## PERFORMANCE CONTRACT

This Performance Contract (this "Agreement") is made this <u>23rd</u> day of <u>June</u>, 2020 between:

## PARTIES

JOHNSON CONTROLS, INC. ("JCI") 6 AERIAL WAY SYOSSET, NY 11791

and

DEER PARK SCHOOL DISTRICT ("Customer") 1881 DEER PARK AVE, DEER PARK, NY 11729

## 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 Energy Conservation Measures ("ECMs") and improvement measures (collectively, 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, which will result in Project Benefits as set forth in the Assured Performance Guarantee. JCI shall provide construction, supervision, inspection, labor, materials, tools, design, construction management, construction equipment, installation and subcontracted items necessary for the execution and completion of the Work. JCI shall pay for the architectural/engineering services necessary for the execution and completion of the Work as part of the total cost to be paid by the Customer. After the Work is Substantially Complete (as defined below) and the Certificate of Substantial Completion is executed by Customer, JAG Architects ("JAG" or "Architect/Engineer" of Record) (as defined below in paragraph 3) 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). Customer shall make payments to JCI for the Work and the M&V Services in accordance with Schedule 4 (Price and Payment Terms). JCI shall supervise, direct and inspect the Work and M&V Services and shall be solely responsible for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work and M&V Services under this Agreement. JCI shall be responsible for all labor, materials, equipment, tools, design, construction management, construction equipment and machinery, installation, subcontracted items, transportation, and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work and M&V Services.
- 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 – Change Order Attachment 3 – Certificate of Substantial Completion; Certificate of Final Completion Attachment 4 – Lighting Line by line (Deer Park Schools LED Lighting Rev-D 11-8-19) Appendix 1 – Scope of Architectural/Engineering Services

In addition, the Customer's RFP for a District-Wide Energy Generation Project – Phase 2 and JCI's response to that RFP with all addenda and mutually agreed upon modifications are incorporated into and shall be deemed part of this Agreement.

- 3. ARCHITECT/ENGINEER OF RECORD. The Customer has identified John A. Grillo Architect PC (JAG) as the certified Architect/Engineer of Record (JAG) to provide architectural/engineering services in connection with the Work to be performed by JCI ("Architectural/Engineering Services"). The fees and total compensation for such Architectural/Engineering Services shall be \$357,989 and are the sole responsibility of JCI. Both JCI and Customer agree and acknowledge that the JAG owes its/his/her professional obligations and duties, including duties of care to JCI and the Customer. The Architect/Engineer shall remain free from any financial interest in the Agreement which conflicts with the proper completion of its/his/her responsibilities under this Agreement and which conflicts with its/her responsibilities and duties to the Customer.
- 4. 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. Pursuant to 8 NYCRR §155.20, this Agreement is subject to the approval of the Commissioner of Education of the State of New York and the issuance of a building permit by the New York State Education Department ("NYSED"). Prior to submission of this Agreement to NYSED for approval, JCI shall validate each ECM with the Customer and obtain final approval of the guaranteed energy cost savings numbers as outlined herein and as set forth in Schedule 2. After receipt of written approval from NYSED, and after Customer has secured financing in accordance with this Agreement, the Customer shall issue a Notice to Proceed, a form of which is attached hereto as Attachment 1 and which is in a form acceptable to NYSED. JCI shall commence performance of the Work within ten (10) business days of receipt of Customer's Notice to Proceed, and shall achieve Substantial Completion of the Work by the Substantial Completion date, which shall be the date on which Customer and JAG execute a Certificate of Substantial Completion substantially in the form attached hereto as Attachment 3.

For purposes of this Agreement, "Substantial Completion" shall be achieved when JCI has provided sufficient materials and services to permit Customer to operate all of the Improvement Measures and when the following items are completed by JCI and approved by Customer and the Architect/Engineer:

- a. A written acknowledgement by the Customer that the Improvement Measures have been installed by JCI and completed to the satisfaction of the Customer and the Architect/Engineer;
- b. A written acknowledgment by the Customer of receipt of manuals and training provided by JCI under the Agreement;
- c. A written acknowledgement by the Customer of the warranty start date and warranty period;
- d. The receipt of a punch list of items remaining to be completed by JCI; and
- e. A written acknowledgement by the Customer of receipt of warranties, release of liens, and proof of payment to subcontractors.

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 M&V Services Period, 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 other than for breach of this Agreement, (ii) fails to pay for M&V Services in accordance with Schedule 4, after written notice thereof to Customer and a 30 day period to cure, (iii) fails to fulfill any of Customer's responsibilities necessary to enable JCI to complete the Work and provide the M&V Services, after written notice thereof to Customer and a 30 day period to cure, or

(iv) otherwise cancels, terminates or materially breaches this Agreement, the Assured Performance Guarantee shall automatically terminate.

- 5. DELAYS AND IMPACTS. If JCI is delayed in the commencement, performance, or completion 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 property; concealed or unknown conditions 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; a Force Majeure (as defined below) condition; failure by Customer to perform its material obligations under this Agreement; or failure by Customer to reasonably cooperate with JCI in the timely completion of the Work, JCI shall provide written notice to Customer of the existence, extent of, and reason for such delays and impacts. Under such circumstances, an equitable adjustment in the time for performance and any equitable monetary adjustment shall be made, subject to the mutual written agreement of the parties.
- 6. 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. JCI and Customer shall mutually agree on a project schedule, which schedule shall not interfere with instruction or student events. 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. An equitable adjustment in the time for performance, price and payment terms, and Assured Performance Guarantee shall be made as a result of any unreasonable failure to grant such access, subject to the mutual written agreement of the parties.
- 7. PERMITS, TAXES, AND FEES. Unless otherwise specified in Schedule 3 (Customer Responsibilities), JCI shall be responsible for obtaining all building permits and paying all related permit fees associated with the Work and M&V Services. JCI shall pay any applicable sales, consumer, use, and other similar taxes and shall secure and pay for the building permit and other permits and governmental fees, licenses, and inspections necessary for proper execution of the Work. Unless otherwise specified in Schedule 1 (Scope of Work), Customer shall be responsible for securing any necessary approvals, easements or assessments required for 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 are 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, to the extent applicable.
- 8. WARRANTY. JCI warrants that the design, engineering (outside of the scope of Architect/Engineering Services), and installation services it performs will be performed consistent with good engineering practices and that such work is warranted to be free from defects in materials and workmanship for a period of (2) years from the date of execution of the Certificate of Substantial Completion by the School District with respect to Substantial Completion. Any manufacturers' warranties which exceed this (2) year period shall be assigned to School District to the extent allowed by the manufacturer. 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 two (2) years following Substantial Completion or such other period identified in Schedule 1. 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. JCI warrants that the Work shall be free from defects in material and workmanship arising from normal usage for a period of two years from the date of Substantial Completion. Upon written notice from the Customer, JCI shall, at its option, promptly repair or replace any defective Work or re-perform defective Services to the reasonable satisfaction of the 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 two (2) 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 two (2) year period described above or such other period identified in Schedule 1. 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.

- 9. CLEANUP. JCI shall keep the premises and the surrounding area safe and free from accumulation of waste materials or rubbish caused by the Work on a daily basis and, upon completion of the Work, JCI shall remove all waste materials, rubbish, tools, construction equipment, machinery, and surplus materials and shall dispose of them in accordance with applicable law, and shall clean up the Work, including any dust from the materials, and surrounding areas to the reasonable satisfaction of the Customer in a timely manner and shall dispose of them in accordance with applicable law. In the event that JCI fails to clean up the Work and the surrounding areas, upon seven (7) days' written notice to JCI, the Customer will have the same cleaned. All reasonable costs associated with such clean up shall be back charged to JCI.
- **10. 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. JCI shall comply with all applicable Federal, New York State and/or local municipal laws, ordinances, rules, regulations, and lawful orders of public authorities (collectively, "Laws") in connection with its performance hereunder, including but not limited to 8 NYCRR 155.2, 155.5 and 155.20.

## 11. ASBESTOS-CONTAINING MATERIALS AND OTHER HAZARDOUS MATERIALS.

JCI has the obligation to determine if hazardous materials/wastes will be disturbed or handled/disposed of in performing the project. Hazardous materials/wastes include, but are not limited, to asbestos, lead paint, mercury and PCBs. If hazardous materials/wastes must be disturbed, removed and/or remediated and/or or disposed of, JCI must advise the District beforehand and perform such activities in accordance with all federal and State regulations. A copy of the AHERA 3-year Reinspection, Management Plan will be made available upon request, for use as a guide to ACBM in the various buildings.

<u>Asbestos-Containing Materials</u>: 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"), unless otherwise specified in Schedule 1. 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. 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, unless otherwise specified in Schedule 1, it shall promptly stop the Work or M&V Services in the affected area and notify the other. Unless otherwise specified in Schedule 1, 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 is 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.

<u>Other Hazardous Materials</u>: 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. Unless otherwise specified in Schedule 1, 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 form its facilities and the remediation of any areas impacted by the release of Non-JCI Hazardous Materials form 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.

- **12. 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. Any contract changes must be submitted, together with all supporting documentation to the NYSED for review and approval. All Change Orders shall be subject to the availability of funds and the prior written approval of the Customer, the Architect/Engineer, NYSED and, if necessary, leasing company. Any Change Order will not be considered effective until it is signed by an authorized representative of each party and the Architect/Engineer. JCI may delay performance of Work subject to the Change Order until adjustments arising out of the Change Order are clarified and agreed upon. If concealed or unknown conditions are encountered at the project, differing from the conditions represented by Customer in the bid documents or from those conditions ordinarily found to exist and generally recognized as inherent in construction activities of the character covered under this Agreement, 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, may be equitably adjusted subject to the availability of funds and written approval of the Customer's Board of Education, the Architect/Engineer and NYSED. Claims for equitable adjustment may be asserted in writing within a reasonable time, but no later than twenty (20) days, from the date a party becomes aware of a change to the Work by written notification. Failure to promptly assert a request for equitable adjustment, however, shall not constitute a waiver of any rights to seek any equitable adjustment with respect to such change.
- **13. 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.

14. INSURANCE. JCI shall maintain insurance in amounts no less than those set forth below and the Customer's RFP in full force and effect at all times until the Work has been completed and shall provide a certificate evidencing such coverage promptly to Customer prior to commencing work hereunder.

COVERAGE	LIMITATIONS OF LIABILITY			
Workers' Compensation Coverage	Statutory			

Extensions	Voluntary compensation All states coverage employers Employers' liability – unlimited
Commercial General and Umbrella Liability: Coverage	Occurrence using ISO occurrence Form CG 00 01 07 98 or later form
Limits per Project	General Aggregate - \$2,000,000.00 on a per-project basis Products - Completed/Operations - \$2,000,000.00 Personal & Advertising Injury - \$1,000,000.00 Each Occurrence - \$1,000,000.00 Fire Damage (any one fire) - \$100,000.00 Medical Expenses (any one person) - \$10,000.00 Umbrella - \$10,000,000.00. Umbrella coverage must be on a follow form basis
Builder's Risk Coverage	Amount sufficient to repair or replace the work, such amount to be approved by the District
Automobile Liability (all vehicles hired or non-hired)	\$1,000,000 per accident \$1,000,000 per occurrence/\$2,000,000 aggregate

The Contractor shall require the Engineer selected by the District and compensated by the Contractor, to maintain the following minimum insurance coverage:

The Engineer shall maintain professional liability insurance (errors and omissions) in an amount no less than \$2,000,000, worker's compensation in amounts required by law, and general liability insurance (including owned, non-owned, and hired motor vehicles) in a single limit amount of no less than \$1,000,000.

JCI shall name the Customer, its officers, employees and agents, as an additional insured on a primary and noncontributory basis under its general liability insurance, auto and umbrella policy with respect to liability arising out of operations performed for them by or on behalf of JCI, shall comply with all other insurance requirements set forth in Customer's RFP specifications.

15. INDEMNIFICATION. To the fullest extent permitted by applicable Law, JCI agrees to defend and indemnify Customer, its officers, agents and employees, for third party claims, liabilities, actions, judgments, losses, costs, damages or expenses (including reasonable attorneys' fees), suits, actions or damages ("Claims") arising by reason of bodily injury, death or damage to property to the extent caused by the negligence, misconduct or wrongful act of JCI, its officers, agents, subcontractors or employees. A condition precedent to the obligation of JCI to indemnify the Customer pursuant to this Section 15 shall be for the Customer to promptly advise JCI of the claim pursuant to the notice provision of this Agreement. JCI shall defend, indemnify and hold harmless the Customer, its employees, agents, and assigns against all Claims arising out of or related to any claims of patent infringement and any claims of construction or materialman's lien made by any subcontractor or materialman. With respect to claims of patent infringement, JCI, at its option, shall have the right to: i) make the product noninfringing, ii) replace the infringing product; or (iii) on return of the equipment JCI refund amounts actually paid by the Customer to JCI for the product, less depreciation over a three (3) year period. JCI shall not be liable for claims arising from (i) misuse or modification of the product by Customer or its employees or agents, (ii) use of the product in combination with other materials, goods, products, or services for which the product was not intended to be used (as demonstrated by JCI's applicable product literature), (iii) failure of Customer to implement any update provided by JCI that would have prevented the claim, (iv) product that JCI made to Customer's specifications or designs, (v) product that is not manufactured by JCI, (iv) or claims with respect to third party hardware, software or services. In the event of a conflict between the Indemnification provisions in the RFP and this Section 15, this provision shall control.

- 16. LIMITATION OF LIABILITY. WITHOUT LIMITING JCI'S EXPRESS OBLIGATIONS UNDER THE ASSURED PERFORMANCE GUARANTEE. NEITHER JCI NOR CUSTOMER WILL BE RESPONSIBLE TO THE OTHER. FOR ANY SPECIAL, INDIRECT, CONSEQUENTIAL, REMOTE, PUNITIVE, EXEMPLARY, LOSS OF PROFITS OR REVENUE, LOSS OF USE, OR SIMILAR DAMAGES, REGARDLESS OF HOW CHARACTERIZED AND REGARDLESS OF A PARTY HAVING BEEN ADVISED OF THE POSSIBILITY OF SUCH POTENTIAL LOSSES OR RELIEF, ARISING IN ANY MANNER FROM THIS AGREEMENT, THE WORK, THE IMPROVEMENT MEASURES, THE PREMISES, THE M&V SERVICES, OR OTHERWISE. WITHOUT LIMITING JCI'S EXPRESS OBLIGATIONS UNDER THE ASSURED PERFORMANCE GUARANTEE, JCI'S LIABILITY UNDER THIS AGREEMENT, REGARDLESS OF THE FORM OF ACTION, SHALL IN NO EVENT EXCEED THE TOTAL CONTRACT PRICE SET FORTH ON SCHEDULE 4. If this Agreement 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. The foregoing waivers and limitations are fundamental elements of the basis for this Agreement between JCI and Customer, and each party acknowledges that JCI would not be able to provide the Work and Services contemplated by this Agreement on an economic basis in the absence of such waivers and limitations, and would not have entered into this Agreement without such waivers and limitations.
- 17. PAYMENT AND PERFORMANCE BOND. JCI shall, prior to the commencement of construction, deliver to the Customer Performance and Payment Bonds in a sum equal to the contract amount with sureties licensed by the State of New York and satisfactory to the Customer, conditioned upon the faithful performance by JCI, for the implementation of the ECMs, such bonds to be in such form of AIA Document A312, and shall contain such provisions as are reasonably satisfactory to the Customer. JCI shall deliver to School District the Payment and Performance Bond promptly upon School District's issuance of a Notice to Proceed. A rider including the following provisions shall be attached to each Bond.
  - a. Surety hereby agrees that it consents to and waives notice of any addition, alteration, omission, change, or other modification of the Contract Documents, or other modification of the Contract Documents, or a forbearance on the part of either the Owner or the Energy Performance Contractor to the other, shall not release the Surety of its obligations hereunder and notice to the Surety of such matter is hereby waived.
  - b. Surety further agrees that in the event of any default by the Owner in the performance of the Owner's obligations to the Energy Performance Contractor under the Contract, the Energy Performance Contractor or Surety shall cause written notice of such default (specifying said default in detail) to be given to the Owner, and the Owner shall have thirty (30) days after receipt of such notice within which to cure such default, or such additional reasonable period of time as may be required if the nature of such default is such that it cannot be cured within thirty (30) days. Such Notice of Default shall be sent by certified or registered U.S. Mail, return receipt requested, first class postage prepaid, to Lender and the Owner.
- 18. REVIEW BY THE NEW YORK STATE EDUCATION DEPARTMENT/APPROVAL OF CONTRACT. JCI and Customer acknowledge that this Agreement is subject to 8 NYCRR 155.20 and, as such, requires the approval of the Commissioner of Education of the State of New York. This Agreement shall not be executory until Commissioner's approval is obtained in writing. The Customer's obligations within this Agreement are contingent upon and subject to prior review and written approval of NYSED, pursuant to the laws and regulations of the State of New York and are also contingent upon and subject to the Customer's securing of financing, terms and conditions of financing and other means of payment acceptable to Customer in its sole discretion. In the event approval of said financing and other means of payment has not been secured by the Customer within 180 days after NYSED approval, then this Agreement shall terminate with no further obligation of Customer or JCI or any other party. This Agreement may be extended beyond the 180 days if such extension is in writing signed by both parties. Upon receiving NYSED approval and building permits, the cash flow for the Project will be recalculated with current energy costs and current interest rates. If the recalculation of cash flow does not yield a cash flow similar to that provided as part of the detailed study report for Customer, Customer reserves the right to terminate this Agreement, Moreover, in the event that building aid for the Project is reduced and/or eliminated. Customer, in its sole discretion, shall have the right to terminate the Agreement or to reduce the scope of Work as necessary to achieve the same cash flow as per the cash flow protection provided with the detailed study at the time of submittal of this agreement. The Price and Payment Terms set forth at Schedule 4 of this Agreement will be

adjusted by Change Order or amendment to this Agreement to reflect any necessary modifications resulting there from.

Prior to NYSED approval, it shall be JCI's sole responsibility to validate each ECM with Customer and gain the final approval of the savings outlined in Schedule 2. This process may include the providing of mock-ups and/or site visits as well as delivering additional presentations if necessary. Without final Customer approval of Schedule 2 and any requested mock-ups, this Agreement shall not be executory. If NYSED approval is not obtained within 180 days of the date of the Engineer's submittal to NYSED, JCI reserves the right to propose modifying the terms of this Agreement, including but not limited to the cost to be financed under this Agreement, subject to Customer's approval in writing, which shall not be unreasonably withheld. JCI agrees to cooperate with Customer in obtaining necessary approvals, including approval by the Commissioner of Education. This shall include providing the certifications pursuant to 155.20 (d) (7) (ii), (iii) and (iv) of the Regulations of the Commissioner of Education. Notwithstanding the above, should any portion of this Agreement fail to be approved by NYSED, or, if the Scope of Work contained in this Agreement is not approved by NYSED in its entirety, Customer may, in its sole discretion, elect to terminate this Agreement. JCI shall have no remedy at law or in equity for such termination or for any costs incurred by JCI up to the date of termination.

- 19. 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; fires; explosions or other casualties; riots or war; acts of terrorism; electrical power outages; interruptions or degradations in telecommunications, computer, or electronic communications systems; epidemics, pandemics, quarantine restrictions; or changes in Laws.
- **20. JCI'S PROPERTY.** All materials and tools 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 upon appointment during normal business hours. 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.
- **21. DISPUTES.** If a dispute arises under this Agreement, the parties will first attempt to resolve such dispute through good faith negotiation, before initiating any litigation or mutually agreed upon alternative dispute resolution.
- 22. GOVERNING LAW. This Agreement shall be governed and construed in accordance with the laws of the State of New York. The parties agree that the sole jurisdiction and venue for actions related to the subject matter hereof shall be the State courts in the County of Suffolk, New York and the federal courts in the Eastern District of New York. Both parties consent to the jurisdiction of such courts and waive any objections regarding venue in such courts.
- **23. MODIFICATIONS.** Additions, deletions, and modifications to this Agreement may be made upon the mutual agreement of the parties in writing. The parties contemplate that such modifications may include, but are not limited to, the installation of additional improvement measures, energy conservation measures, facility improvement measures, and operational efficiency improvements or furnishing of additional services within the identified facilities, as well as other facilities owned or operated by the Customer. These modifications may take the form of additional phases of work or modifications to the original scope of Work or Services.
- 24. TERMINATION. Customer reserves the right to terminate this Agreement for any reason, or no reason whatsoever, upon thirty (30) days written notice to JCI. In the event of such termination, the parties shall endeavor in an orderly manner to wind down activities hereunder. In the event of termination, all reports and services due to the Customer must be completed by JCI, its employees, and/or agents within thirty (30) days of the termination date. Customer shall pay to JCI all undisputed amounts due for Work satisfactorily completed in accordance with this Agreement up to the date of termination.
- 25. WAGE AND HOURS PROVISIONS. This is a public work contract covered by Article 8 of the Labor Law. Neither JCI's employees nor the employees of its subcontractors may be required or permitted to work more than the

number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, JCI and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law. Accordingly, JCI and each of its subcontractors shall comply with Prevailing Wage Rates as issued by the State of New York Department of Labor for the location and duration of this Project and shall comply with all requirements governing its payments to its employees as set forth in section 220 et. seq. of the New York State Labor Law. JCI must submit the required certified payrolls with its requests for payment. The Customer will not make any payment to JCI unless the completed certified payrolls are submitted to the Customer.

- **26. 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.
- 27. 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.
- **28. 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. Neither JCI nor any person performing any duties or engaged in any Work on the Customer's property on behalf of JCI shall be deemed an employee or agent of Customer. Nothing in this Section shall be deemed to be a waiver of the Customer's right to use its property. Customer and JCI are independent of one another and shall have no other relationship relating to or arising out of this Agreement. Neither party shall have or hold itself out as having the right or authority to bind or create liability for the other by its intentional or negligent act or omission, or to make any contract or otherwise assume any obligation or responsibility in the name of or on behalf of the other party.
- 29. NON-APPROPRIATION. Pursuant to NYS Energy Law 109-3, this Agreement shall be deemed executory only to the extent of the monies appropriated and available for the purpose of the Agreement, and no liability on account therefore shall be incurred beyond the amount of such monies. It is understood that neither this Agreement nor any representation by any public employee or officer creates any legal or moral obligation to request, appropriate or make available monies for the purpose of the Agreement. Customer shall provide written proof of the amount appropriated to the Work prior to execution of the Agreement.
- **30. ASSIGNMENT**. The parties agree not to assign, transfer, convey or sublet or otherwise dispose of this Agreement nor any duties or obligations hereunder or rights, title and interest therein or power to execute such Agreement, to any other person, firm or corporation without the previous consent in writing of the other party, which consent shall not be unreasonably conditioned withheld or delayed; provided, however, that JCI may subcontract any portion of the Work to be performed hereunder in accordance with the provisions set forth herein. JCI may not assign any monies due or to become due to it pursuant to its Agreement with Customer without Customer's prior written consent. Any such assignment shall be in a form acceptable to Customer. If JCI attempts to make such an assignment without such consent from Customer, JCI shall nevertheless remain legally responsible for all obligations under its Agreement with Customer.
- **31. SUBCONTRACTING.** JCI may elect to use subcontractors in meeting its obligations hereunder. All subcontractors must be approved by Customer. Customer reserves the right to reject the use of any subcontractor, upon discussion and mutual agreement of JCI. JCI and its subcontractors will be required to wear photo identification and yellow safety vests at all times while on School District property. JCI's employees, agents, subcontractors etc. shall not interact with Customer's students. JCI and its subcontractors as necessary shall attend any meetings when reasonably required during the construction of the Project. By appropriate agreement, JCI shall require each subcontractor to be bound to JCI by the terms of this Agreement.

- **32. NOTIFICATIONS OF GOVERNMENTAL ACTION Occupational Safety and Health.** The parties agree to notify each other as promptly as is reasonably possible upon becoming aware of an inspection under, or any alleged violation of, the Occupational Safety and Health Act or any other provision of Federal, state or local codes, laws, rule or regulation relating in any way to the undertakings of either Party under this Agreement. JCl represents and warrants that it will meet all applicable OSHA requirements applicable to this Agreement, including any required certification and training requirements for its employees and its subcontractors.
- **33. TRAINING**. JCI shall provide adequate training upon initial turnover to Customer's employees to allow Customer or its employees to have sufficient knowledge with respect to the proper use and operation of the equipment and ECMs.
- **34. WAIVER**. The failure of either party to require compliance with any provision of this Agreement shall not affect that party's right to later enforce the same. It is agreed that the waiver by either party of performance of any other terms of this Agreement or of any breach thereof will not be held or deemed to be a waiver by that party of any subsequent failure to perform the same or any other term or condition of this Agreement or any breach thereof.
- **35. NON-DISCRIMINATION.** JCI agrees not to discriminate against any employee, or applicant for employment, to be employed in the performance of this Agreement, with respect to hire, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment, because of age, sex, race, disability, color, religion, national origin, Vietnam era military service or ancestry in accordance with applicable Federal, New York State or local laws, rules, and ordinances.
- **36. INTERNATIONAL BOYCOTT**. In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this Agreement exceeds \$5,000, JCI, as a material condition of the Agreement, represents that neither JCI nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the Federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations there under. If JCI, or any of the aforesaid affiliates of JCI, is convicted or is otherwise found to have violated said laws or regulations under the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contractors execution, such contract, amendment or modification thereto shall be rendered forfeit and void. JCI shall so notify Customer within five (5) business days of such conviction, determination or disposition of appeal (2 NYCRR 105.4).
- **37. NON-COLLUSION**. JCI warrants, under penalty of perjury, that its proposal was arrived at independently and without collusion aimed at restricting competition.
- **38. SET OFF RIGHTS**. Customer shall have the right and option to withhold for the purposes of set-off any moneys due to the other party under this Agreement up to any amounts due and owing to Customer with regard to this Agreement, plus any amounts due and owing to Customer for any reasons of tax delinquencies, fee delinquencies or monetary penalties relative thereto. Customer shall exercise its set-off rights in accordance with normal Customer practices including, in cases of set-off pursuant to an audit, the finalization of such Customer audit by a State agency and its representatives.
- **39. BOOKS**; **RECORDS**. JCI shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this Agreement (hereinafter, collectively the "Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter or such longer period as may be required by applicable Law. The State Comptroller, the Attorney General, the Commissioner of Education, and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this Agreement, shall have access to the Records during normal business hours at an office of JCI within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. Customer shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law provided that: (i) JCI shall timely inform an appropriate Customer official, in writing, that said Records should not be disclosed; and (ii) said Records shall be sufficiently identified; and (iii) designation of said Records as exempt under the statute is reasonable. Customer may, however, determine that JCI's records are not exempt from disclosure. Nothing contained herein shall diminish, or in any way adversely affect, either party's right to discovery in any pending or future litigation.

- **40. THIRD PARTY BENEFICIARIES**. This Agreement does not create, and shall not be construed as creating, any rights or interests enforceable by any person not a party to this Agreement.
- **41. CUSTOMER POLICIES.** It is understood and agreed that JCI, its employees, agents, subcontractors and employees of such agents and subcontractors, shall adhere to Customer's policies with respect to conduct on the Customer's property as well as any and all Federal, state, and local laws, rules, ordinances, regulations, Customer's policies and procedures applicable to construction projects on Customer's premises, to the extent such policies are provided to JCI in writing.
- **42. MECHANICS' LIENS**. In the event a lien is filed against the School District property or this Performance Contract and/or any sums due JCI hereunder, and JCI has been paid any undisputed amounts, JCI shall within thirty (30) days provide proof of bonding and/or satisfaction of any such lien against the School District property or this Performance Contract and/or any sums due JCI hereunder, and will use commercially reasonable efforts to assist the School District in order to have the lien removed.
- **43. OWNERSHIP OF DOCUMENTS.** The as-built drawings, whether prepared by the Architect or furnished by the JCI are Instruments of Service. JCI, the Architect/Engineer and other providers of professional services individually shall retain all common law, statutory and other reserved rights, including copyright in those Instruments of Services furnished by them, except as otherwise provided herein or in the Customer's agreement with the Architect/Engineer or other provider of professional services. However, if JCI is terminated from the Agreement for cause, Customer shall have a permanent, paid up license and rights to use the Instruments of Service, including all drawings, specifications, and other documents and materials and electronic data that are furnished for use solely with respect to this Project.

Upon execution of this Agreement, JCI grants to the Customer a non-exclusive license to reproduce and use the Instruments of Service solely in connection with the Work, including the Work's further development by the Customer and others retained by the Customer for such purposes, provided that Customer agrees not to reproduce the Instruments of Service unless JCI is terminated from the Agreement for cause. Such license shall extend to those parties retained by the Customer for such purposes, including other design professionals. JCI shall obtain similar non-exclusive licenses from its design professionals, including the Architect/Engineer. This license shall survive the termination of this Agreement prior to completion of the JCI's services unless this Agreement is terminated solely as a result of the Customer's default as determined by a court of competent jurisdiction. Each of JCI's design professionals, including the Engineer, shall be contractually required to convey to the Customer a non-exclusive license to use that design professional's Instruments of Service for the completion, use and maintenance of the Work. In the event of a conflict between the RFP and this Section 44, the provisions of this section shall control.

- **44. 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.
- **45. 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.
- **46. COMPLETE AGREEMENT.** It is understood and agreed that this Agreement, together with all Schedules, Attachments and other documents incorporated herein by reference, 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 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.

- 47. HEADINGS. The captions and titles in this Agreement are for convenience only and shall not affect the interpretation or meaning of this Agreement.
- **48. 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.
- **49. 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.

IN WITNESS WHEREOF, the duly authorized officers or representatives of the Parties have set their hand on the date first written above with the intent to be legally bound.

DEER PARK SCHOOL DISTRICT Signature are Ellipt Printed Name: L dent. Brand of Education Title: UNP 23. 31020 Date:

JOHNSON CONTROLS, INC. Signature:

Printed Name: David M. Peters

Title: Regional VP & GM

Date: June 26, 2020

## **Construction Management**

#### **Construction Management Services**

- 1. JCI will prepare and maintain an overall Project Management Plan and Construction Schedule. Updates will be provided to the Customer on an on-going basis.
- 2. JCI will maintain a staff to administer the contract terms and conditions with project subcontractors.
- 3. JCI will provide coordination and supervision of the work of separate ECMs ensuring enforcement of contract provisions, compliance with energy initiatives, and timely completion of the project.
- 4. JCI will establish and maintain coordination procedures, e.g., project meetings, documentation process.
- 5. JCI will coordinate site accessibility for Customer and project contractors for continuous operation of school services and activities.
- 6. JCI will perform inspection work necessary to assure the conformity to the plans and specifications until final completion and acceptance of the project by Customer.
- 7. JCI will coordinate post-completion activities including the assembly of guarantee, manuals, as-built drawings of trade and subcontractors, and Customer's final acceptance. JCI will coordinate training of Customer's personnel by installers and vendors for the operations of the project ECMs.
- 8. JCI shall subcontract with District-approved Architectural/engineering firm JAG to prepare and submit necessary design work to the New York State Education Department for approval.
- 9. JCI and its subcontractors will always be required to wear photo identification while on Customer's property.
- 10. Customer will provide JCI with at least an eight (8) hour day at least five (5) days per week to perform all construction activities, at no cost to JCI.

## SCOPE OF WORK

**1. SUMMARY OF WORK:** The following summarizes the Work to be provided by JCI under this Agreement, as further defined below:

ECM #	Proposed Measure	Deer Park High School	Robert Frost Middle School	John F Kennedy Intermediate School	Abraham Licoln Elementary School	John Quincy Adams Elementary School	May Moore Elementary School	Memorial School	Deer Park Annex
ECM 1	Lighting - Interior Retrofit	x	x	X	x	x	x	X	x
ECM 2	Lighting - Exterior Retrofit	x	x	X	x	x	x		x
ECM 3	Building Envelope - Weatherization	x	x	x		x	x	X	x
ECM 4	Energy Efficient Motor Replacement	x	х			x			
ECM 5	Heating System - Boiler Replacement		x						
ECM 6	Boiler Plant Optimization	x							
ECM 7	Heating System - DHW & Furnace Controllers		x			x	х	X	
ECM 8	Heating System - Pipe and Valve Insulation	x	x	x		x	х	X	
ECM 9	Refrigerator Compressor Controllers	x	x	x					
	Renewable Energy - Photovoltaic Generation/ Cogen	¥	~	×		×	×		
ECM 10	Decommission	*	X	×		X	X		
ECM 11	Plug Load Controllers	x	x	X		x	x	x	x
ECM 12	Vending Machine Controllers	x	x			x	x	X	
ECM 13	AC Compressor Controllers	x						X	

## GENERAL

The following scope of work is included in this Agreement and shall be provided by JCI:

## ECM 1: Lighting – Interior Retrofit

Johnson Controls will furnish and install energy efficient LED lighting in specified areas in the facilities listed in Line by Line by retrofitting the existing fixture with new lamps and/or ballasts or by replacing with new lighting fixtures. Please refer to the detailed lighting survey in Attachment 4 for the retrofit type and locations.

#### Demolition and Removal Work

Existing lamps, ballasts and fixtures associated with the above-referenced scope of work will be removed and properly disposed according to applicable, laws, rules and regulations in effect at the time of SED approval of the Agreement.

## New Installation Work

Johnson Controls will furnish necessary materials, labor and necessary equipment to complete the above Interior LED Retrofits. No reconfiguration of lighting systems is included. No repair, replacement or upgrade of existing indoor or exterior emergency and/or egress lighting system is included unless otherwise noted in the Scope of Work.

Exclusions:

- 1. Repair or replacement of defective equipment, other than the equipment specifically described in the ECM description. Johnson Controls will identify the location of defective equipment and notify Customer in writing.
- 2. Repair or upgrades required to rectify existing lighting or electrical system code violations unless specifically described in this scope of work. Johnson Controls will identify the location of the existing violation and notify Customer in writing.

## ECM 2: Lighting – Exterior Retrofit

Johnson Controls will install energy efficient LED lighting in specified areas in the facilities listed in Line by Line either by retrofitting the existing fixture with new lamps and ballasts or by replacing with new lighting fixtures. Please refer to the detailed lighting survey in Attachment 4 for the retrofit type and locations.

#### Demolition and Removal Work

Existing lamps, ballasts and fixtures associated with the above-referenced scope of work will be removed and properly disposed according to applicable, laws, rules and regulations in effect at the time of SED approval of the Agreement.

#### New Installation Work

Johnson Controls will furnish necessary materials, labor and necessary equipment to complete the above exterior LED Retrofits. No reconfiguration of lighting systems is included.

Exclusions:

- 1. Existing poles shall be used. Repair of wiring to or within existing poles is not included in this scope of work. Customer is responsible
- 2. Repair or replacement of defective equipment, other than the equipment specifically described in the ECM description. Johnson Controls will identify the location of defective equipment and notify Customer in writing.
- **3.** Repair or upgrades required to rectify existing lighting or electrical system code violations unless specifically described in this scope of work. Johnson Controls will identify the location of the existing violation and notify Customer in writing.

## ECM 3: Building Envelope Improvements - Weatherization

Johnson Controls shall perform the following weatherization scope. Doors shall be weather-stripped, and caulking be applied around structural leakage. Cracks and openings within the building envelope will be sealed to decrease the rate of infiltration. New weather-stripping is to be of aluminum mill finish with a black gasket, unless otherwise specified.

WALL AIR SEALING/ INSULATION: Fasten Dow Thermax poly-isocyanurate rigid insulation to create air barrier and insulation continuity over the wall system. Seal the perimeter and seams of the rigid insulation board with foam sealant or sheathing tape. Materials: Dow Froth-Pak closed cell spray polyurethane foam; Dow Thermax Rigid Sheathing; Touch 'n Seal All Seasons Foam

DOOR WEATHER STRIPPING: Install heavy duty weather stripping with aluminum carrier at door sides and top jamb. Install for 40% - 60% weather strip compression. Caulk behind weather strip carrier. Materials: Visco Weatherseal Products with aluminum carrier; soft-cell foam insert with thermoplastic cover.

CAULKING: Seal the non-operational components of the jamb, casing or trim that have been identified as pathways for air leakage. Install backer rod as required at large gaps. Materials: DuPont Airtite Siliconized Acrylic Latex Sealant.

Table below indicates the weatherization scope included.

Task	Deer Park District Office Annex	Deer Park High School	John F. Kennedy Intermediate	John Q Adams Elementary	May Moore Elementary	Memorial School	Robert Frost Middle School	Total Quantity
Buck Frame Air Sealing (LF)			762					762
Caulking (LF)	70		625	675			573	1,943
Door Weather Striping - Doubles (Units)						5		5
Door Weather Stripping - Singles (Units)					1			1
Hopper Window Weatherization (LF)	12		275					287
Overhang Air Sealing (LF)			12		14	12		38
Overhang Air Sealing (SF)	32	128	32		96	96		384
Overhead Door Weather Stripping (Units)			2	2			1	5
Roof-Wall Intersection Air Sealing (LF)		1,36 5	160	600	905	770	800	4,600
Wall Air Sealing (LF)					75			75

#### **Exclusions:**

- 1. Repair or replacement of existing exterior doors and windows is excluded in this scope of work other than as described in the scope of work. If any doors are found to be inoperable, or windows are found to be broken, JCI will report the deficiency to the customer for repair or replacement prior to JCI retrofitting the seals.
- 2. Repair or replacement of existing brick or other masonry materials/systems is excluded in this scope of work.
- 3. Repair or replacement of existing attic space including rafters, ceiling or roof areas.
- 4. Modifications required to due to existing code violations, including but not limited to the Americans with Disabilities Act (ADA) and egress, are the responsibility of the Customer.

- 5. Cutting, patching, and painting is excluded.
- 6. The scope of work does not include the repair or installation of any structural systems.

## ECM 4: Motor Replacement

Johnson Controls shall replace the motors listed in the table below with new premium efficiency units.

The scope of work will be as follows:

Remove and dispose of existing motor(s)

Provide new premium efficiency open drip-proof type motors with 1.15 SF

Provide precision alignment for new motors connected to pumps

Provide, install, connect, and start up and check out new variable frequency drive with pumps at Robert Frost Middle School.

Building	Equipment Type	Equipment Name	HP	Nema Efficiency
Deer Park High School	Air Compressor	Air Compressor	5	82.5
Deer Park High School	Chilled Water Pump	CHWP-1	10	87.5
Deer Park High School	Chilled Water Pump	CHWP-2	10	87.5
Deer Park High School	Condenser Water Pump	CWP-1	15	91
Deer Park High School	Condenser Water Pump	CWP-2	15	91
Deer Park High School	Hot Water Pump	P-7	5	87.5
Deer Park High School	Pool Pump	Filter Pump 1	7.5	88
Deer Park High School	Pool Pump	Filter Pump 2	7.5	88.5
Robert Frost Middle School	Hot Water Pump	P-1	5	Standard
Robert Frost Middle School	Hot Water Pump	P-2	2	Standard
Robert Frost Middle School	Hot Water Pump	P-3	7.5	Standard
Robert Frost Middle School	Hot Water Pump	P-4	7.5	Standard
John Quincy Adams Primary School	Hot Water Pump	P-1	5	84
John Quincy Adams Primary School	Hot Water Pump	P-2	5	84

## **Exclusions:**

- 1. Repair or replacement of defective mechanical, controls, and electrical equipment and electrical distribution system, except the equipment described in the Scope of Work (Defective equipment identified by JCI during implementation of the Scope of Work will be brought to the attention of the Customer).
- 2. Resolution of existing design, service, and or distribution conditions known or unknown.

3. Temporary pumping and compressed air.

## ECM 5: Boiler Replacement

At Robert Frost Middle School, remove 2 existing boilers, expansion tanks, breeching and pumps including any required asbestos abatement. Furnish and install (4) VTG-2000 Dual Fuel Firetube Condensing Hydronic Boilers equipped with Powerflame Burners.

- Assemble and install boiler-burner unit(s) in compliance with manufacturer's installation instructions. Work shall be done in a neat and workman like manner.
- Shall be hydrostatically pressure tested at factory in accordance with ASME requirements.
- Install new make-up regulator and backflow preventer.
- New piping will be installed from the new boilers and tied into the existing header.
- New header isolation valves and boiler non-return valves will be installed.
- New breaching will be installed and sleeved up the existing stack with drains and neutralization.
- All piping and appurtenances will be abated within the boiler room and insulated with 3-inch fiberglass insulation.
- Plant start up and testing will be performed, and report will be provided.
- Reconnect existing building management system to new boilers.
- Provide Pipe Supports, Hangers and Brackets for new pipe
- Provide Valve Tags and ID Chart
- Provide Pipe Labeling and Directional Arrows
- Synex ModSync Control Panel for lead/lag
- (4) four Armstrong pumps and specialties
- New expansion tank
- Connect existing gas and oil piping to new burners
- Existing domestic hot water heater shall remain

#### Regulatory Requirements

- Boiler(s) and controls to comply with applicable regulations.
- Provide U.L. labeled burner(s).
- Provide add option for local code(s) i.e.: MASS Code, BAR

## Submittals

- Submit shop drawings and product data.
- Submittal packet to include boiler (and burner) manufacturer descriptive literature, installation instructions, operating instructions, and maintenance instructions.

Boiler foundation(s):

• Installer to construct needed support and level concrete foundation(s) where boiler room floor is uneven or will not support the weight of the boiler(s).

#### Boiler trim:

- New electrical components to be of high quality and bear the U.L. label.
- Low water cut-off
- Boiler(s) to be furnished with U.L. labeled low water cut-off with ASME working pressure rating equal to the ASME rating of the relief valve.
- Install cut-off according to manufacturer's instructions.
- Locate so burner shuts down if boiler water level falls below allowable safe waterline.
- Boiler primary low water cut-off shall be a float type auto reset.
- Boiler secondary low water cut-off shall be float or probe manual reset.

## Start-up and Service:

- The contractor shall obtain the services of a factory-authorized agent to provide burner light off and adjustment. The start-up agent shall provide a burner light-off report as written proof that the burner was adjusted to optimum performance.
- The authorized agent shall provide a one-year service warranty after start-up.

#### **Exclusions:**

- 1. Repair or replacement of defective mechanical, controls, and electrical equipment and electrical distribution system, except the equipment described in the Scope of Work (Defective equipment identified by JCI during implementation of the Scope of Work will be brought to the attention of the Customer).
- 2. Resolution of existing design, service, and or distribution conditions known or unknown.
- 3. Temporary hot water.
- 4. Repairs/replacement of insulation, piping or ductwork found to be corroded or rusted or otherwise unacceptable for installation of components or fittings required for installation other than what is specified in the Scope of Work.
- 5. Correction of any existing applicable building code violations and Federal Americans with Disabilities Act (ADA) violations identified by JCI during the execution of the Work. Such violations will be brought to the attention of the Customer for remedy.
- 6. Test and balance.

## ECM 6: Boiler Plant Optimization

Johnson Controls shall furnish and install staging controls for the condensing boilers and the model 94 boilers at the high school according to the following parameters:

- The condensing boilers will operate during the summer months to provide the required heat for the pool.
- The condensing boilers will provide base loading for building heat when the Outside Air Temperature (OAT) is 55°F and below and when the Return Water Temperature (RWT) is below 140°F.
- If the OAT is less than 55°F and the return water is less than 140°F, then disable the sectional boiler. If the condensing boilers do not satisfy the supply temperature for a period of 15 minutes, then the sectional boiler will be enabled.
- When the RWT is greater than 140°F the section boiler shall be enabled to provide heat to the building heating water.

#### **Exclusions:**

- 1. Repair or replacement of defective mechanical, controls, and electrical equipment and electrical distribution system, except the equipment described in the Scope of Work (Defective equipment identified by JCI during implementation of the Scope of Work will be brought to the attention of the Customer).
- 2. Resolution of existing design, service, and or distribution conditions known or unknown.
- 3. Correction of any existing applicable building code violations and Federal Americans with Disabilities Act (ADA) violations identified by JCI during the execution of the Work. Such violations will be brought to the attention of the Customer for remedy.
- 4. Test and balance.

## ECM 7: Furnace/DHW Heater - Burner Controllers

Johnson Controls shall install Intelligent Control Systems I-CON hot water heating systems fuel economizers on furnace and DHW heaters at the following locations:

Building	Gas Fired RTU Furnace Controllers	DHW Controllers
Robert Frost Middle School	7	1
John Quincy Adams Primary School	0	1
May Moore Primary School	0	1
Memorial School	2	1
Total	9	4

## **Exclusions:**

- 1. Resolution of existing design, service, and or distribution conditions known or unknown.
- 2. Correction of any existing applicable building code violations and Federal Americans with Disabilities Act (ADA) violations identified by JCI during the execution of the Work. Such violations will be brought to the attention of the Customer for remedy.
- 3. Temporary space conditioning unless otherwise identified in a FIM Scope of Work.
- 4. Test and balance of existing air and water HVAC systems unless otherwise noted in a specification FIM Scope of Work.
- 5. Repair or replacement of defective mechanical, electrical and controls equipment and electrical distribution system, except the equipment described in the Scope of Work (Defective equipment identified by JCI during implementation of the Scope of Work will be brought to the attention of the Customer).

## ECM 8: Heating Distribution System - Pipe & Valve Insulation

Johnson Controls shall install pipe and valve insulation and/or thermal jackets on existing hot water systems to reduce heat loss according to the following table below:

The fiberglass pipe insulation shall be manufactured by Johns Manville or a manufacturer of equivalent type and quality (subject to Johnson Controls and Customer approval), and with PVC fitting covers. The removable insulated fiberglass pads shall be made with Silicone Impregnated Fiberglass Cloth manufactured by GLT Products or a manufacturer of equivalent type and quality (subject to Johnson Controls and Customer approval).

The following table lists the items that were found to be un-insulated:

Building	Type of Piping/Tank	Location	Quantity	Pipe Material	Line Size Diam. (in)	Length (ft) or Surface Area (sqft)
Deer Park High School	HX Flange	Boiler Room	1	Steel	20	1.5
Deer Park High School	HX Head	Pool MER	1	Steel	18	1.5
Deer Park High School	DHWH Tank Head	Chiller MER	1	Steel	12	1.0
Deer Park High School	HX Head	Pool MER	1	Steel	12	1
Deer Park High School	Flange	Boiler Room	2	Steel	10	4.1
Deer Park High School	Flange	Pool MER	1	Steel	8	3.1
Deer Park High School	Flange	Boiler Room	2	Steel	6	2.3
Deer Park High School	Bonnet	Boiler Room	9	Steel	5	3.2
Deer Park High School	Flange	Boiler Room	2	Steel	4	1.7
Deer Park High School	Elbow	Boiler Room	2	Steel	4	1
Deer Park High School	Butterfly Valve	Boiler Room	8	Steel	4	2
Deer Park High School	Flex	Chiller MER	1	Steel	4	2
Deer Park High School	Suction Strainer	Chiller MER	1	Steel	4	4.68
Deer Park High School	Strainer	Chiller MER	1	Steel	4	4.68
Deer Park High School	Flange Cap	Boiler Room	2	Steel	3	1.2
Deer Park High School	Strainer (DHW)	Chiller MER	2	Steel	3	3.37
Deer Park High School	Gate Valve (DHW)	Chiller MER	4	Steel	3	3.2
Deer Park High School	Check Valve (DHW)	Chiller MER	1	Steel	3	3.2
Deer Park High School	Control Valve	Chiller MER	1	Steel	3	3.2
Deer Park High School	Tee	Chiller MER	1	Steel	3	1
Deer Park High School	DHW Piping	Chiller MER	1	Copper	3	2
Deer Park High School	Flange	Pool MER	2	Steel	3	1.2
Deer Park High School	HW Piping	Pool MER	1	Copper	3	3
Deer Park High School	Check Valve	Pool MER	2	Steel	2	1.8
Deer Park High School	Balancing Valve	Chiller MER	1	Steel	1	1

Building	Type of Piping/Tank	Location	Quantity	Pipe Material	Line Size Diam. (in)	Length (ft) or Surface Area (sqft)
Robert Frost Middle School	Bonnet	Boiler Room	3	Steel	8	4.3
Robert Frost Middle School	Control Valve	Boiler Room	1	Steel	8	4.9
Robert Frost Middle School	Bonnet	Boiler Room	5	Steel	6	3.9
Robert Frost Middle School	Bonnet	Boiler Room	1	Steel	4	2.8
Robert Frost Middle School	Gate Valve	Boiler Room	1	Steel	4	4.68
Robert Frost Middle School	DHW Piping	Boiler Room	1	Copper	3	1
Robert Frost Middle School	Flex	Boiler Room	1	Steel	2.5	3
Robert Frost Middle School	Strainer	Boiler Room	2	Steel	2	1.8
Robert Frost Middle School	Control Valve (DHW)	Boiler Room	1	Steel	2	1.8
Robert Frost Middle School	Flex	Boiler Room	1	Steel	2	4
Robert Frost Middle School	Check Valve	Boiler Room	3	Steel	2	1.8
Robert Frost Middle School	Balancing Valve	Boiler Room	2	Steel	2	1.8
Robert Frost Middle School	Union	Boiler Room	3	Steel	2	1
Robert Frost Middle School	Strainer	Boiler Room	1	Steel	1.5	1
Robert Frost Middle School	DHW Piping	Boiler Room	1	Copper	1.5	2.5
Robert Frost Middle School	Check Valve	Boiler Room	1	Steel	1.5	1
Robert Frost Middle School	Flex	Boiler Room	1	Steel	1	1
John F. Kennedy Intermediate School	Top of Boiler 1	Boiler Room	1	Steel	8' x 6"	12.9525

Building	Type of Piping/Tank	Location	Quantity	Pipe Material	Line Size Diam. (in)	Length (ft) or Surface Area (sqft)
John F. Kennedy Intermediate School	Reducer	Boiler Room	4	Steel	4" - 3"	1
John F. Kennedy Intermediate School	Reducer	Boiler Room	2	Steel	4" - 2.5"	1
John F. Kennedy Intermediate School	Vapor Separator	Boiler Room	1	Steel	4' x 2'	31.4
John F. Kennedy Intermediate School	DHWH Tank Head	Boiler Room	1	Steel	18	1.5
John F. Kennedy Intermediate School	HX Head	Boiler Room	1	Steel	14	1
John F. Kennedy Intermediate School	Flange (Off of Separator)	Boiler Room	3	Steel	8	3.1
John F. Kennedy Intermediate School	Balancing Valve	Boiler Room	1	Steel	6	7.03
John F. Kennedy Intermediate School	HW Piping	Boiler Room	1	Steel	6	3
John F. Kennedy Intermediate School	Balancing Valve	Boiler Room	6	Steel	4	4.68
John F. Kennedy Intermediate School	Suction Strainer	Boiler Room	6	Steel	4	4.68
John F. Kennedy Intermediate School	Flex	Boiler Room	1	Steel	4	6
John F. Kennedy Intermediate School	Balancing Valve	Boiler Room	4	Steel	3	3.2
John F. Kennedy Intermediate School	Union	Boiler Room	4	Steel	3	1.2
John F. Kennedy Intermediate School	Strainer	Boiler Room	1	Steel	3	3.37
John F. Kennedy Intermediate School	Butterfly Valve	Boiler Room	1	Steel	3	2
John F. Kennedy Intermediate School	DHW Piping	Boiler Room	1	Steel	3	6
John F. Kennedy Intermediate School	Strainer (DHW)	Boiler Room	1	Steel	3	3.37
John F. Kennedy Intermediate School	Control Valve (DHW)	Boiler Room	1	Steel	3	3.2

Building	Type of Piping/Tank	Location	Quantity	Pipe Material	Line Size Diam. (in)	Length (ft) or Surface Area (sqft)
John F. Kennedy Intermediate School	Bonnet (DHW)	Boiler Room	1	Steel	3	2.3
John F. Kennedy Intermediate School	Mixing Valve (DHW)	Boiler Room	1	Steel	1.5	1
John Quincy Adams Primary School	HX Head	Boiler Room	1	Steel	14	1
John Quincy Adams Primary School	Flange Cap	Boiler Room	1	Steel	5	1.5
John Quincy Adams Primary School	Bonnet	Boiler Room	8	Steel	4	2.8
John Quincy Adams Primary School	Flange Cap	Boiler Room	2	Steel	4	1.7
John Quincy Adams Primary School	Gate Valve	Boiler Room	1	Steel	4	4.68
John Quincy Adams Primary School	Balancing Valve	Boiler Room	2	Steel	3	3.2
John Quincy Adams Primary School	Strainer	Boiler Room	1	Steel	1	1
May Moore Primary School	Bonnet	Boiler Room	1	Steel	6	3.9
May Moore Primary School	Flange	Boiler Room	2	Steel	6	2.3
May Moore Primary School	Balancing Valve	Boiler Room	1	Steel	5	6.8
May Moore Primary School	Bonnet	Boiler Room	2	Steel	4	2.8
May Moore Primary School	Bonnet	Boiler Room	1	Steel	3	2.3
May Moore Primary School	Balancing Valve	Boiler Room	3	Steel	2.5	2.97
May Moore Primary School	Mixing Valve (DHW)	Boiler Room	1	Steel	2	1.8
May Moore Primary School	Mixing Valve (DHW)	Boiler Room	1	Steel	1.5	1
Memorial	DHW Piping	Boiler Room	1	Copper	2	4

## Exclusions:

- 1. Resolution of existing design, service, and or distribution conditions known or unknown.
- Correction of any existing applicable building code violations and Federal Americans with Disabilities Act (ADA) violations identified by JCI during the execution of the Work. Such violations will be brought to the attention of the Customer for remedy.
- 3. Repair or replacement of defective mechanical, electrical and controls equipment and electrical distribution system, except the equipment described in the Scope of Work (Defective equipment identified by JCI during implementation of the Scope of Work will be brought to the attention of the Customer).
- 4. Repairs/replacement of piping or components found to be corroded or rusted and unacceptable for installation other than what is specified in the Scope of Work.

## ECM 9: Refrigeration Compressor Controllers

Johnson Controls shall furnish and install (7) seven Intelligent Control Systems ICON-2500 controllers on the existing individual compressor units located in the buildings listed below:

Building	Location	No. of Compressors
Deer Park High School	Kitchen Basement	1
Deer Park High School	Kitchen Basement	1
Deer Park High School	Exterior	1
Robert Frost Middle School	Kitchen Storage	1
Robert Frost Middle School	Kitchen Storage	1
John F. Kennedy Intermediate School	Kitchen	1
John F. Kennedy Intermediate School	Roof	1

## **Exclusions:**

- 1. Temporary refrigeration.
- 2. Repair or replacement of defective mechanical, electrical and controls equipment and electrical distribution system, except the equipment described in the Scope of Work (Defective equipment identified by JCI during implementation of the Scope of Work will be brought to the attention of the Customer).

## ECM 10: Renewable Energy – Photovoltaic Electric Generation/Cogen Decommission

Johnson Controls shall furnish and install Solar Photovoltaic Systems at five (5) buildings located in the Deer Park Union Free School District. The total system size across these roof top and carport systems will be approximately 992.5 KW DC that will interconnect with the existing electrical distribution system at the associated schools. The cogeneration plants at Deer Park High School, Frost and JFK will be decommissioned and removed. This includes removal of the cogen units, dump radiators, all associated piping, conduits, gas piping, and heat exchangers. Any associated penetrations will be properly sealed. The gas meters will be removed, and accounts will be closed. This will allow for the new PV systems to provide locally produced electricity with zero emissions and meet the current interconnection code compliance.

The following table identifies the PV sizes and installation type at each location:

Locations	Carport / Canopy System (kW-DC)	Roof Mount (kW- DC)	Total (kW-DC)
Deer Park High School	257.3	0	257.3
Robert Frost School	0	188	188
May Moore Elementary School	0	150.0	150.0
John F Kennedy Intermediate School	0	258.0	258.0
John Quincy Adams Elementary School	0	139.2	139.2
Total	257.3	735.2	992.5

Installation includes the following specifications for new Roof Ballasted Systems:

- UL Certificate
- New wiring to meet the requirements of the 2014 National Electric Code ("NEC").
- Solar Module to be 72 cell 400 watt JA Solar or equal and as approved by Customer's Architect/Engineer and Johnson Controls.
- Inverters to be SMA or equal

- Balance of system to meet 2014 NEC Code.
- Required Interconnection to building system located as per 2014 NEC Code lineside tap as determined by the utility(ies) having jurisdiction.
- Unirac RM, Ecofoot or equal self-ballasted racking system
- Web based dashboard for PV production for students and staff to use and access
- Weather station at each location will be installed.
- PV dashboard shall log 15-minute interval data for kW, kWh, and solar irradiance.
- Furnish and install required ballast block as per design.
- One time training for 4 hours to the District
- District to support monitoring by supplying an IT drop to a gateway location and necessary IP addresses that the District will maintain for 18 years.
- Protective slip sheet to meet roofing warranty certifications
- SED approved system design drawings

Installation includes the following specifications for Carport and Canopy Systems:

- Carport system to have a minimum height of 14 ft. in roadway areas
- Solar Modules to be 72 cell 400-watt JA Solar or JCI and Customer approved equal
- Solar Inverters to be SMA or JCI and Customer approved equal 1500-volt family.
- Solar equipment to be mounted at no less than 10 ft above grade.
- Conduit work up to 10 ft. above grade will be hard wall galvanized.
- Should any new exterior switchgear be required, a 6 ft chain-link fence shall be installed with an access gate.
- New underground conduit to be PVC
- Work to conform to PSEG and regulatory or governmental agencies requirements. JCI is responsible for costs necessary to conform to these requirements.
- Carport/Canopy Racking system, including hardware and module mounting hardware to be engineered carport/canopy structure to support PV modules.
- New members and hardware are galvanized steel with Columns and Top Beams hot dipped to ASTM A123 and purlins pre-galvanized to a G140 minimum. Module hardware is stainless steel.
- New member connections shall be bolted. No on-site welding shall be required or undertaken without the prior written permission of the District and its Architect.
- Parking lot restoration in affected areas to be saw cut and hot patched to match existing surface conditions.
- Columns to be set directly on concrete piers with chemical anchors or wet set anchor bolts.
- Temporary fencing, barricades or storage trailers necessary to secure site
- Disposal of soil/spoil created from the foundation installation is included. JCI shall undertake necessary soil testing and properly dispose of soil at its cost and expense in accordance with all applicable laws, rules, regulations and codes in effect at the time of SED approval of the Agreement.
- Grounding hardware for modules and racking
- Module grounding to be per module manufacturer's installation instructions.
- Base design includes pre-punched holes in the purlin for wire management.
- Electrical Underwriters Certificate
- Electrical installation to be installed as per the NEC 2014 code, as amended and updated.
- Electrical conduit will be installed outside of concrete piers and/or baseplates.
- JCI will provide a web-based dashboard for PV production for students and staff to use and access.
- District to support monitoring by supplying an IT drop to a gateway location and all necessary IP addresses that the District will maintain for 18 years.
- SED approved system design drawings

In the event that any of the building roofs, parking lots are determined to be unsuitable for roof mounted, carport, canopy PV arrays, Johnson Controls will attempt to move the arrays or portions of the arrays to another location that is suitable at any of the other buildings outlined above, subject to all necessary review and approvals.

Johnson Controls shall install the new PV systems with existing roof manufacturer standards to maintain current and any new roof warranty(ies) as it relates to the solar panel installation. At impacted locations, existing structural steel, joists, roof decks, parking lots, walkways are anticipated to be adequate for solar panel installation. If during the

design phase the architect / engineer of record, JAG, encounter structural issues, geo-tech issues, drainage issues, septic system issues with any of roofs, roof framing, parking lots and walkways, JCI shall relocate the problem areas of solar arrays to a different location in order to maintain the 992.5 kW DC of total system size. An adjustment to the guarantee will occur if the new location is on a different electric rate.

In the event that any of the proposed locations are determined to not be a viable option, the scope of work for this ECM shall be reduced subject to Customer's written approval by deduct change order and the costs associated with the reduced scope shall be credited to the Customer. The guaranteed savings shall also be adjusted accordingly by a formal written amendment to the Agreement. All adjustments require Customer's written approval and must maintain a positive cash flow as set forth in the contract documents.

The weather station monitoring is included through dashboard for 10 years as long as the internet IP address is maintained. The weather station includes a pyranometer at each location, one at each of the 5 schools. The irradiance value will be trended and logged into the cloud for 10 years. At the end of the 10 years, the Customer can elect to renew the monitoring service at an additional cost.

Power to the building will be temporarily shut down by the utility for up to four (4) hours during the tie-in. Coordination with the District will be required at the time of the tie-in.

## Exclusions:

- 1. Resolution of existing design, service, and or distribution conditions known or unknown.
- 2. Correction of any existing applicable building code violations and Federal Americans with Disabilities Act (ADA) violations identified by JCI during the execution of the Work. Such violations will be brought to the attention of the Customer for remedy.
- 3. Temporary power during tie-in.
- 4. Repair or replacement of defective electrical equipment and electrical distribution system, except the equipment described in the Scope of Work (Defective equipment identified by JCI during implementation of the Scope of Work will be brought to the attention of the Customer).

## ECM 11: Plug Load Controllers

Johnson Controls shall furnish and install 199 plug load management controllers that will gain control of specified plug load equipment listed below. The system will use an existing Wi-Fi network that will communicate to an energy management user interface. Through the user interface, equipment shall be monitored, scheduled and turned on / off. In areas where no Wi-Fi connection exists, plugs shall be programmed with the intended schedule for the equipment.

Building	Copier	Window AC	Water Fountain	Coffee Makers
Deer Park High School	2	21	6	1
Robert Frost Middle School	2	32	3	1
John F. Kennedy Intermediate School	2	47	4	0
John Quincy Adams Primary School	1	15	2	1
May Moore Primary School	1	19	3	0
Annex - Transportation Department	1	8	0	0
Memorial School	1	26	0	0
Total	10	168	18	3

Following is the scope of work for the plug load controllers:

- Provide plug load control devices as per final schedule of outlets
- Install and connect devices
- Load and configure software on an owner designated computer at each school
- Start, test, and checkout the system

## **Exclusions:**

1. Repair or replacement of defective plug load equipment, and the electrical distribution system and components (Defective equipment identified by JCI during implementation of the Scope of Work will be brought to the attention of the Customer).

## ECM 12: Vending Machine Controllers

Johnson Controls shall furnish and install (9) nine vending machine controllers, VM170, on the districts vending machines as outlined below:

Building	Vending Machine QTY
Deer Park High School	2
Robert Frost Middle School	2
John Quincy Adams Primary School	2
May Moore Primary School	1
Memorial	2
Total	9

#### **Exclusions:**

1. Repair or replacement of vending equipment, and the electrical distribution system and components (Defective equipment identified by JCI during implementation of the Scope of Work will be brought to the attention of the Customer).

#### ECM 13: Air Conditioning Compressor Controllers

Johnson Controls shall furnish and install Intelligent Control Systems ICON-2400 controllers on the existing individual compressor units located in the buildings listed below:

Location	No. of Compressors
Deer Park High School	1
Robert Frost Middle School	8
Memorial School	6
Total	15

#### Exclusions:

- 1. Temporary Air Conditioning.
- 2. Repair or replacement of defective mechanical, electrical and controls equipment and electrical distribution system, except the equipment described in the Scope of Work (Defective equipment identified by JCI during implementation of the Scope of Work will be brought to the attention of the Customer).
- 3. Resolution of existing design, service, and or distribution conditions known or unknown.

# 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 Period.

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

**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 Period.

**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 Period.

**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 Schedule 2 Exhibit 6 below.

**Guarantee Period** will commence on the first day of the next month following the Substantial Completion date and will continue for eighteen (18).

**M&V Services** means the services performed to monitor and report the performance relative to the guarantee defined in the Assured Performance Guarantee set forth in Schedule 2.

**M&V Services Period** will commence on the first day of the next month following the Substantial Completion date and will continue for 3 years, 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 Period.

**Measured Project Benefits** are the utility savings and cost avoidance calculated in accordance with the methodologies set forth in Schedule 2 Exhibit 2 below.

**Project Benefits** are the Measured Project Benefits plus the Operational and Maintenance 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. The cost of the M&V Services is included in the Total Project Benefits guaranteed to be achieved during the entire term of this Agreement.

## B. <u>Project Benefits Summary</u>

Subject to the terms and conditions of this Agreement, JCI and Customer agree that Customer will be deemed to achieve a total of \$1,362,942 in Operational and Maintenance Cost Avoidance, \$91,421 in rebates and JCI guarantees that Customer will achieve a total of \$7,271,992 in Measured Project Benefits during the term of this Agreement, for Total Project Benefits of \$8,726,354, as set forth in the Total Project Benefits table below.

Year	Utility Cost Avoidance* Measurable Savings	Operations & Maintenance Cost Avoidance**	Energy Rebate- Non Recurring Savings	Total Guaranteed Project Benefits
Implem.				\$0
1	\$339,617	\$75,719	\$91,421	\$506,757
2	\$346,410	\$75,719		\$422,129
3	\$353,338	\$75,719		\$429,057
4	\$360,405	\$75,719		\$436,124
5	\$367,613	\$75,719		\$443,332
6	\$374,965	\$75,719		\$450,684
7	\$382,464	\$75,719		\$458,183
8	\$390,114	\$75,719		\$465,833
9	\$397,916	\$75,719		\$473,635
10	\$405,874	\$75,719		\$481,593
11	\$413,992	\$75,719		\$489,711
12	\$422,271	\$75,719		\$497,990
13	\$430,717	\$75,719		\$506,436
14	\$439,331	\$75,719		\$515,050
15	\$448,118	\$75,719		\$523,837
16	\$457,080	\$75,719		\$532,799
17	\$466,222	\$75,719		\$541,941
18	\$475,546	\$75,719		\$551,265
Totals	\$7,271,992	\$1,362,942	\$91,421	\$8,726,354

## **Total Project Benefits**

\*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 figures in the table above are based on a mutually agreed fixed annual escalation rate of zero (0%) increase in labor and material cost.

## Annual Measurement and Verification (M&V) Services

JCI shall provide M&V Services for a period of three (3) years starting on the first day of the month next following the Substantial Completion Date. Within sixty (60) days of the commencement of the M&V Services Period, JCI will calculate the Measured Project Benefits achieved during the Installation Period plus any Operations & Maintenance

Project Benefits applicable to such period and advise Customer of same. Any Project Benefits achieved during the Installation Period shall inure to the benefit of the Customer. Within sixty (60) days of each anniversary of the commencement of the Guarantee Period, for so long as the M&V Services Period is in effect, JCI will calculate the Measured Project Benefits achieved for the applicable year plus any Operations & Maintenance Project Benefits applicable to such period and advise Customer of same.

As set forth in the Certification provided by JCI to the NY State Education Department, JCI guarantees recovery of costs of the Agreement from energy savings realized by the Customer during a period of 18 years.

Customer acknowledges and agrees that if, for any reason during the agreed-upon period of M&V Services, it (i) cancels or terminates receipt of M&V Services, other than due to JCI's material breach thereof, or (ii) cancels or terminates this Agreement, it shall be assumed that the Annual Project Benefits will be met during each year of the Guarantee Period.

Customer further acknowledges and agrees that if, for any reason, it (i) fails to pay for M&V Services in accordance with the terms of this Agreement and Schedule 4 – Price and Payment Terms, (ii) fails to fulfill any of Customer's material responsibilities necessary to enable JCI to complete the Work and provide the M&V Services, including but not limited to Customer's failure to operate and maintain the equipment and/or systems substantially as stipulated by JCI, or (iii) otherwise materially breaches this Agreement, JCI shall issue a written notice to the Customer stating the nature of the alleged breach and shall provide Customer with a thirty (30) day period to cure such breach. If the Customer fails to cure such breach within such thirty (30) day period, Customer acknowledges and agrees that the Assured Performance Guarantee shall automatically terminate, unless otherwise agreed to in writing by the parties.

## C. Project Benefits Shortfalls or Surpluses.

- (1) During the period in which JCI is providing M&V Services, the following shall apply:
  - (a) <u>Project Benefits Shortfalls</u>. If an Annual Project Benefits Shortfall occurs for any one year of the M&V Services Period, JCI shall (a) pay to Customer the amount of such shortfall, or (b) subject to Customer's agreement, provide to Customer additional products or services, in the value of such shortfall, at no additional cost to Customer.
    - (b) <u>Project Benefits Surpluses</u>. If an Annual Project Benefits Surplus occurs for any one year of the M&V Services Period, such surplus shall inure to the benefit of the Customer, but shall also be indexed to offset any future Annual Project Benefit Shortfall during the Guarantee Period, in an amount not to exceed the amount of such surplus.
    - (c) <u>Additional Improvements</u>. 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 Period.
- (2) Following the conclusion of the M&V Services Period, the following shall apply:
  - (a) If the Annual Project Benefits are met in each year during the period that M&V Services are provided, it shall be assumed (in accordance with Option A of the NEMVP, and based upon the equipment continuing to operate in accordance with specified criteria) that the Annual Project Benefits will be met during each year of the Guarantee Period.
  - (b) If there is an Annual Project Benefits Shortfall in any one year during the period that M&V Services are provided and such Shortfall is the result of the equipment not operating in accordance with specified criteria, then Customer shall allow JCI access to the property to conduct repairs or make adjustments to the equipment as necessary to resolve the cause of the Shortfall. Once the cause of the Shortfall is resolved, it shall be assumed (based upon the equipment continuing to operate in accordance with the specified criteria) that the Annual Project Benefits will be met during each year of the Guarantee Period. If the Shortfall continues to exist notwithstanding the equipment operating in accordance with the specified criteria, JCI shall pay the amount of the Shortfall to Customer for the remainder of the Guarantee Period.
  - (c) If there was an Annual Project Benefits Shortfall in any one year during the period that M&V Services were provided and such Shortfall (as described in 1.c above) has been eliminated, then Annual Project Benefits will be deemed to have been met during each subsequent year of the Guarantee Period. If the Shortfall has been mitigated but not eliminated and continues to exist, JCI shall pay the mitigated Shortfall to Customer for the remainder of the Guarantee Period.

# **II. 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 use these methodologies as guidelines. These methodologies are more fully detailed in the guidelines and standards of the North American Energy Measurement and Verification Protocol (NEMVP), in connection with the provision of M&V Services hereunder.

## **NEMVP** Option A

#### Potential to Perform Verification and Performance Calculation

Option A is a verification approach designed for projects where the potential to perform needs to be verified, but the actual performance (savings) can be calculated based on the results of the "potential to perform and generate savings" verification and engineering calculations. Option A involves procedures for verifying that:

- Baseline conditions have been properly defined.
- The equipment and/or systems that were contracted to be installed have been installed.
- The installed equipment/systems meet the specifications of the contract in terms of quantity, quality and rating.
- The installed equipment is operating and performing in accordance with the specifications in the contract and meeting all functional tests.
- The installed equipment/systems continue, during the term of the contract, to meet the specifications of the contract in terms of quantity, quality and rating, operation and functional performance.

The potential to perform may be verified through inspections and/or spot or short-term metering conducted immediately before and/or immediately after project installation. Annual (or some other regular interval) inspections may also be conducted to verify an FIM's continued potential to perform and generate savings. Estimated factors used in calculations are supported by historical, published, or manufacturers' data. Savings are determined by means of engineering calculations of baseline and reporting period energy use based on measured and estimated values. With Option A, actual achieved energy or cost savings are not verified; they are predicted using engineering or statistical methods that do not involve long-term measurements. Reference: NEMVP Version 1.0

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

ECM #	Energy Conservation Measure	M&V Option
1	Lighting - Interior Retrofit	А
2	Lighting - Exterior Retrofit	А
3	Building Envelope - Weatherization	А
4	Motors - Energy Efficient Motor Replacement	А
5	Heating System - Boiler Replacement	А
6	Boiler Plant Optimization	А
7	Heating System - Boiler/DHW Controllers	А
8	Heating System - Pipe and Valve Insulation	А
9	Refrigerator Compressor Controllers	А
10	Renewable Energy- Photovoltaic Generation/Cogen Decommission	А
11	Plug Load Controllers	A
12	Vending Machine Controllers	A

#### Table 2.2.1: Option A Measures

			Schedule 2
13	AC Compressor Controllers	А	

## ECM 1: Lighting - Fixture Retrofit

**M&V Option:** NEMVP-A (One Time\*) M&V services shall be provided by JCI on an annual basis throughout the M&V Services Period, unless expressly cancelled by the Customer in accordance with Schedule 4.

**Measurement Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the light fixtures subject to the lighting retrofit project.

## Measured Key Parameter: kW

Estimated Parameter: Standard SED hours of operation as set forth at Exhibit 7 of Schedule 2

**Interaction:** Lighting kw reduction leads to increase in heat energy usage during winter and decrease in cooling energy usage during summer. The net energy usage due interaction will be accounted during pre-retrofit and post-retrofit savings calculation.

Measuring Equipment: True-RMS Wattmeter (kw measurement) and light meter (light level measurement)

## **Measuring Equipment Accuracy:**

True RMS Watt Meter:  $\pm 3\%$  of measurement range Light Meter:  $\pm 3\%$  of measurement range

**Measuring Equipment Calibration:** Equipment will be quality checked for calibration at the time of measurement and documented in the M&V report.

#### Measurement Period: One-minute average

**Measurement Frequency:** One-time post-retrofit measurement. Inspection checks for remainder of M&V Services Period

#### **Measurement and Verification Details:**

#### Sampling Procedure:

To reduce M&V cost, all fixtures installed will not be measured, an effective NEMVP recommended sampling method will be used. Lighting fixture types that account for greater than 10% of the total fixtures installed will be measured. Lighting fixtures will be separated to homogenous groups and sampled to achieve  $\pm 20\%$  precision with 80% confidence assuming a 0.5 coefficient of variance.

#### Measurement Procedure:

True RMS power measurements will be taken at the light switch that energizes the circuit containing only the sampled fixtures.

#### **Quality Check Procedure:**

In order to ensure that a room is not under lit due to lighting kw reduction, a sample of light levels pre and post retrofit will be measured. This data will be compared against the ASHRAE/IES recommended light levels for each space usage type. The installation team will check the lighting installation line by line. The M&V team will quality check the line by line and take photographs of sample spaces for documentation.

#### Pre-Installation Activities:

Pre-retrofit lighting kw will be analyzed and listed in the lighting line by line by location and fixture type. The kw data from the line by line will be used for pre-retrofit savings calculation. Pre-kw will be sampled and measured to validate the line by line. Light level will be quality checked.

#### Post-Installation Activities:

Post-kw measurements will be sampled and measured once after retrofit and will be used for remainder of the M&V Services Period. Light level will be quality checked one time. Inspection results and JCI warranty commitments will

be communicated to the Customer in writing to maximize warranty benefits. Warranty claim procedure will be the responsibility of the Customer.

## Formulas and run hours in the DEA will be used to calculate the savings

## ECM 2: Lighting - Exterior Lighting

M&V Option: NEMVP-A (One Time)

**Measurement Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the light fixtures subject to the lighting retrofit project.

Measured Key Parameter: kW,

Verification Period & Frequency: One time during post-retrofit year in Customer's presence.

Measuring Equipment: True-RMS Wattmeter (kw measurement) and light meter (light level measurement)

#### **Measuring Equipment Accuracy:**

True RMS Watt Meter: ±3% of measurement range Light Meter: ±3% of measurement range

**Measuring Equipment Calibration:** Equipment will be quality checked for calibration at the time of measurement and documented in the M&V report.

#### Measurement Period: One-minute average

**Measurement Frequency:** One-time post-retrofit measurement. Inspection checks for remainder of M&V Services Period

#### **Measurement and Verification Details:**

#### Sampling Procedure:

To reduce M&V cost, all fixtures installed will not be measured, an effective NEMVP recommended sampling method will be used. Lighting fixture types that account for greater than 10% of the total fixtures installed will be measured. Lighting fixtures will be separated to homogenous groups and sampled to achieve  $\pm 20\%$  precision with 80% confidence with an assume 0.5 coefficient of variance.

#### Measurement Procedure:

True RMS power measurements will be taken at the panel that energizes the circuit containing only the sampled fixtures.

#### Quality Check Procedure:

In order to ensure that anarea is not under lit due to lighting kw reduction, a sample of light levels pre and post retrofit will be measured. This data will be compared against the ASHRAE/IES recommended light levels for each area type. The installation team will check the lighting installation line by line. The M&V team will quality check the line by line and take photographs of sample fixtures for documentation.

#### **Pre-Installation Activities:**

Pre-retrofit lighting kw uses NYSERDA values. These will be analyzed and listed in the lighting line by line by location and fixture type. The kw data from the line by line will be used for pre-retrofit savings calculation. Pre-kw

will be sampled and measured to validate the line by line. Light level will be quality checked.

#### Post-Installation Activities:

Post-kw measurements will be sampled and measured once after retrofit and will be used for remainder of the M&V Services Period. Light level will be quality checked one time. Inspection results and JCI warranty commitments will be communicated to the customer to maximize warranty benefits Warranty claim procedure will be the responsibility of the Customer with the. Visual inspections of a sample of fixtures will occur annually.

## Formulas and run hours in the DEA will be used to calculate the savings

#### ECM 3: Building Envelope Improvements - Weatherization

**M&V Option:** NEMVP-A (One Time)

**Measurement Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the items that are subject to this building envelope improvement project.

Interaction: All thermal ECMs.

Verification Equipment: Infrared camera, thermal gun and measuring tape

**Verification Period & Frequency:** One time during post-retrofit year in Customer's presence and under appropriate weather conditions as agreed to by Customer.

#### **Pre-Installation Activities:**

A digital camera will primarily be used to document the pre-retrofit conditions. An infrared camera will be used to capture the thermo graphic image of pre-retrofit thermal leaks. Linear footage of weatherization will be measured using a measuring tape.

#### **Post-Installation Activities:**

A digital camera will primarily be used to document the post-retrofit conditions. An infrared camera will be used to capture the thermo graphic image of post retrofit thermal leaks. Linear footage of weatherization will be measured using a measuring tape. Visual inspections of a sample set for the remainder of the M&V services period.

#### Formulas and values in the DEA will be used to calculate the savings

#### ECM 4 – Motor Replacement

M&V Option: NEMVP-A (One Time)

**Verification Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the items that are subject to this measure

Verification Period & Frequency: One time during both pre-retrofit period and post-retrofit period.

#### **Pre-Installation Activities:**

Document with the digital camera the existing condition of the old motors.

#### **Post-Installation Activities:**

A digital camera will be used to document the post- retrofit conditions. Inspect and verify installed motors to see if they meet the specifications of the DEA in terms of quantity, quality and rating. Verify if they perform in accordance with the functional specifications in the DEA and meeting all functional tests.

#### Formulas and values in the DEA will be used to calculate the savings

#### ECM 5: Boiler Replacement

## M&V Option: NEMVP-A (One Time)

**Verification Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the items that are subject to this boiler burner replacement project.

Verification Period & Frequency: One time during both pre-retrofit period and post-retrofit period

**Pre-Installation Activities:** A combustion efficiency test using a combustion analyzer will be performed to measure the existing operating efficiency of the boilers at a minimum 80% load.

#### **Post- Installation Activities:**

A digital camera will be used to document the post- retrofit conditions. Inspect and verify the installed boilers to see if they meet the specifications of the DEA in terms of quantity and capacity. Verify if they perform in accordance with the functional specifications in the DEA and meeting all functional tests and provide start up report for each unit. A combustion efficiency test using a combustion analyzer will be performed on the new boilers at a minimum 80% load to confirm that it meets specified efficiency specified in the calculations.

#### Formulas and values in the DEA will be used to calculate the savings

#### **ECM 6: Boiler Plant Optimization**

M&V Option: NEMVP-A (One Time)

**Verification Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the items that are subject to this boiler plant optimization project.

Verification Period & Frequency: One time during both pre-retrofit period and post-retrofit period

**Pre-Installation Activities:** Document the existing boiler sequence using pictures and operator interviews.

#### **Post- Installation Activities:**

Confirm the boiler sequence based on design is operating as per dictated sequence of operations.

#### Formulas and values in the DEA will be used to calculate the savings

#### ECM 7: DHW Heaters/Furnace - Burner Controllers

M&V Option: NEMVP-A (One Time)

**Verification Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the items that are subject to this boiler burner controller project.

Verification Period & Frequency: One time during both pre-retrofit period and post-retrofit period.

Pre-Installation Activities: Verify that the boilers do not have any burner controllers installed on them.

#### **Post- Installation Activities:**

A digital camera will be used to document the post- retrofit conditions. Inspect and verify installed boiler controllers to see if they meet the specifications of the contract in terms of quantity, quality and rating. Verify if they perform in accordance with all functional tests and provide start up and check out report for each unit. Visual inspections every year thereafter.

#### Formulas and values in the DEA will be used to calculate the savings

## ECM 8: Heating Distribution System - Pipe and Valve Insulation

## M&V Option: NEMVP-A (One Time)

**Measurement Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the items that are subject to this Pipe and Valve Insulation project.

## Verification Equipment: Thermal gun (or infrared camera) and measuring tape Verification Frequency & Period: One time during both pre-retrofit period and post-retrofit period

#### **Pre-Installation Activities:**

A thermal gun will be used to measure surface temperatures, or an infrared camera will be used to capture the thermo graphic image of pre-retrofit thermal leaks.

#### **Post- Installation Activities:**

Accuracy of the as built will be verified (sampling will be conducted as detailed in the sampling procedure). A digital camera will be used to document the post-retrofit conditions. A thermal gun or an infrared camera will be used to verify installation. Visual inspections of a sample of insulation will occur annually.

#### Formulas and values in the DEA will be used to calculate the savings

#### ECM 9: Refrigeration Compressor Controllers

M&V Option: NEMVP-A (One Time)

**Verification Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the items that are subject to the refrigeration compressor controller project.

Verification Period & Frequency: One time during both pre-retrofit period and post-retrofit period.

#### **Pre-Installation Activities:**

Document with the digital camera that the compressor controllers are not installed.

#### **Post-Installation Activities:**

A digital camera will be used to document the post- retrofit conditions. Inspect and verify the refrigeration compressor controller installation to see if they meet the specifications of the DEA in terms of quantity, quality and rating. Verify if they perform in accordance with the specifications in the DEA and meeting all functional tests and provide start up report for each unit. An annual visual inspection of a sample of units will occur to ensure the equipment is still in place and operational.

#### Formulas and assumptions in the DEA will be used to calculate the savings

#### ECM 10: Renewable Energy- Photovoltaic Electric Generation/ Cogen Decommission M&V Option: NEMVP-A (Short term)

**Verification Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the items that are subject to this photovoltaic electric generation project.

Measuring Equipment: PV dashboard will log 15-minute interval data for kW, kWh and solar irradiance.

#### Interaction: Electrical System

Kov Parameter	Measurement	Measurement Description
Key Parameter	Frequency	(including sampling plan)

Electricity Generated (kW and kWh)	Summer month during performance year 1	The amount of electricity generated (kW and kWh) will be verified using data from the inverter. Measurements from all the panels installed by the project will be used.
Sunshine for Normalization (Measured as irradiance (kWh/m2))	Summer month during performance year 1	Average expected Irradiance data for Long Island, NY is used to calculate the contract savings.

Month	Contract Assumption for Expected Irradiance in Long Island, NY Area (kWh/m <sup>2</sup> )
January	61.6
February	80.3
March	129.7
April	147.1
May	169.3
June	178.4
July	185.4
August	162.8
September	133.4
October	99.4
November	61.0
December	53.8
Annual	1462.2

The energy production guarantee shall assume the monthly baseline (reference) solar irradiance as shown above. On a monthly basis, the average amount of electricity produced per kWh/m<sup>2</sup> of solar irradiance will be calculated and the savings will be adjusted accordingly:

$$kWh_{Adjusted} = (kWh_{measured}) \left(\frac{kWh/m^{2}_{contract}}{kWh/m^{2}_{measured}}\right) (\% RSS_{adjusted})$$

Where kWh/m<sup>2</sup> is the irradiance. The achieved dollar savings shown in Table 2.3 are based on the rates shown in Exhibit 6.

$$\% RSS_{Month} = \left(\frac{Irradiance (kWh/m^2)_{Month}}{Irradiance (kWh/m^2)_{Total}}\right)$$
$$\% RSS_{adjusted} = \sum_{1-12}^{Month} (\% RSS_{Month}) \left(\frac{Days_{Month} - (Days_{offline}) \left(\frac{Panels_{offline}}{Panels_{total}}\right)}{Days_{Month}}\right)$$

Where  $RSS_{month}$  = Percentage of the total annual solar resource for that month Days<sub>month</sub> = number of days in that month, Days<sub>offline</sub> = number of days each inverter is offline Panels<sub>offline</sub> = number of panels offline, Panels<sub>total</sub> = total number of panels installed

kWh impact of any production factors that occur during the measurement period. Production factors are defined as events outside JCI control that has the effect of reducing kWh generation or failures in system operation due to maintenance that influences data collection and recording for complete and accurate data pertaining to production and weather. Other production factors include, but are not limited to, physical obstructions or interference with the solar irradiation of each array (i.e. over shadowing or shading), snow-frost-ice, utility grid outages, outages directed by the owner-customer, casualty events, Force Majeure events, theft, vandalism, equipment failure, DAS failure (lost connection or data), or utility system permit events (system disabled).

#### Cogen System Decommission

## M&V Option: NEMVP-A (One-time measurement)

**Verification Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the items that are subject to this Cogen system decommission project. **Interaction:** All thermal and electric ECMs.

Verification Period & Frequency: One time during both pre-retrofit period and post-retrofit period.

#### **Pre-Installation Activities:**

Document with the digital camera that the Cogen system is in operation.

## **Post-Installation Activities:**

A digital camera will be used to document the post- retrofit conditions. Verify that the Cogen system has been decommissioned and removed from the locations.

## Formulas and values in the DEA will be used to calculate the savings

## ECM 11: Plug Load Controllers

**M&V Option:** NEMVP-A (One Time)

**Verification Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the items that are subject to the Plug Load Management project.

Interaction: Electric ECMs

Measured Key Parameter: Operating Schedule

Measuring Equipment: M&V BERT Kit

**Measuring Equipment Calibration:** Equipment will be quality checked for calibration at the time of measurement and documented in the M&V report.

**Verification Period & Frequency:** One time two weeks prior to installation and one time two weeks after installation

**Pre-Installation Activities:** M&V BERT Kit will be installed on 10% of the equipment that will be controlled for a period of two weeks to establish the baseline operating schedule.

**Post-Installation Activities:** A digital camera will be used to document the post- retrofit conditions. Inspect and verify the BERT installation to see if they meet the specifications of the contract in terms of quantity and functionality. Once the Bert plugs are installed, schedules are established and operational; we will collect usage schedule data for two-week period and compare it to the baseline to validate savings. An annual visual inspection of a sample of units will occur to ensure the equipment is still in place and operational.

## Formulas and assumptions in the DEA will be used to calculate the savings

## ECM 12: Vending Machine Controllers

**M&V Option:** NEMVP-A (One Time) Performance Contract [Rev 15 EC] 04/09 Johnson Controls, Inc. – Proprietary © 2009 Johnson Controls, Inc. **Verification Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the items that are subject to this vending machine controller project.

Verification Period & Frequency: One-time post-retrofit year.

Pre-Installation Activities: Take pictures of the vending machines with no controllers.

#### **Post Installation Activities:**

A digital camera will be used to document the post-retrofit conditions. Inspect and verify the vending machine controller installation to see if they meet the specifications of the DEA in terms of quality. Verify if they perform in accordance with the functional specifications in the DEA and meeting all functional tests. An annual visual inspection of a sample of units will occur to ensure the equipment is still in place and operational.

## Formulas and values in the DEA will be used to calculate the savings

## ECM 13: Air Conditioning Compressor Controllers

**M&V Option:** NEMVP-A (One Time)

**Verification Boundary:** Retrofit isolation – Project savings will be determined within the measurement boundary that encompasses only the items that are subject to air conditioning compressor controller project.

Interaction: Electric ECMs.

Verification Period & Frequency: One time during both pre-retrofit period and post-retrofit period.

#### **Pre-Installation Activities:**

A digital camera will be used to document that a controller does not exist.

#### **Post-Installation Activities:**

A digital camera will be used to document the post- retrofit conditions. Inspect and verify the air conditioning compressor controller installation to see if they meet the specifications of the DEA in terms of quantity. Verify if they perform in accordance with the functional specifications in the contract and meeting all functional tests. An annual visual inspection of a sample of units will occur to ensure the equipment is still in place and operational.

#### Formulas and assumptions in the DEA will be used to calculate the savings

# **III. MEASURED PROJECT BENEFITS**

Table 2.3 below defines and describes the ECMs included in this guarantee that comprise Measured Utility Cost Avoidance savings:

		Electric Use		Elect. Demand Nat.		Gas	Total (\$)	
ECM#	PROPOSED MEASURES			SAVINGS				
1	Lighting - Interior Retrofit	\$73,055	475,165	\$16,618	167	\$ (8,814)	-1,057	\$80,859
2	Lighting - Exterior Retrofit	\$18,446	121,266	\$0	0	\$-	0	\$18,446
3	Building Envelope - Weatherization	\$260	1,688	\$0	0	\$ 10,727	1,237	\$10,987
4	Motors - Energy Efficient Motor Replacement	\$2,112	14,234	\$255	25	\$-	0	\$2,366
5	Heating System - Boiler Replacement	\$0	0	\$0	0	\$ 23,775	2,863	\$23,775
6	Boiler Plant Optimization	\$0	0	\$0	0	\$ 7,371	991	\$7,371
7	Heating System - Boiler/DHW Controllers	\$0	0	\$0	0	\$ 6,777	795	\$6,777
8	Heating System - Pipe and Valve Insulation	\$0	0	\$0	0	\$ 3,883	470	\$3,883
9	Refrigerator Compressor Controllers	\$457	3,032	\$0	0	\$-	0	\$457
	Renewable Energy- Photovoltaic						10 101	
10	Generation/Cogen Decommission	\$97,878	639,131	\$0	0	\$67,330	10,191	\$165,207
11	Plug Load Controllers	\$16,200	102,623	\$0	0	\$-	0	\$16,200
12	Vending Machine Controllers	\$1,783	11,667	\$0	0	\$-	0	\$1,783
13	AC Compressor Controllers	\$1,506	9,264	\$0	0	\$-	0	\$1,506
		\$211,696	1,378,071	\$16,873	192	\$111,048	15,491	\$339,617

## **Table 2.3: Measured Project Benefits Summary**

# IV. OPERATIONAL & MAINTENANCE (O&M) & REBATE PROJECT BENEFITS

## **Operational and Maintenance Cost Avoidance:**

#### M&V Option: NEMVP-A

For measures where the baseline (or boundary) is well understood, and measure operating hours are not expected to change, only the "change in equipment performance" is needed in order to calculate the savings (or cost avoidance).

Lighting Operational Cost Avoidance is calculated by comparing the existing lamp and ballast average failure rate and replacement cost with the proposed project replacement lamp and ballast average failure rate and replacement cost. Measure operating hours are not expected to change. The average annual savings for all schools is determined to be \$7,969.

Boiler Operational Cost Avoidance is calculated by comparing the cost of maintaining the existing boilers versus the newly installed boilers. The reduction in repairs of the new boilers is deemed to be the cost avoidance. The average annual savings for all schools is determined to be \$18,000.

Cogen Maintenance Cost Avoidance is calculated by comparing the cost of maintaining the existing cogens versus not having any cogens to maintain. The cogens will decommissioned and removed from site. The average annual savings for all the cogen units are \$49,750.

## **Total Operational Cost Avoidance: \$75,719**

The O & M savings are based on the scope of work as well as discussions with the customer. Customer agrees that the O&M Project Benefits are reasonable and supportable, and that the installation of the Improvement Measures will enable Customer to take actions that will result in the achievement of such O&M Project Benefits.

#### Energy Rebates/Incentives:

Rebates: \$91,421

## Total Rebates: \$91,421

JCI will apply for utility company rebates programs at the time of application. JCI hereby guarantees the rebate amount and if the customer receives the rebate less than the guaranteed amount then JCI will pay the difference in rebates to the Customer or make up the difference with excess energy savings. All guaranteed rebates and incentives shall inure to the benefit of Customer. All guaranteed rebates and/or incentives shall be payable to Customer. JCI shall be responsible for assuring that said guaranteed rebates/incentives are distributed to Customer. JCI anticipates the rebates will be secured during the implementation period however due to the program structure some of the money may be procured during Year 1. No shortfall will be paid if the total rebates matches the guaranteed amount, regardless of when they are received. If the Customer receives higher than the guaranteed rebate amount, the excess rebates will be assigned to JCI.

# **V. 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 M&V Services Period, 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 M&V Services Period 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.

# VI. 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 percent (2%). The Base Utility Cost for each type of utility represents the 12-month average utility costs from June 2017 through May 2018. The customer did not use any oil during the base year, therefore all thermal savings are based on gas consumption and associated rates.

	Electric Usage and Cost							
Building	Demand kW	Avg kW Cost	Electric Usage kWh	Usage kWh Cost	Total Electric Cost	Unblended \$/kWh		
Memorial	45	\$10.09	130,088	\$21,303	\$26,705	\$0.16		
Annex	11	\$11.11	24,045	\$5,396	\$6,740	\$0.22		
John F Kennedy	156	\$10.56	495,554	\$77,742	\$96,647	\$0.16		
Robert Frost	190	\$9.99	555,040	\$83,309	\$106,045	\$0.15		
John Quincy Adams	90	\$10.91	270,480	\$39,661	\$50,523	\$0.15		
Deer Park High School	286	\$10.05	948,717	\$141,580	\$175,972	\$0.15		
Lincoln	30	\$10.81	68,480	\$11,682	\$15,319	\$0.17		
May Moore	97	\$10.06	244,202	\$38,149	\$49,880	\$0.16		
	904	\$10.45	2,736,606	\$418,822	\$527,830	\$0.15		

Table 2.4.1: Baseline Electrical Consumption Data & Rates

The above rates shown in Table 2.4.1will be known as **Floor Electrical Rates**, for the purpose of the Assured Performance Guarantee. Beginning in year 1, the annual calculated electric rates are expected to increase every year. In the event that the annual rates are lower than the above baseline rates, the 2% escalated floor rates will be substituted for the annual calculated rate.

The Electric Rates will be averaged over the course of the one-year baseline period, as provided by customer. In turn, the Incremental Electric Rate (IER), and the Demand Rate (DR) will be averaged annually over the course of the reporting periods, as reflected on utility invoices, for equitable cost avoidance savings reporting.

The following formula will be used to calculate the current reporting period Incremental Energy Rate (IER):

## FORMULA B-2

	IER= ∑TKC <sub>1-12</sub> ÷ ∑TKWH <sub>1-12</sub>
Where:	
IER:	Incremental Electrical Rate (Dollars per kWh)
∑TKC <sub>1-12</sub> :	Sum Total of Monthly Electrical Utility Costs (Dollars) for kWh included Fuel Adjustment
	Cost and other related Energy Charges for Months 1 Through 12 of the current reporting period.
$\Sigma TKWH_{1-12}$	2: Sum Total of Monthly Electrical Incremental Use (kWh) for Months 1 Through 12 of the
	current reporting period.

The following formula will be used to calculate the current reporting period Incremental Demand Rate (DR):

#### **FORMULA B-3**

## $\mathsf{DR}= \sum \mathsf{TKC}_{1-12} \div \sum \mathsf{TKWH}_{1-12}$

Where:

DR: Demand Electrical Rate (Dollars per kW)

 $\Sigma$ TKC<sub>1-12</sub>: Sum Total of Monthly Electrical Utility Costs (Dollars) for kW included Fuel Adjustment Cost and other related Energy Charges for Months 1 Through 12 of the current reporting period.

 $\Sigma$ TKW<sub>1-12</sub>: Sum Total of Monthly Electrical Demand Use (kW) for Months 1 Through 12 of the current reporting period.

Nat Gas Usage and Cost Building Gas Usage Cost per **Gas Cost** Therms Therm \$40,864 Memorial 45,063 \$0.91 Annex 1,806 \$2,931 \$1.62 John F Kennedy 113,056 \$93,586 \$0.83 149,810 **Robert Frost** \$124,384 \$0.83 John Quincy Adams 33,788 \$31,456 \$0.93 Deer Park High School 257,394 \$191,491 \$0.74 Lincoln 27,431 \$25,654 \$0.94 May Moore 22,066 \$22,060 \$1.00 650,414 \$532,426 \$0.82

Table 2.4.2: Baseline Gas Consumption Data & Rates

The above rates shown above in Table 2.4.2 will be known as **Floor Natural Gas Rates**, for the purpose of the Assured Performance Guarantee. Beginning with year 1, the annual calculated natural gas rates are expected to increase every year. In the event that the annual rates are lower than the above baseline rates, the 2% escalated floor rates will be substituted for the annual calculated rate.

The natural gas unit costs have been averaged over the course of the one-year period. In turn, unit costs will be averaged over the course of the reporting period, as reflected on utility invoices, for equitable cost avoidance savings reporting.

The following formulas will be used to calculate the current reporting period Fuel Rate(s) for Natural Gas:

FORMULA G-1

NGR=∑TGC <sub>1-12</sub> ÷∑TGU <sub>1-12</sub>				
Where:				
NGR:	Natural Gas Rate (\$/Therm)			
$\Sigma TGC_{1-12}$ : Sum Total of Monthly Gas Costs (\$)				
$\Sigma$ TGU <sub>1-12</sub> : Sum Total of Monthly Gas Purchased (Therms) for Months 1				
Through 12 of the reporting period.				

## **Energy Conversion Conventions**

For purposes of this Guarantee the follow fuel conversions will apply:

- 1 CCF (100 cubic feet) of Natural Gas = 103,000 Btus (British Thermal Units)
- 1 Therm of Natural Gas = 100,000 Btus
- 1 MMBtu of Natural Gas = 1,000,000 Btus
- 1 Decatherm of Natural Gas = 1,000,000 Btus
- 1 Gallon of Fuel Oil = 139,000 Btus

# VII. PRIMARY OPERATIONS SCHEDULE PRE & POST RETROFIT

## **District Wide Pre and Post Operation Schedule:**

	Weeks Per Month							
Month	Memorial	Annex	John F Kennedy	Robert Frost	John Quincy Adams	Deer Park High School	Lincoln	May Moore
Jan	4.43	4.43	4.43	4.43	4.43	4.43	4.43	4.43
Feb	4	4	4	4	4	4	4	4
Mar	4.43	4.43	4.43	4.43	4.43	4.43	4.43	4.43
Apr	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29
May	4.43	4.43	4.43	4.43	4.43	4.43	4.43	4.43
Jun	2	2	2	2	2	2	2	2
Jul	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0
Sep	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29
Oct	4.43	4.43	4.43	4.43	4.43	4.43	4.43	4.43
Nov	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29
Dec	4.43	4.43	4.43	4.43	4.43	4.43	4.43	4.43

## Monthly occupancy schedule

## Weekly Operating Schedule

	Days of the week							
Day	Memorial	Annex	John F Kennedy	Robert Frost	John Quincy Adams	Deer Park High School	Lincoln	May Moore
Monday	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied
Tuesday	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied
Wednesday	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied
Thursday	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied
Friday	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied
Saturday	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied
Sunday	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied

## **Daily Operating hours**

School/Building	Midnight - 8 AM	8 AM - 4 PM	4 PM - Midnight
Memorial	2	8	7
Annex	2	8	7
John F Kennedy	2	8	7
Robert Frost	2	8	7
John Quincy Adams	2	8	7
Deer Park High School	2	8	7
Lincoln	2	8	7
May Moore	2	8	7

# VII. 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 Engineer will track Measured Project Benefits. JCI will report the Measured Project Benefits achieved during the Installation Period, to Customer within 60 days of the commencement of the Guarantee Period.
- 2. During the M&V Services Period, within 60 days of each anniversary year of the commencement of the M&V Services Period, 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 M&V Services Period, a JCI Performance Engineer 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. In this regard, the Performance Engineer 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.
- 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 determined from the as-built information to reflect the actual mix of retrofits encountered during installation).
  - D. confirm that the appropriate metering and data points required to track the variables associated with the applicable Improvement Measures' benefits calculation formulas are established; and
  - E. set up appropriate data capture systems (e.g., trend and totalization data on the facility management system) necessary to track and report Measured Project Benefits for the applicable Improvement Measure.
  - F. Trend data records maintained in the ordinary course of system operation shall be used and relied upon by Johnson Controls to in connection with Project Benefit calculations. JCI will use commercially reasonable efforts to ensure the integrity of the data collected to calculate the required savings. In the event data are lost due to equipment failure, power failure or other interruption in data collection, transmission or storage, JCI will use reasonable engineering methods to estimate the impact of the lost data.

# **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;
- 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;
- 3. Providing timely reviews and approvals of design submissions, proposed change orders, and other project documents;
- 4. To the extent applicable to the Scope of Work and to the extent available to the Customer, 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;
  - 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.
- 5. To the extent applicable to the Scope of Work, securing and executing all necessary agreements with adjacent land or property owners that are necessary to enable JCI to perform the Work;
- 6. Providing assistance to JCI in obtaining any permits, approvals, and licenses that are JCI's responsibility to obtain as set forth in Schedule 1;
- 7. 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;
- 8. 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;
- 9. Providing the utility bills, reports, and similar information reasonably necessary for administering JCI's obligations under the Assured Performance Guarantee within five (5) days, or as soon as is reasonably practical, of Customer receipt and/or generation or JCI's request therefor;
- 10. Providing all records relating to energy and/or water usage and related maintenance of the premises and relevant equipment requested by JCI;
- 11. Promptly notifying JCI of any change in use or condition described in Schedule 2 under section titled: "Adjustment to Baseline and/or Annual Project Benefits" or any other matter that may impact the Assured Performance Guarantee;

- 12. If any equipment under control is changed out, it is the responsibility of the customer to move the controls and the controls programming to the new equipment;
- 13. Customer is responsible for providing room for a laydown area, parking, room for a dumpster, necessary office space; and
- 14. Customer will coordinate with JCI and national grid to close out Cogen gas accounts.

# PRICE AND PAYMENT TERMS

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

1. Total Project Costs. The total cost of the Work, including payment for JCI and the Engineer, is **\$7,517,778**.

Payments (including payment for materials delivered to JCI and work performed on and off-site) shall be made to JCI as follows:

First payment due: 30% down payment, or \$2,255,333, due upon SED approval, customer's securing of acceptable financing, and the issuance of the notice to proceed. Balance shall be invoiced monthly using AIA Invoice format.

Customer shall make payment to JCI against monthly invoices for work completed and approved during the previous month in accordance with the agreed upon Schedule of Values. Payments will be made within 30 days of receipt of each monthly invoice on a progress payment basis for work completed and accepted by the Customer and the Architect using the AIA format. JCI must attach certified payrolls to each application for payment, together with supporting documents as required by the Customer and Architect, including but not limited to any lien waivers for the work completed.

Payments are due upon Customer's receipt of JCI's invoice and shall be paid within thirty (30) days. Invoicing disputes must be identified in writing within twenty-one (21) days of the date of the invoice. Payment of disputed amounts are due and payable upon resolution. All other amounts remain due within thirty (30) days. Payment is a condition precedent to JCI's obligation to perform the Work hereunder.

Customer's failure to make payments when due, after written notice thereof to Customer and a 30 day period to cure, will give JCI, without prejudice to any other right or remedy, the right to stop performing any Work or M&V Services, withhold deliveries of equipment and other materials, terminate or suspend any unpaid software licenses, and/or terminate this Agreement.

2. Payments for Architectural/Engineering Services. JCI shall be responsible for making payments directly to JAG as set forth herein. The total fee to be paid to the Architect is \$357,989. JCI will make payments to JAG according to the following schedule:

- a. 25% upon full execution of this Agreement;
- b. 25% upon submittal of plans and specifications to the New York State Education Department;
- c. 25% upon approval of plans and specifications by the New York State Education Department; and
- d. 25% upon final completion.

3. M&V Services. M&V Services for the project from the construction period through Year 3 are included in the total price for the Work set forth in clause 1 above.

## NOTICE TO PROCEED

Johnson Controls, Inc. 6 Aerial Way Syosset, NY 11791 ATTN: Kieran Moran

Re: Notice to Proceed for Deer Park School District EPC

Dear Kieran Moran:

This Notice to Proceed is being issued by Deer Park School District ("Customer") 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 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.

## DEER PARK SCHOOL DISTRICT

Signature:\_\_\_\_\_

Printed Name:\_\_\_\_\_

Title:

Date:\_\_\_\_\_

ACKNOWLEDGED & AGREED TO:

JOHNSON CONTROLS, INC.			
Signature:			
Printed Name:			
Title:			
Date:			

# Attachment 2

# **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 modif Terms and Conditions of the CHANGE ORDERS section the	ied to the extent described reof.	below in ac	cordance with the	
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: increased, decreased, unchanged. (mo, day, yr)   The new completion date resulting from this Change Order is: (mo, day, yr)				
[check if applicable] Assured Performance Guarantee chang	ed 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") [Insert JCI Address]

> [Insert Customer Name] ("Customer") [Insert Customer Address]

PROJECT: [Insert Project Name]; 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	<mark>en</mark> .
CUSTOMER:	JOHNSON CONTROLS, INC.
Signature:	Signature:
Printed Name:	Printed Name:
Title:	Title:

## **CERTIFICATE OF FINAL COMPLETION**

PARTIES: JOHNSON CONTROLS, INC. ("JCI") [Insert JCI Address]

> [Insert Customer Name] ("Customer") [Insert Customer Address]

PROJECT: [Insert Project Name]; 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 <mark>.</mark> .	
CUSTOMER:		JOHNSON CONTROLS, INC.
Signature:		Signature:
Printed Name:		Printed Name:
Title:		Title:

Lighting Line by line (Deer Park Schools LED Lighting Rev-D 11-8-19)

# Scope of Architectural/Engineering Services