum Circuit Breaker
9	Grounding: <ul style="list-style-type: none"> • Inspection • General Maintenance 	12	2016 NFPA 70B Chapter 15.9.9 for Grounding
10	Switchgear Assembly: <ul style="list-style-type: none"> • Visual and Mechanical Inspection • Electrical Tests 	<ul style="list-style-type: none"> • Visual and Mech: 12 • Visual, Mech, and Elect: 24 	ANSI/NETA MTS 2015, Section 7.1

Notes:

1. Reference material found in Submittal 16272-0025-B.

Electrical Preventative Maintenance Schedule and Procedures

Direct-Current Systems/Batteries (Switchgear and Generators)

Task	Procedure	Recommended Time Interval (Months)	Reference
1	Battery: <ul style="list-style-type: none"> • Visual and Mechanical Inspection <ul style="list-style-type: none"> - Verify equipment - Cleaning - Neutralize acid • Electrical Tests • Test Comparisons 	<ul style="list-style-type: none"> • Visual: 1 • Visual and Mech: 12 • Visual, Mech, and Elect: 24 	ANSI/NETA MTS 2015, Section 7.18.1.3
2	Battery Charger: <ul style="list-style-type: none"> • Visual and Mechanical Inspection • Electrical Tests • Test Comparisons 	<ul style="list-style-type: none"> • Visual: 1 • Visual and Mech: 12 • Visual, Mech, and Elect: 24 	ANSI/NETA MTS 2015, Section 7.18.2

Notes:

Electrical Preventative Maintenance Schedule and Procedures

4160V Unit Substation (Primary Switch, Transformer, and Switchgear)

Task	Procedure	Recommended Time Interval (Months)	Reference
1	Air-Disconnecting Switch Switchgear: <ul style="list-style-type: none"> • Inspection <ul style="list-style-type: none"> - Bus And Connections - Connections - Instruments, Relays, and other devices - Control Wiring - Mechanical Parts - Ventilation 	<ul style="list-style-type: none"> • After circuit experiences a fault current or stressful condition • 12 	Metal-Enclosed Switchgear 2.4kV to 38kV Class 6040 Instruction Bulletin, Section 8-Inspection and Maintenance ¹
2	Switchgear Surge Arresters: <ul style="list-style-type: none"> • Inspection • General Maintenance 	12	2016 NFPA 70B Chapter 15.9.2 for Surge Arrestors
3	Transformer: <ul style="list-style-type: none"> • Inspection • Replacement of corroded parts • Cleaning 	24	Power-Dry II Dry Type Transformers Class 7420 Instruction Bulletin, Section 8-Inspection and Maintenance ¹
4	Transformer: <ul style="list-style-type: none"> • Inspection • Torque bolts • Start Up Procedures 	After a major fault	Power-Dry II Dry Type Transformers Class 7420 Instruction Bulletin, Section 8-Inspection and Maintenance ¹
5	Transformer: <ul style="list-style-type: none"> • Inspection/Readings <ul style="list-style-type: none"> - Current and Voltage - Temperature - Ventilation - Noise • Cleaning • Insulation Test 	<ul style="list-style-type: none"> • Inspections (while energized): 1 • Major Maintenance (de-energized): 36-72 	<ul style="list-style-type: none"> •2016 NFPA 70B Chapter 21.3 for Dry-Type Transformers •Table K.4(b)
6	Transformer: <ul style="list-style-type: none"> • Visual and Mechanical Inspection • Electrical Tests • Test Comparisons 	<ul style="list-style-type: none"> • Visual: 1 • Visual and Mech: 12 • Visual, Mech, and Elect: 24 	ANSI/NETA MTS 2015, Section 7.2.1.2
7	Switchgear Main Bus Compartment: <ul style="list-style-type: none"> • Inspection • Cleaning • General Maintenance 	12	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8-Inspection and Maintenance ¹

Electrical Preventative Maintenance Schedule and Procedures

4160V Unit Substation (Primary Switch, Transformer, and Switchgear)

Task	Procedure	Recommended Time Interval (Months)	Reference
8	Switchgear Cable Compartment: <ul style="list-style-type: none"> • Inspection and Cleaning 	12	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8-Inspection and Maintenance ¹
9	Switchgear Circuit Breaker Compartment: <ul style="list-style-type: none"> • Inspection <ul style="list-style-type: none"> - Moving Mechanisms - Shutter Hardware - Primary Contacts • Cleaning • General Maintenance 	12	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8-Inspection and Maintenance ¹
10	Switchgear Circuit Breaker Compartment: <ul style="list-style-type: none"> • Lubrication of primary and ground contacts, and all moving joints 	Every 50 cycles of racking mechanism	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8-Inspection and Maintenance ¹
11	Switchgear Type VR Circuit Breaker: <ul style="list-style-type: none"> • Inspection • Cleaning • Measuring E-Gap • Monitoring Contact Erosion • Hi-Pot (Dielectric) Testing • Resistance Measurement • Lubrication • General Maintenance 	<ul style="list-style-type: none"> • 12 • Every 1000 Operations • After severe fault operations 	Type VR Vacuum Circuit Breaker Instruction Bulletin 6055-31, Section 7
12	Switchgear Vacuum Circuit Breakers: <ul style="list-style-type: none"> • Inspection • Testing 	12	2016 NFPA 70B Chapter 15.5 for Vacuum Circuit Breaker
13	Switchgear VT, CPT and Fuse Drawout Units: <ul style="list-style-type: none"> • Inspection • Cleaning • Lubrication • Fuse Replacement 	12	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8-Inspection and Maintenance ¹

Electrical Preventative Maintenance Schedule and Procedures

4160V Unit Substation (Primary Switch, Transformer, and Switchgear)

Task	Procedure	Recommended Time Interval (Months)	Reference
14	Switchgear Unit Compartments: <ul style="list-style-type: none"> • Inspection of Dielectric Stress • Corona • Tracking • Thermal Damage 	12	2016 NFPA 70B Chapter 15.2 for Switchgear Assemblies
15	Switchgear Grounding: <ul style="list-style-type: none"> • Inspection • General Maintenance 	12	2016 NFPA 70B Chapter 15.9.9 for Grounding
16	Switchgear Assembly: <ul style="list-style-type: none"> • Visual and Mechanical Inspection • Electrical Tests 	<ul style="list-style-type: none"> • Visual and Mech: 12 • Visual, Mech, and Elect: 24 	ANSI/NETA MTS 2015, Section 7.1

Notes:

1. Reference material found in Submittal 16272-0030-A.

Electrical Preventative Maintenance Schedule and Procedures

480V Unit Substation (Primary Switch, Transformer, and Switchgear)

Task	Procedure	Recommended Time Interval (Months)	Reference
1	Switchgear Main Bus Compartment: <ul style="list-style-type: none"> • Inspection • Cleaning • General Maintenance 	12	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8- Inspection and Maintenance ¹
2	Switchgear Cable Compartment: <ul style="list-style-type: none"> • Inspection and Cleaning 	12	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8- Inspection and Maintenance ¹
3	Switchgear Circuit Breaker Compartment: <ul style="list-style-type: none"> • Inspection <ul style="list-style-type: none"> - Moving Mechanisms - Shutter Hardware - Primary Contacts • Cleaning • General Maintenance 	12	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8- Inspection and Maintenance ¹
4	Circuit Breaker Compartment: <ul style="list-style-type: none"> • Lubrication of primary and ground contacts, and all moving joints 	Every 50 cycles of racking mechanism	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8- Inspection and Maintenance ¹
5	Switchgear Type VR Circuit Breaker: <ul style="list-style-type: none"> • Inspection • Cleaning • Measuring E-Gap • Monitoring Contact Erosion • Hi-Pot (Dielectric) Testing • Resistance Measurement • Lubrication • General Maintenance 	<ul style="list-style-type: none"> • 12 Months • Every 1000 Operations • After severe fault operations 	Type VR Vacuum Circuit Breaker Instruction Bulletin 6055-31, Section 7
6	VT, CPT and Fuse Drawout Units: <ul style="list-style-type: none"> • Inspection • Cleaning • Lubrication • Fuse Replacement 	12	Masterclad Metal-Clad Indoor Switchgear, 4.76-15.0kV Series 5 with Type VR Vacuum Circuit Breakers, Class 6055, Section 8- Inspection and Maintenance ¹

Electrical Preventative Maintenance Schedule and Procedures

480V Unit Substation (Primary Switch, Transformer, and Switchgear)

Task	Procedure	Recommended Time Interval (Months)	Reference
7	Switchgear Unit Compartments: <ul style="list-style-type: none"> • Inspection of Dielectric Stress • Corona • Tracking • Thermal Damage 	12	2016 NFPA 70B Chapter 15.2 for Switchgear Assemblies
8	Switchgear Vacuum Circuit Breakers: <ul style="list-style-type: none"> • Inspection • Testing 	12	2016 NFPA 70B Chapter 15.5 for Vacuum Circuit Breaker
9	Switchgear Grounding: <ul style="list-style-type: none"> • Inspection • General Maintenance 	12	2016 NFPA 70B Chapter 15.9.9 for Grounding
10	Switchgear Assembly: <ul style="list-style-type: none"> • Visual and Mechanical Inspection • Electrical Tests 	<ul style="list-style-type: none"> • Visual and Mech: 12 • Visual, Mech, and Elect: 24 	ANSI/NETA MTS 2015, Section 7.1
11	Switchgear Surge Arresters: <ul style="list-style-type: none"> • Inspection • General Maintenance 	12	2016 NFPA 70B Chapter 15.9.2 for Surge Arrestors
12	Transformer: <ul style="list-style-type: none"> • Inspection • Replacement of corroded parts • Cleaning 	24	Power-Dry II Dry Type Transformers Class 7420 Instruction Bulletin, Section 8-Inspection and Maintenance ¹
13	Transformer: <ul style="list-style-type: none"> • Inspection • Torque bolts • Start Up Procedures 	After a major fault	Power-Dry II Dry Type Transformers Class 7420 Instruction Bulletin, Section 8-Inspection and Maintenance ¹
14	Transformer: <ul style="list-style-type: none"> • Inspection/Readings <ul style="list-style-type: none"> - Current and Voltage - Temperature - Ventilation - Noise • Cleaning • Insulation Test 	<ul style="list-style-type: none"> • Inspections (while energized): 1 • Major Maintenance (de-energized): 36-72 	<ul style="list-style-type: none"> • 2016 NFPA 70B Chapter 21.3 for Dry-Type Transformers • Table K.4(b)

Electrical Preventative Maintenance Schedule and Procedures

480V Unit Substation (Primary Switch, Transformer, and Switchgear)

Task	Procedure	Recommended Time Interval (Months)	Reference
15	Transformer: <ul style="list-style-type: none"> • Visual and Mechanical Inspection • Electrical Tests • Test Comparisons 	<ul style="list-style-type: none"> • Visual: 1 • Visual and Mech: 12 • Visual, Mech, and Elect: 24 	ANSI/NETA MTS 2015, Section 7.2.1.2
16	LV Switchgear: <ul style="list-style-type: none"> • General Inspection and Cleaning <ul style="list-style-type: none"> - Enclosure Interior - Enclosure Exterior • General Maintenance 	12	Power-Zone 4 Low Voltage, Metal-Enclosed Drawout Switchgear with Masterpact Low Voltage Power Circuit Breakers Class 6037 Instruction Bulletin 80298-002-06, Section 7-Inspection and Maintenance ¹
17	LV Switchgear Bus Bar Joints, Lug Terminations, and Insulating Materials: <ul style="list-style-type: none"> • Inspection • Cleaning 	12	Power-Zone 4 Low Voltage, Metal-Enclosed Drawout Switchgear with Masterpact Low Voltage Power Circuit Breakers Class 6037 Instruction Bulletin 80298-002-06, Section 7-Inspection and Maintenance ¹
18	LV Switchgear Traveling Lifter: <ul style="list-style-type: none"> • Lubrication • Inspection • General Maintenance 	12	Power-Zone 4 Low Voltage, Metal-Enclosed Drawout Switchgear with Masterpact Low Voltage Power Circuit Breakers Class 6037 Instruction Bulletin 80298-002-06, Section 7-Inspection and Maintenance ¹
19	LV Switchgear Breaker: <ul style="list-style-type: none"> • Level II • Level III • Level IV 	<ul style="list-style-type: none"> • 12 • 24 • 60 	See attached Maintenance and Field Testing Guide for Masterpact NT and NW Circuit Breaker document for level procedure descriptions.

Notes:

1. Reference material found in Submittal 16272-0025-B.

Electrical Preventative Maintenance Schedule and Procedures

Motor Control Center

Task	Procedure	Recommended Time Interval (Months)	Reference
1	Enclosure: <ul style="list-style-type: none"> • Inspection • Cleaning 	12	Model 6 Motor Control Centers, Class 8898, Section 6 - Maintaining the MCC ¹
2	Bus Bars and Incoming Line Compartments: <ul style="list-style-type: none"> • Inspection <ul style="list-style-type: none"> - Bus bars - Bus connections - Insulators, braces, and barriers • Cleaning • General Maintenance • Resistance measurements 	12	Model 6 Motor Control Centers, Class 8898, Section 6 - Maintaining the MCC ¹
3	Control Units (Buckets): <ul style="list-style-type: none"> • Inspection <ul style="list-style-type: none"> - Stab Assemblies - Circuit breaker or disconnect switch - Operator mechanism - Fuses, contacts, control devices - Insulators, braces, and barriers • Cleaning • General Maintenance • Lubrication 	12	Model 6 Motor Control Centers, Class 8898, Section 6 - Maintaining the MCC ¹

Notes:

1. Reference material found in Submittal 16423-0022-A.

Automatic Transfer Switch

Task	Procedure	Recommended Time Interval (Months)	Reference
1	Enclosure: <ul style="list-style-type: none"> • Inspection • Cleaning 	12	7000 Series, Automatic Delayed-Transition Transfer Switches Operator's Manual, Section 2 - Preventive Maintenance ²
2	Internal Components: <ul style="list-style-type: none"> • Inspection <ul style="list-style-type: none"> - Cable connections - Contacts - Insulators, braces, and barriers • Cleaning • General Maintenance • Lubrication 	12	7000 Series, Automatic Delayed-Transition Transfer Switches Operator's Manual, Section 2 - Preventive Maintenance ²

Dry-Type Transformers

Task	Procedure	Recommended Time Interval (Months)	Reference
1	Transformer: <ul style="list-style-type: none"> • Inspection/Readings <ul style="list-style-type: none"> - Current and Voltage - Temperature - Ventilation - Noise • Cleaning • Insulation Test 	<ul style="list-style-type: none"> • Inspections (while energized): 1 • Major Maintenance (deenergized): 36-72 	<ul style="list-style-type: none"> • 2016 NFPA 70B Chapter 21.3 for Dry-Type Transformers • Table K.4(b)

**EXHIBIT B
COMPENSATION**

General

Contractor shall be paid for those Services performed pursuant to this Agreement inclusive of all reimbursable expenses (if applicable), in accordance with the terms and conditions herein. The Compensation Schedule below/attached states nature and amount of compensation the Contractor may charge the City:

BID FORM

Section 1 – Schedule of Prices

Company: Utilities Instrumentation Service, Inc:

Project: **WWTP Electrical Preventative Maintenance**

Base Bid

For the entire work outlined in these documents for **WWTP Electrical Preventative Maintenance**, complete as specified, using equipment and materials only of the type and manufacturers where specifically named.

One-Hundred, Forty-Three Thousand, Four Hundred and Seventy-Four Dollars (\$ 143,474.00)

**EXHIBIT C
INSURANCE REQUIREMENTS**

From the earlier of the Effective Date or the Commencement Date of this Agreement, and continuing without interruption during the term of this Agreement, Contractor shall provide certificates of insurance to the City on behalf of itself, and when requested any subcontractor(s). The certificates of insurance and required endorsements shall meet the following minimum requirements.

A. The Contractor shall have insurance that meets the following minimum requirements:

1. Worker's Compensation Insurance in accordance with all applicable state and federal statutes. Further, Employers Liability Coverage shall be obtained in the following minimum amounts:

Bodily Injury by Accident - \$500,000 each accident
Bodily Injury by Disease - \$500,000 each employee
Bodily Injury by Disease - \$500,000 each policy limit

2. Commercial General Liability Insurance equivalent to, as a minimum, Insurance Services Office form CG 00 01 04 13 or current equivalent. The City of Ann Arbor shall be an additional insured. There shall be no added exclusions or limiting endorsements which diminish the City's protections as an additional insured under the policy. Further, the following minimum limits of liability are required:

\$1,000,000 Each occurrence as respect Bodily Injury Liability or
Property Damage Liability, or both combined
\$2,000,000 Per Project General Aggregate
\$1,000,000 Personal and Advertising Injury
\$2,000,000 Completed Operations Aggregate

3. Motor Vehicle Liability Insurance equivalent to, as a minimum, Insurance Services Office form CA 00 01 10 13 or current equivalent. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles. The City of Ann Arbor shall be an additional insured. There shall be no added exclusions or limiting endorsements that diminish the City's protections as an additional insured under the policy. Further, the limits of liability shall be \$1,000,000 for each occurrence as respects Bodily Injury Liability or Property Damage Liability, or both combined.

4. Umbrella/Excess Liability Insurance shall be provided to apply in excess of the Commercial General Liability, Employers Liability and the Motor Vehicle coverage enumerated above, for each occurrence and for aggregate in the amount of \$1,000,000.

- B. Insurance required under A.2 and A.3 above shall be considered primary as respects any other valid or collectible insurance that the City may possess, including any self-insured retentions the City may have; and any other insurance the City does possess shall be considered excess insurance only and shall not be required to contribute with this insurance. Further, the Contractor agrees to waive any right of recovery by its insurer against the City for any insurance listed herein.
- C. Insurance companies and policy forms are subject to approval of the City Attorney, which approval shall not be unreasonably withheld. Documentation must provide and demonstrate an unconditional and unqualified 30-day written notice of cancellation in favor of the City of Ann Arbor. Further, the documentation must explicitly state the following: (a) the policy number(s); name of insurance company; name(s), email address(es), and address(es) of the agent or authorized representative; name and address of insured; project name; policy expiration date; and specific coverage amounts; (b) any deductibles or self-insured retentions, which may be approved by the City in its sole discretion; (c) that the policy conforms to the requirements specified. Contractor shall furnish the City with satisfactory certificates of insurance and endorsements prior to commencement of any work. Upon request, the Contractor shall provide within 30 days, a copy of the policy(ies) and all required endorsements to the City. If any of the above coverages expire by their terms during the term of this Agreement, the Contractor shall deliver proof of renewal and/or new policies and endorsements to the Administering Service Area/Unit at least ten days prior to the expiration date.