

PERFORMANCE CONTRACT

This Performance Contract (this "Agreement") is made this 31st day of January, 2019 between:

PARTIES

JOHNSON CONTROLS, INC. ("JCI")
507 East Michigan Street
Milwaukee, Wisconsin 53202

and

City of Milwaukee, acting through the Milwaukee Public Library Board of Trustees ("Customer")
Milwaukee Public Library
814 W. Wisconsin Avenue
Milwaukee, Wisconsin 53233

RECITALS

WHEREAS, Customer desires to retain JCI to perform the work specified in Schedule 1 (Scope of Work) hereto (the "Work") relating to the installation of the improvement measures (the "Improvement Measures") described therein; and

WHEREAS, Customer is authorized and empowered under applicable Laws (as defined below) to enter into this Agreement, and has taken all necessary action under applicable Laws to enter into this Agreement; and

WHEREAS, Customer has selected JCI to perform the Work after it determined JCI's proposal was the most advantageous to Customer in accordance with all applicable procurement and other Laws.

NOW, THEREFORE, in consideration of the mutual promises set forth herein, the parties agree as follows:

AGREEMENT

1. SCOPE OF THE AGREEMENT. JCI shall perform the Work set forth in Schedule 1. After the Work is Substantially Complete (as defined below) and the Certificate of Substantial Completion is executed by Customer and JCI, JCI shall provide the assured performance guarantee (the "Assured Performance Guarantee") and the measurement and verification services (the "M&V Services") set forth in Schedule 2 (Assured Performance Guarantee) and/or Schedule 2A (Assured Performance Guarantee – Utility Meters), as applicable. Customer shall make payments to JCI for the Work and the M&V Services in accordance with Schedule 4 (Price and Payment Terms).

2. AGREEMENT DOCUMENTS: In addition to the terms and conditions of this Agreement, the following Schedules are incorporated into and shall be deemed an integral part of this Agreement:

- Schedule 1 – Scope of Work
- Schedule 2 – Assured Performance Guarantee
- Schedule 3 – Customer Responsibilities
- Schedule 4 – Price and Payment Terms
- Attachment 1 – Notice to Proceed
- Attachment 2 – Form of Change Order
- Attachment 3 – Form of Certificate of Substantial Completion
- Attachment 4 – Form of Certificate of Final Completion
- Attachment 5 – Detailed Lighting Scope Appendix

3. **NOTICE TO PROCEED; SUBSTANTIAL COMPLETION; M&V SERVICES.** This Agreement shall become effective on the date of the last signature on the signature page below. JCI shall commence performance of the Work within ten (10) business days of receipt of Customer's Notice to Proceed, a form of which is attached hereto as Attachment 1, and shall achieve Substantial Completion of the Work within 12 months of the date on which JCI receives Customer's Notice to Proceed. Upon Substantial Completion, Customer shall execute a Certificate of Substantial Completion substantially in the form attached hereto as Attachment 3.

For purposes of this Agreement, "Substantial Completion" means that JCI has provided sufficient materials and services to permit Customer to operate the Improvement Measures. The M&V Services shall commence on the first day of the month following the month in which Customer executes a Certificate of Substantial Completion and shall continue throughout the Guarantee Term, subject to earlier termination of the Assured Performance Guarantee as provided herein. Customer acknowledges and agrees that if, for any reason, it (i) cancels or terminates receipt of M&V Services, (ii) fails to pay for M&V Services in accordance with Schedule 4, (iii) fails to fulfill any of Customer's responsibilities necessary to enable JCI to complete the Work and provide the M&V Services, or (iv) otherwise cancels, terminates or materially breaches this Agreement, the Assured Performance Guarantee shall automatically terminate and JCI shall have no liability thereunder.

4. **DELAYS AND IMPACTS.** If JCI is delayed in the performance of the Work and/or M&V Services by causes beyond its control and without its fault, including but not limited to inability to access the Premises; concealed or unknown conditions encountered at the Premises that materially differ from the conditions otherwise reasonably expected or known to JCI; a Force Majeure Event (as defined below); or a failure by Customer to perform its obligations under this Contract, JCI shall provide written notice to Customer of the existence, extent of, and reason for such delays and impacts, and JCI shall not be held responsible to Customer for damages, loss, injury, or delay caused by such conditions. Under such circumstances, the parties shall negotiate an equitable adjustment in the time for performance, price and payment terms, and the Assured Performance Guarantee.
5. **ACCESS.** Customer shall provide JCI, its subcontractors, and its agents reasonable and safe access to all facilities and properties in Customer's control that are subject to the Work and M&V Services. Customer further agrees to assist JCI, its subcontractors, and its agents to gain access to facilities and properties that are not controlled by Customer but are necessary for JCI to complete the Work and provide the M&V Services. Should Customer fail to grant the required access, the parties shall negotiate an equitable adjustment in the time for performance, price and payment terms, and the Assured Performance Guarantee.
6. **PERMITS, TAXES, AND FEES.** Unless otherwise specified, JCI shall be responsible for obtaining all building permits required for it to perform the Work. Unless otherwise specified, Customer shall be responsible for obtaining all other permits, licenses, approvals, permissions and certifications, including but not limited to, all zoning and land use changes or exceptions required for the provision of the Work or the ownership and use of the Improvement Measures. JCI shall not be obligated to provide any changes to or improvement of the facilities or any portion thereof required under any applicable building, fire, safety, sprinkler or other applicable code, standard, law, regulation, ordinance or other requirement unless the same expressly regulates the installation of the Improvement Measures. Without limiting the foregoing, JCI's obligations with respect to the Work is not intended to encompass any changes or improvements that relate to any compliance matters (whether known or unknown) that are not directly related to the installation of the Improvement Measures or which have been imposed or enforced because of the occasion or opportunity of review by any governmental authority. Customer shall be responsible for and shall pay when due all assessments, charges and sales, use, property, excise, or other taxes now or hereafter imposed by any governmental body or agency upon the provision of the Work or the M&V Services, implementation or presence of the Improvement Measures, the use of the Improvement Measures or payments due to JCI under this Agreement, other than taxes upon the net income of JCI. Customer shall also be responsible for real or personal property taxes relating to equipment or material included in the Improvement Measures. Any fees, taxes, or other lawful charges paid by JCI on account of Customer shall become immediately due from Customer to JCI.

Customer is exempt from Federal Excise and Wisconsin Sales Taxes. All vendor quotes, bids and invoices must include delivery FOB destination to the location receiving the goods and freight must be prepaid. This means any freight, shipping, processing, handling or like charges must be part of JCI's compensation

hereunder. Any separate line items for freight, shipping, processing, handling or like charges listed on an invoice will be deleted and NOT PAID.

All materials and equipment shall be bid, purchased, and transferred to the Customer tax free upon installation in accordance with WI Act 126 "Sales and Use Tax Exemption for Building Materials That Become Part of a Nonprofit or Government Facility" and the subsequent statutory language contained in WI Statute 77.54 (9m). Customer shall provide JCI a WI Department of Revenue form S-211 WISCONSIN SALES AND USE TAX EXEMPTION CERTIFICATE, for this purpose.

Customer shall provide reasonable evidence to JCI of the tax exempt nature of Customer and the Project.

7. **WARRANTY.** JCI will perform the Work in a professional, workman-like manner. JCI will promptly re-perform any non-conforming Work for no charge, as long as Customer provides written notice to JCI within one (1) year following Substantial Completion or such other period identified in Schedule 1. During the one year period following Substantial Completion, Customer shall also have the benefit of any implied warranties relating to the Work, including without limitation warranties of merchantability and fitness for particular purpose. If JCI installs or furnishes goods or equipment under this Agreement, and such goods or equipment are covered by an end-user warranty from their manufacturer, JCI will transfer the benefits of such warranty to Customer. The foregoing remedy with respect to the Work, together with any remedy provided by goods or equipment manufacturers, shall be Customer's sole and exclusive remedies for warranty claims. Customer agrees that the one (1) year period following Substantial Completion, or such other period identified in Schedule 1, shall be a reasonable time for purposes of submitting valid warranty claims with respect to the Work. These exclusive remedies shall not have failed of their essential purpose so long as JCI transfers the benefits of any goods or equipment end-user warranty to Customer and remains willing to re-perform any non-conforming Work for no charge within the one (1) year period described above or such other period identified in Schedule 1. Except as provided above, NO OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE PROVIDED BY JCI. This warranty does not extend to any Work that has been abused, altered, or misused, or repaired by Customer or third parties without the supervision or prior written approval of JCI. Except with respect to goods or equipment manufactured by JCI and furnished to Customer hereunder, for which JCI shall provide its express written manufacturer's warranty, JCI shall not be considered a merchant or vendor of goods or equipment.
8. **CLEANUP.** JCI shall keep the premises and the surrounding area free from accumulation of waste materials or rubbish caused by the Work and, upon completion of the Work, JCI shall remove all waste materials, rubbish, tools, construction equipment, machinery, and surplus materials. JCI shall store materials, tools, and equipment only in areas designated by Customer and shall reasonably remove as Work progresses tools and equipment no longer reasonably required.
9. **SAFETY; COMPLIANCE WITH LAWS.** JCI shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work and M&V Services. Each of JCI and Customer shall comply with all applicable laws, ordinances, rules, regulations, and lawful orders of public authorities (collectively, "Laws") in connection with its performance hereunder.
10. **ASBESTOS-CONTAINING MATERIALS AND OTHER HAZARDOUS MATERIALS.**

Asbestos-Containing Materials: Neither party desires to or is licensed to undertake direct obligations relating to the identification, abatement, cleanup, control, removal or disposal of asbestos-containing materials ("ACM"). Consistent with applicable Laws, Customer shall supply JCI with any information in its possession relating to the presence of ACM in areas where JCI undertakes any Work or M&V Services that may result in the disturbance of ACM. It is JCI's policy to seek certification for facilities constructed prior to 1982 that no ACM is present, and Customer shall provide such certification for buildings it owns, or aid JCI in obtaining such certification from facility owners in the case of buildings that Customer does not own, if JCI will undertake Work or M&V Services in the facility that could disturb ACM. If either Customer or JCI becomes aware of or suspects the presence of ACM that may be disturbed by JCI's Work or M&V Services, it shall promptly stop the Work or M&V Services in the affected area and notify the other. As between Customer and JCI, Customer shall be responsible at its sole expense for addressing the potential for or the presence of ACM in conformance with all

applicable Laws and addressing the impact of its disturbance before JCI continues with its Work or M&V Services, unless JCI had actual knowledge that ACM was present and acted with intentional disregard of that knowledge, in which case (i) JCI shall be responsible at its sole expense for remediating areas impacted by the disturbance of the ACM, and (ii) Customer shall resume its responsibilities for the ACM after JCI's remediation has been completed.

Other Hazardous Materials: JCI shall be responsible for removing or disposing of any Hazardous Materials (as defined below) that it uses in providing Work or M&V Services ("JCI Hazardous Materials") and for the remediation of any areas impacted by the release of JCI Hazardous Materials. For other Hazardous Materials that may be otherwise present at Customer's facilities ("Non-JCI Hazardous Materials"), Customer shall supply JCI with any information in its possession relating to the presence of such materials if their presence may affect JCI's performance of the Work or M&V Services. If either Customer or JCI becomes aware of or suspects the presence of Non-JCI Hazardous Materials that may interfere with JCI's Work or M&V Services, it shall promptly stop the Work or M&V Services in the affected area and notify the other. As between Customer and JCI, Customer shall be responsible at its sole expense for removing and disposing of Non-JCI Hazardous Materials from its facilities and the remediation of any areas impacted by the release of Non-JCI Hazardous Materials, unless JCI had actual knowledge that Non-JCI Hazardous Materials were present and acted with intentional disregard of that knowledge, in which case (i) JCI shall be responsible at its sole expense for the remediation of any areas impacted by its release of such Non-JCI Hazardous Materials, and (ii) Customer shall remain responsible at its sole expense for the removal of Non-JCI Hazardous Materials that have not been released and for releases not resulting from JCI's performance of the Work or M&V Services. For purposes of this Agreement, "Hazardous Materials" means any material or substance that, whether by its nature or use, is now or hereafter defined or regulated as a hazardous waste, hazardous substance, pollutant or contaminant under applicable Law relating to or addressing public or employee health and safety and protection of the environment, or which is toxic, explosive, corrosive, flammable, radioactive, carcinogenic, mutagenic or otherwise hazardous or which is or contains petroleum, gasoline, diesel, fuel, another petroleum hydrocarbon product, or polychlorinated biphenyls. "Hazardous Materials" specifically includes mold and lead-based paint and specifically excludes ACM. JCI shall have no obligations relating to the identification, abatement, cleanup, control, removal, or disposal of mold, regardless of the cause of the mold.

11. CHANGE ORDERS. The parties, without invalidating this Agreement, may request changes in the Work to be performed under this Agreement, consisting of additions, deletions, or other revisions to the Work ("Change Orders"). The price and payment terms, time for performance and, if necessary, the Assured Performance Guarantee, shall be equitably adjusted in accordance with the Change Order. Such adjustments shall be determined by mutual agreement of the parties. JCI may delay performance until adjustments arising out of the Change Order are clarified and agreed upon. Any Change Order must be signed by an authorized representative of each party. If concealed or unknown conditions are encountered at the project, differing from the conditions represented by Customer in the bid documents or otherwise disclosed by Customer to JCI prior to the commencement of the Work, price and payment terms, time for performance and, if necessary, the Assured Performance Guarantee, shall be equitably adjusted. Such adjustments shall be determined by mutual agreement of the parties. Claims for equitable adjustment may be asserted in writing within a reasonable time from the date a party becomes aware of a change to the Work by written notification. Customer shall have no responsibility for work that is the subject of a change order that JCI performs prior to the execution of a Change Order by both parties.

12. CUSTOMER FINANCING; TREATMENT; TAXES. The parties acknowledge and agree that JCI is not making any representation or warranty to Customer with respect to matters not expressly addressed in this Agreement, including, but not limited to:

- (a) Customer's ability to obtain or make payments on any financing associated with paying for the Improvement Measures, related services, or otherwise;
- (b) Customer's proper legal, tax, accounting, or credit rating agency treatment relating to this Agreement; and
- (c) the necessity of Customer to raise taxes or seek additional funding for any purpose.

Customer is solely responsible for its obligations and determinations with respect to the foregoing matters. In addition, the parties acknowledge and agree that Customer shall be responsible to comply, at its cost and

expense, with all Laws that may be applicable to it relating to performance contracting, including, without limitation, any requirements relating to the procurement of goods and/or services and any legal, accounting, or engineering opinions or reviews required or obtained in connection with this Agreement.

- 13. PROMPT PAYMENT POLICY.** It is the Customer's policy to pay all invoices within 30 days. If the Customer does not make payment 45 days after receipt of properly completed supporting payment and other required contract documentation, the Customer shall pay simple interest beginning with the 31st calendar day at the rate of one percent per month (unless the amount due is subject to a good-faith dispute and, before the 45th day of receipt, notice of the dispute is sent to JCI by first-class mail, personally delivered, or sent in accordance with the notice provisions in the contract).

If there are subcontractors, consistent with s. 66.0135(3), Wis. Stats., the prime contractor must pay the subcontractors for satisfactory work within seven days of the contractor's receipt of payment from the City of Milwaukee, or seven days from receipt of a properly submitted and approved invoice from the subcontractor, whichever is later. If the contractor fails to make timely payment to a subcontractor, the contractor shall pay interest at the rate of 12 percent per year, compounded monthly, beginning with the 8th calendar day.

- 14. FEDERAL DEBARMENT.** The Customer reserves the right to cancel this Agreement with any federally debarred contractor or a contractor that is presently identified on the list of parties excluded from federal procurement and non-procurement contracts.
- 15. TERMINATION FOR CONVENIENCE.** The Customer may terminate this Agreement at any time for any reason, including no reason, by giving at least 10 days notice in writing to JCI. If the Agreement is terminated by the Customer as provided herein, JCI will be paid an amount which bears the same ratio to the total compensation as the work actually and satisfactorily performed bears to the total work of JCI covered by this Agreement, less payments of compensation previously made.
- 16. PUBLIC RECORDS.** Both Parties understand that the Customer is bound by the Wisconsin Public Records Law, and as such, all of the terms of this Agreement are subject to and conditioned on the provisions of Wis. Stat. sec. 19.21 et. sec. JCI acknowledges that it is obligated to assist the Customer in retaining and producing records that are subject to the Wisconsin Public Records Law, including but not limited to those records produced or collected by JCI under this Agreement pursuant to Wis. Stat. sec. 19.36(3) and that the failure to do so shall constitute a material breach of this Agreement, and that JCI must defend and hold the Customer harmless from liability due to its fault under that law. Except as otherwise authorized, those records shall be maintained for a period of seven years after receipt of the final payment under this Agreement.
- 17. NON-DISCRIMINATION.** JCI agrees not to discriminate against any qualified employee or qualified applicant for employment because of sex, race, religion, color, national origin or ancestry, age, disability, lawful source of income, marital status, sexual orientation, gender identity or expression, victimhood of domestic abuse of sexual assault, past or present membership in the military service, HIV status, domestic partnership, genetic identity, homelessness, familial status, or an individual's affiliation or perceived affiliation with any of these categories. The Customer and JCI will comply with all requirements imposed by or pursuant to the regulations of the appropriate federal agency effectuating Title VI of the Civil Rights Act of 1964. JCI agrees to comply with all applicable requirements of the Americans with Disabilities Act of 1990, 42 U.S.C. 12101, *et seq.* JCI will cause the foregoing provisions to be inserted in all subcontracts, if any, for any work covered by this Agreement so that such provisions will be binding upon each subcontractor, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.
- 18. INSURANCE.** JCI and its subcontractors shall effect and maintain the following types of insurance coverage in the limits shown below: Workers' Compensation, Employers' Liability, Commercial General Liability including Contractual Liability, Professional Liability, Automobile Liability and Umbrella Liability. JCI's indemnification obligation, however, shall not be reduced in any way by the existence or non-existence, limitation, amount or type of damages, compensation, or benefits payable under Workers' Compensation laws or other insurance provisions.

The limits of insurance required of JCI by Customer shall be:

Workers' Compensation	Statutory Limits
Employers' Liability: -Bodily Injury by Accident -Bodily Injury by Disease -Bodily Injury by Disease	\$100,000 per each accident \$100,000 per each employee \$500,000 policy limit
Commercial General Liability: -General Aggregate Limit -Products/Completed Operations Aggregate Limit -Personal and Advertising Injury Limit -Each Occurrence Limit -Fire Damage Limit (any one fire) -Medical Expense Limit (any one person)	\$2,000,000 \$2,000,000 \$1,000,000 \$1,000,000 \$100,000 \$5,000
Professional Liability	\$1,000,000 per claim \$1,000,000 aggregate
Auto Liability (Owned, Hired and Non-Owned)	\$1,000,000 per accident
Umbrella (excess) Liability: Aggregate Limit - Each Occurrence Limit	\$5,000,000 \$5,000,000
Installation Floater	In an amount equal to the Contract amount.

Customer shall be listed as an additional insured with respect to liability arising out of operations performed for them by or on behalf of JCI, but only to the extent of damages caused by the negligence of JCI under JCI's commercial general liability policy. A certificate of insurance including the additional insured endorsement shall be given to Customer as evidence of the required insurance. JCI shall endeavor to provide Customer with thirty (30) days prior written notice in the event of cancellation, non-renewal or any material change that would result in JCI not being in compliance with these insurance requirements by any of JCI's insurers providing the coverages required by Customer in this section 18 for the duration of this Contract.

JCI shall provide an All Risk Installation Floater with a limit equal to the Contract amount.

- 19. INDEMNIFICATION.** JCI assumes full liability for all of its acts or omissions in the performance of this Contract, as well as the acts or omissions of its Subcontractors. JCI shall indemnify and hold harmless Customer, its agents, officers and employees against all liabilities, losses, judgments, decrees, costs, and expenses that may be claimed against Customer by third parties as a result of the willful misconduct or the negligent actions or omissions of JCI, its agents, or employees. If judgment is recovered against Customer in suits of law or equity as a consequence of the willful misconduct or negligent actions or omissions of JCI, JCI assumes full liability for such judgment, not only as to any monetary award, but also as to the costs, attorneys' fees or other expenses resulting therefrom.

In accordance with applicable laws, Customer shall be responsible for defending and paying judgments on behalf of its officers, employees and agents while acting within the scope of their employment or agency for any claims that may arise out of Customer's negligence for acts, policies, or directives that affect the activities covered by this Contract.

- 20. LIMITATION OF LIABILITY.** WITHOUT LIMITING JCI'S EXPRESS OBLIGATIONS UNDER THE ASSURED PERFORMANCE GUARANTEE, JCI'S LIABILITY UNDER THIS CONTRACT, REGARDLESS OF THE FORM OF ACTION, SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PAYMENTS ACTUALLY RECEIVED BY JCI UNDER THIS CONTRACT. If this Contract covers fire safety or security equipment, Customer

understands that JCI is not an insurer regarding those services, and that JCI shall not be responsible for any damage or loss that may result from fire safety or security equipment that fails to prevent a casualty loss, except to the extent such loss resulted from JCI's willful misconduct, negligence, or fraud.

TO THE EXTENT PERMITTED UNDER WISCONSIN LAW, AND EXCEPT AS SET FORTH BELOW, NEITHER CUSTOMER NOR JCI WILL BE RESPONSIBLE TO THE OTHER FOR ANY SPECIAL, INDIRECT, CONSEQUENTIAL, REMOTE, PUNITIVE, EXEMPLARY DAMAGES FOR LOSS OF PROFITS OR REVENUE, LOSS OF USE, PRINCIPAL OFFICE EXPENSES, AND COMPENSATION OF PERSONNEL ("CONSEQUENTIAL DAMAGES"), REGARDLESS of a party having been advised of the possibility of such potential losses or relief, arising in any manner from this Contract, the Work, the Improvement Measures, the M&V Services, or otherwise. NOTWITHSTANDING THE FOREGOING, THIS LIMITATION DOES NOT APPLY TO ANY CONSEQUENTIAL DAMAGES THAT (A) ARE COVERED BY INSURANCE CARRIED BY JCI; (B) ARISE OUT OF THE WILLFUL MISCONDUCT, NEGLIGENCE, OR FRAUD OF JCI; (C) ARISE OF OUT OF RELATE TO ANY OBLIGATION OF JCI TO INDEMNIFY CUSTOMER FOR THIRD-PARTY CLAIMS UNDER THIS CONTRACT; (D) ARISE OF OUT OF RELATE TO ANY VIOLATIONS OF LAW BY JCI; OR (E) THAT ARE NOT COVERED BY INSURANCE BUT HAVE AN AGGREGATE VALUE OF LESS THAN \$ 50,000. The foregoing waivers and limitations are fundamental elements of the basis for this Contract between JCI and Customer, and each party acknowledges that JCI would not be able to provide the Work and M&V Services contemplated by this Contract on an economic basis in the absence of such waivers and limitations, and would not have entered into this Contract without such waivers and limitations.

- 21. FORCE MAJEURE.** Neither party will be responsible to the other for damages, loss, injury, or delay caused by conditions that are beyond the reasonable control, and without the intentional misconduct or negligence of that party. Such conditions (each, a "Force Majeure") include, but are not limited to: acts of God; acts of government agencies; strikes; labor disputes; fires; explosions or other casualties; thefts; vandalism; riots or war; acts of terrorism; electrical power outages; interruptions or degradations in telecommunications, computer, or electronic communications systems; changes in Laws; or unavailability of parts, materials or supplies.
- 22. JCI'S PROPERTY.** All materials furnished or used by JCI personnel and/or JCI subcontractors or agents at the installation site, including documentation, schematics, test equipment, software and associated media remain the exclusive property of JCI or such other third party. Customer agrees not to use such materials for any purpose at any time without the express authorization of JCI. Customer agrees to allow JCI personnel and/or JCI subcontractors or agents to retrieve and to remove all such materials remaining after installation or maintenance operations have been completed. Customer acknowledges that any software furnished in connection with the Work and/or M&V Services is proprietary and subject to the provisions of any software license agreement associated with such software.
- 23. DISPUTES.** JCI and Customer will attempt to settle any controversy, dispute, difference, or claim between them concerning the performance, enforcement, or interpretation of this Agreement (collectively, "Dispute") through direct discussion in good faith. JCI AND CUSTOMER HEREBY WAIVE THEIR RESPECTIVE RIGHTS TO A JURY TRIAL AS TO ANY CLAIM OR CAUSE OF ACTION BASED UPON, ARISING OUT OF OR DIRECTLY OR INDIRECTLY RELATED TO THIS AGREEMENT, INCLUDING CONTRACT, TORT AND STATUTORY CLAIMS, AND EACH OF THE PARTIES HERETO ACKNOWLEDGES THAT THIS WAIVER IS A MATERIAL INDUCEMENT TO ENTER INTO A BUSINESS RELATIONSHIP, THAT EACH HAS RELIED ON THIS WAIVER IN ENTERING INTO THIS AGREEMENT, AND THAT EACH WILL CONTINUE TO RELY ON THIS WAIVER IN THEIR RELATED FUTURE DEALINGS UNDER THIS AGREEMENT.
- 24. GOVERNING LAW.** This Agreement and the construction and enforceability thereof shall be interpreted in accordance with the laws of the state of Wisconsin. Venue for any action arising out of or in any way related to this Agreement shall be exclusively in the Milwaukee County Circuit Court for matters arising under state law and in federal district court in the Eastern District of Wisconsin for matters arising under federal law.
- 25. CONSENTS; APPROVALS; COOPERATION.** Whenever Customer's consent, approval, satisfaction or determination shall be required or permitted under this Agreement, and this Agreement does not expressly state that Customer may act in its sole discretion, such consent, approval, satisfaction or determination shall not be unreasonably withheld, qualified, conditioned or delayed, whether or not such a "reasonableness" standard is expressly stated in this Agreement. Whenever Customer's cooperation is required by JCI in order

to carry out JCI's obligations hereunder, Customer agrees that it shall act in good faith and reasonably in so cooperating with JCI and/or JCI's designated representatives or assignees or subcontractors. Customer shall furnish decisions, information, and approvals required by this Agreement in a timely manner so as not to delay the performance of the Work or M&V Services.

- 26. FURTHER ASSURANCES.** The parties shall execute and deliver all documents and perform all further acts that may be reasonably necessary to effectuate the provisions of this Agreement.
- 27. INDEPENDENT CONTRACTOR.** The relationship of the parties hereunder shall be that of independent contractors. Nothing in this Agreement shall be deemed to create a partnership, joint venture, fiduciary, or similar relationship between the parties.
- 28. POWER AND AUTHORITY.** Each party represents and warrants to the other that (i) it has all requisite power and authority to execute and deliver this Agreement and perform its obligations hereunder, (ii) all corporate, board, body politic, or other approvals necessary for its execution, delivery, and performance of this Agreement have been or will be obtained, and (iii) this Agreement constitutes its legal, valid, and binding obligation.
- 29. SEVERABILITY.** In the event that any clause, provision, or portion of this Agreement or any part thereof shall be declared invalid, void, or unenforceable by any court having jurisdiction, such invalidity shall not affect the validity or enforceability of the remaining portions of this Agreement unless the result would be manifestly inequitable or materially impair the benefits intended to inure to either party under this Agreement.
- 30. COMPLETE AGREEMENT.** It is understood and agreed that this Agreement contains the entire agreement between the parties relating to all issues involving the subject matter of this Agreement. No binding understandings, statements, promises or inducements contrary to this Agreement exist. This Agreement supersedes and cancels all previous agreements, negotiations, communications, commitments and understandings with respect to the subject matter hereof, whether made orally or in writing. Each of the parties to this Agreement expressly warrants and represents to the other that no promise or agreement which is not herein expressed has been made to the other, and that neither party is relying upon any statement or representation of the other that is not expressly set forth in this Agreement. Each party hereto is relying exclusively on the terms of this Agreement, its own judgment, and the advice of its own legal counsel and/or other advisors in entering into this Agreement. Customer acknowledges and agrees that any purchase order issued by Customer associated with this Agreement is intended only to establish payment authority for Customer's internal accounting purposes. No purchase order shall be considered a counteroffer, amendment, modification, or other revision to the terms of this Agreement.
- 31. HEADINGS.** The captions and titles in this Agreement are for convenience only and shall not affect the interpretation or meaning of this Agreement.
- 32. COUNTERPARTS.** This Agreement may be executed in any number of counterparts, all of which when taken together shall constitute one single agreement between the parties.
- 33. NOTICES.** All notices or communications related to this Agreement shall be in writing and shall be deemed served if and when sent by facsimile or mailed by certified or registered mail: to Johnson Controls, Inc. at the address listed on the first page of this Agreement, ATTN: Regional Solutions Manager, with a copy to Johnson Controls, Inc., ATTN: General Counsel – Building Efficiency Americas, 507 East Michigan Street, Milwaukee, Wisconsin, 53202: and to Customer at the address listed on the first page of this Agreement.

City of Milwaukee,
acting through the Milwaukee Public Library
Board of Trustees



Tom Barrett, Mayor

Date: 1/31/19

JOHNSON CONTROLS, INC.

Signature: 

Printed Name: Jeffery J Roepsch

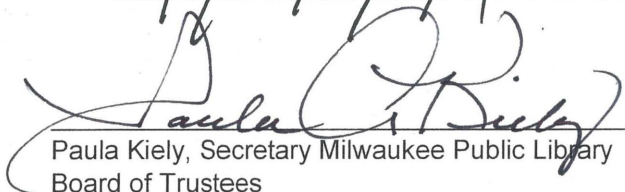
Title: Area General Manager

Date: 1/31/19



James Owczarski, City Clerk

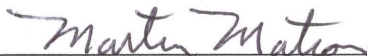
Date: 1/31/19



Paula Kiely, Secretary Milwaukee Public Library
Board of Trustees

Date: 2/4/19

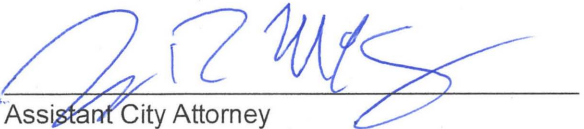
COUNTERSIGNED



Martin Matson, Comptroller

Date: 2-6-19

Examined and approved as to form and execution,



Assistant City Attorney

Date: 2/6/19

SCOPE OF WORK

I. SUMMARY OF THE SCOPE OF WORK

The following information lists and summarizes the Improvement Measures to be implemented for this project.

ECM Number	ECM Name
ECM-1-MCL	Central Library Replace and Upgrade Chilled Water Plant with Mag-Lev Chiller
ECM-3-MCL	Central Library Convert Existing AC-7 from CAV to DOAS
ECM-12a-MCL	Central Library Interior Lighting Retrofits
ECM-12b-MCL	Central Library Exterior Lighting Retrofits
ECM-12c-MCL	Central Library Lighting Control Panel Upgrades
ECM-4a-BVL	Bayview Library Interior Lighting Retrofits
ECM-4b-BVL	Bayview Library Exterior Lighting Retrofits
ECM-99	All Sites and ECMs – Third-Party Commissioning

II. DESCRIPTION OF THE SCOPE OF WORK

The following information provides a description of the scope of work. For more detail on the Improvement Measures noted immediately below, please refer to the corresponding attachments:

ECM-1-MCL – Central Library Replace and Upgrade Chilled Water Plant with Mag - Lev Chiller

This ECM proposes installing a new water-cooled York YMC2 magnetic bearing, variable speed, centrifugal chiller with a new primary pump and condenser water pump to serve the new chiller. The new YMC2 chiller would then be run as the primary chiller. The existing Trane chiller would be peak-load back-up, and the existing Air-Cooled York chiller would be used as a back-up shoulder season chiller.

Removal of the abandoned water-cooled McQuay chiller in room SB-0006 is **not included** in the scope of work for this ECM.

Subcontracted Engineering Scope:

- Engineer to visit each site and document existing equipment and conditions.
- Review of existing mechanical floor plans.
- Heating and cooling final load calculations are to be performed by Engineer. Building minimum outside air ventilation amounts, to calculate the ventilation load, will be taken from the existing plans.
- Engineer to provide demolition and new work HVAC drawings in CAD.
- Engineer to provide HVAC specification for associated equipment.
- Temperature Control specification or control sequence by JCI.
- Professional Engineering stamping of plans and specifications for items submitted to Department of Safety and Professional Services.
- Submit plans and specifications to the Department of Safety and Professional Services as required.
- Review of submittals for HVAC equipment.
- Provide sign-off for Department of Safety & Professional Services occupancy requirements as necessary.
- Engineer to provide electronic copies of all final documents for printing and distribution for contractor and owner use. Engineer to print plans and specification for Department of Safety & Professional Services.

Direct Materials and Equipment (JCI/YORK Furnished Equipment):

JCI/YORK HIGH-EFFICIENCY MAGNETIC BEARING CENTRIFUGAL WATER CHILLERS:

- Water Cooled, Magnetic Bearing Centrifugal Compressor
- Electrical Requirements:
 - 460/3/60 Single Point Power Connection
 - Unit Mounted Variable Speed Drive
 - IEEE 519 Harmonic Filter
- Optiview Control Center with OptiSound Control
- Form 7 Shipment
 - Compressor, Condenser, Evaporator, and Drive all ship separately
 - Field Assembled
- Evaporator:
 - Marine Water Boxes w/ Hinges, 150psi, 2-Pass
 - 0.025" Enhanced Copper Tubes
 - Grooved Water Connections
- Condenser:
 - Marine Water Boxes w/ Hinges, 150psi, 2-Pass
 - 0.025" Enhanced Copper Tubes
 - Grooved Water Connections
- Service Isolation Valves
- Factory Mounted BACnet (MS/TP) Communications Module
- 1" Thick Neoprene Isolation Pads
- One Year Parts and Labor Warranty on Entire Unit
- Five Year Compressor Parts Warranty
- Factory Start-up and Training by JCI Chiller Technicians
- Reassembly and Pressure Testing by JCI Chiller Technicians

Subcontracted Installation Scope:*JCI Controls Scope (JCI and electrical controls labor and material listed below)*

- Demo existing controls at chiller and for two pumps.
- Connect new controls to existing Metasys network.
 - Bacnet trunk to new chiller.
 - Furnish and install DDC for new chilled water and condenser water pumps.
 - Wire to existing control panel.
 - Flow switch interlock.
 - Graphics.
- Control drawings and commissioning.
- Controls per JCI/MPL Standards.
- One Year parts and labor warranty.

Mechanical Contractor Scope (labor and all materials listed below include all electrical power wiring and any general contracting work required for a complete scope of work)

- Demolish and remove the existing York water cooled chiller in room B9, Existing pad will remain for reuse.
- Demolish and remove one existing primary pump (CP-10) in room B9 serving the evaporator of the York water cooled chiller in room B9. Existing pad will remain for reuse.
- Demolish and remove all existing piping and accessories serving the existing water-cooled chiller enough to facilitate installation of the new chiller.
- Demolish and remove one existing condenser water pump (CP-7) in room SB-0005 serving the existing water-cooled York Chiller in room B9. Existing pad will remain for reuse.
- Demolish the existing wiring serving the existing water-cooled York chiller.
- Disconnect one existing chilled water pump motor for CP-10. Remove existing motor starter for pump.
- Disconnect one existing condenser water pump motor for CP-7. Remove existing motor starter for pump.
- Install one new 350 ton water-cooled chiller in room B9 on the existing chiller pad saved for reuse.
- Furnish and Install all piping and accessories as required to provide piping connections and service to the new water-cooled chiller.

Schedule 1

- Furnish and Install one new primary chiller pump to serve the new chiller on the existing pump pad in room B9 saved for reuse.
- Furnish and Install one new condenser water pump to serve the new chiller on the existing pump pad in room SB-0005 saved for reuse.
- Provide labeling and pipe tags for all newly installed piping.
- Provide pipe jacketing for newly insulated pipe within mechanical room.
- Insulate all newly installed pipes, ducts and any pipe or duct where insulation was removed to tie in the new work. Piping or duct not previously insulated or where insulation was removed solely for hazardous material abatement is not included.
- Provide new electrical connection to new chiller and new feeder, conduit, electrical wire, breakers, and components required for operation.
- Provide new electrical connection to new primary pump. Provide new HOA motor starter with pilot lights for new pump.
- Provide new electrical connection to new condenser pump. Provide new motor starter for new pump.
- Contractor shall field verify electrical service and provide updates to electrical service as required by the new equipment and all applicable codes.

Owner shall be responsible for:

- Any and all hazardous materials abatement prior to installation of any components as required.

ECM-3-MCL – Central Library Convert Existing AC-7 from CAV to DOAS

This ECM proposes removal and replacement of AC-7 with a new built-up dedicated outdoor air (DOAS) air handling unit with energy recovery. In addition to the new unit, this ECM proposes installed a booster cooling coil and a reheat coil in the duct that serves the book-drop area and a new dedicated thermostat for that section of floor 3T. The cooling coil shall be chilled water and the reheat coil shall be steam.

Subcontracted Engineering Scope:

- Engineer to visit each site and document existing equipment and conditions.
- Review of existing mechanical floor plans.
- Heating and cooling final load calculations are to be performed by Engineer. Building minimum outside air ventilation amounts, to calculate the ventilation load, will be taken from the existing plans.
- Engineer to provide demolition and new work HVAC drawings in CAD.
- Engineer to provide HVAC specification for associated equipment.
- Temperature Control specification or control sequence by JCI.
- Professional Engineering stamping of plans and specifications for items submitted to Department of Safety and Professional Services.
- Submit plans and specifications to the Department of Safety and Professional Services as required.
- Review of submittals for HVAC equipment.
- Provide sign-off for Department of Safety & Professional Services occupancy requirements as necessary.
- Engineer to provide electronic copies of all final documents for printing and distribution for contractor and owner use. Engineer to print plans and specification for Department of Safety & Professional Services.

Direct Materials and Equipment (JCI Furnished Equipment):

JCI / YORK SOLUTION XTI AIR HANDLING UNITS COMPLETE WITH THE FOLLOWING:

- 2" Double Wall Construction with Spray Injected Foam Panels
- L/240 Panel Deflection
- Shipping Splits
- Formed Steel Baserail
- Inlet Plenum (Top Tier)
- Flat Filter Section (Top Tier)
 - 2" MERV 8

- Filter Gauge Provided (0-2")
- Discharge Plenum (Top Tier)
- Inlet Plenum
- Flat Filter Section
 - 2" MERV 8
 - Filter Gauge Provided (0-2")
- Heat Wheel Section
 - Synthetic, 4A Molecular Sieve Total Enthalpy Wheel
 - Inverter Rated Motor
- Integral Face & Bypass Coil
 - 2 Row Steam Coil
- CW Cooling Coil Segment with Drain Pan
 - Surface Decontamination UV Lights
- Steam Reheat Coil Section
- Supply Fan Section
 - Direct-Drive Plenum Fan w/ VFD
 - Premium Efficiency (460/3/60 VAC)
 - 1" Spring Isolation
 - Shaft Grounding Ring
 - Fan Inlet Screen
- Exhaust Fan Section (separate)
 - Direct-Drive Plenum Fan w/ VFD
 - Premium Efficiency (460/3/60 VAC)
 - 1" Spring Isolation
 - Shaft Grounding Ring
 - Fan Inlet Screen
- Humidifier Section
 - Steam Humidifier w/ Wye Strainer and Steam Trap
- Discharge Plenum Section
- Access Sections as Specified
- 1 Year Parts and labor Warranty

JOHNSON CONTROS TWO LOOSE COILS COMPLETE WITH THE FOLLOWING:

- Cooling/Heating Coils
- 5/8" Tube Diameter
- Galvanized Casing, Copper Header
- 0.035" Tube Thickness

Subcontracted Installation Scope:

JCI Controls Scope (JCI and electrical controls labor and material listed below)

- Demo existing AC-7 controls.
- Connect new controls to existing Metasys network.
 - Furnish and install DDC for new replacement AHU. Includes all sensors, transducers, valves, actuators, dampers, and control panel.
 - Furnish and install DDC for new steam and chilled water booster coils in mech room. Controls for booster coil wire to new panel serving AC-7. Mount and wire 4 total zone sensor back to mech room: One on 1T, one 2T, one 3T and one in book drop area.
 - Graphics.
- Control drawings and commissioning.
- Controls per JCI/MPL Standards.
- One Year parts and labor warranty.

Mechanical Contractor Scope (labor and all materials listed below include all electrical power wiring and any general contracting work required for a complete scope of work)

Schedule 1

- Open the existing 10' by 7' openings that separate the floors 1T, 3T, and 4T in the north-east corner to provide direct access to the mechanical room. Save all wood framing and materials for reuse.
- Remove 10' by 7' section of 4T roof located at the north-east veranda immediately above the existing opening located in the floors of 3T and 4T.
- Remove existing AC-7; including chilled water coils, steam coils, humidifier, fan, and AHU casing.
- Remove existing return fan for AC-7.
- Remove existing pipe as required for removal of AC-7.
- Remove three existing dampers associated with AC-7 (outside air, return air, and relief air dampers).
- Remove three existing "VAV" dampers in the supply ducts for AC-7.
- Remove existing supply and return ducts as required to remove AC-7 and the existing return fan.
- Existing intake and exhaust duct and louvers shall remain for reuse.
- Disconnect and remove two VFDs, one for AC-7 supply fan and one for AC-7 return fan.
- Reinstall wood framing and opening covering for 10' by 7' openings located on 3T and 4T with materials saved during removal.
- Restore 10' by 7' section of 4T veranda immediately above 3T and 4T opening, patch and seal to match the surrounding construction.
- Patch and paint area immediately surrounding new stats to match the existing finish immediately adjacent to the new thermostat.
- Install one new 100% OA DOAS AHU.
- Install one new exhaust fan.
- For duct serving the Book-drop area (approximately 600 cfm):
 - Install one new duct mounted chilled water coil.
 - Install one new duct mounted steam reheat coil.
- Insulate all newly installed pipes, ducts and any pipe or duct where insulation was removed to tie in the new work. Piping or duct not previously insulated or where insulation was removed solely for hazardous material abatement is not included.
- Provide wiring and connection for two new VFDs, one for AC-7 supply fan and one for AC-7 return fan.
- Electrical contractor shall field verify and modify existing electrical service as required to accommodate newly installed equipment.

Owner shall be responsible for:

- Any and all hazardous materials abatement prior to installation of any components as required.

ECM-12a-MCL – Central Library Interior Lighting Retrofits

This measure proposes upgrading the existing interior lighting to LED sources. Retrofits will be completed only where identified in Attachment 5 and only for fixtures that are currently in-use and have lamps installed.

This lighting scope includes the retrofit of existing fixtures as described in Attachment 5; complete new lighting fixtures are not included for any area of the library, except for within the third floor hallways adjacent to the rotunda, where nine (9) existing fluorescent strip fixtures are to be replaced with a new LED strip fixture, final fixture to be approved by the Customer. This scope of work excludes all areas identified for new ceilings (listed in Attachment 5 as "NR" for no retrofit), where neither retrofits nor new fixtures are anticipated (areas outlined in red on the floor plans included in Attachment 5). Additionally, occupancy sensors will only be installed where indicated, in the quantity indicated, in Attachment 5, as listed under "Sensor Description", "Sensor Type", and "Qty of Sensors/(C)ontrolled".

Emergency and egress lighting at the Central Library is not included in this ECM due to a separately contracted egress study currently in progress by MPL and their consultants.

Subcontracted Installation Scope:

Lighting Scope (labor and all materials listed below include all electrical power wiring and any general contracting work required for a complete scope of work)

- Mock-up of the following fixtures for approval:

Schedule 1

- Rotunda Area Wall Sconce – One (1) 6-lamp decorative wall sconce to be relamped with LED screw-in lamps.
- Hallway Area Décor Pendant – One (1) 5-lamp decorative chandelier fixture to be relamped with LED screw-in lamps.
- Grand Staircase Décor fixture – One (1) 6-lamp pedestal decor fixture to be relamped with LED screw-in lamps. This scope included mock-up of only one (1) side of the staircase to allow a side-by-side review of pre- and post-retrofit lighting.
- Décor Pendant Metal Halide fixture – One (1) 1-lamp décor fixture location with the proposed relamp scope of work.
- Recessed can fixture – Two (2) to Four (4) 1-lamp recessed can retrofit utilizing the proposed Green Creative Recessed Can Retrofit product.
- Trustee Conference Room – Two (2) fixtures to be relamped utilizing the proposed lamp and driver retrofit.
- Retrofits of the interior lighting fixtures identified in Attachment 5 including:
 - Re-lamp of Historic Décor Lighting Fixtures with LED comparable lamps.
 - Incandescent and Compact Fluorescent screw in lamps to be re-lamped with LED comparable lamps.
 - Linear fluorescent lighting fixtures to be retrofitted with LED tube and external driver.
 - Recess Can fixtures to be replaced with LED replacement kits.
- Hardwired Occupancy Sensor controls installed in select areas identified in Attachment 5.

Owner shall be responsible for:

- Any and all hazardous materials abatement prior to installation of any components as required.
- Removal or relocation of owner shelving, furniture, or other owner property identified as necessary to facilitate installation of lighting retrofits.

ECM-12b-MCL – Central Library Exterior Lighting Retrofits

This measure proposes upgrading the existing non-LED exterior lighting to LED sources. Retrofits will be completed only where identified in Attachment 5 and only for fixtures that are currently in-use and have lamps installed. Fixtures converted to LED sources as part of prior retrofit project(s) are **excluded** from the scope of work.

Subcontracted Installation Scope:

Lighting Scope (labor and all materials listed below include all electrical power wiring and any general contracting work required for a complete scope of work)

- Retrofits of the exterior lighting fixtures identified in Attachment 5.

Owner shall be responsible for:

- Any and all hazardous materials abatement prior to installation of any components as required.
- Removal or relocation of owner shelving, furniture, or other owner property identified as necessary to facilitate installation of lighting retrofits.

ECM-12c-MCL – Central Library Lighting Control Panel Upgrades

This measure proposes installation of twelve (12) new lighting control panels serving areas where lighting is currently controlled solely by electric panel circuit breakers.

Lighting control panel upgrades will be provided only for areas where lighting is undergoing retrofit as described in ECM-12a-MCL. This scope of work **excludes** the nine (9) lighting control panels estimated to replace electric panel circuit breaker control for lighting in all areas identified for new ceilings (areas outlined in red on the floor plans included in Attachment 5).

Subcontracted Installation Scope:

Lighting Scope (labor and all materials listed below include all electrical power wiring and any general contracting work required for a complete scope of work)

- Installation of twelve (12) lighting control panels.
- Rewiring from existing electric power to new lighting control panels.
- Drywall patching and painting around new lighting control panels to match existing conditions.

JCI Controls Scope (JCI and electrical controls labor and material listed below)

- Connect twelve (12) lighting control panels to existing Metasys network (trunk tie-in).
- Programming of all lighting points and graphics of lighting zones.
- Software override for "all on" and "all off" commands to lighting in public spaces.

Owner shall be responsible for:

- Any and all hazardous materials abatement prior to installation of any components as required.
- Removal or relocation of owner shelving, furniture, or other owner property identified as necessary to facilitate installation of new lighting control panels.

ECM-4a-BVL – Bayview Library Interior Lighting Retrofits

This measure proposes upgrading the existing interior lighting to LED sources. Retrofits will be completed only where identified below and only for fixtures that are currently in-use and have lamps installed.

All emergency and egress lighting will remain on the current emergency power source; an inverter has **not** been included in the scope of work for this ECM.

Subcontracted Installation Scope:

Lighting Scope (labor and all materials listed below include all electrical power wiring and any general contracting work required for a complete scope of work)

- Mock-up of the following fixtures for approval:
 - Main Library Space HID Uplighting Flood Lights – Two (2) 1-lamp HID flood lights to be replaced with LED flood lights.
- Retrofits of the interior lighting fixtures identified in Attachment 5 including:
 - Replacement of Metal Halide uplighting floods with LED uplighting with integral controls for daylight and occupancy.
 - Incandescent and Compact Fluorescent screw in lamps to be re-lamped with LED comparable lamps.
 - Linear fluorescent lighting fixtures to be retrofitted with LED tube and external driver.
 - Recess Can fixtures to be replaced with LED replacement kits.
- Hardwired Occupancy Sensor controls installed in select areas identified in Attachment 5.

JCI Controls Scope (JCI and electrical controls labor and material listed below)

- Connect existing panel controls for interior and exterior lighting above to existing Metasys network (trunk tie-in).
- Programming of all lighting points and graphics of lighting zones.
- Software override for "all on" and "all off" commands to lighting in public spaces.

Owner shall be responsible for:

- Any and all hazardous materials abatement prior to installation of any components as required.
- Removal or relocation of owner shelving, furniture, or other owner property identified as necessary to facilitate installation of lighting retrofits.

ECM-4b-BVL – Bayview Library Exterior Lighting Retrofits

This measure proposes upgrading the existing non-LED exterior lighting to LED sources. Retrofits will be completed only where identified below and only for fixtures that are currently in-use and have lamps installed. Fixtures converted to LED sources as part of prior retrofit project(s) are excluded from the scope of work.

Subcontracted Installation Scope:

Lighting Scope (labor and all materials listed below include all electrical power wiring and any general contracting work required for a complete scope of work)

- Retrofits of the exterior lighting fixtures identified in Attachment 5.

Owner shall be responsible for:

- Any and all hazardous materials abatement prior to installation of any components as required.
- Removal or relocation of owner shelving, furniture, or other owner property identified as necessary to facilitate installation of lighting retrofits.

ECM-99 – All Sites and ECMs – Third Party Commissioning

The above ECMs will undergo third-party commissioning through a provider identified and contracted by JCI from a list of Customer-approved providers. The Customer representative(s) may participate in any or all scope identified below. Commissioning will include the following:

Third-party Commissioning Agent Scope

- Attend one (1) pre-construction meeting to review commissioning requirements with all involved subcontractors.
- Provide commissioning specifications for HVAC equipment, lighting, and controls to be commissioned.
- Attend two (2) commissioning meetings during the project duration.
- Verify installation of all ECMs was complete as per scope
 - Check approved HVAC equipment, lighting, and controls were installed
 - Confirm completion of HVAC equipment start-up and confirm burn-in of lighting (lamps and ballasts) for 100 hours; identify any problems
 - Verify lighting luminaire aiming and complete a visual inspection for lighting operating problems
- Complete on-site Functional Performance Testing for HVAC equipment, lighting, and controls being commissioned. Sampling rates, if applied, will be consistent with industry standard statistical sampling approaches.
 - Functional Performance Testing for HVAC equipment and HVAC controls will include exercising the equipment through the sequence of operation and verifying correct response and performance.
 - Functional Performance Testing for lighting and lighting controls will include:
 - Measuring light levels
 - Operational tie in check with new BAS controls or local switching and system on/off scheduling
 - Operation check related to occupancy sensors, daylight harvesting, dimming sequence
- Provide functional performance testing documentation and a Final Commissioning Report.

ASSURED PERFORMANCE GUARANTEE

I. PROJECT BENEFITS

A. Certain Definitions. For purposes of this Agreement, the following terms have the meanings set forth below:

Annual Project Benefits are the portion of the projected Total Project Benefits to be achieved in any one year of the Guarantee Term.

Annual Project Benefits Realized are the Project Benefits actually realized for any one year of the Guarantee Term.

Annual Project Benefits Shortfall is the amount by which the Annual Project Benefits exceed the Annual Project Benefits Realized in any one year of the Guarantee Term.

Annual Project Benefits Surplus is the amount by which the Annual Project Benefits Realized exceed the Annual Project Benefits in any one year of the Guarantee Term.

Baseline is the mutually agreed upon data and/or usage amounts that reflect conditions prior to the installation of the Improvement Measures as set forth in Section IV below.

Guarantee Term will commence on the first day of the month next following the Substantial Completion date and will continue through the duration of the M&V Services, subject to earlier termination as provided in this Agreement.

Installation Period is the period beginning on JCI's receipt of Customer's Notice to Proceed and ending on the commencement of the Guarantee Term.

Measured Project Benefits are the utility savings and cost avoidance calculated in accordance with the methodologies set forth in Section III below.

Non-Measured Project Benefits are identified in Section II below. The Non-Measured Project Benefits have been agreed to by Customer and will be deemed achieved in accordance with the schedule set forth in the Total Project Benefits table below. Customer and JCI agree that: (i) the Non-Measured Project Benefits may include, but are not limited to, future capital and operational costs avoided as a result of the Work and implementation of the Improvement Measures, (ii) achievement of the Non-Measured Project Benefits is outside of JCI's control, and (iii) Customer has evaluated sufficient information to conclude that the Non-Measured Project Benefits will occur and bears sole responsibility for ensuring that the Non-Measured Project Benefits will be realized. Accordingly, the Non-Measured Project Benefits shall not be measured or monitored by JCI at any time during the Guarantee Term, but rather shall be deemed achieved in accordance with the schedule set forth in the Total Project Benefits table below.

Project Benefits are the Measured Project Benefits plus the Non-Measured Project Benefits to be achieved for a particular period during the term of this Agreement.

Total Project Benefits are the projected Project Benefits to be achieved during the entire term of this Agreement.

B. Project Benefits Summary. Subject to the terms and conditions of this Agreement, JCI and Customer agree that Customer will be deemed to achieve a total of \$995,195 in Non-Measured Project Benefits and JCI guarantees that Customer will achieve a total of \$2,662,516 in Measured Project Benefits during the term of this Agreement, for Total Project Benefits of \$3,657,711, as set forth in the Total Project Benefits table below.

Total Project Benefits

Year	Utility Cost Avoidance*	Operations & Maintenance Cost Avoidance**	Focus on Energy Incentive Benefit***	Future Capital Cost Avoidance**	Annual Project Benefits
1	\$ 101,633	\$ 21,893	\$ 33,253	\$ 430,000	\$ 586,779
2	\$ 104,428	\$ 22,331	\$ -	\$ -	\$ 126,759
3	\$ 107,299	\$ 22,777	\$ -	\$ -	\$ 130,077
4	\$ 110,250	\$ 23,233	\$ -	\$ -	\$ 133,483
5	\$ 113,282	\$ 23,698	\$ -	\$ -	\$ 136,980
6	\$ 116,397	\$ 24,172	\$ -	\$ -	\$ 140,569
7	\$ 119,598	\$ 24,655	\$ -	\$ -	\$ 144,253
8	\$ 122,887	\$ 25,148	\$ -	\$ -	\$ 148,035
9	\$ 126,267	\$ 25,651	\$ -	\$ -	\$ 151,918
10	\$ 129,739	\$ 26,164	\$ -	\$ -	\$ 155,903
11	\$ 133,307	\$ 26,687	\$ -	\$ -	\$ 159,994
12	\$ 136,973	\$ 27,221	\$ -	\$ -	\$ 164,194
13	\$ 140,739	\$ 27,766	\$ -	\$ -	\$ 168,505
14	\$ 144,610	\$ 28,321	\$ -	\$ -	\$ 172,931
15	\$ 148,587	\$ 28,887	\$ -	\$ -	\$ 177,474
16	\$ 152,673	\$ 29,465	\$ -	\$ -	\$ 182,138
17	\$ 156,871	\$ 30,054	\$ -	\$ -	\$ 186,926
18	\$ 161,185	\$ 30,655	\$ -	\$ -	\$ 191,841
19	\$ 165,618	\$ 31,269	\$ -	\$ -	\$ 196,886
20	\$ 170,172	\$ 31,894	\$ -	\$ -	\$ 202,066
Total	\$ 2,662,516	\$ 531,942	\$ 33,253	\$ 430,000	\$ 3,657,711

*Utility Cost Avoidance is a Measured Project Benefit. Utility Cost Avoidance figures in the table above are based on anticipated increases in unit energy costs as set forth in the table in Section IV below.

** Operations & Maintenance Cost Avoidance and Future Capital Cost Avoidance are Non-Measured Project Benefits. Operations & Maintenance Cost Avoidance and Future Capital Cost Avoidance figures in the table above are based on a mutually agreed fixed annual escalation rate of two percent (2.0%).

*** Focus on Energy Incentive Benefits are estimated based on funding formulas current at the time of development but are not part of the financial guarantee. Focus on Energy Incentive Benefits are a one-time rebate anticipated to occur during Year 1 of the Project Benefits Term.

Within sixty (60) days of the commencement of the Guarantee Term, JCI will calculate the Measured Project Benefits achieved during the Installation Period plus any Non-Measured Project Benefits applicable to such period and advise Customer of same. Any Project Benefits achieved during the Installation Period may, at the Customer's discretion, be allocated to the Annual Project Benefits for the first year of the Guarantee Term. Within sixty (60) days of each anniversary of the commencement of the Guarantee Term, JCI will calculate the Measured Project Benefits achieved for the applicable year plus any Non-Measured Project Benefits applicable to such period and advise Customer of same.

Customer acknowledges and agrees that if, for any reason, it (i) cancels or terminates receipt of M&V Services, (ii) fails to pay for M&V Services in accordance with Schedule 4, (iii) fails to fulfill any of its responsibilities necessary to enable JCI to complete the Work and provide the M&V Services, or (iv) otherwise cancels, terminates or materially breaches this Agreement, the Assured Performance Guarantee shall automatically terminate and JCI shall have no liability hereunder.

C. Project Benefits Shortfalls or Surpluses.

- (i) Project Benefits Shortfalls. If an Annual Project Benefits Shortfall occurs for any one year of the Guarantee Term, JCI shall provide the amount of the Annual Project Benefits Shortfall to Customer via any combination of the following, (a) set off the amount of such shortfall against any unpaid balance Customer then owes to JCI, (b) pay to Customer the amount of such shortfall, or (c) subject to Customer's agreement, provide to Customer additional products or services, in the value of such shortfall, at no additional cost to Customer.
- (ii) Project Benefits Surpluses. If there is an Annual Project Benefits Surplus in respect of a year, Customer shall be entitled to retain the benefit of such surplus, except any surplus achieved during the Installation Period, to the extent such Annual Project Benefits Surplus was not applied to reduce any other Annual Project Benefits Shortfall.
- (iii) Additional Improvements. Where an Annual Project Benefits Shortfall has occurred, JCI may, subject to Customer's approval (which approval shall not be unreasonably withheld, conditioned, or delayed), implement additional Improvement Measures, at no cost to Customer, which may generate additional Project Benefits in future years of the Guarantee Term.

II. NON-MEASURED PROJECT BENEFITS

The Project Benefits identified below were derived using engineering calculations based on industry standards and data provided by the Customer. These Project Benefits shall be Non-Measured Project Benefits (as defined above).

The parties acknowledge that Customer's capital contribution of \$430,000, to be paid in full to JCI during the construction period, shall result in the receipt by Customer of certain "Capital Cost Avoidance" benefits, which benefits are Non-Measured Project Benefits, as set forth below. It is understood between the Parties that (a) any equipment included in the Work for which capital outlay funds have been allocated for replacement are included in such Capital Cost Avoidance benefits; (b) equipment to be replaced pursuant to this Project that is at or near the end of its useful life is included in Capital Cost Avoidance benefits even if not budgeted, and Owner stipulates that for such equipment, failure and replacement is imminent within the Guaranty Term; and (c) Project Benefits allocable to Capital Cost Avoidance shall be the amortized cost of the equipment being replaced over the desired period, which must be no longer than the useful life of the equipment or the Guaranty Term (calculated as total installed cost / number of years).

The information in this section summarizes the Non-Measured Project Benefits. The details on the calculations and other supporting material are provided in the Investment Grade Audit report.

Non-Measured Project Benefits

Year	Non-Measured Utility Benefits	Non-Measured Operational Benefits	Focus on Energy Incentive Benefits	Future Capital Cost Avoidance	Annual Non-Measured Project Benefits
1	\$ -	\$ 21,893	\$ 33,253	\$ 430,000	\$ 485,146
2	\$ -	\$ 22,331	\$ -	\$ -	\$ 22,331
3	\$ -	\$ 22,777	\$ -	\$ -	\$ 22,777
4	\$ -	\$ 23,233	\$ -	\$ -	\$ 23,233
5	\$ -	\$ 23,698	\$ -	\$ -	\$ 23,698
6	\$ -	\$ 24,172	\$ -	\$ -	\$ 24,172
7	\$ -	\$ 24,655	\$ -	\$ -	\$ 24,655
8	\$ -	\$ 25,148	\$ -	\$ -	\$ 25,148
9	\$ -	\$ 25,651	\$ -	\$ -	\$ 25,651
10	\$ -	\$ 26,164	\$ -	\$ -	\$ 26,164
11	\$ -	\$ 26,687	\$ -	\$ -	\$ 26,687
12	\$ -	\$ 27,221	\$ -	\$ -	\$ 27,221
13	\$ -	\$ 27,766	\$ -	\$ -	\$ 27,766
14	\$ -	\$ 28,321	\$ -	\$ -	\$ 28,321
15	\$ -	\$ 28,887	\$ -	\$ -	\$ 28,887
16	\$ -	\$ 29,465	\$ -	\$ -	\$ 29,465
17	\$ -	\$ 30,054	\$ -	\$ -	\$ 30,054
18	\$ -	\$ 30,655	\$ -	\$ -	\$ 30,655
19	\$ -	\$ 31,269	\$ -	\$ -	\$ 31,269
20	\$ -	\$ 31,894	\$ -	\$ -	\$ 31,894

In the table above, each column before Annual Non-Measured Project Benefits contains rounded amounts.

Non-Measured Utility Benefits	ECM	Year 1 Benefits	Escalation
None	None	\$ -	0%

Schedule 2

Total Non-Measured Utility Benefits =		\$ -	
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Non-Measured Operational Benefits	ECM	Year 1 Benefits	Escalation
The Non-Measured Operational Benefits of ECM-1-MCL are a result of Operational Subcontracted Maintenance Costs avoided due to the new chiller	ECM-1-MCL	\$ 15,000	2.00%
The Non-Measured Operational Benefits of ECM-12a-MCL are the result of Operational Material Savings due to Lighting Replacement	ECM-12a-MCL	\$ 6,259	2.00%
The Non-Measured Operational Benefits of ECM-12b-MCL are the result of Operational Material Savings due to Lighting Replacement	ECM-12b-MCL	\$ 6	2.00%
The Non-Measured Operational Benefits of ECM-4a-BVL are the result of Operational Material Savings due to Lighting Replacement	ECM-4a-BVL	\$ 611	2.00%
The Non-Measured Operational Benefits of ECM-4b-BVL are the result of Operational Material Savings due to Lighting Replacement	ECM-4b-BVL	\$ 17	2.00%
Total Non-Measured Operational Benefits =		\$ 21,893	

Focus on Energy Incentive Benefits	ECM	Year 1 Benefits	Escalation
The Focus on Energy Incentive Benefit is the result of lighting energy savings	ECM-12a-MCL	\$ 29,537	0%
The Focus on Energy Incentive Benefit is the result of lighting energy savings	ECM-4a-BVL	\$ 3,716	0%
Total Non-Measured Demand Response Benefits =		\$ 33,253	

The Non-measured Project Benefits described in the table above run for the entire performance period. Details on data and associated calculations are presented in the final audit report used to develop the project. Focus on Energy Incentive Benefits are estimated based on funding formulas current at the time of development but are not part of the financial guarantee. Focus on Energy Incentive Benefits are a one-time rebate anticipated to occur during Year 1 of the Project Benefits Term.

Post-installation, the proposed efficiency rating in scope of work will be compared with the ECMs As-built documentation to confirm actual units installed. The achieved non-measured benefits will be adjusted one-time only and documented in the Post-Installation Report if proposed unit efficiency does not meet or exceed efficiency listed in scope of work.

Customer agrees that the Non-Measured Project Benefits are reasonable and that the installation of the Improvement Measures will enable Customer to take actions that will result in the achievement of such Non-Measured Project Benefits.

III. MEASUREMENT AND VERIFICATION METHODOLOGIES

The following is a brief overview of the measurement and verification methodologies applicable to the Improvement Measures set forth below. JCI shall apply these methodologies, as more fully detailed in the guidelines and standards of the International Measurement and Verification Protocol (IPMVP) and/or the Federal Energy Management Program (FEMP), in connection with the provision of M&V Services hereunder.

A. Measured Project Benefits Summary. The information in this section summarizes the estimated Measured Project Benefits. The calculation of the Measured Project Benefits is based on the energy consumption and demand savings projected for each measure individually, but are not individually guaranteed and are not individually severable. All values reported below are estimated for Year 1 of the Project Benefits Term.

		Energy						Total Annual Utility Savings	
		Electric Consumption		Natural Gas		Steam			
		kWh	kBtu	therm	kBtu	klbs	kBtu	kBtu (site)	kBtu (source)
ECM-1-MCL	Dollars	\$ 21,817		\$ -		\$ -		\$ 21,817	
	Units	108,110.00	368,871.32	-	-	-	-	368,871.32	1,032,839.70
ECM-3-MCL	Dollars	\$ 5,014		\$ -		\$ 6,245		\$ 11,259	
	Units	31,255.00	106,642.06	-	-	558.00	666,252.00	772,894.06	1,098,100.17
ECM-12a-MCL	Dollars	\$ 60,895		\$ -		\$ -		\$ 60,895	
	Units	541,972.00	1,849,208.46	-	-	-	-	1,849,208.46	5,177,783.70
ECM-12b-MCL	Dollars	\$ 109		\$ -		\$ -		\$ 109	
	Units	1,767.00	6,029.00	-	-	-	-	6,029.00	16,881.21
ECM-12c-MCL	Dollars	\$ -		\$ -		\$ -		\$ -	
	Units	-	-	-	-	-	-	-	-
ECM-4a-BVL	Dollars	\$ 7,312		\$ -		\$ -		\$ 7,312	
	Units	68,656.00	234,254.27	-	-	-	-	234,254.27	655,911.96
ECM-4b-BVL	Dollars	\$ 238		\$ -		\$ -		\$ 238	
	Units	2,537.00	8,656.24	-	-	-	-	8,656.24	24,237.48
Total All ECMs	Dollars	\$ 90,371		\$ -		\$ 6,245		\$ 101,630	
	Units	754,297.00	2,573,661.36	-	-	558.00	666,252.00	3,239,913.36	8,005,754.22

The calculated benefits are based on the following conversion factors as well as the agreed upon utility rates described in this Schedule 2. This table is provided for information only and is not guaranteed. Note that the conversion from kBtu (site) to kBtu (source) is subject to update by the U.S. Environmental Protection Agency on an annual basis.

Fuel	Base Units	Conversion factor to kBtu	Conversion from kBtu (site) to kBtu (source)
Electricity (Grid)	kWh	3.412	2.80
Electricity (On-site Renewable)	kWh	3.412	1.00
Natural Gas	Therm	100	1.05
District Steam	kLbs	1,194	1.20

B. General M&V Methods. The following is a brief overview of the measurement and verification methodologies applicable to the Improvement Measures set forth below. JCI shall apply these methodologies, as more fully detailed in the guidelines and standards of the International Measurement and Verification Protocol (IPMVP) and/or the Federal Energy Management Program (FEMP), in connection with the provision of M&V Services hereunder.

The following table summarizes the M&V method applied by ECM.

Facility	ECM Number	ECM Name	M&V Method	
			Year 1-3	Year 4+
Central Library	ECM-1-MCL	Central Library Replace and Upgrade Chilled Water Plant with Mag-Lev Chiller	Option C	None
	ECM-3-MCL	Central Library Convert Existing AC-7 from CAV to DOAS	Option C	None
	ECM-12a-MCL	Central Library Interior Lighting Retrofits	Option C	None
	ECM-12b-MCL	Central Library Exterior Lighting Retrofits	Option C	None
	ECM-12c-MCL	Central Library Lighting Control Panel Upgrades	Option C	None
Bayview Library	ECM-4a-BVL	Bayview Library Interior Lighting Retrofits	Option A	None
	ECM-4b-BVL	Bayview Library Exterior Lighting Retrofits	Option A	None

Option A Partially Measured Retrofit Isolation

Measured Project Benefits are determined by partial field measurement of the energy use of the system(s) to which an Improvement Measure was applied separate from the energy use of the rest of the facility. Measurements will be short-term with only one-time measurements before and after the Installation Period.

Partial measurement means that some but not all parameters will be measured. Careful review of the design and installation of Improvement Measures is intended to demonstrate that the stipulated values fairly represent the probable actual values. Agreed-upon values will be shown in the measurement and verification plan, along with analysis of the significance of the error they may introduce. Engineering calculations using short-term pre and post-retrofit measurements and stipulations are used to calculate Measured Project Benefits for the duration of the Guarantee Term.

Measured Project Benefits from the following Improvement Measures will be calculated using Option A:

ECM Number	ECM Name
ECM-4a-BVL	Bayview Library Interior Lighting Retrofits
ECM-4b-BVL	Bayview Library Exterior Lighting Retrofits

Lighting Improvements – ECM 4a-BVL, & 4b-BVL

The savings for this ECM are generated through a reduction in energy used by the lighting system; therefore the measurement boundary is the lighting system itself.

The existing power draw will be measured using a true RMS meter. The pre and post sample plan will adhere to the 80/20 guidelines. Fixtures with similar lamps and ballasts, counts and types, will be grouped together with a lamp/ballast code. Measured wattages will be used where collected. In some situations, such as when a certain type of lighting fixture is not available by itself on a switch, typical wattages as published by ANSI (American National Standards Institute) will be used. These values will be measured only once prior to retrofit.

Expected Pre Retrofit Sample Plan

Pre-Construction Component Code	Pre-Construction Population	Existing System kW	Projected kWh Savings	Percentage of Connected Load	Percentage of Saving Contribution	Population Sample Size for Coefficient of Variation: 0.5	Minimum Required Fixture Samples
2X32T8EBN	2290	132.82	98,165.6	24%	15%	11	11
4X32T8EBN	397	44.46	69,082.0	8%	11%	11	11
3X32T8EBN	563	50.11	65,345.0	9%	10%	11	11
1X13CFLSI	3453	44.89	61,349.2	8%	9%	11	11
2X400MH	24	21.98	45,937.9	4%	7%	8	8
1X32T8EBN	1752	54.31	39,606.1	10%	6%	11	11
1X250MH	42	12.39	21,908.1	2%	3%	9	9
12X42CFL4P	16	8.93	21,226.8	2%	3%	7	7
2X34T12MB	160	11.52	18,579.3	2%	3%	11	11
2X60T12HOM B	75	10.88	18,173.7	2%	3%	10	10
1X50HAL	106	5.30	12,391.4	1%	2%	10	10
9X32T8EBN3	30	7.62	10,877.1	1%	2%	9	9
4X42CFL4P	31	5.77	10,778.7	1%	2%	9	9
6X32T8EBN2	57	9.69	10,340.7	2%	2%	10	10
1X75HAL	56	4.20	10,193.0	1%	2%	10	10
4X65HAL	13	3.38	10,060.6	1%	2%	6	6
4X32T8EBN2	60	6.96	8,595.2	1%	1%	10	10
1X26CFLSI	131	3.41	7,591.8	1%	1%	11	11
1X150HAL	22	3.30	7,549.4	1%	1%	8	8
4X34T12MB2	25	3.60	6,312.8	1%	1%	8	8
1X60INCA	211	12.66	6,243.3	2%	1%	11	11

Expected Post Retrofit Sample Plan

Schedule 2

Post-Construction Component Code	Post-Construction Population	Proposed System kW	Projected kWh Savings	Percentage of Connected Load	Percentage of Savings Contribution	Population Sample Size for Coefficient of Variation: 0.5	Minimum Required Fixture Samples
4XLEDT4FT-DR-STD	522	27.14	98,615.4	8%	15%	11	11
2XLEDT4FT-DR-STD	871	22.65	87,682.4	7%	13%	11	11
1X6LEDSI	3502	21.01	76,100.0	6%	12%	11	11
1X319LEDF-UP	25	7.98	45,474.1	2%	7%	8	8
3XLEDT4FT-DR-STD	312	12.17	45,387.4	4%	7%	11	11
2XLEDT4FT-HO-DR-STD	320	10.56	25,249.6	3%	4%	11	11
1X37LEDF-RETRO	155	5.74	25,179.7	2%	4%	11	11
1XLEDT4FT-DR-STD	381	4.95	23,985.4	2%	4%	11	11
12X8.5LED4P	16	2.02	21,226.8	1%	3%	7	7
1XLEDT4FT-HO-DR-STD	434	7.38	19,784.5	2%	3%	11	11
1X9LEDSI	200	1.80	19,362.8	1%	3%	11	11
1X45LED HID	23	1.04	18,867.5	0%	3%	8	8
1X6 LED-MR16	96	0.58	12,391.4	0%	2%	10	10
9XLEDT4FT-DR-STD	30	4.32	10,877.1	1%	2%	9	9
1X25LEDF-6RC	176	4.58	10,876.8	1%	2%	11	11
4X8.5LED4P	31	1.30	10,778.7	0%	2%	9	9
1X17LED PAR38	49	0.83	10,711.9	0%	2%	9	9

The lighting system annual run hours by space type are agreed to be as shown in the table below. These run hours are based on schedules and sample loggers used during the audit phase. These values are considered non-measured and agreed upon by the Customer.

Include (Yes/No)	All Areas Usage Group Code	Description	Existing Burn Hours Assigned	Proposed Controlled Burn Hours
Yes	E	Exterior	4380	4380
Yes	X	Exit Signs	8760	8760

Schedule 2

Include (Yes/No)	All Areas Usage Group Code	Description	Existing Burn Hours Assigned	Proposed Controlled Burn Hours
No	VEND	Vending Machines	8760	6132
Yes	AU	Auditorium/Stage	4038	2827
Yes	BR	Break room	1205	603
No	CL	Classroom	4038	2827
Yes	CR	Conference Room	1000	500
No	CT	Court Room/Trial Areas	4038	2827
Yes	GA	Garage/Parking Decks	4038	2827
No	GYM	Gymnasium	4038	2827
Yes	HW	Hallway	3432	1716
Yes	KT	Kitchen	1385	693
No	LAB	Laboratory	4038	2827
Yes	LO	Lobby/Entry Vestibule	4038	2827
No	LI	Library	4038	2827
No	LQ	Living Quarters/Bunk Rooms	4038	2827
No	LR	Locker Room	4038	2827
Yes	ME	Mechanical/Electrical Rooms	2493	1745
Yes	MP	Multipurpose	4038	2827
Yes	OO	Open Office	2850	2280
No	OS	Office Support (copy room, coffee room, etc)	4038	2827
Yes	PO	Private Office	2493	1745
No	PR	Patient Room	4038	2827
Yes	RR	Restroom	1500	375
Yes	RT	Retail	4038	2827
Yes	ST	Storage	2493	1745
No	WH	Warehouse	4038	2827
Yes	UT	Utility/Janitor Closets	2493	1246
Yes	WS	Workshop	4038	2827
Yes	SW	Stairwell	4038	2827
Yes	CF	Cafeteria	4038	2827
Yes	LIB	Library Public Space	3071	2150
Yes	EMG	Emergency Lighting	8760	6132
Yes	24/7	Night Light	8760	6132
Yes	LOL	Lobby - Low Use	2493	1745
No	DW		4038	2827
Yes	LIBL	Library Space - low use	2493	1745
Yes	LABL	Lab Space - low use	2493	1745
Yes	STH	Stairwell - High Use	4038	2827
Yes	LOAS	Lobby - Already Sensored	4038	4038
Yes	HWAS	Hallway - Already Sensored	3432	3432
Yes	OOAS	Open Office - Already Sensored	2850	2850

Include (Yes/No)	All Areas Usage Group Code	Description	Existing Burn Hours Assigned	Proposed Controlled Burn Hours
Yes	CRAS	Conference Room - Already Sensored	1000	1000
Yes	LIBAS	Library - Already Sensored	4038	4038
Yes	STAS	Storage - Already Sensored	4038	4038
Yes	RRAS	Restroom - Already Sensored	1500	1500
Yes	POAS	Private Office - Already Sensored	4038	4038
Yes	SWAS	Stairwell - Already Sensored	4038	4038
Yes	UTAS	Utility/Janitor Closets - Already Sensored	2493	2493
Yes	EMG EGRESS	Emergency Egress Lighting	299	299

Equations for Calculating Lighting Retrofit Savings (Option A)

Demand (kW)

$$\text{Connected kW Saving} = \sum_u [(\text{kW/Fixture}_{\text{baseline}} \times \text{Quantity}_{\text{baseline}} - \text{kW/Fixture}_{\text{post}} \times \text{Quantity}_{\text{post}})]_{t,u}$$

where:

$\text{kW/fixture}_{\text{baseline}}$ = lighting baseline demand per fixture for usage group u

$\text{kW/fixture}_{\text{post}}$ = lighting demand per fixture during post-installation period for usage group

$\text{Quantity}_{\text{baseline}}$ = quantity of affected fixtures before the lighting retrofit for usage group u

$\text{Quantity}_{\text{post}}$ = quantity of affected fixtures after the lighting retrofit for usage group u

Examples of usage groups include hallways and offices.

Energy (kWh)

$$\text{kWh Savings}_{\text{Lighting}} = \sum_u [\text{Connected kW Savings}_u \times \text{Hours of Operation}]_{t,u}$$

where:

kW Savings_u = kilowatt savings realized during the post-installation time for usage group u

$\text{Hours of Operation}$ = number of operating hours during the time period t for the usage group u

Option B Retrofit Isolation

Measured Project Benefits are determined by field measurement of the energy use of the systems to which an Improvement Measure was applied separate from the energy use of the rest of the facility. Short-term, long-term or continuous measurements are taken throughout the pre and post-retrofit periods. Engineering calculations using

short term, long-term or continuous pre and post-retrofit measurements are used to calculate the Measured Project Benefits for the duration of the Guarantee Term.

Measured Project Benefits from the following Improvement Measures will be calculated using Option B:

ECM Number	ECM Name
None	None

Option C Whole Facility

Option C involves use of utility meters or whole-building sub-meters to assess the energy performance of a total building. Option C assesses the impact of any type of Improvement Measure, but not individually if more than one is applied to an energy meter. This option determines the collective Measured Project Benefits of all Improvement Measures applied to the part of the facility monitored by the energy meter. Also, since whole building meters are used, Measured Project Benefits reported under Option C include the impact of any other change made in facility energy use (positive or negative).

Measured Project Benefits from the following Improvement Measures will be calculated using Option C:

ECM Number	ECM Name
ECM-1-MCL	Central Library Replace and Upgrade Chilled Water Plant with Mag-Lev Chiller
ECM-3-MCL	Central Library Convert Existing AC-7 from CAV to DOAS
ECM-12a-MCL	Central Library Interior Lighting Retrofits
ECM-12b-MCL	Central Library Exterior Lighting Retrofits
ECM-12c-MCL	Central Library Lighting Control Panel Upgrades

Savings will be proved by using Metrix Utility Accounting System. An example M&V report demonstrating how Metrix Utility Accounting System is used to determine savings is included as Attachment 7. This example report is provided for information purposes only. All M&V reports for this project will reflect the scope of work and performance of the project and facilities described in Schedule 1 and this Schedule 2. Additionally, the results will be inputted into Energy Star Portfolio Manager.

Option D Calibrated Simulation

Option D involves the use of computer simulation software to predict energy use. Such simulation model must be "calibrated" so that it predicts an energy use and demand pattern that reasonably matches actual utility consumption and demand data from either the base-year or a post-retrofit year.

Option D may be used to assess the performance of all Improvement Measures in a facility, akin to Option C. However, different from Option C, multiple runs of the simulation tool in Option D allow estimates of the Measured Project Benefits attributable to each Improvement Measure within a multiple Improvement Measure project.

Option D may also be used to assess just the performance of individual systems within a facility, akin to Options A and B. In this case, the system's energy use must be isolated from that of the rest of the facility by appropriate meters.

Measured Project Benefits from the following Improvement Measures will be calculated using Option D:

ECM Number	ECM Name
None	None

**CHANGES IN USE OR CONDITION; ADJUSTMENT TO BASELINE
AND/OR ANNUAL PROJECT BENEFITS**

Customer agrees to notify JCI, within fourteen (14) days, of (i) any actual or intended change, whether before or during the Guarantee Term, in the use of any facility, equipment, or Improvement Measure to which this Schedule applies; (ii) any proposed or actual expansions or additions to the premises or any building or facility at the premises; (iii) a change to utility services to all or any portion of the premises; or (iv) any other change or condition arising before or during the Guarantee Term that reasonably could be expected to change the amount of Project Benefits realized under this Agreement.

Such a change, expansion, addition, or condition would include, but is not limited to: (a) changes in the primary use of any facility, Improvement Measure, or portion of the premises; (b) changes to the hours of operation of any facility, Improvement Measure, or portion of the premises; (c) changes or modifications to the Improvement Measures or any related equipment; (d) changes to the M&V Services provided under this Agreement; (e) failure of any portion of the premises to meet building codes; (f) changes in utility suppliers, utility rates, method of utility billing, or method of utility purchasing; (g) insufficient or improper maintenance or unsound usage of the Improvement Measures or any related equipment at any facility or portion of the premises (other than by JCI); (h) changes to the Improvement Measures or any related equipment or to any facility or portion of the premises required by building codes or any governmental or quasi-governmental entity; or (i) additions or deletions of Improvement Measures or any related equipment at any facility or portion of the premises.

Such a change or condition need not be identified in the Baseline in order to permit JCI to make an adjustment to the Baseline and/or the Annual Project Benefits. If JCI does not receive the notice within the time period specified above or travels to either Customer's location or the project site to determine the nature and scope of such changes, Customer agrees to pay JCI, in addition to any other amounts due under this Agreement, the applicable hourly consulting rate for the time it took to determine the changes and to make any adjustments and/or corrections to the project as a result of the changes, plus all reasonable and documented out-of-pocket expenses, including travel costs. Upon receipt of such notice, or if JCI independently learns of any such change or condition, JCI shall calculate and send to Customer a notice of adjustment to the Baseline and/or Annual Project Benefits to reflect the impact of such change or condition, and the adjustment shall become effective as of the date the change or condition first arose. Should Customer fail to promptly provide JCI with notice of any such change or condition, JCI may make reasonable estimates as to the impact of such change or condition and as to the date on which such change or condition first arose in calculating the impact of such change or condition, and such estimates shall be conclusive.

IV. BASELINE CALCULATIONS AND UTILITY RATES

The unit utility costs for the Baseline period are set forth below as "Base Utility Cost" and shall be used for all calculations made under this Schedule. The Base Utility Cost shall be escalated annually by the actual utility cost escalation but such escalation shall be no less than the mutually agreed "floor" escalation rate of two and three quarters percent (2.75%).

The calculations for baseline utility costs are further explained below. Baseline Source EUI information has been retrieved from ENERGY STAR Portfolio Manager and is presented for information only. Determination of the conversion factor from kBtu (site) to kBtu (source) are by the U.S. Environmental Protection Agency and are not within JCI's guarantee. Additionally, no baseline natural gas usage has been included for facilities where natural gas consumption will be unaffected by the implemented ECMs.

Baseline (July 2016 to June 2017)		Energy			Total Annual Utility Spend
		Electric Consumption	Natural Gas	Steam	
		kWh	therm	klbs	
Milw Central Public Library (MCL)	Dollars	\$297,681		\$119,812	\$417,493
	Units	2,904,947		9,335	
Bay View Public Library (BVL)	Dollars	\$24,340	\$5,866		\$30,206
	Units	204,320	7,485		
Sites Total	Dollars	\$322,021	\$5,866	\$119,812	\$447,699
	Units	3,109,267	7,485	9,335	

For the Central Library facility, the following additional baseline information has been retrieved from ENERGY STAR Portfolio Manager and is presented for information relative to the M&V responsibilities outlined in this Schedule 2.

2009 Better Buildings Challenge Baseline Year Source kBtu	40,597,443 kBtu
2017 Benefit Term Baseline Year Source kBtu	38,198,387 kBtu
Projected Savings Source kBtu due to all MCL ECMs	7,325,605 kBtu
Projected 2019 Source kBtu	30,192,633 kBtu
Estimated Percent Reduction from 2017 Baseline due to all ECMs	19.2%

The unit utility costs for the Baseline period are set forth below as "Base Utility Cost" and shall be used for all calculations made under this Schedule. The Base Utility Cost for electric, natural gas, and fuel represents the 12 or 24 month average utility costs between June 2017 and June 2018 as described in detail in the following tables.

Rate Summary

Building	Account	Rate Code	Tariff	Unit	Rate
818 W WISCONSIN AVE	8026753497	AG1	Milwaukee	Steam Used (mlbs)	\$11.197480
814 W WISCONSIN AVE	6606872777	FG-1	WGC	Gas Used (therms)	\$0.855000
814 W WISCONSIN AVE	6276451235	FG-1	WGC	Gas Used (therms)	\$0.855000
814 W WISCONSIN AVE	4296319834	CP1, CP1PV	Wisconsin	Standard/ On-Peak Usage Charge	\$0.074150
				Off-Peak Usage Charge	\$0.052810

Schedule 2

Building	Account	Rate Code	Tarriff	Unit	Rate
				On-Peak Demand Charge	\$13.519000
				Customer Demand Charge	\$1.380000
2566 S KINNICKINNIC AVE	6840261981	FG-2	WGC	Gas Used (therms)	\$0.783700
		CG2	Wisconsin	Standard/ On-Peak Usage Charge	\$0.121010
				Off-Peak Usage Charge	\$0.091700
				On-Peak Demand Charge	\$6.860000

Effective Electric Rates used in Calculations

MPL 814 West Wisconsin

Energy

Usage from 6/13/17-6/13/18

on peak	1,413,807	48.7%	\$ 0.0742	\$ 0.0742	\$ 0.0742
off peak	1,491,140	51.3%	\$ 0.0528	\$ 0.0528	\$ 0.0528

2,904,947

Effective kWh rate \$ 0.06320

Demand

Elect Service Distribution

On-Peak Demand Charge	\$ 13.52
Customer Demand Charge	\$ 1.38

2566 S KINNICKINNIC AVE

Energy

Usage from 6/28/17-6/27/18

on peak	115,680	56.6%	\$ 0.0742	\$ 0.1210	\$ 0.1054
off peak	88,640	43.4%	\$ 0.0528	\$ 0.0917	\$ 0.0787

204,320

Effective kWh rate \$ 0.09383

Demand

Elect Service Distribution

On-Peak Demand Charge	\$6.860000
Customer Demand Charge	\$ -

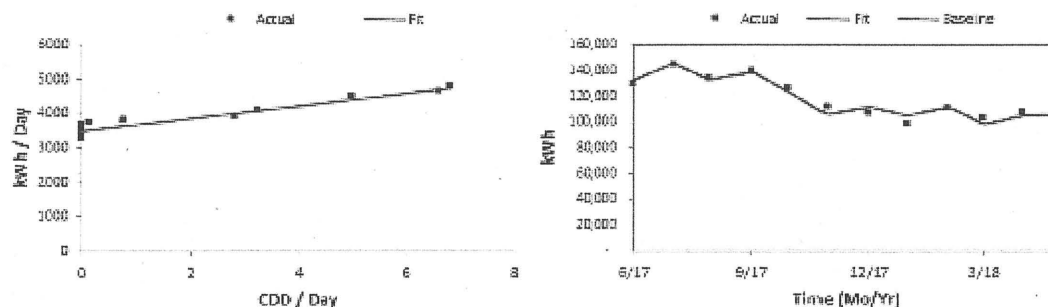
The following is the expected baseline and may be updated for anything found during construction.



Meter Tuning Contract

Project: MPL
Area: Main Library
Account: 4296319834

Site: Site1
Meter: Main-Electric5
Unit: kWh(Qty OnPk)



From	To	# Days	Reading	Incl?	HDD	CDD	Offset	Baseline	Deviation
05/12/17	06/13/17	33	129,055	<input checked="" type="checkbox"/>	0.0	93.0	-	132,474	2.6%
06/14/17	07/14/17	31	143,932	<input checked="" type="checkbox"/>	0.0	204.5	-	145,919	1.4%
07/15/17	08/11/17	28	133,729	<input checked="" type="checkbox"/>	0.0	190.5	-	132,859	-0.7%
08/12/17	09/14/17	34	139,507	<input checked="" type="checkbox"/>	0.0	110.5	-	139,180	-0.2%
09/15/17	10/12/17	28	125,908	<input checked="" type="checkbox"/>	0.0	140.0	-	123,601	-1.8%
10/13/17	11/11/17	30	111,538	<input checked="" type="checkbox"/>	0.0	4.5	-	105,757	-5.2%
11/12/17	12/13/17	32	105,869	<input checked="" type="checkbox"/>	0.0	0.0	-	111,928	5.7%
12/14/17	01/12/18	30	97,660	<input checked="" type="checkbox"/>	0.0	0.0	-	104,933	7.4%
01/13/18	02/13/18	32	109,749	<input checked="" type="checkbox"/>	0.0	0.0	-	111,928	2.0%
02/14/18	03/13/18	28	102,122	<input checked="" type="checkbox"/>	0.0	0.0	-	97,937	-4.1%
03/14/18	04/12/18	30	107,098	<input checked="" type="checkbox"/>	0.0	0.0	-	104,933	-2.0%
04/13/18	05/11/18	29	110,841	<input checked="" type="checkbox"/>	0.0	22.5	-	105,559	-4.8%
Sum/Average/Max		365	1,417,008		0.0	765.5	-	1,417,008	0% +/- 3.6%

Main-Electric5 (Account # 4296319834): Tuning Period is 365 days from 5/12/2017 until 5/11/2018.

Below is the equation used to calculate the Baseline values for the tuning period and all future periods:

$$\text{Baseline (kWh)} = 3497.749 \times \# \text{Days} + 183.3175 \times \text{CDD}$$

The Baseline Equation has a Net Mean Bias of 0% and a Monthly Mean Error of +/-3.6082%. The underlying regression has a $R^2=0.9247$

Baseline Costs are calculated using Average Cost/Consumption.

Explanations and Assumptions:

☐ (empty checkbox) under 'Incl?' indicates that the bill is excluded from the regression. However the Baseline Equation is always applied for all billing periods, even those excluded from the regression.

CDD = Cooling Degree-Days calculated for MILWAUKEE WI for a 65.0 F° balance point.

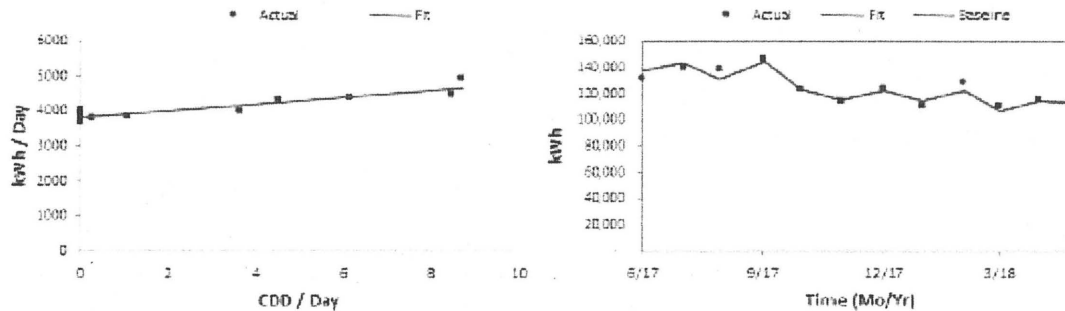
Multiplier is derived from Modification(s) in effect during the tuning period and is replicated annually for all future periods.



Meter Tuning Contract

Project: MPL
Area: Main Library
Account: 4296319834

Site: Site1
Meter: Main-Electric5
Unit: kWh(Qty OffPk)



From	To	# Days	Reading	Incl?	HDD	CDD	Offset	Baseline	Deviation
05/12/17	06/13/17	33	131,352	<input checked="" type="checkbox"/>	0.0	119.5	-	137,612	4.8%
06/14/17	07/14/17	31	138,732	<input checked="" type="checkbox"/>	0.0	262.5	-	143,938	3.8%
07/15/17	08/11/17	28	138,040	<input checked="" type="checkbox"/>	0.0	243.5	0	130,633	-5.4%
08/12/17	09/14/17	34	146,167	<input checked="" type="checkbox"/>	0.0	153.5	-	144,748	-1.0%
09/15/17	10/12/17	28	122,674	<input checked="" type="checkbox"/>	0.0	172.5	-	123,703	0.8%
10/13/17	11/11/17	30	114,378	<input checked="" type="checkbox"/>	0.0	8.5	-	115,327	0.8%
11/12/17	12/13/17	32	123,580	<input checked="" type="checkbox"/>	0.0	0.0	-	122,131	-1.2%
12/14/17	01/12/18	30	110,399	<input checked="" type="checkbox"/>	0.0	0.0	-	114,497	3.7%
01/13/18	02/13/18	32	128,424	<input checked="" type="checkbox"/>	0.0	0.0	-	122,131	-4.9%
02/14/18	03/13/18	28	109,993	<input checked="" type="checkbox"/>	0.0	0.0	-	106,864	-2.8%
03/14/18	04/12/18	30	114,605	<input checked="" type="checkbox"/>	0.0	0.0	-	114,497	-0.1%
04/13/18	05/11/18	29	111,394	<input checked="" type="checkbox"/>	0.0	30.5	-	113,658	2.0%
Sum/Average/Max		365	1,489,738		0.0	990.5	0	1,489,738	0% +/- 3.4%

Main-Electric5 (Account # 4296319834): Tuning Period is 365 days from 5/12/2017 until 5/11/2018.

Below is the equation used to calculate the Baseline values for the tuning period and all future periods:

$$\text{Baseline (kWh)} = 3816.577 \times \text{\#Days} + 97.6148 \times \text{CDD} + \text{Offset}$$

The Baseline Equation has a Net Mean Bias of 0% and a Monthly Mean Error of +/-3.4223%. The underlying regression has a $R^2=0.8517$

Baseline Costs are calculated using Average Cost/Consumption.

Explanations and Assumptions:

☐ (empty checkbox) under 'Incl?' indicates that the bill is excluded from the regression. However the Baseline Equation is always applied for all billing periods, even those excluded from the regression.

CDD = Cooling Degree-Days calculated for MILWAUKEE WI for a 63.0 F° balance point.

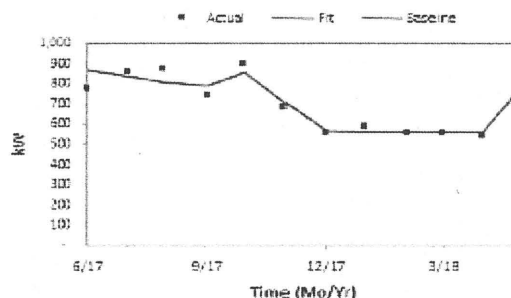
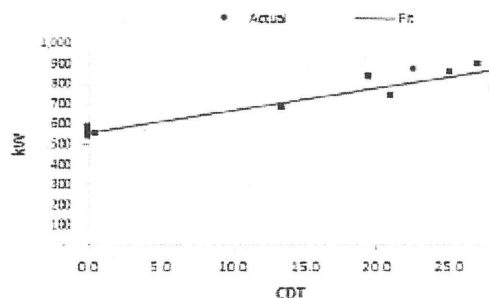
Multiplier and Offset are derived from Modification(s) in effect during the tuning period and are replicated annually for all future periods.



Meter Tuning Contract

Project: MPL
Area: Main Library
Account: 4296319834

Site: Site1
Meter: Main-Electric5
Unit: kW(Dmd OnPk)



From	To	# Days	Reading	Incl?	HDT	CDT	Offset	Baseline	Deviation
05/12/17	06/13/17	33	776	<input checked="" type="checkbox"/>	0.0	28.0	-	868	11.9%
06/14/17	07/14/17	31	856	<input checked="" type="checkbox"/>	0.0	25.0	-	835	-2.5%
07/15/17	08/11/17	28	868	<input checked="" type="checkbox"/>	0.0	22.5	-	807	-6.9%
08/12/17	09/14/17	34	738	<input checked="" type="checkbox"/>	0.0	21.0	-	791	7.2%
09/15/17	10/12/17	28	895	<input checked="" type="checkbox"/>	0.0	27.0	-	857	-4.2%
10/13/17	11/11/17	30	684	<input checked="" type="checkbox"/>	0.0	13.5	-	708	3.5%
11/12/17	12/13/17	32	556	<input checked="" type="checkbox"/>	0.0	0.5	-	564	1.5%
12/14/17	01/12/18	30	587	<input checked="" type="checkbox"/>	0.0	0.0	-	559	-4.9%
01/13/18	02/13/18	32	557	<input checked="" type="checkbox"/>	0.0	0.0	-	559	0.4%
02/14/18	03/13/18	28	554	<input checked="" type="checkbox"/>	0.0	0.0	-	559	0.9%
03/14/18	04/12/18	30	538	<input checked="" type="checkbox"/>	0.0	0.0	-	559	3.8%
04/13/18	05/11/18	29	832	<input checked="" type="checkbox"/>	0.0	19.5	-	774	-7.0%
Sum/Average/Max		365	8,440		0.0	157.0	-	8,440	0% +/- 6.4%

Main-Electric5 (Account # 4296319834): Tuning Period is 365 days from 5/12/2017 until 5/11/2018.

Below is the equation used to calculate the Baseline values for the tuning period and all future periods:

$$\text{Baseline (kW)} = 558.8385 + 11.0467 \times \text{CDT}$$

The Baseline Equation has a Net Mean Bias of 0% and a Monthly Mean Error of +/-6.379%. The underlying regression has a $R^2=0$

Baseline Costs are calculated using Average Cost/Demand, but no less than \$0/ kW.

Explanations and Assumptions:

☐ (empty checkbox) under 'Incl?' indicates that the bill is excluded from the regression. However the Baseline Equation is always applied for all billing periods, even those excluded from the regression.

CDT = Cooling Delta T calculated for MILWAUKEEWI for a 55.0 F° balance point.

CDT was calculated using Maximum Temperatures.

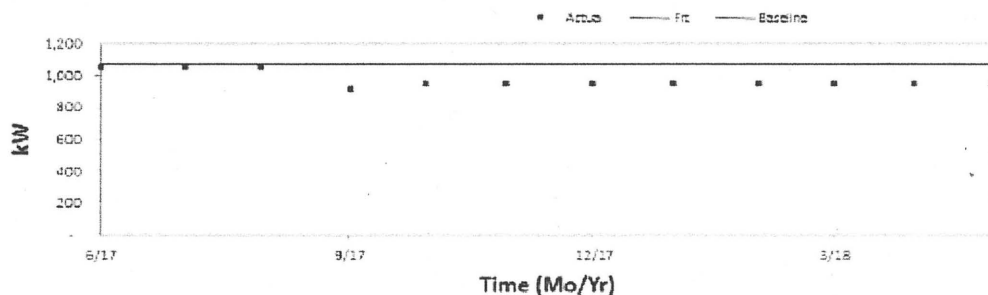
Multiplier is derived from Modification(s) in effect during the tuning period and is replicated annually for all future periods.



Meter Tuning Contract

Project: MPL
Area: Main Library
Account: 4296319834

Site: Site1
Meter: Main-Electric5
Unit: kW(Dmd OffPk)



From	To	# Days	Reading	Incl?	HDT	CDT	Offset	Baseline	Deviation
05/12/17	06/13/17	33	1,042	<input checked="" type="checkbox"/>	0.0	0.0	-	1,075	3.1%
06/14/17	07/14/17	31	1,042	<input checked="" type="checkbox"/>	0.0	0.0	-	1,075	3.1%
07/15/17	08/11/17	28	1,042	<input checked="" type="checkbox"/>	0.0	0.0	-	1,075	3.1%
08/12/17	09/14/17	34	909	<input checked="" type="checkbox"/>	0.0	0.0	-	1,075	18.3%
09/15/17	10/12/17	28	937	<input checked="" type="checkbox"/>	0.0	0.0	-	1,075	14.7%
10/13/17	11/11/17	30	937	<input checked="" type="checkbox"/>	0.0	0.0	-	1,075	14.7%
11/12/17	12/13/17	32	937	<input checked="" type="checkbox"/>	0.0	0.0	-	1,075	14.7%
12/14/17	01/12/18	30	937	<input checked="" type="checkbox"/>	0.0	0.0	-	1,075	14.7%
01/13/18	02/13/18	32	937	<input checked="" type="checkbox"/>	0.0	0.0	-	1,075	14.7%
02/14/18	03/13/18	28	937	<input checked="" type="checkbox"/>	0.0	0.0	-	1,075	14.7%
03/14/18	04/12/18	30	937	<input checked="" type="checkbox"/>	0.0	0.0	-	1,075	14.7%
04/13/18	05/11/18	29	937	<input checked="" type="checkbox"/>	0.0	0.0	-	1,075	14.7%
Sum/Average/Max		365	11,535		0.0	0.0	-	12,900	10.6% +/- 13.4%

Main-Electric5 (Account # 4296319834): Tuning Period is 365 days from 5/12/2017 until 5/11/2018.

Below is the equation used to calculate the Baseline values for the tuning period and all future periods:

$$\text{Baseline (kW)} = 1075$$

The Baseline Equation has a Net Mean Bias of 10.5798% and a Monthly Mean Error of +/-13.3915%. The underlying regression has a $R^2=0$

Baseline Costs are calculated using Average Cost/Demand, but no less than \$0/ kW.

Explanations and Assumptions:

☐ (empty checkbox) under 'Incl?' indicates that the bill is excluded from the regression. However the Baseline Equation is always applied for all billing periods, even those excluded from the regression.

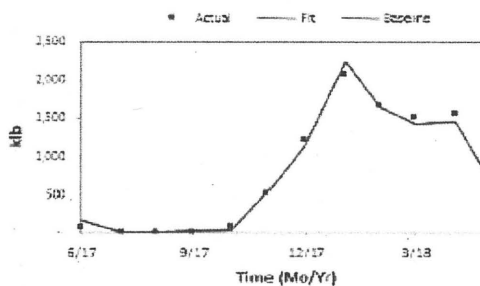
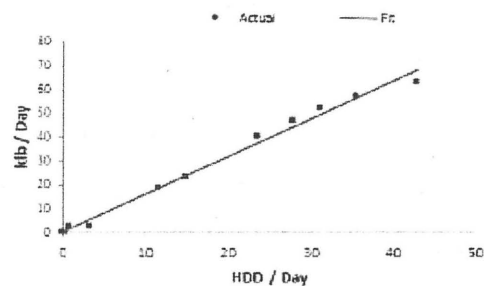
Multiplier is derived from Modification(s) in effect during the tuning period and is replicated annually for all future periods.



Meter Tuning Contract

Project: MPL
Area: Main Library
Account: 8026753497

Site: Site1
Meter: Main-Steam
Unit: klb(Qty OnPk)



From	To	# Days	Reading	Incl?	HDD	CDD	Offset	Baseline	Deviation
05/11/17	06/09/17	30	67	<input checked="" type="checkbox"/>	97.0	0.0	-	156	132.6%
06/10/17	07/12/17	33	-	<input checked="" type="checkbox"/>	0.5	0.0	-	3	0.0%
07/13/17	08/09/17	28	-	<input checked="" type="checkbox"/>	0.0	0.0	-	2	0.0%
08/10/17	09/08/17	30	-	<input checked="" type="checkbox"/>	12.5	0.0	-	22	0.0%
09/09/17	10/10/17	32	77	<input checked="" type="checkbox"/>	26.5	0.0	-	44	-42.4%
10/11/17	11/07/17	28	521	<input checked="" type="checkbox"/>	325.0	0.0	-	517	-0.8%
11/08/17	12/07/17	30	1,209	<input checked="" type="checkbox"/>	708.5	0.0	-	1,124	-7.0%
12/08/17	01/09/18	33	2,069	<input checked="" type="checkbox"/>	1419.0	0.0	-	2,250	8.7%
01/10/18	02/07/18	29	1,655	<input checked="" type="checkbox"/>	1031.5	0.0	-	1,636	-1.2%
02/08/18	03/08/18	29	1,512	<input checked="" type="checkbox"/>	901.0	0.0	-	1,429	-5.5%
03/09/18	04/10/18	33	1,554	<input checked="" type="checkbox"/>	921.0	0.0	-	1,461	-6.0%
04/11/18	05/09/18	29	671	<input checked="" type="checkbox"/>	435.0	0.0	-	691	3.0%
Sum/Average/Max		364	9,335		5877.5	0.0	-	9,335	0% +/- 9.9%

Main-Steam (Account # 8026753497): Tuning Period is 364 days from 5/11/2017 until 5/9/2018.

Below is the equation used to calculate the Baseline values for the tuning period and all future periods:

$$\text{Baseline (klb)} = 0.0746 \times \# \text{Days} + 1.5836 \times \text{HDD}$$

The Baseline Equation has a Net Mean Bias of 0% and a Monthly Mean Error of +/-0.0275%. The underlying regression has a $R^2=0.9905$

Baseline Costs are calculated using Average Total Cost/Consumption.

Explanations and Assumptions:

☐ (empty checkbox) under 'Incl?' indicates that the bill is excluded from the regression. However the Baseline Equation is always applied for all billing periods, even those excluded from the regression.

HDD = Heating Degree-Days calculated for MILWAUKEEWI for a 62.0 F° balance point.

Multiplier is derived from Modification(s) in effect during the tuning period and is replicated annually for all future periods.

V. PRIMARY OPERATIONS SCHEDULE PRE & POST RETROFIT

Lighting hours of operation are as described above in Section III, Paragraph B. HVAC Schedules, setpoints and operating parameters are listed in the eQuest Review of Building Simulation Assumptions Attachment 6.

VI. MEASUREMENT & VERIFICATION SERVICES

JCI will provide the M&V Services set forth below in connection with the Assured Performance Guarantee.

1. During the Installation Period, a JCI Performance Assurance Specialist will track Measured Project Benefits. JCI will report the Measured Project Benefits achieved during the Installation Period, as well as any Non-Measured Project Benefits applicable to the Installation Period, to Customer within 60 days of the commencement of the Guarantee Term.
2. Within 60 days of each anniversary of the commencement of the Guarantee Term, JCI will provide Customer with an annual report containing:
 - A. an executive overview of the project's performance and Project Benefits achieved to date;
 - B. a summary analysis of the Measured Project Benefits accounting; and
 - C. depending on the M&V Option, a detailed analysis of the Measured Project Benefits calculations.
3. During the Guarantee Term, a JCI Performance Assurance Specialist will monitor the on-going performance of the Improvement Measures, as specified in this Agreement, to determine whether anticipated Measured Project Benefits are being achieved. For the duration of the Option C portion of the M&V scope, monitoring will occur at a minimum through two (2) on-site reviews per year, twelve (12) monthly conference calls per year, and several remote checks of monitoring data per month per year. For the duration of the Option A portion of the M&V scope, monitoring will occur through one (1) on-site review and periodic remote checks of monitoring data as necessary. In this regard, the Performance Assurance Specialist will periodically assist Customer, on-site or remotely, with respect to the following activities:
 - A. review of information furnished by Customer from the facility management system to confirm that control strategies are in place and functioning;
 - B. advise Customer's designated personnel of any performance deficiencies based on such information;
 - C. coordinate with Customer's designated personnel to address any performance deficiencies that affect the realization of Measured Project Benefits; and
 - D. inform Customer of opportunities to further enhance project performance and of opportunities for the implementation of additional Improvement Measures.
 - E. provide the Customer with ENERGY STAR Portfolio Manager baseline and use adjustments as necessary as they relate to work done under the Contract and that may be in addition to any agreed upon baseline and savings adjustments and savings calculations associated with the provisions of the Contractor's energy savings guarantee.
4. For specified Improvement Measures utilizing an "Option A" M&V protocol, JCI will:
 - A. conduct pre and post installation measurements required under this Agreement;
 - B. confirm the building management system employs the control strategies and set points specified in this Agreement; and
 - C. analyze actual as-built information and adjust the Baseline and/or Measured Project Benefits to conform to actual installation conditions (e.g., final lighting and water benefits calculations will be

Schedule 2

determined from the as-built information to reflect the actual mix of retrofits encountered during installation).

CUSTOMER RESPONSIBILITIES

In order for JCI to perform its obligations under this Agreement with respect to the Work, the Assured Performance Guarantee, and the M&V Services, Customer shall be responsible for:

1. Providing JCI, its subcontractors, and its agents reasonable and safe access to all facilities and properties that are subject to the Work and/or M&V Services;
2. Providing for removal or relocation of owner shelving, furniture, or other owner property identified as necessary to facilitate installation of the Work.
3. In coordination with JCI, providing for shut down and scheduling of affected locations during installation, including timely shutdowns of chilled water and hot water systems as needed to accomplish the Work and/or M&V Services;
4. Providing timely reviews and approvals of design submissions, proposed change orders, and other project documents. Project submittals to include:
 - Product cut sheets for major equipment, lighting, and lighting controls;
 - Schematic design drawings during review meeting (20% complete drawings including equipment outlines, boundary of work, and major duct, pipe, or conduit routings as necessary);
 - Construction drawings during review meeting (95% complete drawings);
 - Control drawings and sequences of operation;
 - Project specifications;
5. Providing the following information with respect to the project and project site as soon as practicable following JCI's request:
 - a. surveys describing the property, boundaries, topography and reference points for use during construction, including existing service and utility lines;
 - b. geotechnical studies describing subsurface conditions, and other surveys describing other latent or concealed physical conditions at the project site;
 - c. temporary and permanent easements, zoning and other requirements and encumbrances affecting land use, or necessary to permit the proper design and construction of the project and enable JCI to perform the Work;
 - d. a legal description of the project site;
 - e. as-built and record drawings of any existing structures at the project site; and
 - f. environmental studies, reports and impact statement describing the environmental conditions, including hazardous conditions or materials, in existence at the project site.
6. Following the receipt of any environmental studies, reports, or impact statements describing the environmental conditions, JCI will identify all work areas impacted by known environmental hazards identified in the documentation, and will identify any work areas where construction activities may disturb suspected hazardous materials. The Customer will provide timely testing and abatement of known or suspected ACMs and Non-JCI Hazardous Materials encountered during project implementation;
7. Securing and executing all necessary agreements with adjacent land or property owners that are necessary to enable JCI to perform the Work;
8. Providing assistance to JCI in obtaining any permits, approvals, and licenses that are JCI's responsibility to obtain as set forth in Schedule 1;

9. Obtaining any permits, approvals, and licenses that are necessary for the performance of the Work and are not JCI's responsibility to obtain as set forth in Schedule 1;
10. Except for tasks that JCI is responsible for, properly maintaining, and performing appropriate preventative maintenance on, all equipment and building systems affecting the Assured Performance Guarantee in accordance with manufacturers' standards and specifications;
11. Except for tasks that JCI is responsible for, promptly repairing or replacing any item of equipment or the building systems affecting the achievement of Project Benefits, including without limitation pursuing claims under any applicable manufacturer's warranties then in affect;
12. Providing the utility bills, reports, and similar information reasonably necessary for administering JCI's obligations under the Assured Performance Guarantee within ten (10) business days of Customer receipt and/or generation or JCI's request therefor;
13. Providing all records relating to energy and/or water usage and related maintenance of the premises and relevant equipment requested by JCI;
14. Providing and installing utility sub-meters on all new construction and/or additions built during the Guarantee Term as recommended by JCI or, alternatively, paying JCI's applicable fees for calculating necessary adjustments to the Assured Performance Guarantee as a result of the new construction;
15. Providing and maintaining a dedicated telephone line and/or TCP/IP remote connection to facilitate remote monitoring of relevant equipment; including DDC Controls systems or existing Energy Management Controls systems for trended data collection, remote data files downloads and/or remote monitoring tasks;
16. Promptly notifying JCI of any change in use or condition described in Section III of Schedule 2 or any other matter that may impact the Assured Performance Guarantee;
17. Taking all actions reasonably necessary to achieve the Non-Measured Project Benefits;

PRICE AND PAYMENT TERMS

Customer shall make payments to JCI pursuant to this Schedule 4.

1. **Work.** The price to be paid by Customer for the Work shall be \$2,441,402. This includes \$430,000 capital cost avoidance, some/or all of which will be provided by the Customer as an Initial Payment. The remaining \$2,011,402 will be provided through Project Financing, secured by the Customer under separate contract. The subsequent Mobilization Payment and Construction Progress Payments (including payment for materials delivered to JCI and work performed on and off-site) shall be made upon approval by Customer's designated staff of invoiced materials ordered and/or construction progress completed and inspected. Such approval and inspection shall not be unreasonably withheld and shall be granted according to a mutually agreed upon regular inspection process, established within thirty (30) days following notice to proceed. Payments are anticipated to JCI as follows:

Payment	Percent of Contract Value	Estimated Percent Construction Completion*	
First payment due upon execution of Agreement	17.6%	17.6%	
Mobilization payment due upon receipt of funds from financing	32.4%	50.0%	
Subsequent payments to be made after receipt of invoice for work completed to date	varied	50%-95%	
Final payment due upon substantial completion:	5.0%	100.0%	Construction Retainer, Due Upon Completion

*The Initial Payment and Mobilization Payment, totaling 50% of the contract value, will be invoiced according to the stated Invoice dates and will not be subject to construction completion. The following percent of construction completion has been estimated as the actual construction schedule is dependent on final engineered design of the ECMs, field conditions during implementation, and other factors not yet known. Invoicing will occur approximately monthly based on the schedule noted above.

2. **M&V Services.** The total price for JCI's M&V Services, as detailed on Schedule 2 of this Agreement, is \$108,839. This amount will be paid to JCI in annual installments, beginning with the first annual payment of \$35,564 and escalating annually at two percent (2.0%). These payments will be due and payable when Customer receives JCI's invoice and in advance of the services JCI is to provide, and shall be made throughout the Guarantee Term.

First Annual amount due: \$35,564

Second Annual amount due: \$36,275

Third Annual amount due: \$37,000

Due Date: The first day of the Guarantee Term, and annually on the anniversary date thereafter.

Schedule 4

At the end of Project Benefits Year 3, as described in Schedule 2, the M&V will transition from Option C to stipulated benefits for the remainder of the Guarantee Term. During Year 3, the Customer may elect to continue Option C at the current pricing and escalation rate.

JCI's pricing for this Project, and its opportunity and ability to complete the Work, are extremely schedule dependent. Accordingly, it is understood by both parties that the Customer will use its best efforts to secure Project Financing. However, if Customer is unable to secure and close Project Financing, JCI and Customer may, by one or more Change Orders, alter the Contract Sum, Assured Performance Guaranty, and/or construction progress schedule, to accommodate the delays in Project commencement (but only to the extent that such altered contract terms comply with applicable Wisconsin Statutes). Notwithstanding the foregoing, if Customer does not secure and close the Project Financing within sixty (60) days after the parties' execution of this Agreement, then JCI or the Customer shall have the option by providing written notice to the other party within ten (10) business days after the sixtieth (60) day after execution of this Agreement, to terminate this Agreement.

NOTICE TO PROCEED

Johnson Controls, Inc.
507 East Michigan Street
Milwaukee, Wisconsin 53202
ATTN: Jeffery J. Roepsch

Re: Notice to Proceed for 6PZK-0023 Milwaukee Public Library

Dear Mr. Roepsch:

This Notice to Proceed is being issued by City of Milwaukee, by its Board of Trustees ("Customer"), Milwaukee Public Library to Johnson Controls, Inc. ("JCI") pursuant to that certain Performance Contract entered into between Customer and JCI for the purpose of notifying JCI to commence work under such contract.

In the event that this Notice to Proceed is delivered by Customer prior to the execution of the Performance Contract by Customer and JCI, Customer understands and expects JCI will incur significant costs and expenses in complying with this Notice to Proceed. In the event the Performance Contract is not executed by the parties, for any reason, Customer agrees to pay JCI for its costs and fees incurred in complying with this Notice to Proceed on a time and material basis. Customer also agrees JCI shall be entitled to a reasonable markup thereon for profit and overhead. Customer agrees to pay amounts billed by JCI no later than five (5) days after Customer receives JCI's payment application. JCI will continue to submit payment applications to Customer until the Performance Contract is executed. Once the Performance Contract is executed, JCI will begin submitting its payment applications to Customer in accordance with the terms and conditions set forth therein. Any amounts already paid by Customer will be credited towards the Performance Contract price.

By signing and dating this Notice to Proceed, the parties hereto agree to these terms and represent and warrant they have the authority to execute this Notice to Proceed on behalf of their respective organizations.

**City of Milwaukee,
acting through the Milwaukee Public Library Board of Trustees**

Signature: _____

Printed Name: _____

Title: _____

Date: _____

ACKNOWLEDGED & AGREED TO:

JOHNSON CONTROLS, INC.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

CHANGE ORDER

Performance Contract dated , 20 between Johnson Controls, Inc. and Customer	Change Order No.	Date (mo/day/yr)
Customer [Insert Customer Name]		
The above referenced Performance Contract is hereby modified to the extent described below in accordance with the Terms and Conditions of the CHANGE ORDERS section thereof.		
Scope of Work changed as follows:		
Total amount of this Change Order.....	\$	
Total Performance Contract amount as revised by this Change Order.....	\$	
The time for completion is: <input type="checkbox"/> increased, <input type="checkbox"/> decreased, <input type="checkbox"/> unchanged. The new completion date resulting from this Change Order is:	(mo, day, yr)	
[check if applicable] Assured Performance Guarantee changed as follows:		
Unless specifically changed by this Change Order, all terms, conditions and provisions of the above referenced Performance Contract remain unchanged and in full effect.		
JOHNSON CONTROLS, INC.	CUSTOMER	
Signature:	Signature:	
Printed Name:	Printed Name:	
Title:	Title:	

CERTIFICATE OF SUBSTANTIAL COMPLETION

PARTIES: JOHNSON CONTROLS, INC. ("JCI")
507 East Michigan Street
Milwaukee, Wisconsin 53202

City of Milwaukee,
acting through the Milwaukee Public Library Board of Trustees ("Customer")
Milwaukee Public Library
814 W. Wisconsin Avenue
Milwaukee, Wisconsin 53233

PROJECT: 6PZK-0023 Milwaukee Public Library; Performance Contract dated _____, 20____
between JCI and Customer

By executing this Certificate of Substantial Completion, Customer acknowledges the following:

- a. The work set forth in the Performance Contract is substantially complete.
- b. Customer has received the manuals, warranty information, and training required under the Performance Contract.
- c. The following punch list items must be completed by JCI (check as applicable):
 - ☐ punch list attached
 - ☐ punch list complete
- d. Upon completion of the punch list items, or if such punch list items are complete, JCI and Customer shall sign the Certificate of Final Completion attached hereto.

Dated _____, 20____.

CUSTOMER:

Signature: _____

Printed Name: _____

Title: _____

JOHNSON CONTROLS, INC.

Signature: _____

Printed Name: _____

Title: _____

CERTIFICATE OF FINAL COMPLETION

PARTIES: JOHNSON CONTROLS, INC. ("JCI")
507 East Michigan Street
Milwaukee, Wisconsin 53202

City of Milwaukee,
acting through the Milwaukee Public Library Board of Trustees ("Customer")
Milwaukee Public Library
814 W. Wisconsin Avenue
Milwaukee, Wisconsin 53233

PROJECT: 6PZK-0023 Milwaukee Public Library; Performance Contract dated _____, 20____
between JCI and Customer

By executing this Certificate of Final Completion, Customer acknowledges the following:

- a. The work set forth in the Performance Contract has been reviewed and determined by Customer to be fully complete.
- b. Customer accepts the work as complete and hereby releases JCI's obligations under any performance and payment bonds posted for the project as of the date set forth below.

Dated _____, 20____.

CUSTOMER:

Signature: _____

Printed Name: _____

Title: _____

JOHNSON CONTROLS, INC.

Signature: _____

Printed Name: _____

Title: _____