



Professional Services Agreement

This is an Agreement between Ramsey County, a political subdivision of the State of Minnesota, on behalf of Property Management, 121 7th Place East, Suite 2200, St. Paul, MN 55101 ("County") and inBYLT, LLC, 3495 Northdale Blvd. NW, Suite 230, Anoka, MN 55448, registered as a Limited Liability Company in the State of Minnesota ("Contractor").

1. Term

1.1.

The original term of this Agreement shall be from October 7, 2025 through October 6, 2030 and may be renewed for up to five (5) additional five year period(s).

The full term of this agreement (including renewals) is 25 year(s), 0 month(s) and 0 day(s).

1.1.1.

Contract renewals shall be made by way of a written Amendment to the original contract and signed by authorized representatives.

2. Scope of Service

The County agrees to purchase, and the Contractor agrees to furnish, services described as follows:

2.1.

Insert the County's and the Contractor's roles and responsibilities. If you reference an attachment, include the exact title and number of the document.

2.1.1 Contractor will perform services as set forth in **Exhibit A: Summary of Work, Exhibit E: Project Schedule, and Exhibit F: Contractor's Measurement & Verification Responsibilities**, which are attached and incorporated into this Agreement.

2.1.2 Contractor warrants and guarantees that the energy conservation measures provided under this Agreement will result in savings to the County that will meet or exceed the cost of this Agreement, as further set forth in **the Exhibit D Facility Operating Parameters & Utility Savings Calculation Methods**.

2.1.3 The term "Work" means all design, bidding, and construction services provided by the Contractor to fulfill Contractor's obligations under this Agreement.

2.1.4 The "Contract Documents" consists of this Agreement, including the Attachments and Exhibits; any Design Documents approved by the County; the Construction Documents approved by the County; and Modifications issued after execution of this Agreement. A Modification is a Change Order to this Agreement signed by both parties.

2.1.5 Design services required shall be performed by architects and engineers licensed in the state of Minnesota. The contractual obligations of such professional persons or entities are undertaken and performed in the interest of the Contractor. Throughout the design

process, the County will be provided with the Construction Documents for review and comment.

- 2.1.6 Contractor shall provide or cause to be provided and shall pay for design services, labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.
- 2.1.7 Contractor shall be responsible for all construction means, methods, techniques, sequences and procedures, and for coordinating all portions of the Work under this Agreement.
- 2.1.8 Contractor shall keep the County informed of the progress and quality of the Work by holding weekly progress meetings with the County to cover project related information (with meeting minutes to be issued by Contractor). Contractor will also submit monthly progress reports including narratives of Inclusiveness in Contracting results/Small Business Enterprise utilization and workforce results, change log narratives, schedule, budget updates, and major issues resolution. Additionally, a County representative will be invited to all construction meetings and project walk-throughs.
- 2.1.9 Contractor warrants to the County that materials and equipment furnished under this Agreement will be of good quality and new unless otherwise required or permitted in writing, that the construction will be free from faults and defects. Construction not conforming to these requirements, including substitutions not properly approved by the Contractor, shall be corrected in by Contractor.
- 2.1.10 Except as otherwise provided herein, Contractor shall pay all sales, consumer, use and similar taxes which had been legally enacted as of the date of execution of this Agreement, and shall secure and pay for the building, mechanical, electrical, pollution control and watershed permits as applicable; and other permits and governmental fees, licenses and inspections necessary for the proper execution and completion of the Work which are customarily secured after execution of a contract for construction and/or are legally required as of the date of execution of this Agreement.
- 2.1.11 Contractor shall pay royalties and license fees for patented designs, processes or products. Contractor shall defend suits or claims for infringement of patent rights and shall hold the County harmless from loss on account thereof.
- 2.1.12 Contractor shall maintain at the site for the County one record copy of the drawings, specifications, product data, samples, warranties, close-out documentation, shop drawings, Change Orders, RFIs (Request for Information) and other modifications, in good order and regularly updated to record the completed construction. These shall be delivered to the County upon completion of construction and prior to final payment. Documentation shall be provided in digital format (pdf), unless specifically requested otherwise. Contractor shall provide AutoCAD and Revit files of the as-built construction documents. Hard copies of such documents shall be available upon request.
- 2.1.13 Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under this Agreement. At the completion of the Work, the Contractor shall remove from the site waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials.

- 2.1.14 **Ramsey County Information Services Coordination and Approval.** The Contractor and any subcontractors must coordinate and seek approval from Ramsey County Information Services for all telecommunications and information technology requirements prior to purchase or installation/implementation of a technology solution for the project.
- 2.1.15 **Electrical System and Cabling Standards.** Electrical system and cabling services performed by Contractor shall be provided in accordance with the standard provided in **Attachment C**, as applicable.
- 2.1.16 **Asset Tracking.** Contractor shall detail building asset inventory changes related to Project activities for the County's use in its Enterprise Asset Management (EAM) system. Equipment and finishes schedules shall be documented in the **Attachment D – Asset Tracking Spreadsheet**. Contractor shall also document assets that have been decommissioned or removed from the facility during delivery of the Project.
- 2.1.17 Contractor shall create documentation and assist County to apply for any tax credits (solar/geothermal) that qualify for the Inflation Reduction Act of 2024 as modified by the One Big Beautiful Bill Act of 2025. Contractor shall create a report including all documentation required for the tax credit, complete the pre-registration process, and assist County in filing their tax return for the tax credit.
- 2.1.18 Contractor will apply for utility rebates for any qualifying materials installed as part of the work.

2.2.

During the term of the contract, the County reserves the right to add similar in scope goods/services, via written amendment, to accommodate accidental omissions, unanticipated needs, or new offerings.

2.3.

The Contractor shall make every reasonable effort to provide services in a universally accessible, multi-cultural and/or multi-lingual manner to persons of diverse populations.

2.4.

The Contractor agrees to furnish the County with additional programmatic and financial information it reasonably requires for effective monitoring of services. Such information shall be furnished within a reasonable period, set by the County, upon request.

3. Schedule

The Contractor shall provide services as follows: in the enclosed project schedule, Exhibit E.

4. Cost

4.1.

The County shall pay the Contractor a not to exceed amount of \$ 22,776,445.87 over the life of the contract according to the agreed to rates.

The following is the breakdown of the lump sum payment amounts by Project phase:

- Phase 1: \$8,488,694
- Phase 2: \$6,726,957 (Budget based on 2025 Cost)
- Phase 3: \$7,116,154 (Budget based on 2025 Cost)

The Phase 1 Notice to Proceed (NTP) is given upon execution of this Agreement. Phase 2 and Phase 3 NTP shall be provided by the County after budget costs have been adjusted. No work or cost for Phase 2 or Phase 3 work will be realized by the Contractor, and the County will not be responsible for any Phase 2 or Phase 3 costs, until after the NTP of Phase 2 or Phase 3 has been issued to Contractor.

Any changes to Phase 2 or Phase 3 costs will be made to the Agreement by future amendment. Contractor shall adjust Phase 2 and Phase 3 budgets to financial grade numbers prior to the County provided NTP for each future phase of work.

4.2.

The County shall pay the Contractor the following unit rates:
Progress payments shall be submitted on a monthly basis.

5. Special Conditions

5.1.

5.1.1 On or about November 6, 2024, Contractor and County entered into an agreement whereby Contractor agreed to perform a directed engineering study to determine the feasibility of entering into a guaranteed energy savings project for the procurement and installation of energy efficiency measure, renewable energy measure, and capital improvement measures, Contract ID PRMG000109, (the "Study").

5.1.2. As a result of the Study, Contractor has provided County with a report as required by Minnesota Statutes Section 471.345 Subdivision 13, which summarizes estimates of all costs of installations, modifications, or remodeling, including costs of design, engineering, installation, maintenance, repairs, or debt service, and estimates of the amounts by which energy, or operating costs will be reduced. This report is attached and made a part of this Agreement as Exhibit A and Exhibit D (in combination).

5.1.3. The County Board reviewed the report and made the required finding pursuant to Minnesota Statutes Section 471.345 Subdivision 13 (c).

6. County Roles and Responsibilities

The County shall perform the Maintenance responsibilities as set forth in **Exhibit G: Maintenance Responsibilities**, which is attached and incorporated into this Agreement.

7. Contracting for Equity

7.1. Commitment to Advancing Racial Equity

The county is committed to advancing racial equity for its residents. The commitment is captured in the county's Advancing Racial Equity policy which states that "Racial equity is achieved when race can no longer be used to predict life outcomes, and outcomes for all are improved."

Consistent with the Advancing Racial Equity policy, contractors will take all reasonable measures to advance racial equity during contract performance. Contractors will recognize and acknowledge this requires deconstructing barriers and changing systems, structures, policies and procedures. Contractors will be equitable, inclusive, transparent, respectful and impactful in serving and engaging residents. Contractors will have meaningful and authentic engagement with community and employees to strengthen the administration, development and implementation of policies and procedures to advance racial equity and ensure that all residents in need have awareness of and access to contracted services.

Please review Ramsey County's [Advancing Racial Equity policy](#) to learn more about Ramsey County's commitment to racial equity.

7.2. Non-Discrimination (In accordance with Minn. Stat. § 181.59)

Contractors will comply with the provisions of Minn. Stat. § 181.59 which require:

"Every contract for or on behalf of the state of Minnesota, or any county, city, town, township, school, school district, or any other district in the state, for materials, supplies, or construction shall contain provisions by which the contractor agrees:

(1) that, in the hiring of common or skilled labor for the performance of any work under any contract, or any subcontract, no contractor, material supplier, or vendor, shall, by reason of race, creed, or color, discriminate against the person or persons who are citizens of the United States or resident aliens who are qualified and available to perform the work to which the employment relates;

(2) that no contractor, material supplier, or vendor, shall, in any manner, discriminate against, or intimidate, or prevent the employment of any person or persons identified in clause (1) of this section, or on being hired, prevent, or conspire to prevent, the person or persons from the performance of work under any contract on account of race, creed, or color;

(3) that a violation of this section is a misdemeanor; and

(4) that this contract may be canceled or terminated by the state, county, city, town, school board, or any other person authorized to grant the contracts for employment, and all money due, or to become due under the contract, may be forfeited for a second or any subsequent violation of the terms or conditions of this contract."

7.3. Equal Employment Opportunity and Civil Rights

7.3.1.

Contractors agree that no person shall, on the grounds of race, color, religion, age, sex, sexual orientation, disability, marital status, public assistance status, criminal record (subject to the exceptions contained in Minn. Stat. §§299C.67 to 299C.71 and Minn. Stat. §144.057), creed or national origin, be excluded from full employment rights in, participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program, service, or activity under the provisions of any and all applicable federal and state laws against discrimination, including the Civil Rights Act of 1964. Contractors will furnish all information and reports required by the county or by Executive Order No. 11246 as amended, and by the rules and regulations and orders of the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

7.3.2.

Contractors shall comply with any applicable licensing requirements of the Minnesota Department of Human Services in employment of personnel.

7.3.3.

Contractors shall agree that no qualified individual with a disability as defined by the Americans with Disabilities Act, 42 U.S.C. §§12101-12213 or qualified handicapped person, as defined by United States Department of Health and Human Services regulations, Title 45 Part 84.3 (j) and (k) which implements Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. §794, under Executive Order No. 11914 (41FR17871, April 28, 1976) shall be:

7.3.3.1.

Denied access to or opportunity to participate in or receive benefits from any service offered by contractors under the terms and provisions of this agreement; nor

7.3.3.2.

Subject to discrimination in employment under any program or activity related to the services provided by contractors.

7.3.3.3.

If it is discovered that a contractor is not in compliance with applicable regulations as warranted, or if the contractor engages in any discriminatory practices, as described above, then the county may cancel said agreement as provided by the cancellation clause of this agreement.

7.4. Diverse Workforce Inclusion Resources

For information and assistance in increasing the participation of women and minorities, contractors are encouraged to access the websites below:

1. <http://www.ramseycounty.us/jobconnect>
2. <http://www.ramseycounty.us/constructionconnect>

Job Connect and the Construction Connect provide a recruiting source for employers and contractors to post job openings and source diverse candidates.

Ramsey County's Job Connect links job seekers, employers and workforce professionals together through our website, networking events and community outreach. The network includes over 10,000 subscribed job seekers ranging from entry-level to highly skilled and experienced professionals across a broad spectrum of industries.

Employers participate in the network by posting open jobs, meeting with workforce professionals and attending hiring events. Over 200 Twin Cities community agencies, all working with job seekers, participate in the network.

Ramsey County's Construction Connect is an online and in-person network dedicated to the construction industry. Construction Connect connects contractors and job seekers with employment opportunities, community resources and skills training related to the construction industry. Construction Connect is a tool for contractors to help meet diversity hiring goals. Additional assistance is available through askworkforcesolutions@ramseycounty.us or by calling 651-266-9890.

8. General Contract/Agreement Terms and Conditions

8.1. Payment

8.1.1.

No payment will be made until the invoice has been approved by the County.

8.1.2.

Payments shall be made when the materials/services have been received in accordance with the provisions of the resulting contract.

8.2. Application for Payments

8.2.1.

The Contractor shall submit an invoice as mutually agreed upon by Contractor and the County.

8.2.2.

Invoices for any goods or services not identified in this Agreement will be disallowed.

8.2.3.

Each application for payment shall contain the order/contract number, an itemized list of goods or services furnished and dates of services provided, cost per item or service, and total invoice amount.

8.2.4.

Payment shall be made within thirty-five (35) calendar days after the date of receipt of a detailed invoice and verification of the charges. At no time will cumulative payments to the Contractor exceed the percentage of project completion, as determined by the County.

8.2.5.

Payment of interest and disputes regarding payment shall be governed by the provisions of Minnesota Statutes §471.425.

8.2.6.

The Contractor shall pay any subcontractor within ten days of the Contractor's receipt of payment from the County for undisputed services provided by the subcontractor. The Contractor shall pay interest of 1 1/2 percent per month or any part of a month to the subcontractor on any undisputed amount not paid on time to the subcontractor. The minimum monthly interest penalty payment for an unpaid balance of \$100.00 or more is \$10.00. For an unpaid balance of less than \$100.00, the Contractor shall pay the actual penalty due to the subcontractor. A subcontractor who prevails in a civil action to collect interest penalties from the Contractor must be awarded its costs and disbursements, including attorney's fees, incurred in bringing the action.

8.3. Independent Contractor

The Contractor is and shall remain an independent contractor throughout the term of this Agreement and nothing herein is intended to create, or shall be construed as creating, the relationship of partners or joint ventures between the parties or as constituting the Contractor as an employee of the County.

8.4. Successors, Subcontracting and Assignment

8.4.1.

The Contractor binds itself, its partners, successors, assigns and legal representatives to the County in respect to all covenants and obligations contained in this Agreement.

8.4.2.

The Contractor shall not assign or transfer any interest in this Agreement without prior written approval of the County and subject to such conditions and provisions as the County may deem necessary.

8.4.3.

The Contractor shall not enter into any subcontract for performance of any services under this Agreement without the prior written approval of the County. The Contractor shall be responsible for the performance of all subcontractors.

8.5. Compliance With Legal Requirements

8.5.1.

The Contractor shall comply with all applicable federal, state and local laws and the rules and regulations of any regulatory body acting thereunder and all licenses, certifications and other requirements necessary for the execution and completion of the contract.

8.5.2.

Unless otherwise provided in the agreement, the Contractor, at its own expense, shall secure and pay for all permits, fees, charges, duties, licenses, certifications, inspections, and other requirements and approvals necessary for the execution and completion of the contract, including registration to do business in Minnesota with the Secretary of State's Office.

8.6. Data Practices

8.6.1.

All data collected, created, received, maintained or disseminated for any purpose in the course of the Contractor's performance under this Agreement is subject to the provisions of the Minnesota Government Data Practices Act, Minn. Stat. Ch. 13, any other applicable state statutes, any state rules adopted to implement the Act and statutes, as well as federal statutes and regulations on data privacy.

8.6.2.

The Contractor designates Mark Rasmussen as its Responsible Designee, pursuant to the Minnesota Government Data Practices Act, Minnesota Statutes Chapter 13.02 Subdivision 6, as the individual responsible for any set of data collected to be maintained by Contractor in the execution of this Agreement.

8.6.3.

The Contractor shall take all reasonable measures to secure the computers or any other storage devices in which County data is contained or which are used to access County data in the course of providing services under this Agreement. Access to County data shall be limited to those persons with a need to know for the provision of services by the Contractor. Except where client services or construction are provided, at the end of the Project all County data will be purged from the Contractor's computers and storage devices used for the Project and the Contractor shall give the County written verification that the data has been purged.

8.7. Security

8.7.1.

The Contractor is required to comply with all applicable Ramsey County Information Services Security Policies ("Policies"), as published by Information Services Information Security. The Policies are posted at <https://www.ramseycounty.us/businesses/doing-business-ramsey-county/contracts-vendors/information-security-policies-vendors>.

8.7.2.

Contractors shall report to Ramsey County any privacy or security incident regarding the information of which it becomes aware. "Security Incident" means the attempted or successful unauthorized access, use, disclosure, modification, or destruction of information or interference with System operations in an information system. "Privacy incident" means violation of the Minnesota Government Data Practices Act (MGDPA) and/or the HIPAA Privacy Rule (45 C.F.R. Part 164, Subpart E), including, but not limited to, improper and/or unauthorized use or disclosure of protected information, and incidents in which the confidentiality of the information maintained by it has been breached. This report must be in writing and sent to the County not more than 7 days after learning of such non-permitted use or disclosure. Such a report will at least: (1) Identify the nature of the non-permitted use or disclosure; (2) Identify the data used or disclosed; (3) Identify who made the non-permitted use or disclosure and who received the non-permitted or violating disclosure; (4) Identify what corrective action was taken or will be taken to prevent further non-permitted uses or disclosures; (5) Identify what was done or will be done to mitigate any deleterious effect of the non-permitted use or disclosure; and (6) Provide such other information, including any written documentation, as the County may reasonably request. The Contractor is responsible for notifying all affected individuals whose sensitive data may have been compromised as a result of the Security or Privacy incident.

8.7.3.

Contractors must ensure that any agents (including contractors and subcontractors), analysts, and others to whom it provides protected information, agree in writing to be bound by the same restrictions and conditions that apply to it with respect to such information.

8.7.4.

The County retains the right to inspect and review the Contractor's operations for potential risks to County operations or data. The review may include a review of the physical site, technical vulnerabilities testing, and an inspection of documentation such as security test results, IT audits, and disaster recovery plans.

8.7.5.

All County data and intellectual property stored in the Contractor's system is the exclusive property of the County.

8.8. Surety Deposit Requirement for Non-Minnesota Construction Contractors.

For any one contract where the anticipated contract value of the construction portion of the contract exceeds \$50,000, the department must withhold 8 percent from payments and send the money to the Minnesota Department of Revenue. The department will hold the funds as surety for the payment of state taxes owed as a result of the contract. For more information about this law, including exceptions to the withholding requirement, visit the MN Department of Revenue or Withholding Tax Fact Sheet 12 -- Surety Deposits for Non-Minnesota Construction Contractors.

8.9. Title – Risk of Loss

- 8.9.1. Contractor warrants that title to all construction covered by an application for payment will pass to the County no later than the time of payment. The Contractor further warrants that upon submittal of an application for payment all construction for which payments have been received from the County shall be free and clear of liens, claims, security

interests or encumbrances in favor of the Contractor or any other person or entity performing construction at the site or furnishing materials or equipment relating to the construction.

- 8.9.2. The County shall be relieved from all risks of loss or damage to goods, and/or all documentation prior to the time title passes to the County as described above. The Contractor shall not be responsible for loss or damage to goods and/or documentation occasioned by negligence of the County or its employees.

8.10. Substantial Completion and Certificate of Start of Warranty

- 8.10.1. The County and the Contractor must comply with Minn. Stat. § 15.72, Progress Payments on Public Contracts; Retainage. Except with the County's written consent, payments for the Work for Contractor's subcontractors shall be subject to retainage of 5%.
- 8.10.2. Contractor shall notify the County when the Contractor believes that the Work or an agreed upon portion meets Start of Warranty. Contractor shall notify the County with the Contractor believes that the Work meets Substantial Completion. If the County concurs, Contractor shall issue a Certificate of Start of Warranty, and/or Certificate of Substantial Completion in the form set forth in **Exhibit C: Completion Certificates** which shall establish the Date of Start of Warranty and Date of Start of Substantial Completion, shall state the responsibility of each party for security, maintenance, heat, utilities, damage to the Work and insurance, shall include a list of items to be completed or corrected and shall fix the time within which the Contractor shall complete items listed therein.
- 8.10.3. Neither progress payment nor partial or entire use or occupancy shall constitute an acceptance of Work not in accordance with this Agreement.
- 8.10.4. At the time of Start of Warranty, the County shall pay the Contractor the retainage, if any, less the reasonable cost to correct or complete incorrect or incomplete Work. Final payment of such withheld sum shall be made upon correction or completion of such Work.
- 8.10.5. Contractor shall provide the following commissioning services on equipment and systems including: preparation of operation and maintenance manuals; training of personnel for operation and maintenance; confirmation of conformance to contract documents; and consultation during initial occupancy and operation.
- 8.10.6. Before final payment is made, the Contractor shall also make a satisfactory showing that it has complied with the provisions of Minn. Stat. § 290.92 requiring the withholding of state income tax from wages paid to the Contractor's employees for Work performed under the Agreement. Receipt by the County of a certificate of compliance from the Commissioner of Revenue will satisfy this requirement.
- 8.10.7. The Contractor has been advised that before the certificate can be issued Contractor must first place on file with the Commissioner of Revenue, an affidavit stating that Contractor has complied with the provisions of Minn. Stat. § 290.92. Unless the Contractor has presented an affidavit to the County's Representative showing that all claims against Contractor by reason of the Agreement have either been paid or satisfactorily secured, final payment may be withheld or a sufficient amount may be retained there from to cover the unpaid and potential claims.

8.11. Release of Liens

If required by the County, the Contractor shall submit other data establishing payment or satisfaction of all obligations, such as receipts, releases and waivers of liens arising from the Contract, to the extent and in such form as may be designated by the County. If any Subcontractor refuses to furnish a release or waiver required by the County, the Contractor may furnish a bond satisfactory to the County to indemnify it against any such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the County all moneys that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

8.12. Final Payments

At the time of Project close out, the Contractor shall submit the following listed items and the final payment, and the remaining retained percentage shall not become due until the Contractor submits to the County each of the following:

1. Contractor IC-134;
2. Subcontractor(s) IC-134;
3. An affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the work for which the County or its property might in any way be responsible, have been paid or otherwise satisfied (the form of affidavit for use by the Contractor and all Subcontractors will be provided by the County to the Contractor prior to Project close-out);
4. Consent of surety, if any, to final payment;
5. Submission of two hard copies of operation and maintenance manuals with provided warranty documentation for products; plus digital (pdf) copy of the operation and maintenance manual with warranty documentation.
6. One electronic (pdf) copy set of as-built plans identifying modifications to original plans; plus AutoCAD and Revit files of as-built drawings.
7. If required by the County, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens arising from the Agreement, to the extent and in such form as may be designated by the County;
8. Temporary Certificate of Occupancy, if applicable;
9. Final Certificate of Occupancy;
10. Substantial completion on Certificate;
11. Completed punch list signed by the Contractor;
12. Storm water NPDES Notice of Termination (if applicable);
13. All Prevailing Wage Reports through the completion of the work;
14. Final SBE report;
15. Final Diverse workforce report;
16. Copies of Project records and evidence that all required operation and maintenance training has been completed and all required training manuals, videos and similar or related documents. If any Subcontractor refuses to furnish a release or waiver required by the County, the Contractor may furnish a bond satisfactory to the County to indemnify it against any such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the County all moneys that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

8.13. Protection of Persons and Property

- 8.13.1. The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to, County employees and other persons who may be affected; the Contractor's work and materials and equipment which are under the care, custody and control of the

Contractor or any of the Contractor's subcontractors; and other property at the project site or adjacent thereto.

- 8.13.2. Unless otherwise directed by the County's Authorized Representative, the Contractor shall promptly remedy damage or loss to property caused in whole or in part by the Contractor, its employees, officers, or subcontractor(s), or anyone directly employed by any of them, or by anyone for whose acts any of them may be liable.

8.14. Bond Requirements

- 8.14.1. The Contractor shall furnish bonds as described below, covering the faithful performance of the Contract and the payments of all obligations arising thereunder. The Agreement will not be signed until the County has received the proper bonds specified under this clause, issued by a bonding company licensed to do business in Minnesota, and on the current list of Companies Holding Certificates of Authority as acceptable Sureties on Federal Bonds and as acceptable reinsuring companies as published in Circular 570 (Amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All bonds signed by an agent must be accompanied by a certified copy of the authority to act.
- 8.14.2. The bonds shall each be in the amount of 100% of the Construction Cost. The term "contract", as used herein, shall include the original agreement plus all subsequent change orders and/or amendments. The contract price to which the principal is bound shall be the amount of the Construction Cost as reflected by the terms of the contract.
- 8.14.3. Duly executed, notarized and updated Acknowledgments of both the Principal and Surety and the Surety's Power of Attorney must be attached to each of the two required bonds.
- 8.14.4. Bond amounts shall not exceed the single bond limit for the Contractor's bonding company as set forth in the Federal Register current as of the bid date.
- 8.14.5. Bonds shall indemnify the County as required by Minn. Stat. Sec. 574.26

8.15. Concealed Conditions

If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or (2) unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then written notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than seven (7) business days after first observance of the conditions. Upon timely notice in writing by the observing party to the other party, the County and the Contractor will value engineer the Project to stay within the Price and to address the concealed conditions; the actions to be taken; and the responsibility for costs of such actions shall be mutually agreed to by the parties. Alternatively, the parties may agree to modify the Price, in which case the parties shall execute a Change Order. If the Contractor is the observing party and fails to give notice within the 21-day time period, the County reserves the right to demand and receive services from the Contractor to address and correct such concealed conditions without additional cost to the County.

8.16. Correction of Work

- 8.16.1. The Contractor shall promptly correct Work rejected by the County or known by the Contractor to be defective or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial

Completion and whether or not fabricated, installed or completed. All defective and/or non-complying Work observed after Substantial Completion shall be completed in a timely manner agreed to by both parties. The Contractor shall bear the costs of correcting such rejected, defective, or non-conforming Work, including additional testing and inspections.

- 8.16.2. If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within seven (7) business days after receipt of written notice from the County to commence and continue correction of such default or neglect with diligence and promptness, the County may give a second written notice to the Contractor and, seven (7) business days following receipt by the Contractor of that second written notice and without prejudice to other remedies the County may have, correct such deficiencies. The County shall deduct from payments then or thereafter due the Contractor, the costs of correcting such deficiencies. If the payments then or thereafter due the Contractor are not sufficient to cover the amount of the deduction, the Contractor shall pay the difference to the County.
- 8.16.3. If, within one (1) year after the date of Substantial Completion of the Work of this Agreement, or after the date for commencement of warranties established in a written agreement between the County and the Contractor, or by terms of an applicable special warranty required for the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly at its own cost after receipt of a written notice from the County to do so unless the County has previously given the Contractor a written acceptance of such condition. Manufacturers' and/or extended warranties shall be assigned to the County, and the County will be responsible for administration of same beyond this one (1) year period.
- 8.16.4. Nothing contained in this section shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the time period of one (1) year as described in Section 8.16.3 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.
- 8.16.5. If the Contractor fails to correct nonconforming Work as required or fails to carry out Work in accordance with the Contract Documents, the County may order the Contractor to stop the Work, or any portion thereof, until the cause for such stop order has been eliminated; however, the County's right to stop the Work shall not give rise to a duty on the part of the County to exercise the right for benefit of the Contractor or other persons or entities.

8.17. Criminal Justice Information

- 8.17.1. The County has electronic access to state and federal databases containing unencrypted and confidential Criminal Justice Information ("CJI"). These databases are managed by the Minnesota Bureau of Criminal Apprehension ("BCA") which requires that anyone who could have 'logical and physical access to CJI' must submit to a fingerprint-based record check. This includes not only those who actually have authorization to access CJI from their desktop computers, but also includes those who receive the CJI for any reason and those who do not receive CJI but are or could be in the general physical proximity of those who do receive it. This includes both a Contractor's employees and sub-contractors. ("Covered Individuals").

- 8.17.2. Covered Individuals must contact the BCA at BCACJISSATScreening@state.mn.us to complete the vendor screening program. Upon receipt of the background checks from BCA the County will evaluate them to determine, in the County's sole discretion, whether the individual may provide services to the County pursuant to this Agreement. The County may require Covered Individuals to submit to a BCA fingerprint-based record check every five years

8.18. Prevailing Wage (Construction and Labor)

- 8.18.1. Contractors and all subcontractors of the Contractor shall conform to the labor laws of the State of Minnesota, Ramsey County Prevailing Wage Ordinance No. 2013-329, and all other laws, ordinances, and legal requirements affecting the work in Ramsey County and Minnesota. The minimum wage rate per hour to be paid for each classification of work shall be the union wage rate in the locality of the project for those classifications over which unions have jurisdiction and the local prevailing rate for those classifications of work in the localities over which unions do not have jurisdiction.
- 8.18.2. The terms "prevailing wage", "minimum wage rate per hour", and "prevailing rate" as used in the contract, shall mean "prevailing wage rate" as defined in Minnesota Statutes §177.42.
- 8.18.3. Pursuant to Minnesota Statutes §§177.41 to 177.44 and corresponding Rules 5200.1000 to 5200.1120, all construction contracts funded in whole or in part by state funds are subject to the prevailing wages as established by the Minnesota Department of Labor and Industry. Specifically, all Contractors and subcontractors must pay all laborers and mechanics the established prevailing wages for work performed under the contract. Failure to comply with the aforementioned may result in civil or criminal penalties.
- 8.18.4. Pursuant to the Ramsey County Prevailing Wage Ordinance No. 2013-329, the Prevailing Wage Rate must be paid under any contract with Ramsey County or under a subcontract to that contract with Ramsey County with an anticipated Project completion cost or anticipated Services contract value of over \$25,000.
- 8.18.5. Throughout the term of this Agreement, the Contractor shall submit Certified Payroll Records within 14 days of the end of a pay period and in accordance with the requirements of Ramsey County Prevailing Wage Ordinance No. 2013-329. Failure of the Contractor to submit the Certified Payroll Records in accordance with the Ordinance may result in criminal or civil enforcement by the County, including, but not limited to termination of the agreement for cause, withholding of payments, and assessment of liquidated damages.
- 8.18.6. For the purposes of this section, prevailing wage rates and basic hourly rates in the same or more similar trade or occupation in the area, and prevailing hours of labor, shall be as contained in the Certified Prevailing Wages for Commercial Construction or the Certified Prevailing Wages for Highway and Heavy Construction established by the State of Minnesota, Department of Labor and Industry, as set forth in Attachment A. Prevailing wage rates shall mean the Total Rate, consisting of Basic Hourly Rates plus Fringe Benefits. State of Minnesota Prevailing Wage Rates, current as of the date of the project's bid release, shall apply for the entire term of the Agreement.
- 8.18.7. The Contractor shall post the applicable prevailing wage rates, hourly basic rates, and prevailing hours of labor, at a conspicuous location accessible by workers at the location of the Work. The Contractor shall physically include the requirements of the

article and the schedules set forth in Attachment A in applicable agreements and contracts with Subcontractors, agents, or other persons doing or contracting to do all or any part of the Work under the Agreement. Incorporation of prevailing wage rates by reference in such agreements and contracts is not acceptable.

- 8.18.8. In the event of any violation of the requirement that the Contractor or Subcontractor pay not less than 1-1/2 times the basic hourly rate to each laborer or mechanic employed directly on the job site when such employee is permitted or required to work in excess of the prevailing hours of labor, the Contractor or Subcontractor shall be liable for the unpaid wages.

8.19. Project Labor Agreement

The County has determined that it is in the best interests of the County, as an owner of real property, to have a Project Labor Agreement in place. The Contractor will enter into, and have in effect for the duration of this project, a Project Labor Agreement with the Saint Paul Building and Construction Trades Council. Upon execution, the Project Labor Agreement shall be incorporated into and become a part of the contract for this Project.

8.20. Indemnification

The Contractor shall indemnify, hold harmless and defend the County, its officials, agents, and employees against any and all liability, losses, costs, damages, expenses, claims or actions, including reasonable attorney's fees, which the County, its officials, agents, or employees may hereafter sustain, incur or be required to pay, arising out of or by reason of any act or omission of the Contractor, or its subcontractors, and their officers, agents or employees, in the execution, performance, or failure to adequately perform the Contractor's obligations pursuant to this Agreement.

8.21. Prison Rape Elimination Act (PREA)

Contractor and staff will comply with the Prison Rape Elimination Act of 2003 (42 U.S.C. § 15601 *et seq.*), which establishes a zero-tolerance standard against sexual assault, and with all applicable PREA Standards including background checks, county policies related to PREA and county standards related to PREA for preventing, detecting, monitoring, investigating, and eradicating any form of sexual abuse with Facilities/Client Services owned, operated or contracted. Contractor acknowledges that, in addition to "self-monitoring requirements" the county will conduct announced or unannounced, compliance monitoring to include "on-site" monitoring. Failure to comply with PREA, including PREA Standards and county PREA policies may result in termination of the Agreement.

8.22. Contractor's Insurance

8.22.1.

The Contractor shall purchase and maintain such insurance as will protect the Contractor from claims which may arise out of, or result from, the Contractor's operations under this Agreement, whether such operations are by the Contractor or by any subcontractor, or by anyone directly employed by them, or by anyone for whose acts or omissions anyone of them may be liable.

8.22.2.

Throughout the term of this Agreement, the Contractor shall secure the following coverages and comply with all provisions noted. Certificates of Insurance shall be issued to the County contracting department evidencing such coverage to the County throughout the term of this Agreement.

8.22.3.

Commercial general liability of no less than \$1,000,000 per claim, \$5,000,000 per occurrence, \$5,000,000 general aggregate, \$5,000,000 products/completed operations total limit, \$5,000,000 personal injury and advertising liability.

8.22.3.1.

All policies shall be written on an occurrence basis using ISO form CG 00 01 or its equivalent. Coverage shall include contractual liability and XCU. Contractor will be required to provide proof of completed operations coverage for 3 years after substantial completion.

8.22.4.

Whenever work at issue under Contract involved potential pollution risk to the environment or losses caused by pollution conditions, including asbestos, that may arise from the operations of the Contractor or Contractor's subcontractors, Contractor shall include completed operations coverage for 3 years after substantial completion. Coverage shall apply to sudden and gradual pollution conditions resulting from the escape or release of smoke, vapors, fumes, acids, toxic chemical, liquids, or gases, natural gas, waste materials, or other irritants, contaminants or pollutants, including asbestos.

8.22.5.

Contractor certifies it is in compliance with Minnesota Statutes Ch. 176 (Workers' Compensation). The Contractor's employees, subcontractors and agents will not be considered County employees. Contractor must provide Workers' Compensation insurance for all its employees and, in case any work is subcontracted, Contractor will require the subcontractor to provide Workers' Compensation insurance in accordance with the statutory requirements of the State of Minnesota.

Required minimum limits of \$500,000/\$500,000/\$500,000. Any claims that may arise under Minnesota Statutes Ch. 176 on behalf of these employees, subcontractors or agents and any claims made by any third party as a consequence of any act or omission on the part of these employees, subcontractors or agents are in no way the County's obligation or responsibility.

If Minnesota Statute 176.041 exempts Contractor from Workers' Compensation insurance or if the Contractor has no employees in the State of Minnesota, Contractor must provide a written statement, signed by an authorized representative, indicating the qualifying exemption that excludes Contractor from the Minnesota Workers' Compensation requirements. If during the course of the contract the Contractor becomes eligible for Workers' Compensation, the Contractor must comply with the Workers' Compensation Insurance requirements herein and provide the County with a certificate of insurance.

8.22.6.

An umbrella or excess liability policy over primary liability insurance coverages is an acceptable method to provide the required commercial general liability and employer's liability insurance amounts. If provided to meet coverage requirements, the umbrella or excess liability policy must follow form of underlying coverages and be so noted on the required Certificate(s) of Insurance.

8.22.7.

The Contractor is required to add Ramsey County, its officials, employees, volunteers and agents as Additional Insured to the Contractor's Commercial General Liability, Auto Liability, Pollution and Umbrella policies with respect to liabilities caused in whole or

part by Contractor's acts or omissions, or the acts or omissions of those acting on Contractor's behalf in the performance of the ongoing operations, services and completed operations of the Contractor under this Agreement. The coverage shall be primary and non-contributory.

8.22.8.

If the contractor is driving on behalf of the County but not transporting clients as part of the contractor's services under this contract, a minimum of \$500,000 combined single limit auto liability, including hired, owned and non-owned.

8.22.9.

The Contractor waives all rights against Ramsey County, its officials, employees, volunteers or agents for recovery of damages to the extent these damages are covered by the general liability, worker's compensation, and employers liability, automobile liability, professional liability and umbrella liability insurance required of the Contractor under this Agreement.

8.22.10.

These are minimum insurance requirements. It is the sole responsibility of the Contractor to determine the need for and to procure additional insurance which may be needed in connection with this Agreement. Copies of policies and/or certificates of insurance shall be submitted to the County upon written request and within 10 business days.

8.22.11.

Certificates shall specifically indicate if the policy is written with an admitted or non-admitted carrier. Best's Rating for the insurer shall be noted on the Certificate, and shall not be less than an A-.

8.22.12.

The Contractor shall not commence work until it has obtained the required insurance and if required by this Agreement, provided an acceptable Certificate of Insurance to the County.

8.22.13.

All Certificates of Insurance shall provide that the insurer give the County prior written notice of cancellation or non-renewal of the policy as required by the policy provisions of Minn. Stat. Ch. 60A, as applicable. Further, all Certificates of Insurance to evidence that insurer will provide at least ten (10) days written notice to County for cancellation due to non-payment of premium.

8.22.14.

Nothing in this Agreement shall constitute a waiver by the County of any statutory or common law immunities, defenses, limits, or exceptions on liability.

8.23. Umbrella Liability

8.23.1.

\$5,000,000 per occurrence; \$5,000,000 general aggregate.

8.23.2.

The County, its officials, employees, and agents, shall be an additional insured as required under the Commercial General Liability policy.

8.23.3.

The policy will provide excess coverage over the commercial general liability and automobile liability policies.

8.24. Property Insurance

8.24.1.

The County shall purchase and maintain, in a company or companies authorized to do business in the jurisdiction in which the Project is located, property insurance upon the work to the fullest insurable value thereof on a replacement cost basis, subject to a deductible of \$100,000.00 per occurrence. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the County has an insurable interest in the property required by this section to be insured, whichever is earlier. This insurance shall include interests of the County, the Contractor, and their respective contractors and subcontractors in the Work. The Contractor shall be responsible for the deductible of \$100,000.00 per occurrence under this policy, and all other costs not covered by property insurance up to the date of Substantial Completion.

8.24.2

Property insurance shall be on an all-risk policy form and shall insure against the perils of fire and extended coverage and physical loss or damage including, without duplication of coverage, theft, and debris removal including demolition occasioned by enforcement of any applicable legal requirements and shall cover reasonable compensation for the services and expenses of the Contractor's architect and other professionals required as a result of such insured loss. Coverage for other perils shall not be required unless otherwise provided in the Contract Documents.

8.24.3

Unless otherwise provided, the County shall purchase and maintain such boiler and machinery insurance required by this agreement or by law, which shall specifically cover such insured objects during installation and until final acceptance by the County. This insurance shall include interests of the County, the Contractor, the Contractor's contractors and subcontractors in the Work, and the Contractor's architect and other design professionals. The County and the Contractor shall be named insureds.

8.24.4

A loss insured under the County's property insurance shall be adjusted by the County as fiduciary and made payable to the County as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 8.11.6. The Contractor shall pay contractors their shares of insurance proceeds received by the Contractor, and by appropriate agreement, written where legally required for validity, shall require contractors to make payment to their subcontractors in similar manner.

8.24.5

Before an exposure to loss may occur, the County shall file with the Contractor a copy of a Certificate of Insurance for each policy that includes insurance coverages required by this Section 8. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire until at least thirty (30) business days' prior written notice has been given to the Contractor.

8.24.6

The County and the Contractor waive all rights against each other and the Architect and other design professionals, contractors, subcontractors, agents and employees, each of the other, for damages caused by fire or other perils to the extent covered by property insurance obtained pursuant to this Section 2) or other property insurance applicable to the Work, except such rights as they may have to proceeds of such insurance held by the County as trustee. The County or Contractor, as appropriate, shall require from contractors and subcontractors by appropriate agreements, written where legally required for validity, similar waivers each in favor of the parties enumerated in this Section 2). The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

8.24.7

The County as trustee shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing, within five (5) business days after such notification of the County's intent to exercise this power; if such objection be made, the parties shall enter into dispute resolution under procedures provided in this Agreement. If distribution of insurance proceeds by arbitration is required, the arbitrators will direct such distribution.

8.24.8

Partial occupancy or use prior to Substantial Completion shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The County and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall not, without mutual written consent, take any action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of coverage.

8.25. Audit

Until the expiration of six years after the furnishing of services pursuant to this Agreement, the Contractor, upon request, shall make available to the County, the State Auditor, or the County's ultimate funding source, a copy of the Agreement, and the books, documents, records, and accounting procedures and practices of the Contractor relating to this Agreement.

8.26. Notices

All notices under this Agreement, and any amendments to this Agreement, shall be in writing and shall be deemed given when delivered by certified mail, return receipt requested, postage prepaid, when delivered via personal service or when received if sent by overnight courier. All notices shall be directed to the Parties at the respective addresses set forth below. If the name and/or address of the representatives changes, notice of such change shall be given to the other Party in accordance with the provisions of this section.

County:

John Felipe, 121 7th Place East, Suite 2200, St. Paul, MN 55101

Contractor:

Mark Rasmussen P.E., 3495 Northdale Blvd. NW, Suite 230, Anoka, MN 55448

8.27. Non-Conforming Services

The acceptance by the County of any non-conforming goods/services under the terms of this Agreement or the foregoing by the County of any of the rights or remedies arising under the terms of this Agreement shall not constitute a waiver of the County's right to conforming services or any rights and/or remedies in respect to any subsequent breach or default of the terms of this Agreement. The rights and remedies of the County provided or referred to under the terms of this Agreement are cumulative and not mutually exclusive.

8.28. Setoff

Notwithstanding any provision of this Agreement to the contrary, the Contractor shall not be relieved of liability to the County for damages sustained by the County by virtue of any breach of the contract by the Contractor. The County may withhold any payment to the Contractor for the purpose of setoff until such time as the exact amount of damages due the County from the Contractor is determined.

8.29. Conflict of Interest

The Contractor shall comply with all conflict of interest laws, ordinances, and regulations now in effect or hereafter to be enacted during the term of this Agreement. The Contractor warrants that it is not now aware of any facts that create a conflict of interest. If the Contractor hereafter becomes aware of any facts that might reasonably be expected to create a conflict of interest, it shall immediately make full written disclosure of such facts to the County. Full written disclosure shall include, but is not limited to, identification of all persons implicated and a complete description of all relevant circumstances. Failure to comply with the provisions of this subparagraph shall be deemed a material breach of this Agreement.

8.30. Respectful Workplace and Violence Prevention

The Contractor shall make all reasonable efforts to ensure that the Contractor's employees, officers, agents, and subcontractors do not engage in violence while performing under this Agreement. Violence, as defined by the Ramsey County Respectful Workplace and Violence Prevention Policy, is defined as words and actions that hurt or attempt to threaten or hurt people; it is any action involving the use of physical force, harassment, intimidation, disrespect, or misuse of power and authority, where the impact is to cause pain, fear or injury.

8.31. Force Majeure

Neither party shall be liable for any loss or damage incurred by the other party as a result of events outside the control of the party ("Force Majeure Events") including, but not limited to: war, storms, flooding, fires, strikes, legal acts of public authorities, or acts of government in time of war or national emergency.

8.32. Unavailability of Funding - Termination

The purchase of goods and/or labor services or professional and client services from the Contractor under this Agreement is subject to the availability and provision of funding from the United States, the State of Minnesota, or other funding sources, and the appropriation of funds by the Board of County Commissioners. The County may immediately terminate this Agreement if the funding for the purchase is no longer available or is not appropriated by the Board of County Commissioners. Upon receipt of the County's notice of termination of this Agreement the Contractor shall take all actions necessary to discontinue further commitments of funds to this Agreement. Termination shall be treated as termination without cause and will not result in any penalty or expense to the County.

8.33. Termination

8.33.1.

The County may immediately terminate this Agreement if any proceeding or other action is filed by or against the Contractor seeking reorganization, liquidation, dissolution, or insolvency of the Contractor under any law relating to bankruptcy, insolvency or relief of debtors. The Contractor shall notify the County upon the commencement of such proceedings or other action.

8.33.2.

If the Contractor violates any material terms or conditions of this Agreement the County may, without prejudice to any right or remedy, give the Contractor, and its surety, if any, seven (7) calendar days written notice of its intent to terminate this Agreement, specifying the asserted breach. If the Contractor fails to cure the deficiency within the seven (7) day cure period, this Agreement shall terminate upon expiration of the cure period.

8.33.3.

The County may terminate this Agreement without cause upon giving at least thirty (30) calendar days written notice thereof to the Contractor. In such event, the Contractor shall be entitled to receive compensation for services provided in compliance with the provisions of this Agreement, up to and including the effective date of termination.

8.34. Interpretation of Agreement; Venue

8.34.1.

The Agreement shall be interpreted and construed according to the laws of the State of Minnesota. All litigation regarding this Agreement shall be venued in the appropriate State or Federal District Court in Ramsey County, Minnesota.

8.34.2.

The provisions of this Agreement are severable. If any part of this Agreement is rendered void, invalid or unenforceable, such rendering shall not affect the validity and enforceability of the remainder of this Agreement.

8.35. Warranty

8.35.1. The Contractor shall expressly warrant and guarantee the workmanship, equipment and materials furnished for a one (1) year period from and after the date of Substantial Completion. If any of the work is found to be defective or, Contractor shall correct the said condition promptly after receipt of written notice from the County. This includes the repairs of any damage to other parts of the property resulting from such defects. Prior to commencement of the corrective work, the Contractor shall provide insurance certificate policies, so as to protect the County, and agents during the performance of the warranty work. Acceptance by the County for the purpose of beginning the warranty period will be deemed to be when the work is finally accepted by the County.

8.35.2. The acceptance of any of the Work, or any part of it, shall not act to waive the liability on the part of the Contractor and the Contractor's surety.

8.35.3. In the event that the Contractor should fail to make the repairs, adjustments or other Work that may be made necessary by defects in any of the Work, the County may do so and charge the Contractor the cost thereby incurred. The performance bond shall remain in full force and effect through the warranty/guaranty period. The Contractor's

performance and payment bond delivered to the County pursuant to the Contract shall cover the Contractor's obligations provided for herein.

- 8.35.4.** Specific products used in the construction may include warranties specific to them and of a longer term than one (1) year. The Contractor shall provide written verification from the manufacturer of the product stating what the warranty covers and the time frame in which the warranty expires.

8.36. Infringement

8.36.1.

Complementary to other "hold harmless" provisions included in this Agreement, the Contractor shall, without cost to the County, defend, indemnify, and hold the County, its officials, officers, and employees harmless against any and all claims, suits, liability, losses, judgments, and other expenses arising out of or related to any claim that the County's use or possession of the software, licenses, materials, reports, documents, data, or documentation obtained under the terms of this Agreement, violates or infringes upon any patents, copyrights, trademarks, trade secrets, or other proprietary rights or information, provided that the Contractor is promptly notified in writing of such claim. The Contractor will have the right to control the defense of any such claim, lawsuit, or other proceeding. The County will in no instance settle any such claim, lawsuit, or proceeding without the Contractor's prior written approval.

8.36.2.

If, as a result of any claim of infringement of rights, the Contractor or County is enjoined from using, marketing, or supporting any product or service provided under the agreement with the County (or if the Contractor comes to believe such injunction imminent), the Contractor shall either arrange for the County to continue using the software, licenses, materials, reports, documents, data, or documentation at no additional cost to the County, or propose an equivalent, subject to County approval. The acceptance of a proposed equivalent will be at the County's sole discretion. If no alternative is found acceptable to the County acting in good faith, the Contractor shall remove the software, licenses, materials, reports, documents, data, or documentation and refund any fees and any other costs paid by the County in conjunction with the use thereof.

8.37. Debarment and Suspension

Ramsey County has enacted Ordinance 2013-330 [Ramsey County Debarment Ordinance](#) that prohibits the County from contracting with contractors who have been debarred or suspended by the State of Minnesota and/or Ramsey County.

8.38. Alteration

Any alteration, variation, modification, or waiver of the provisions of this Agreement shall be valid only after it has been reduced to writing and signed by both parties.

8.39. Entire Agreement

The written Agreement, including all attachments, represent the entire and integrated agreement between the parties hereto and supersede all prior negotiations, representations or contracts, either written or oral. No subsequent agreement between the County and the Contractor to waive or alter any of the provisions of this Agreement shall be valid unless made in the form of a written Amendment to this Agreement signed by authorized representatives of the parties.

9. Special Contract Terms and Conditions

9.1.

9.1.1 Utilization of Certified Vendors

The county has adopted the Principles for Inclusiveness in Contracting Program ("IICP") in order to increase the participation of small businesses ("SBEs") in the county's purchasing activities. The contracting inclusion goal for this project is: 32%.

9.1.2 Diverse Workforce Initiative

The county has a goal of continuing to increase participation of qualified minorities and women in each county construction project. The county has established a goal of 20% women and 32% minority goal for site workforce utilization for the project.

9.1.3 Contracting Inclusion

Contractor (and all appropriate subcontractors) shall complete and submit Attachment B -- Contracting Inclusion Reporting Forms with monthly applications for payment or as otherwise directed by the county project manager.

The report shall specify the project and contract number and include:

Ownership: Including but not limited to CERT small business enterprises (SBEs), minority owned enterprises (SMBEs), women owned enterprises (SWBEs), minority women owned enterprises (SWMBEs) and veteran enterprises (SVBEs).

- a. All certifications of the prime contractor.
- b. Name of sub-contractor and all certifications of each sub-contractor along with amounts paid to each sub-contractor to date.

9.1.4 Workforce Inclusion

Contractor (and all appropriate subcontractors) shall utilize County's LCP Tracker software system for submission of completed certified payroll reports and the LCP Tracker workforce inclusion 'Goal Report' with monthly applications for payment or as otherwise directed by the county project manager. County shall provide LCP Tracker training to Contractor if requested.

9.1.5. Order of Governance

In the case of a conflict, the order of precedence among the documents is:

1. This Agreement (including any amendments)
2. Exhibits and Attachments
3. Agreement #PRMG000109

9.1.6. Contractor Additional Conditions

Included in this agreement are contractor's additional conditions as outlined in **Exhibit H: Additional Conditions**.



EXHIBIT A SUMMARY OF WORK

Exhibit A – Summary of Work

Definitions:

Owner shall also be referred to as Client and/or HOST.

CONTRACTOR shall also be referred to as inBYLT, LLC and/or DEVELOPER.

Work Description	Location	Construction Type	Budget Cost	Annual Utility Savings	Annual O&M Savings	One Time O&M Savings	Potential Incentives	Net Cost	Simple Payback	Total Energy (kBtu)	CO2e Reduction (Metric)	Phase 1 On / Off	Phase 2 On / Off	Phase 3 On / Off
Metro Square														
Lighting Upgrade - LED Door Kits and new fixtures		Energy	\$295,300	\$11,163	\$1,154	\$0	\$16,085	\$279,215	22.7	356,322	48	1		
Building Envelope - Apply weatherization including weather-stripping		Energy	\$15,830	\$4,655	\$0	\$0	\$0	\$15,830	3.4	264,710	15	1		
AHU Control Modifications - Pressure Independent Valves with Balancing Devices for Coils & UV Lights		Asset Preservation	\$955,120	\$13,394	\$0	\$811,852	\$0	\$955,120	10.7	314,409	18			1
Courthouse														
Lighting Upgrade - LED Door Kits and new fixtures W/ Controls		Energy	\$2,109,220	\$75,274	\$15,519	\$0	\$77,435	\$2,031,785	22.4	2,540,469	342	1		
Building Envelope - Apply weatherization including weather-stripping		Energy	\$8,180	\$2,858	\$0	\$0	\$0	\$8,180	2.9	162,339	9	1		
Generator Room Heat Pump - Install Heat Pump near generator to improve efficiency and startup		Energy	\$36,170	\$3,272	\$0	\$0	\$0	\$36,170	11.1	161,401	22			1
AHU Control Modifications - Pressure Independent Valves with Balancing Devices for Coils & UV Lights		Asset Preservation	\$537,060	\$10,052	\$0	\$456,501	\$0	\$537,060	8.0	235,966	14			1
AHU Coil Replacement- Replace all cooling coils for air handlers		Asset Preservation	\$1,289,360	\$0	\$0	\$1,095,956	\$0	\$1,289,360	N/A	-	-			1
Law Enforcement Center														
Building Envelope - Apply weatherization including weather-stripping		Energy	\$42,170	\$3,397	\$0	\$0	\$0	\$42,170	12.4	440,830	24	1		
Generator Room Heat Pump - Install Heat Pump near generator to improve efficiency and startup		Energy	\$17,720	\$1,365	\$0	\$0	\$0	\$17,720	13.0	71,734	10			1
Solar - Install Solar PV (480 kW AC) Roof Mount Older Roof	480 kW AC	Solar	\$1,435,720	\$67,789	\$0	\$0	\$388,033	\$1,047,688	15.5	2,188,180	295		1	
Roofing Replacement (3-8 Years Remaining) - Install new roofing system for Solar Work.		Solar	\$3,520,180	\$0	\$0	\$2,640,135	\$0	\$3,520,180	N/A	-	-		1	
AHU Control Modifications - Pressure Independent Valves with Balancing Devices for Coils		Energy	\$369,830	\$6,426	\$0	\$0	\$0	\$369,830	57.6	150,852	9			1
Water Conservation - Conserve water with proper toilet and urinal valves		Energy	\$316,360	\$25,730	\$946	\$0	\$0	\$316,360	11.9	135,798	7			1
Public Works Facility & Sheriff's Patrol Station														
Lighting Upgrade - LED Tubes and Retrofits		Energy	\$233,310	\$19,899	\$3,847	\$0	\$8,612	\$224,698	9.5	662,552	89	1		
Building Envelope - Apply weatherization including weather-stripping		Energy	\$127,990	\$4,571	\$0	\$0	\$0	\$127,990	28.0	705,974	44	1		
Ramsey County Correctional Facility														
Lighting Upgrade - LED Tubes and Retrofits		Energy	\$409,490	\$19,452	\$6,066	\$0	\$6,113	\$403,377	15.8	659,690	89	1		
Building Envelope - Apply weatherization including weather-stripping		Energy	\$40,280	\$1,701	\$0	\$0	\$0	\$40,280	23.7	321,915	20	1		
Water Conservation - Conserve water with proper toilet and urinal valves		Energy	\$230,260	\$15,040	\$744	\$0	\$0	\$230,260	14.6	120,170	6			1
Generator Room Heat Pump - Install Heat Pump near generator to improve efficiency and startup		Energy	\$24,520	\$1,453	\$0	\$0	\$0	\$24,520	16.9	71,734	10			1
Steam Trap Replacement - Install new wireless steam traps at main equipment (Quantity 10) Include first year service		Energy	\$25,320	\$0	\$0	\$12,660	\$0	\$25,320	N/A	-	-			1
Chiller Replacement - Replace old R22 Chiller with New in the New Addition	North Wing	Asset Preservation	\$374,690	\$2,756	\$0	\$318,487	\$0	\$374,690	20.4	100,251	14			1
Solar - Install Solar PV (999 kW AC) Ground Mount System - Single Axis Tracking	1,000 kW AC	Solar	\$3,681,667	\$225,114	\$0	\$0	\$995,045	\$2,686,622	11.9	7,266,550	979	1		
Juvenile Family Justice Center														
Lighting Upgrade - LED Tubes and Retrofits		Energy	\$489,520	\$10,279	\$6,025	\$0	\$9,863	\$479,657	29.4	347,980	47	1		
Building Envelope - Apply weatherization including weather-stripping		Energy	\$11,050	\$1,421	\$0	\$0	\$0	\$11,050	7.8	184,398	10	1		
Water Conservation - Conserve water with proper toilet and urinal valves		Energy	\$114,040	\$9,717	\$372	\$0	\$0	\$114,040	11.3	32,585	2			1



EXHIBIT A SUMMARY OF WORK

Work Description	Location	Construction Type	Budget Cost	Annual Utility Savings	Annual O&M Savings	One Time O&M Savings	Potential Incentives	Net Cost	Simple Payback	Total Energy (kBtu)	CO2e Reduction (Metric)	Phase 1 On / Off	Phase 2 On / Off	Phase 3 On / Off
Landmark Center														
Building Envelope - Apply weatherization including weather-stripping		Energy	\$44,920	\$3,567	\$0	\$0	\$0	\$44,920	12.6	202,758	11	1		
360 Wabasha														
Building Envelope - Apply weatherization including weather-stripping		Energy	\$7,260	\$433	\$0	\$0	\$0	\$7,260	16.8	135,105	13	1		
Roseville Library														
Lighting Upgrade - LED Tubes and Retrofits		Energy	\$169,790	\$10,554	\$2,237	\$0	\$6,074	\$163,716	12.8	330,476	45	1		
Building Envelope - Apply weatherization including weather-stripping		Energy	\$13,210	\$755	\$0	\$0	\$0	\$13,210	17.5	114,180	7	1		
402 University														
Building Envelope - Apply weatherization including weather-stripping		Energy	\$30,850	\$2,126	\$0	\$0	\$0	\$30,850	14.5	283,858	17	1		
Shoreview Library														
Building Envelope - Apply weatherization including weather-stripping		Energy	\$5,770	\$210	\$0	\$0	\$0	\$5,770	27.5	38,659	2	1		
Water Conservation - Conserve water with proper toilet and urinal valves		Energy	\$600	\$83	\$4	\$0	\$0	\$600	6.9	2,185	0			1
Solar - Install Solar PV (200 kW AC) - Roof Mount	200 kW AC	Solar	\$676,064	\$31,165	\$0	\$0	\$182,720	\$493,344	15.8	1,005,994	135		1	
Maplewood Library														
Building Envelope - Apply weatherization including weather-stripping		Energy	\$4,960	\$218	\$0	\$0	\$0	\$4,960	22.8	36,303	2	1		
Water Conservation - Conserve water with proper toilet and urinal valves		Energy	\$3,440	\$520	\$19	\$0	\$0	\$3,440	6.4	2,555	0			1
Rooftop Unit Replacement - Replace existing Rooftop HVAC with new High Efficiency		Asset Preservation	\$706,920	\$1,023	\$0	\$600,882	\$0	\$706,920	103.7	107,681	8			1
Solar - Install Solar PV (100 kW AC) Older Roof System	99 kW AC	Solar	\$368,206	\$17,025	\$0	\$0	\$99,515	\$268,691	15.8	549,557	74			1
Roofing Replacement (7-10 Years Remaining) - Install new roofing system for Solar Work.		Solar	\$1,090,650	\$0	\$0	\$545,325	\$0	\$1,090,650	N/A	-	-			1
Emergency Communications Center														
Lighting Upgrade - LED Tubes and Retrofits		Energy	\$7,300	\$536	\$149	\$0	\$252	\$7,048	10.3	18,507	2	1		
Building Envelope - Apply weatherization including weather-stripping		Energy	\$14,270	\$874	\$0	\$0	\$0	\$14,270	16.3	107,741	6	1		
Water Conservation - Conserve water with proper toilet and urinal valves		Energy	\$830	\$67	\$3	\$0	\$0	\$830	11.9	-	-			1
RTU Replacement - Replace older R-22 Units with new High Efficiency Units		Asset Preservation	\$626,060	\$0	\$0	\$532,151	\$0	\$626,060	N/A	-	-			1
Solar - Install Solar PV (99 kW AC) Older Roof System	98 kW AC	Solar	\$343,665	\$15,257	\$0	\$0	\$92,883	\$250,783	16.4	492,488	66		1	
Roofing Replacement (7-10 Years Remaining) - Install new roofing system for Solar Work.		Solar	\$536,680	\$0	\$0	\$268,340	\$0	\$536,680	N/A	-	-		1	
Sheriff's Water Patrol Station														
Building Envelope - Apply weatherization including weather-stripping		Energy	\$5,290	\$230	\$0	\$0	\$0	\$5,290	23.0	25,443	2	1		
Solar - Install Solar PV (99 kW AC)	99 kW AC	Solar	\$187,599	\$7,411	\$0	\$0	\$50,703	\$136,897	18.5	239,205	32		1	
Family Services Center														
Building Envelope - Apply weatherization including weather-stripping		Energy	\$28,890	\$1,108	\$0	\$0	\$0	\$28,890	26.1	199,110	12	1		
White Bear Lake Library														
Lighting Upgrade - LED Door Kits and new fixtures W/ Controls		Energy	\$33,790	\$622	\$108	\$0	\$1,455	\$32,335	44.3	17,456	2	1		
Building Envelope - Apply weatherization including weather-stripping		Energy	\$8,140	\$333	\$0	\$0	\$0	\$8,140	24.4	48,965	3	1		
Medical Examiner's Office														
Building Envelope - Apply weatherization including weather-stripping		Energy	\$21,080	\$2,697	\$0	\$0	\$0	\$21,080	7.8	241,846	23	1		
Mounds View Library														
Water Conservation - Conserve water with proper toilet and urinal valves		Energy	\$1,950	\$130	\$9	\$0	\$0	\$1,950	14.0	1,072	0			1
Other														
Solar Down Payment (Safe Harbor)	All		\$542,669	\$0	\$0	\$0	\$0	\$542,669	N/A			1		
Additional Insurance Requirements (Year 1)			\$27,048	\$0	\$0	\$0	\$0	\$27,048	N/A			1		
Additional Insurance Requirements (Year 2)			\$27,048	\$0	\$0	\$0	\$0	\$27,048	N/A				1	
Additional Insurance Requirements (Year 3)			\$27,048	\$0	\$0	\$0	\$0	\$27,048	N/A					1
DES	All		\$59,450	\$0	\$0	\$0	\$0	\$59,450	N/A			1		
Totals - Phase 1			\$8,488,694	\$404,047	\$35,105	\$0	\$1,120,934	\$7,367,760	16.8	15,714,136	1,863			
Totals - Phase 1 & 2			\$15,215,651	\$525,669	\$35,105	\$2,908,475	\$1,835,272	\$13,380,379	18.7	19,640,003	2,391			
Totals - Phase 1, 2, & 3			\$22,331,804	\$633,722	\$37,202	\$7,282,289	\$1,934,787	\$20,397,018	19.5	21,697,953	2,585			



EXHIBIT A SUMMARY OF WORK

Scope of Work:

The following scopes are part of Phase 1:

This scope of work does not include any design work for Roofing in Phase 2 or Phase 3.

Lighting Upgrade

Provide and install lighting upgrades per the room by room light upgrade list (Exhibit D.1: Lighting Upgrade).

Building Envelope

Provide and install building envelope upgrades per the upgrade list (Exhibit D.3: Building Envelope).

Solar

Solar Down Payment (Safe Harbor)

Site specific solar equipment for all locations in Phases 1, 2, & 3 to be purchased for the Investment Tax Credit.



EXHIBIT A SUMMARY OF WORK

Ramsey County Correctional Facility – North Field

Jinko580 Ground SAT (R3) RCCF - Ramsey County Correctional Facility, 297 Century Ave S,
St Paul, MN 55119

Report	
Project Name	RCCF - Ramsey County Correctional Facility
Project Address	297 Century Ave S, St Paul, MN 55119
Prepared By	Shawn Doolittle shawn@cedarcreekenergy.com

System Metrics	
Design	Jinko580 Ground SAT (R3)
Module DC Nameplate	1.46 MW
Inverter AC Nameplate	1,000.0 kW Load Ratio: 1.46
Annual Production	2,130 GWh
Performance Ratio	81.3%
kWh/kWp	1,457.1
Weather Dataset	TMY, 10km Grid (44.95,-92.95), NREL (prospector)
Simulator Version	71101b77bc-daada6a3a3- e590928b1b-b97c517dbd

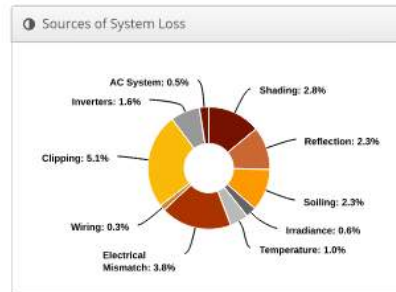


EXHIBIT A

SUMMARY OF WORK

⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,367.6	
	POA Irradiance	1,791.2	31.0%
	Shaded Irradiance	1,740.2	-2.8%
	Irradiance after Reflection	1,700.0	-2.3%
	Irradiance after Soiling	1,661.6	-2.3%
	Total Collector Irradiance	1,661.6	0.0%
Energy (kWh)	Nameplate	2,428,955.8	
	Output at Irradiance Levels	2,415,049.9	-0.6%
	Output at Cell Temperature Derate	2,391,051.2	-1.0%
	Output after Electrical Mismatch	2,299,526.9	-3.8%
	Optimal DC Output	2,292,443.3	-0.3%
	Constrained DC Output	2,174,791.1	-5.1%
	Inverter Output	2,140,405.8	-1.6%
	Energy to Grid	2,129,703.7	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp	10.4 °C	
	Avg. Operating Cell Temp	18.5 °C	
Simulation Metrics			
	Operating Hours	4674	
	Solved Hours	4674	

☁ Condition Set												
Description	snow loss ground mount S.A.T.											
Weather Dataset	TMY, 10km Grid (44.95,-92.95), NREL (prospector)											
Solar Angle Location	Meteo Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack Type	a		b		Temperature Delta						
	Fixed Tilt	-3.56		-0.075		3°C						
	Flush Mount	-2.81		-0.0455		0°C						
	East-West	-3.56		-0.075		3°C						
	Carport	-3.56		-0.075		3°C						
Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	6.5	5.1	1.1	2.5	1.6	1.5	1.5	1.5	1.5	1.7	4.6	7.8
Irradiation Variance	5%											
Cell Temperature Spread	4° C											
Module Binning Range	-2.5% to 2.5%											
AC System Derate	0.50%											
Trackers	Maximum Angle							Backtracking				
	60°							Enabled				
Module & Component Characterizations	Type	Component						Characterization				
	Module	JKM580N-72HL4-BDV (Jinko Solar)						Spec Sheet Characterization, PAN				
	Inverter	XGI 1500 200/200-480 (Solectria Solar)						Spec Sheet				

📦 Components		
Component	Name	Count
Inverters	XGI 1500 200/200-480 (Solectria Solar)	5 (1,000.0 kW)
Strings	10 AWG (Copper)	105 (23,538.0 ft)
Module	Jinko Solar, JKM580N-72HL4-BDV (580W)	2,520 (1.46 MW)

🔌 Wiring Zones									
Description	Combiner Poles			String Size		Stringing Strategy			
Wiring Zone	-			24-24		Along Racking			

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 2	Single-axis Trackers (N/S)	Portrait (Vertical)	30°	180°	13.5 ft	1x72	35	2,520	1.46 MW

Detailed Layout2





EXHIBIT A SUMMARY OF WORK

The following scopes are part of Phase 2:

This Phase does not include the design necessary for the Roofing Projects.

Solar

Law Enforcement Center

Jinko585 RM10EVO CPS Law Enforcement Center, 425 Grove St, St Paul, MN 55101

Report	
Project Name	Law Enforcement Center
Project Address	425 Grove St, St Paul, MN 55101
Prepared By	Shawn Doolittle shawn@cedarcreekenergy.com
	

System Metrics	
Design	Jinko585 RM10EVO CPS
Module DC Nameplate	589.7 kW
Inverter AC Nameplate	480.0 kW Load Ratio: 1.23
Annual Production	641.3 MWh
Performance Ratio	72.9%
kWh/kWp	1,087.6
Weather Dataset	TMY, 10km grid (44.95,-93.05), NREL (prospector)
Simulator Version	dc298edfa0-49fb4d0544-5196f04801-d1e250df32

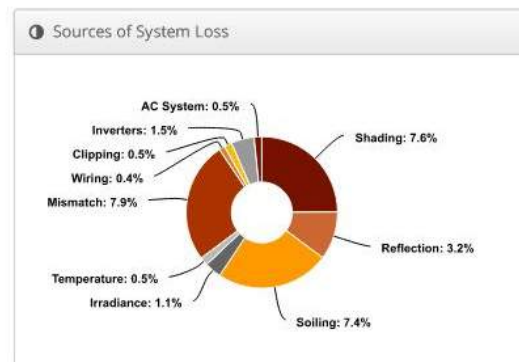
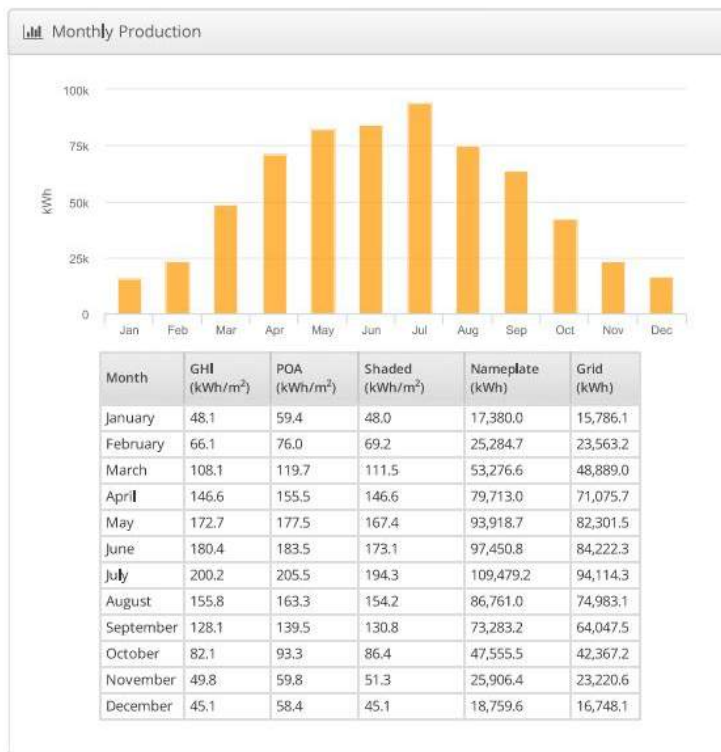


EXHIBIT A SUMMARY OF WORK





EXHIBIT A SUMMARY OF WORK

Shoreview Library

Jinko580 AeroCompact Shoreview Library, 4560 Victoria St N, Shoreview, MN 55126

Report	
Project Name	Shoreview Library
Project Address	4560 Victoria St N, Shoreview, MN 55126
Prepared By	Shawn Doolittle shawn@cedarcreekenergy.com

System Metrics	
Design	Jinko580 AeroCompact
Module DC Nameplate	269.1 kW
Inverter AC Nameplate	200.0 kW Load Ratio: 1.35
Annual Production	294.8 MWh
Performance Ratio	73.9%
kWh/kWp	1,095.6
Weather Dataset	TMY, 10km Grid (45.05,-93.15), NREL (prospector)
Simulator Version	b3036c8de5-88b485dd73- 01817afed1-37246d4264



Monthly Production



Month	GHI (kWh/m ²)	POA (kWh/m ²)	Shaded (kWh/m ²)	Nameplate (kWh)	Grid (kWh)
January	46.3	56.7	49.9	8,225.0	7,544.1
February	72.1	84.7	79.1	13,171.3	12,307.3
March	109.1	120.8	114.9	24,958.0	23,286.3
April	146.1	155.3	148.7	36,845.8	32,520.5
May	168.9	173.9	166.4	42,539.3	36,797.1
June	180.1	183.2	175.3	44,924.3	38,501.9
July	198.7	203.5	194.7	49,959.7	42,250.5
August	157.4	165.5	158.7	40,711.5	35,070.8
September	122.5	134.3	128.0	32,634.5	28,620.0
October	78.3	90.0	85.3	21,393.4	19,157.8
November	50.8	61.8	55.5	12,763.4	11,517.8
December	40.5	52.0	43.0	8,148.0	7,265.8

Sources of System Loss

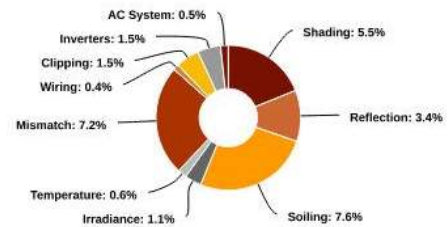


EXHIBIT A SUMMARY OF WORK





EXHIBIT A SUMMARY OF WORK

Emergency Communications Center

Jinko585 RM10EVO Emergency Communications Center, 388 E 13th St, St Paul, MN 55101

Report	
Project Name	Emergency Communications Center
Project Address	388 E 13th St, St Paul, MN 55101
Prepared By	Shawn Doolittle shawn@cedarcreekenergy.com



System Metrics	
Design	Jinko585 RM10EVO
Module DC Nameplate	121.7 kW
Inverter AC Nameplate	100.0 kW Load Ratio: 1.22
Annual Production	144.3 MWh
Performance Ratio	79.5%
kWh/kWp	1,186.2
Weather Dataset	TMY, 10km grid (44.95,-93.05), NREL (prospector)
Simulator Version	fb8d1addf1-a17db0e374-3b85ecbc4e-6ac4a3c4bd

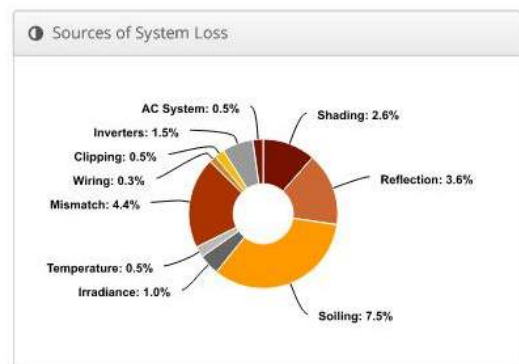
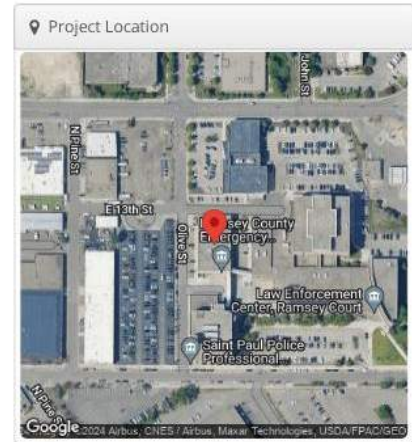


EXHIBIT A SUMMARY OF WORK

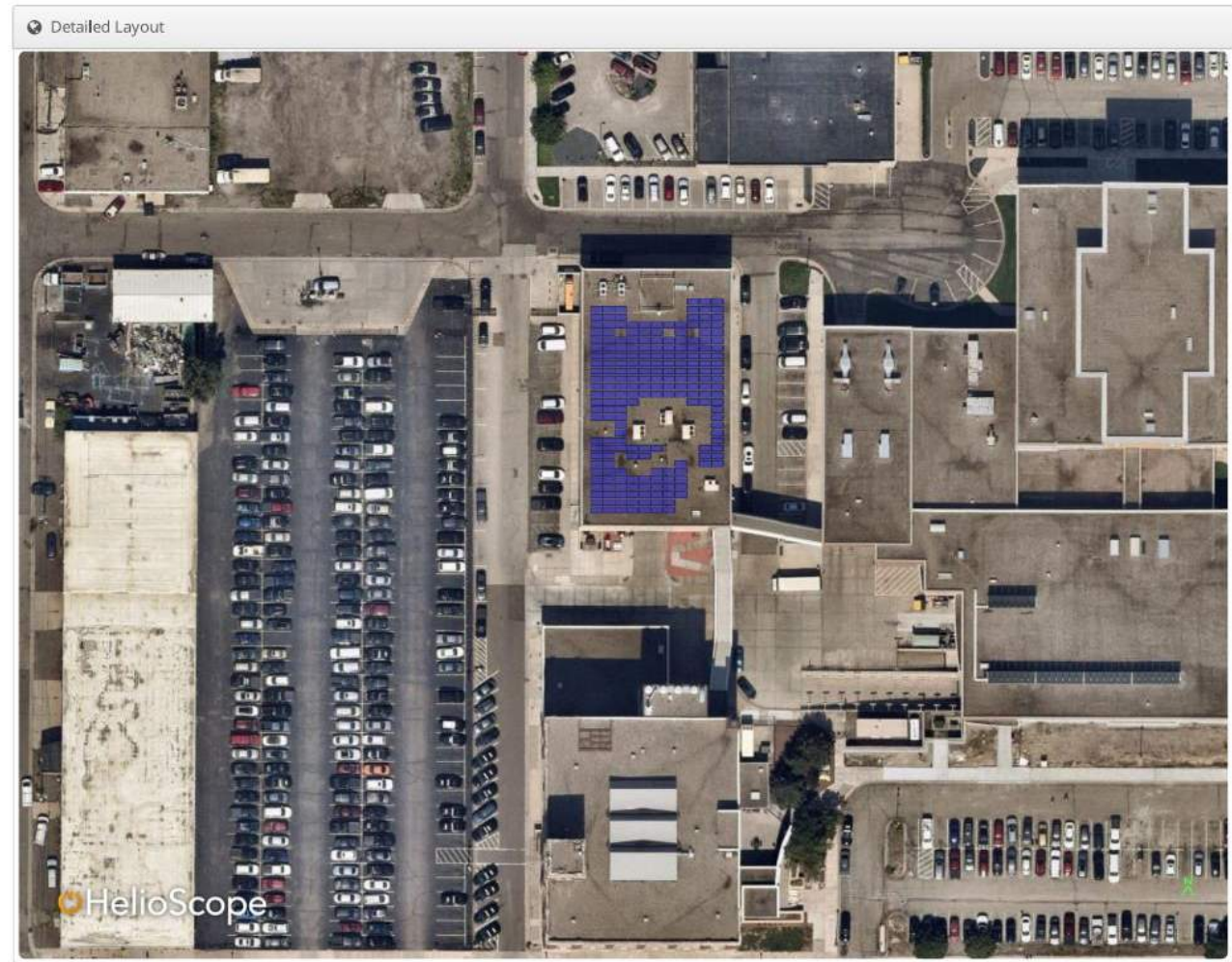




EXHIBIT A SUMMARY OF WORK

Sheriff's Water Patrol Station

Gridflex10 Jinko580 (208v) R1 Water Patrol Station - Ramsey Co, 5 S Owasso Blvd W, St Paul, MN 55117

Report	
Project Name	Water Patrol Station - Ramsey Co
Project Address	5 S Owasso Blvd W, St Paul, MN 55117
Prepared By	Shawn Doolittle shawn@cedarcreekenergy.com

System Metrics	
Design	Gridflex10 Jinko580 (208v) R1
Module DC Nameplate	64.96 kW
Inverter AC Nameplate	50.00 kW Load Ratio: 1.30
Annual Production	70.11 MWh
Performance Ratio	72.2%
kWh/kWp	1,079.2
Weather Dataset	TMY, 10km Grid (45.05,-93.15), NREL (prospector)
Simulator Version	cc4ab4f3d3-1c80416c1c- 24cff998dc-ab0c0e39d2

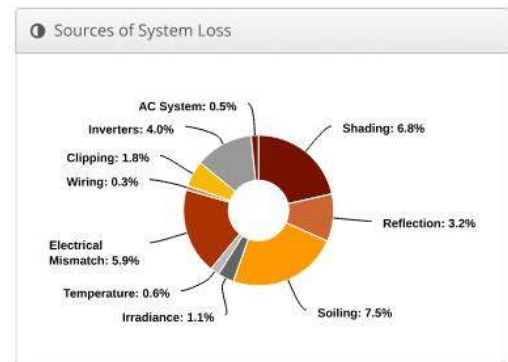
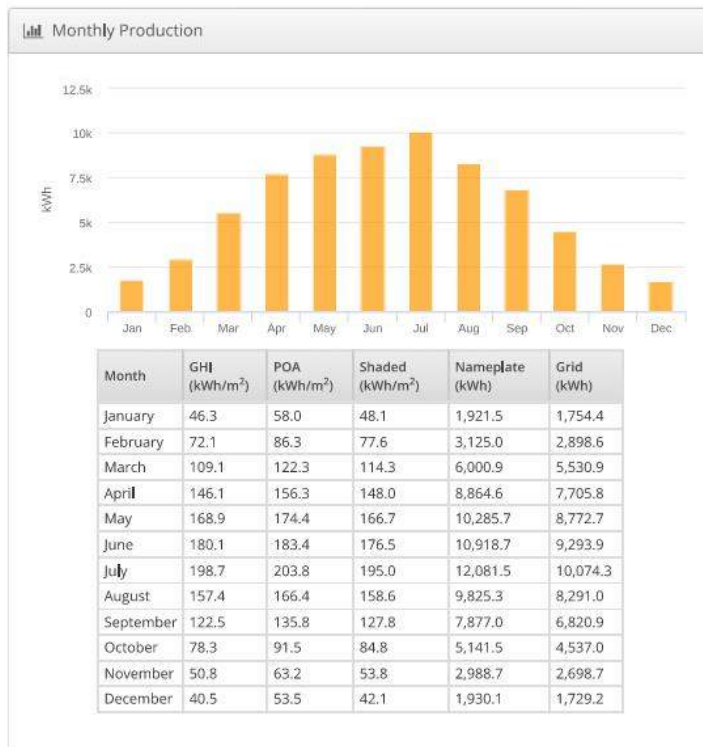


EXHIBIT A SUMMARY OF WORK





EXHIBIT A SUMMARY OF WORK

Roofing

This Phase does not include the design necessary for the Roofing Projects.

Roofing will be replaced with a new 90 Mill or better roofing system. New insulation will be installed to meet current energy code and to replace wet insulation. Roofing system will be designed with solar panels to be installed on top of the new roof.

LEC – All Sections of the Roof to be replaced





EXHIBIT A SUMMARY OF WORK

ECC – Full Roof Replacement

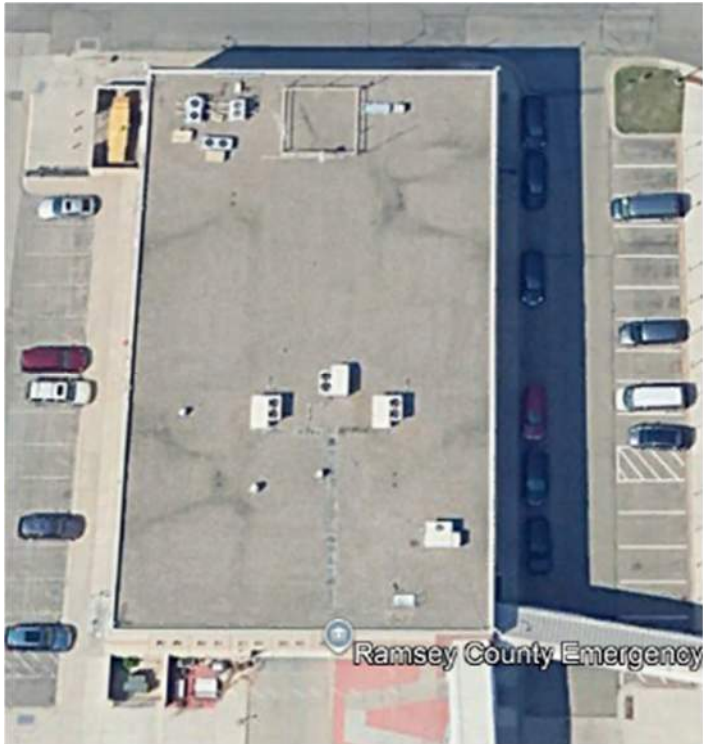




EXHIBIT A SUMMARY OF WORK

The following scopes are part of Phase 3:

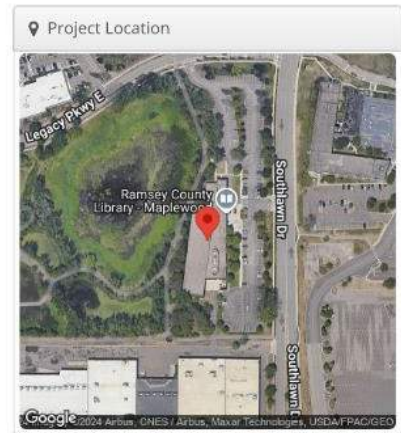
Solar

Maplewood Library

Jinko580 AeroCompact Maplewood Library, 3025 Southlawn Dr, Maplewood, MN 55109

Report	
Project Name	Maplewood Library
Project Address	3025 Southlawn Dr, Maplewood, MN 55109
Prepared By	Shawn Doolittle shawn@cedarcreekenergy.com

System Metrics	
Design	Jinko580 AeroCompact
Module DC Nameplate	139.2 kW
Inverter AC Nameplate	100.0 kW Load Ratio: 1.39
Annual Production	161.1 MWh
Performance Ratio	75.9%
kWh/kWp	1,157.1
Weather Dataset	TMY, 10km grid (45.05,-93.05), NREL (prospector)
Simulator Version	b3036c8de5-88b485dd73- 01817afed1-37246d4264



Monthly Production



Month	GHI (kWh/m ²)	POA (kWh/m ²)	Shaded (kWh/m ²)	Nameplate (kWh)	Grid (kWh)
January	48.6	62.9	54.0	4,630.2	4,404.8
February	66.1	80.2	74.3	6,422.8	6,086.9
March	110.8	124.4	118.8	13,417.9	12,552.4
April	147.9	158.8	154.3	19,794.1	17,548.3
May	167.9	173.3	168.5	22,295.7	19,388.9
June	180.8	183.8	179.2	23,762.5	20,653.2
July	201.9	207.8	202.8	26,952.2	23,137.4
August	169.6	179.6	174.9	23,213.7	20,136.3
September	128.2	142.2	137.4	18,174.5	16,103.2
October	79.3	92.5	87.6	11,399.5	10,468.1
November	49.8	62.3	56.2	6,718.1	6,245.8
December	42.2	56.8	47.1	4,650.6	4,340.2

Sources of System Loss

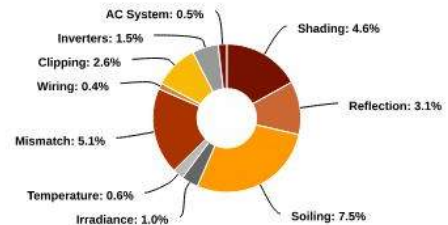


EXHIBIT A SUMMARY OF WORK

Detailed Layout2



Roofing

This Phase does not include the design necessary for the Roofing Projects.

Roofing will be replaced with a new 90 Mill or better roofing system. New insulation will be installed to meet current energy code and to replace wet insulation. Roofing system will be designed with solar panels to be installed on top of the new roof.

Maplewood Library – All Sections of the Roof to be replaced





EXHIBIT A SUMMARY OF WORK

AHU Control Modifications

General Notes:

- This is a design-build application, provided below is a general summary of scope of work. Contractors shall see individual sections for further details on new equipment.
- Contractor is responsible for all shutoffs, balancing devices and circuit centers.
- Provide one-year warranty including parts and labor. This warranty shall be in addition to any equipment or material warranties provided by manufacturer.
- New equipment shall be balanced before and after installation.

Mechanical Installation

The mechanical contractor will be responsible for purchasing the selections provided. The cut sheets and/or schedules are provided. See Ramsey County Air Handler, Coil Modification, and UV Light Schedule. This equipment includes but is not limited to:

- Shipping to the location provided by mechanical contractor.
- Coil Modifications:
 - If noted on Scheule for number of coils provide and install the following:
 - New balancing devices.
 - New insulation of piping.
 - New shut-off to isolate the coil as needed.
 - If noted for GPM provide and install a pressure independent valve for the unit
 - These will be based on the cooling coils.
 - Valves shall be provided by the controls contractor and installed by the mechanical contractor.
 - Replace insulation inside of the air handlers where the insulation is missing or has been destroyed as noted in the photos below.
- Provide onsite owner training.

Electrical Installation

- UV Lights to be installed downstream of the cooling coils in the specified air handler.
 - See attached schedule for cooling coil service area.
 - The design was based on Lumalier supplied by SVL. Equivalent products to be approved by engineer.

Contractor to provide all power wiring and disconnects for the new UV lights. On/off switches shall be located outside of the existing AHU's.

Controls Installation

Expand / Replace existing BAS

Scope to include all costs for labor, equipment and materials to provide controls to new and existing equipment as noted on the drawings.



EXHIBIT A SUMMARY OF WORK

The controls contractor will be responsible for purchasing the selections provided. The cut sheets and/or schedules are provided. This equipment includes but is not limited to:

- Provide new pressure independent control valves for installation by the mechanical contractor.
- Connect new control valves to the existing BAS.
- Provide onsite owner training.

Ramsey County Coil Modification and UV Light Schedule									
BUILDING	LOCATION	SERVING	Unit Tag	No. CW	Total CW	New Equipment			NOTES
			AHU Tag	Coils	GPM	Glycol Content [%]	Width [in]	Height [in]	
METRO SQUARE	LOWER LEVEL	FIRST FLOOR	AHU-1	8	603		120	36	
METRO SQUARE	LOWER LEVEL	FIRST FLOOR	AHU-1				116	36	
METRO SQUARE	LOWER LEVEL	SECOND FLOOR	AHU-2	6	438		81	39	
METRO SQUARE	3RD FLOOR	THIRD FLOOR	AHU-3	9					
METRO SQUARE	FOURTH FLOOR	FOURTH FLOOR	AHU-4	9					
METRO SQUARE	ROOF PENTHOUSE	FIFTH FLOOR	AHU-5	6	402		108	30	
METRO SQUARE	LOWER LEVEL		AHU-6	2	100		85	36	
METRO SQUARE	LOWER LEVEL		AHU-7	6	216		72	36	
METRO SQUARE	LOWER LEVEL		AHU-7				84	36	
COURT HOUSE	BASEMENT	FLOORS 1-3 WEST	AHU-S1	4	360		96	66	
COURT HOUSE	BASEMENT	FLOORS 1-3 EAST	AHU-S2	4	360		96	66	
COURT HOUSE	6TH FLOOR	FLOORS 4-12 EAST	AHU-S3	4	210		60	51	
COURT HOUSE	6TH FLOOR	FLOORS 4-12 WEST	AHU-S4	4	210		60	51	
COURT HOUSE	19TH FLOOR	FLOORS 13-18 WEST	AHU-S5	4			54	51	No New Valve
COURT HOUSE	19TH FLOOR	FLOORS 13-18 EAST	AHU-S6	4			54	51	No New Valve
COURT HOUSE	LOWER LEVEL MEZZ	COUNCIL CHAMBER	AHU-1	1	33				
LEC	7TH LEVEL PENTHOUSE		AHU-1	2					No New Valve
LEC	7TH LEVEL PENTHOUSE		AHU-2	2					No New Valve
LEC	2ND LEVEL	Infirmery	AHU-3	1	8.6				
LEC	ROOF	Kitchen	AHU-4	2	27.3				
LEC	2ND LEVEL	Gun Range	AHU-5	1					No New Valve
LEC	2ND LEVEL	1st Floor Courts	AHU-6	2	78				
LEC	2ND LEVEL		AHU-7	2	58.8				
LEC	2ND LEVEL	Video Conferencing	AHU-8	1	11				
LEC	3RD LEVEL	Admin 8 hr	AHU-9	2	47.5				
LEC	3RD LEVEL	Admin 24 hr	AHU-10	2	57.8				
LEC	2ND LEVEL		AHU-11						No New Valve
LEC	LOWER LEVEL	Courts Basement	AHU-12	1	18.4				*APPEARS TO BE A SMALL UNIT
LEC		AHU-1 & AHU-2	HRU-1	8					No New Valve

AHU Chilled Water Coil Replacement

See table above for the replacement of all of the cooling coils at the Courthouse. Coils would be matched to size the units and CFM of the air handlers. Coils would also be sized for an EWT of 42F and high delta T for the existing district cooling requirements.



EXHIBIT A SUMMARY OF WORK

Generator Heat Pumps

Courthouse:

CAT 3512

Heat pump HE:18

Cummins KTT19

Heat pump HE:12

Law Enforcement Center:

CAT 3508

Heat pump HE:12

Ramsey County Correctional Facility:

Kohler 750ROZDD4

Heat Pump outdoor unit model CVC



High Efficiency Heating System

HE



Hotstart's HE High Efficiency Heating System uses proven air-source heat pump technology to provide the most efficient engine heating solution for standby generators. HE systems use less energy to maintain water jacket temperatures than engine heaters powered by electric resistance.



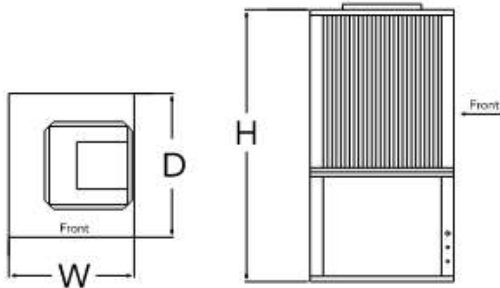
HIGH EFFICIENCY ENGINE HEATING

The HE-12, HE-18, HE-24, and HE-36 are efficient, single-stage air-source heat pumps capable of reducing engine heating costs by up to 75% compared to electric resistance heaters. The system design allows for effective heat transfer through a series of exchangers, using existing heat from the surrounding air rather than generating it through electrical resistance. The resulting reduction in carbon footprint contributes to end-users' net-zero goals.



PRECISE HEATING CONTROL

Standby generators equipped with a HE heating system and a standard Hotstart engine heater will reliably start in lower ambient temperatures. The two systems work in tandem to provide heating redundancy – the existing engine heater takes over if the heat pump technology alone cannot maintain adequate starting temperature. Connected controls allow for the systems to switch on/off automatically based on ambient temperatures.



HE-12			
Depth (D)	Width (W)	Height (H)	Weight
22"	22.4"	34.5"	160 lbs
559 mm	569 mm	876 mm	73 kg

HE-18			
Depth (D)	Width (W)	Height (H)	Weight
25.6"	22.4"	44.6"	257 lbs
650 mm	569 mm	1133 mm	117 kg

HE-24			
Depth (D)	Width (W)	Height (H)	Weight
25.6"	22.4"	48.5"	266 lbs
650 mm	569 mm	1231 mm	121 kg

HE-36			
Depth (D)	Width (W)	Height (H)	Weight
30.6"	25.4"	50.5"	327 lbs
777 mm	645 mm	1283 mm	148 kg

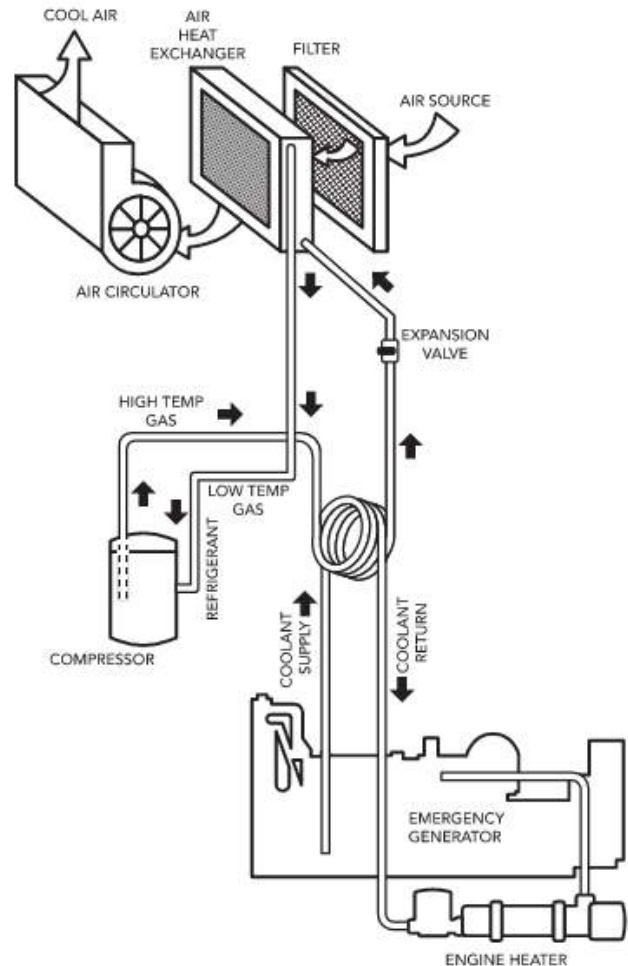
All Systems	
Phase	single-phase (1 Ø)
Voltage (AC)	208 / 230
Environment Rating	Indoor locations*
Certification	ETL/C-US, AHRI, ASHRAE
Refrigerant	HFC-410A
Coolant Type	Water Coolant mix (50% water/50% glycol)

Model-Specific				
	HE-12	HE-18	HE-24	HE-36
Circuit Ampacity	10	15	20	25
Total FLA	6.1	10.4	15.5	18.6
Inlet/Outlet	1/2" NPT	3/4" NPT	3/4" NPT	3/4" NPT
Heat Capacity**	3.5 kW	5.25 kW	7 kW	10.5 kW

* Outdoor installations require additional guarding package.

** Heat capacity dependent on ambient temperatures.

Contact Hotstart for recommendations based on your project specifications.



Heat is removed from the air and is transferred to the engine coolant system through pressurized refrigerant.

For assistance with your heating system application, contact Hotstart at 509.536.8660 or heatpumps@hotstart.com.



High Efficiency Engine Heater CVC

Hotstart's CVC High Efficiency Engine Heater uses proven air-source heat pump technology to provide the most efficient engine heating solution for standby generators across the world. CVC systems use significantly less energy to maintain water jacket temperatures than electric resistance based engine heaters.



HIGH EFFICIENCY HEATING

The CVC is a high efficiency engine heater capable of reducing generator heating costs by up to 40,000 kWh annually*. Hotstart's active heat recovery system pulls existing heat from the surrounding air and sends it through a vapor compression cycle, delivering heat to the coolant to maintain engine temperatures while idle. This process is more efficient than generating heat through electrical resistance.



PRECISE HEATING CONTROL

The variable speed compressor allows the CVC to provide the proper amount of heat needed based on ambient temperature – no overheating or underheating of the generator. The precision regulation of heat output results in lower annual energy costs associated with generator readiness while also reducing system carbon footprint, contributing to end-user's net-zero goals.



REDUNDANT RELIABILITY

Standby generators equipped with a CVC engine heater and a standard Hotstart engine heater will reliably start in lower ambient temperatures. The two systems work cooperatively, operating in tandem through fully integrated and programmed controls, providing heating at any temperature. Network connectivity allows operators to remotely monitor heater status, maintaining uptime and engine reliability.

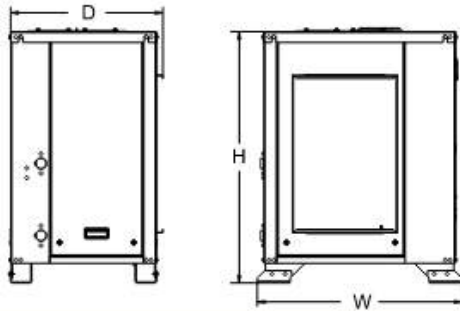
* Savings dependent on engine size and location.

EXHIBIT A

SUMMARY OF WORK

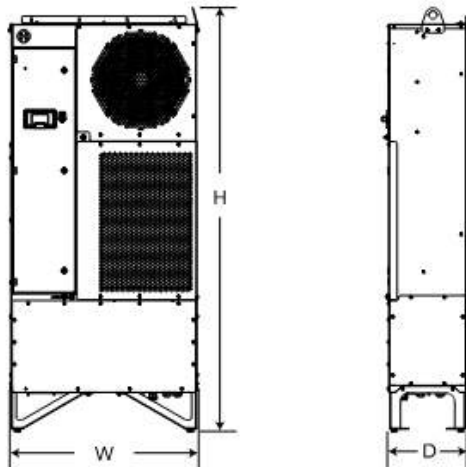


High Efficiency Engine Heater
CVC



Depth (D)	Width (W)	Height (H)	Weight
23.2"	31.2"	38.3"	230 lbs
590 mm	793 mm	973 mm	105 kg

Specifications	
Phase	single-phase (1 Ø)
Voltage (AC)	208 – 240V 50/60 Hz
Environment Rating	IP54
Certification	UL C/US Listed CE Listed
Refrigerant	HFC-32
Coolant Type	Water Coolant mix (50% water/50% glycol)
Circuit Ampacity	30
Total FLA	up to 20A
Inlet/Outlet	1" NPT
Heat Capacity	up to 10.5 kW



Depth (D)	Width (W)	Height (H)	Weight
14.2"	33.76"	76.12"	210 lbs
361 mm	858 mm	1933 mm	95 kg



EXHIBIT A SUMMARY OF WORK

Water Conservation

A) Water Closets:

- **Tank Style Water Closets:**

- Tank style water closets utilize a tank fill valve on top of the bowl which uses gravity to drain large volumes of water into the bowl during evacuation. Pressure assisted tank valves use domestic water pressure to pressurize the tank water allowing for more forceful evacuations with less water volume.

- **Flush Valve Water Closets:**

- Most commercial facilities utilize flush valve water closets. Flush valves are designed to release precise volumes of water when activated. High efficiency flush valve and china combinations can enable a facility to greatly reduce its water consumption by reducing flush valve flow rates and the amount of water required for evacuation.
- Existing water closets use older non-chloramine resistant diaphragm valves. These diaphragms and components deteriorate over time due to the flexing of the rubber and chloramines in the water treatment process. The older 1.6 and 3.5 Gallon per flush "designed" water closet have partially degraded diaphragms for those fixtures which is 10% - 15% additional per flush than design. The fixtures should be retrofit to low flow using high efficiency technology with newer chloramine resistant synthetic diaphragm valves inclusive of changing all porcelain as necessary.
- Existing side mounted sensors will be reinstalled unless noted. Existing integral (head-mounted) sensors will not be replaced or reused unless noted.

B) Urinals:

- Existing urinals typically consist of 1.5 GPF, 1.0 GPF and 0.125 GPF models.
- Existing urinals use older non-chloramine resistant diaphragm valves. These diaphragms and components deteriorate over time due to the flexing of the rubber and chloramines in the water treatment process. Urinal valves over 5 years in age have partially degraded diaphragms creating an average of 10% to 15% additional water per flush for those fixtures. The fixtures should be retrofit to low flow using high efficiency technology with newer chloramine resistant synthetic diaphragm valves inclusive of changing all porcelain as necessary.
- All angle stops will be placed in the standard operating position.
- Existing urinal china will not be changed unless noted.
- Existing side mounted sensors will be reinstalled unless noted. Existing integral (head-mounted) sensors will not be replaced or reused unless noted.

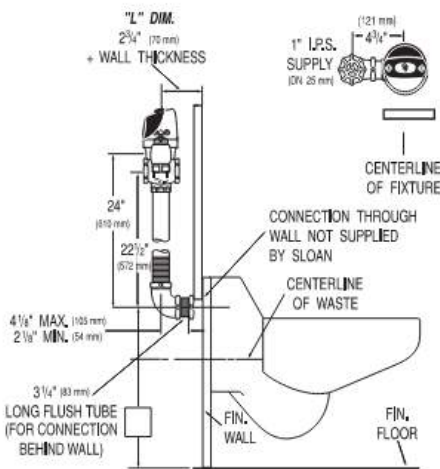
EXHIBIT A SUMMARY OF WORK

C) Bathroom Faucets/ Aerators:

- Most faucets utilize aerators to restrict the volume of water at the mouth of a faucet and to generate a more comfortable flow. High efficiency aerators can greatly reduce flow rates from faucets and create a comfortable flow for handwashing and cleaning. Restricting faucet flow rates enables a facility to conserve water and reduce energy usage associated with heating water.

Provide and install water conservation upgrades per the upgrade list (Exhibit D.2: Water Conservation).

Below is the flush valves proposed for the jail cells:



MICROPlumb™ PRODUCTS 8603 ESM

Description

Concealed, Battery Powered, electronic activated, single I/O Water Closet Flushometer for wall hung stainless steel back inlet bowls.

Flush Cycle

- ☐ 8603 ESM (High Efficiency Water Closet 1.28 gpf/4.8 Lpf)
- ☐ 8603 ESM (Low Consumption Water Closet 1.6 gpf/6.0 Lpf)
- ☐ 8603 ESM (Euro-flush Water Closet 2.4 gpf/9.1 Lpf)
- ☐ 8603 ESM (Water Saver Water Closet 3.5 gpf/13.2 Lpf)

Prison Flushometers features all the performance benefits of standard concealed, Flushometers with added durability to withstand rough environments. Various flush volumes available to match with existing fixtures and meet water-efficiency goals, Flushometer intended for use with stainless steel water closet fixtures from Acorn®, Metcraft®, Willoughby® and other manufacturers.

Specifications

- Concealed electronic operated, diaphragm type, rough brass closet flushometer
- 6 VDC Input solenoid operator Diagnostic LED indicators in control module
- "Low Battery" Flashing LED
- Latching Solenoid Operator
- Fixed Metering No External Volume Adjustment to Ensure Water Conservation
- 1 I.P.S. Wheel handle Bak-Check™ angle stop
- Adjustable tailpiece
- High back pressure vacuum breaker
- Elbow flush connection and coupling for 1 1/2" NPT back inlet (for connection in pipe chase—flush tube through wall not provided by Programmed Water Technologies)
- Maintenance/Manual Flush® Override Button
- Four (4) Size AA alkaline Batteries included: Duracell® with DURALOCK Power Preserve Technology™—guaranteed for up to 10 years in storage
- High Copper, Low Zinc Brass Castings for Dezincification Resistance
- Universal button with mounting hardware
- Flush Accuracy Controlled by CID™ Technology
- Stop Seat and Vacuum Breaker to be molded from PERMEX® Rubber Compound for Chloramine resistance
- Valve shall be in compliance to the applicable sections of ASSE 1037

Electrical Specifications

- Battery Life: 6 years @ 4,000 activations a month

Available with the following activation programs

- 2 activations in a 5 minute window with a lockout of 15 min.
- 2 activations in a 5 minute window with a lockout of 30 min
- 2 activations in a 5 minute window with a lockout of 45 min
- 2 activations in a 5 minute window with a lockout of 60 min
- Dorm Program- 1 activation with a backside delay of 60 seconds/no lockout

Variation

- ☐ GBP Gang box cover plate



EXHIBIT A SUMMARY OF WORK

Steam Trap Replacement

Ramsey County Correctional Facility

Provide and install a maximum of 10 new steam traps around the facility to monitor the steam system.

Smart Steam Trap & System Solution

- 1st Fully Electro-mechanical Trap to Market
- 24x7 Remote Monitoring with Dashboard
- Operational Cost Reduction & Energy Savings
- Single Trap Replaces 24 Current Market Traps



\$100B Wasted Annually

- 37% of all fossil fuels are used to produce industrial steam, 20% is wasted due to steam trap failures.
- 1.4 billion metric tons of GHG is released annually—enough energy loss to power 15 million homes.
- 25 to 30% of all mechanical steam traps fail annually—the primary cause of lost energy and operational cost.

InteliTrap® & SteamView®

The first fully integrated electro-mechanical steam trap, featuring a proactive monitoring system to identify, predict, and address real-time performance issues.



- Wrench only, plug & play design replaces all legacy steam traps.
- High-performance InteliTrap® minimize moving parts to improve reliability 2-3X.
- The only trap designed for 10+ years of reliable performance.
- Self-powered microcontroller monitors & transmits temperature, pressure, and water removal rate.

Savings

Save Money

- Save **\$2,500** a year in fuel costs PER TRAP that fails-open.
- Save **\$30,000** a year in piping and equipment damage costs PER TRAP that fails-closed.
- Average system = 5,000 traps.

Save Labor

- Eliminate **one full-time employee** labor cost per average steam system.

Save Time

- Replace **reactive** steam management to **proactive** real-time monitoring capability.

Save Energy

- Save energy cost by eliminating 26 tons of GHG per trap.

“If steam traps are not regularly monitored, 15-20% of the traps can be malfunctioning. Energy savings for a regular system of steam trap checks and follow-up maintenance is estimated at 10%.”



Contact Us

 512-695-8327

 info@imperiumzone.com



EXHIBIT A SUMMARY OF WORK

Chiller Replacement

Ramsey County Correctional Facility

General Notes:

- Contractor is responsible for all shutoffs, balancing devices and circuit centers.
 - All roof work or penetrations will be the responsibility of the installing Contractor.
 - Provide one-year warranty including parts and labor. This warranty shall be in addition to any equipment or material warranties provided by manufacturer.
 - New equipment shall be balanced before and after installation.
-
- Contractor to replace existing R-22 Air cooled chiller on the North side of the building
 - Removal and replacement of chillers 125 Ton Chiller
 - Piping necessary to tie new chiller onto existing line, unit to be located in the same

Controls Installation: New equipment shall be BACnet compatible and all points shall be brought into the existing BAS System.

Scope to include all costs for labor, equipment and materials to provide controls to new and existing equipment as noted in the mechanical scope of work.

The controls contractor will be responsible for purchasing the selections provided.



EXHIBIT A SUMMARY OF WORK

Rooftop Unit Replacement

Maplewood Library

- Shipping to the location provided by mechanical contractor.
- Remove and dispose of the existing units as noted on drawings.
- New RTU's to be purchased, delivered and installed by this contractor
- Roof curbs to be installed with units, curbs to be current MN energy code compliant.
- All structural reinforcement shall be done by others
- Demo existing ductwork and install new ductwork as noted on the drawings.
- All new supply ductwork to be insulated
- New ceiling removal needed for new ductwork shall be under this contractor.
- Contractor is responsible for all new roofing work as necessary for new roof curbs, penetrations and patching existing equipment.
- Provide onsite owner training

Contractor to refer to all bid documents, drawings and specifications issued for this project. Contractor to include all costs to be in compliance with all conditions and requirements in the project specifications and drawings.

- RTU-1 & 2 will be combined into one unit. If not re-usable, pull existing wiring back to mains and provide new breakers, wiring and disconnects for the new RTU-1.
- Disconnect and Reconnect RTU-3 & 4.
- Provide and install new disconnects for all new RTU's.
- See below for existing wire size
 - RTU-1: 3/4"C, 3#10, 1#10G
 - RTU-2: 3/4"C, 3#10, 1#10G
 - RTU-3: 3/4"C, 3#8, 1#10G
 - RTU-4: 3/4"C, 3#8, 1#10G
- Contractor to install new wiring if necessary for new units.
 - RTU-1: 480V/3ph, 39 FLA; 41 MCA.
 - RTU-2: 480V/3ph, 19 FLA; 21 MCA.
 - RTU-3: 480V/3ph; 130.8 MCA.
- Provide new 120V power outlets for service as per code

Controls Installation: New equipment shall be BACnet compatible and all points shall be brought into the existing BAS System.

All equipment shall be re-evaluated if the purpose of the space changes before installation of new equipment.

EXHIBIT A

SUMMARY OF WORK

DRAWING INDEX

MECHANICAL SHEET INDEX

M-000	GENERAL MECHANICAL NOTES AND LEGEND
MD-100	FIRST FLOOR MECHANICAL DEMO PLAN - SECTION A
MD-101	FIRST FLOOR MECHANICAL DEMO PLAN - SECTION B
MD-102	BASEMENT AND SECOND FLOOR MECHANICAL DEMO PLAN
MD-103	PARTIAL GYM MEZZANINE AREA DEMOLITION PLAN
M-100	FIRST FLOOR DUCTWORK PLAN - SECTION A
M-101	FIRST FLOOR DUCTWORK PLAN - SECTION B
M-102	PARTIAL GYM MEZZANINE PLAN
M-103	BASEMENT AND SECOND FLOOR MECHANICAL PLAN
M-104	ROOF MECHANICAL PLAN - SECTION A

MECHANICAL SYMBOLS

[illegible]

MECHANICAL GENERAL NOTES:

[illegible]

MECHANICAL ABBREVIATIONS

[illegible]

MECHANICAL DEMOLITION GENERAL NOTES

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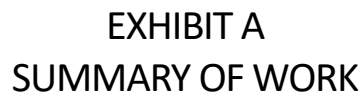
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RAMSEY COUNTY DES
RAPLEWOOD LIBRARY PROJECT
111 EAST 20TH STREET



MECH TITLE SHEET

M100



Northdale Blvd, Suite 238
 Coon Rapids, MN 55448
www.nbylt.com

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RAMSEY COUNTY DES
MAPLEWOOD LIBRARY PROJECT
330 EAST 30TH STREET
MINNEAPOLIS, MN 55409

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1990			
1991	1992		
1993	1994	1995	1996
1997	1998	1999	2000

MECH DEMOLITION PLAN

M101

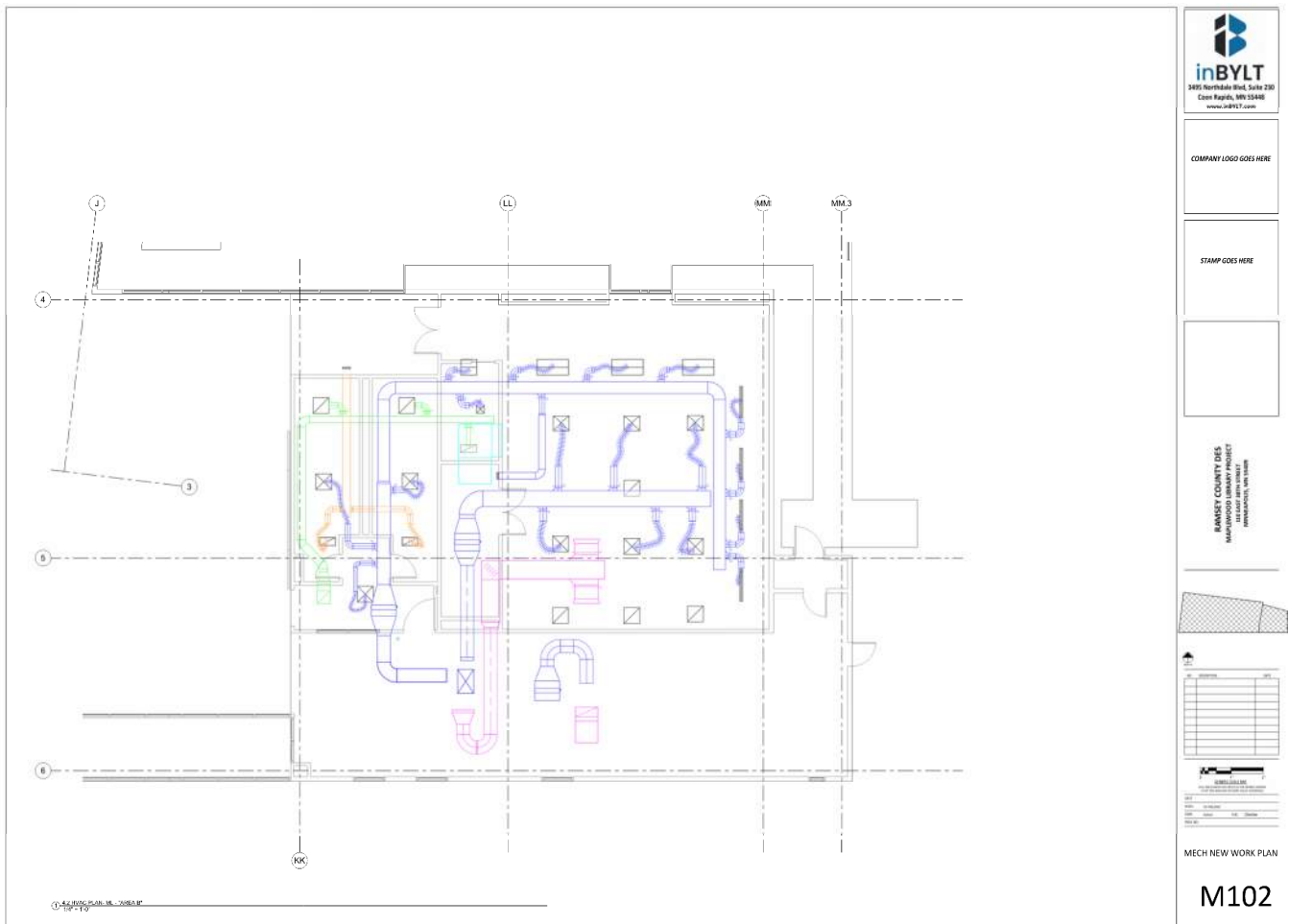
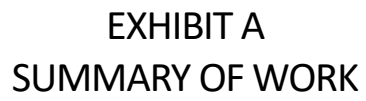
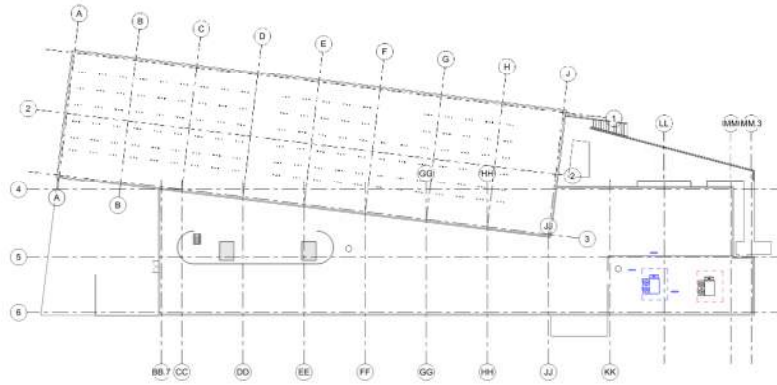




EXHIBIT A SUMMARY OF WORK



12 ROOF PLAN
VP-100



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RAMSEY COUNTY DES
MAY 10 2010
MAY 10 2010



NO.	DESCRIPTION
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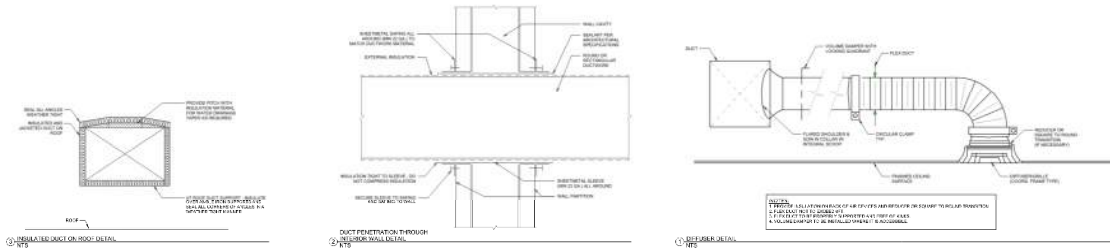
DATE	BY	CHKD	APP'D
05/10/10	VP-100		

ROOF DEMO AND NEW
WORK PLAN

M103



EXHIBIT A SUMMARY OF WORK



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WISCONSIN COUNTY RES
MANUFACTURED EMERGENCY PRODUCT
100 EAST CENTER STREET
MILWAUKEE, WI 53202



NO.	DESCRIPTION	DATE

REVISIONS	
NO.	DESCRIPTION

DETAILS

M104

EXHIBIT A SUMMARY OF WORK

Emergency Communications Center

- Shipping to the location provided by mechanical contractor.
- Remove and dispose of the existing rooftop units.
- New RTU's to be purchased, delivered and installed by this contractor.
- Roof curbs to be installed with units, curbs to be current MN energy code compliant.
- Demo existing ductwork and install new ductwork as needed to tie into current HVAC system.
- All new supply ductwork to be insulated.
- Contractor is responsible for all new roofing work as necessary for new roof curbs, penetrations and patching existing equipment.
- Provide onsite owner training.



RTU-1, 2, & 3



RTU-4

The mechanical contractor is responsible for the following equipment / tasks that includes but is not limited to:

Scope to include all costs for labor, equipment and materials to install mechanical equipment, rooftop units and ductwork. This contractor is responsible for air and water balancing.

- Disconnect the old and Reconnect the new RTU-1, 2, 3, & 4.
- Provide and install new disconnects for all new RTU's.
- See below for existing wire size and electrical information.
 - RTU-1: 3#8, 1#8G, 480V/3ph, 43 FLA
 - RTU-2: 3#8, 1#8G, 480V/3ph, 43 FLA
 - RTU-3: 3#8, 1#8G, 480V/3ph, 43 FLA
 - RTU-4: 3#12, 1#12G, 480V/3ph, 12 FLA
- Contractor to install new wiring if necessary for new units.
 - RTU-1: 460V/3ph, 42 FLA; 45 MCA
 - RTU-2: 460V/3ph, 42 FLA; 45 MCA
 - RTU-3: 460V/3ph, 44 FLA; 47 MCA
 - RTU-4: 460V/3ph, 11 FLA; 12 MCA
- Provide new 120V power outlets for service as per code

Expand / Replace existing BAS from MMC/NAC.

Scope to include all costs for labor, equipment and materials to provide controls to new and existing equipment as necessary.

Controls Installation: New equipment shall be BACnet compatible and all points shall be brought into the existing BAS System.

All equipment shall be re-evaluated if the purpose of the space changes before installation of new equipment.



EXHIBIT B
NOT USED

Exhibit B – Not Used



EXHIBIT C COMPLETION CERTIFICATES

Certificate of Start of Warranty

Pursuant to the Agreement, by and between the CONTRACTOR and the OWNER, the OWNER does hereby acknowledge the following:

1. **State of Warranty.** The OWNER agrees that the scope of Work specified in Exhibit A of this Agreement and any applicable amendments thereof have been completed by the CONTRACTOR to a point where the warranty start date is initiated.
2. **Facility Improvement Measure/System Start Date(s).**

Phase 1:

Item	Owner Approval	
	Signature	Date *
Lighting Upgrade (Metro Square, Courthouse, Public Works & Sheriff's Patrol Station, Ramsey County Correctional Facility, Juvenile & Family Justice Center, Roseville Library, Emergency Communications Center, & White Bear Library)		
Building Envelope (All buildings but Mounds View Library)		
Solar (Ramsey County Correctional Facility)		

Phase 2:

Item	Owner Approval	
	Signature	Date *
Solar (Law Enforcement Center, Shoreview Library, Emergency Communications Center, & Sheriff's Water Patrol Station)		
Roofing Replacement (Law Enforcement Center, Emergency Communications Center,)		



EXHIBIT C COMPLETION CERTIFICATES

Phase 3:

Item	Owner Approval	
	Signature	Date *
Solar (Maplewood Library)		
Roofing Replacement (Maplewood Library)		
AHU Control Modifications (Metro Square, Courthouse, & Law Enforcement Center)		
AHU Coil Replacement (Courthouse)		
Generator Heat Pump (Courthouse, Law Enforcement Center, & Ramsey County Correctional Facility)		
Water Conservation (Law Enforcement Center, Ramsey County Correctional Facility, Juvenile & Family Justice Center, Shoreview Library, Maplewood Library, Emergency Communications Center, & Mounds View Library)		
Steam Trap Replacement (Ramsey County Correctional Facility)		
Chiller Replacement (Ramsey County Correctional Facility)		
RTU Replacement (Maplewood Library & Emergency Communications Center)		

* Note: Warranty Commence Date also includes Commencement of Savings Date if savings are required by the Agreement.



EXHIBIT C COMPLETION CERTIFICATES

Certificate of Substantial Completion

Pursuant to the Agreement, by and between the CONTRACTOR and the OWNER, the OWNER does hereby acknowledge the following:

1. **Substantial Completion.** The OWNER agrees that the scope of Work specified in Exhibit A of this Agreement and any applicable amendments thereof have been substantially completed by the CONTRACTOR and are hereby accepted by the OWNER. Substantial completion shall be defined as the OWNER having first beneficial use of the system.
2. **Project Substantial Completion Approval.**

Phase 1:

Project Name	Owner Approval	
	Signature	Date *

Phase 2:

Project Name	Owner Approval	
	Signature	Date *

Phase 3:

Project Name	Owner Approval	
	Signature	Date *



EXHIBIT C COMPLETION CERTIFICATES

Certificate of Final Completion

Pursuant to the Agreement, by and between the CONTRACTOR and the OWNER, the OWNER does hereby acknowledge the following:

3. **Completion and Acceptance.** The OWNER agrees that the Work specified in the agreement and any applicable amendments thereof have been completed by the CONTRACTOR and are hereby accepted by the OWNER.
4. **Project Completion Documents.** The OWNER has received four (4) copies of the following project completion documents
 - a. Final detailed project costs
 - b. All amended exhibits
 - c. All as-built documentation
 - d. Operating manual including vendor cut sheet giving general instructions and installation instructions, name plate data, parts list along with local service representative and pricing sheet, detailed system description with operating instruction, and detailed adjustment instructions including alignments, tolerances, etc.
 - e. Manufacturer warranty documentation and information including contact names and telephone numbers.

5. **Facility Improvement Measure (FIM) Approval.**

Project Final Completion Date	Owner Approval	
	Signature	Date *

6. **Punch List.** The CONTRACTOR has completed all project punch list items

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

Performance Guarantee and Savings Calculations

Summary Table of Energy Savings and O&M Savings:

Location	Facility Improvement Detail	Therms	District Heating MWh	kWh	kW/yr	District Cooling T-h	kGal/yr	Total Energy kWh	CO2e Reduction Metric Tons	\$ - Therm	District Heating \$ - MWh	\$ - kWh	\$ - kW	District Cooling \$ - T-h	\$ - kGal	Total Savings	Safety Factor	Guaranteed Savings
Metro Square, Courthouse, Public Works & Sheriff's Patrol Station, Ramsey County Correctional Facility, Juvenile & Family Justice Center, Roseville Library, Emergency Communications Center, & White Bear Library	Lighting Upgrade	-	-	1,445,911	4,535	-	-	4,933,450	664	\$ -	\$ -	\$109,556.66	\$54,646.12	\$ -	\$ -	\$164,202.78	90%	\$ 147,779
Law Enforcement Center, Ramsey County Correctional Facility, Juvenile & Family Justice Center, Shoreview Library, Maplewood Library, Emergency Communications Center, & Mounds View Library	Water Conservation	1,260	49	-	-	-	3,828	294,367	16	\$ 599.00	\$ 1,616.25	\$ -	\$ -	\$ -	\$54,842.21	\$ 57,057.46	90%	\$ 51,287
All buildings but Mounds View Library	Building Envelope	13,317	415	111,128	-	32,376	-	3,514,383	220	\$ 8,141.72	\$13,581.84	\$ 6,638.70	\$ -	\$18,389.67	\$ -	\$ 46,751.94	67%	\$ 31,154
Courthouse, Law Enforcement Center, & Ramsey County Correctional Facility	Generator Heat Pump	-	-	89,352	-	-	-	304,869	41	\$ -	\$ -	\$ 6,767.19	\$ -	\$ -	\$ -	\$ 6,767.19	90%	\$ 6,090
Metro Square, Courthouse, & Law Enforcement Center	AHU Control Modifications	-	-	-	-	58,435	-	701,222	41	\$ -	\$ -	\$ -	\$ -	\$33,191.19	\$ -	\$ 33,191.19	90%	\$ 29,872
Maplewood Library	RTU Replacement	757	-	9,373	-	-	-	107,641	8	\$ 439.62	\$ -	\$ 697.57	\$ -	\$ -	\$ -	\$ 1,137.19	90%	\$ 1,023
Ramsey County Correctional Facility	Chiller Replacement	-	-	29,362	100	-	-	100,251	14	\$ -	\$ -	\$ 2,256.14	\$ 1,194.06	\$ -	\$ -	\$ 3,450.21	80%	\$ 2,756
Law Enforcement Center, Ramsey County Correctional Facility, Shoreview Library, Maplewood Library, Emergency Communications Center, & Sheriff's Water Patrol Station	Solar	-	-	3,441,376	-	-	-	11,741,974	1,581	\$ -	\$ -	\$264,165.51	\$ -	\$ -	\$ -	\$388,533.78	94%	\$ 363,761

Utility Rates:

Table below summarizes the baseline utility rates currently being paid by the Owner to their utility providers. These rates were used in establishing the Baseline in Exhibit D. Throughout the Term of the Guarantee Period the utility rates in Table D1, escalated at 3.2% per year shall be used in determining savings. The Owner acknowledges and accepts the utility rates set forth in Table below.

Facility	Gas (F) \$/Therm	District Heating \$/MWh	Electric \$/kWh \$/kW		District Cooling \$/T-h	Water \$/kGal
Metro Square		\$32.75	\$0.074	\$11.91	\$0.568	
Courthouse		\$32.75	\$0.077	\$12.03	\$0.568	
Law Enforcement Center		\$32.75	\$0.072	\$12.00	\$0.568	\$15.20
Public Works Facility	\$0.650		\$0.073	\$12.22		
RCCF	\$0.469		\$0.077	\$11.89		\$12.53
JFJC	\$0.386	\$32.75	\$0.073	\$11.85	\$0.568	\$15.51
Landmark Center		\$32.75	\$0.034	\$12.00	\$0.568	
Wabasha		\$32.75		\$12.00		
Roseville Library	\$0.662		\$0.075	\$12.45		
Sheriff's Patrol Station	\$0.654		\$0.073	\$12.22		
402 University		\$32.75	\$0.078	\$12.00		
Shoreview Library	\$0.643		\$0.108	\$12.00		\$12.99
Maplewood Library	\$0.581		\$0.074	\$12.00		\$13.86
Emergency Communications Center		\$32.75	\$0.074	\$12.02	\$0.568	\$15.50
Sheriff's Water Patrol Station	\$0.627		\$0.181	\$12.00		
Family Service Center	\$0.659		\$0.034	\$12.00		
White Bear Library	\$0.653		\$0.085	\$12.11		
Medical Examiner's Office		\$32.75	\$0.074	\$12.00		
Mounds View Library	\$0.625		\$0.074	\$12.27		\$12.99

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

ANNUAL UTILITY COST SAVINGS GUARANTEE

The Owner shall be guaranteed annual utility costs savings by the Contractor, a total of \$633,722 per year with all three phases implemented.

Where required by the Measurement and Verification Plan, the Contractor shall measure and document savings in each year in accordance with the plan. Where required by the Measurement and Verification Plan, the Parties agree to use the pre-agreed utility savings each guarantee year for the annual guarantee reconciliation subject to adjustment provision set in Exhibit D.

ANNUAL OPERATION & MAINTENANCE COST SAVINGS GUARANTEE

The Owner shall be guaranteed annual costs savings by the Contractor, a total of \$37,202 per year with all three phases implemented r.

The Parties agree to use the Operation & Maintenance savings each year for the annual guarantee reconciliation subject to adjustments provisions set in Exhibit D.

ONE TIME OPERATION & MAINTENANCE COST SAVINGS GUARANTEE

The Owner shall be guaranteed costs savings by the Contractor, a total of \$7,282,289 total with all three phases implemented.

The Parties agree to use the Operation & Maintenance savings for the annual guarantee reconciliation subject to adjustments provisions set in Exhibit D.

ANNUAL M&V MEETING / RECONCILIATION

On an annual basis, on or near the date of Commencement of Energy Savings, there shall be a meeting held to review the savings (energy and operations and maintenance). If the report shows that there is a shortfall in the annual savings (actual vs guaranteed), CONTRACTOR shall write a check to cover the difference to the Owner. CONTRACTOR reserves the right to, at their own expense, make additional modifications to the Owner's facility (with Owner's approval) to obtain additional savings in future years. If the report shows an excess of savings (actual vs guaranteed), the excess savings shall be the property of the Owner and CONTRACTOR shall have no right to any portion of it. Each guarantee year shall stand on its own merit and shall not take into account excess savings in any prior year.

BASELINE ADJUSTMENTS

The following adjustments to the established baseline shall be allowed for generation of the energy savings determination.

The hours a facility is occupied and/or equipment and lighting is utilized is a variable which will be adjusted for if the number of hours rises or drops more than 10% from the quantity identified in Exhibit D. Where applicable, energy management systems will be used to monitor and verify hours of equipment operation. Buildings without energy management systems will have equipment operation logged by Owner building staff.

The Contractor may use energy modeling to quantify changes from the baseline resulting from changes to:

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

- Square footage changes
- Weather changes
- Major remodeling or renovation projects
- Quantity or modification of facility equipment
- Change in building or central plant usage
- Change in process
- Change in volume of product being produced or processed

The Owner agrees to notify the Contractor of any changes or additions of equipment or environments that may affect the energy consumption associated with the buildings under this Agreement at the Annual Meeting.

UTILITY COST SAVINGS ADJUSTMENT

The Savings guarantee is for energy saved (fuel, kWh, gallon, etc.). The Contractor does not take responsibility for price fluctuations from the utility, which are outside of its control. In the Measurement and Verification reports we will provide cost savings data with the energy savings guarantee calculated as outlined below.

For the purpose of calculating savings under this guarantee, utility rates used will be the base rates paid by the Owner subject to the following:

The base Rate will be the rates included in Exhibit D of the Agreement. In the event that a facility has multiple meters, a weighted average rate of the meters will be used. The Weighted average will be weighted by the kwh used per year for each meter.

Rate Schedule Change: The rate used shall be limited to a floor rate and a ceiling rate. When a utility makes a change to the utility rate, the new rate shall be used for computing savings. However, the adjustment shall be constrained by the floor and ceiling. The floor rate shall never drop below the base rate. The ceiling rate shall never exceed 1.5 times the base rate above.

OPERATION & MAINTENACE COST SAVINGS ADJUSTMENT

Unless otherwise stated, the Parties agree that the Operation and Maintenance Cost Savings identified in this Exhibit will be in effect for the term of the contract.

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

TECHNICAL SERVICE AGREEMENT

GENERAL

The Technical Service Agreement (TSA) will be provided to the Owner for the first year and is included in the total price of this Agreement. Services set forth under this agreement are outlined below.

SCOPE OF WORK

For each year the Technical Service Agreement is in force, the following work shall be completed under the TSA:

1. Site visits will be conducted two times each year. Visits will inspect and verify proper operation of FIM's. Visits will include operations review with staff and consulting for new insight and training on the new technologies and/or procedures.
2. Annually a report will be provided to the Owner. The report shall include reporting of measured and verified FIM's and will verify savings conformance with guarantees provided in the Agreement.

TERMS AND CONDITIONS

The TSA shall be in force for 12 months starting from the substantial completion of the last FIM to be completed, or for 12 months from the Prior TSA agreement if the TSA agreement is renewed. This TSA agreement will automatically renew for the next one-year period unless either party provides written notice of non-renewal to the other party at least sixty (60) days prior to the end of the current term in force.

The total first year price for the Services is included in the Agreement price. The TSA Agreement price for successive years starting in year two is indicated in the following table:

Year	Escalation	Fee - Phase 1	Fee - Phase 2	Fee - Phase 3	Total
1	NA	Included in Agreement			Included in Agreement
2	3.5%	\$8,000.00	Included in Agreement		\$8,000.00
3	3.5%	\$8,280.00	\$2,500.00	Included in Agreement	\$10,780.00
4	3.5%	\$8,569.80	\$2,587.50	\$5,000.00	\$16,157.30
5	3.5%	\$8,869.74	\$2,678.06	\$5,175.00	\$16,722.81
6	3.5%	\$9,180.18	\$2,771.79	\$5,356.13	\$17,308.10
7	3.5%	\$9,501.49	\$2,868.81	\$5,543.59	\$17,913.89
8	3.5%	\$9,834.04	\$2,969.22	\$5,737.62	\$18,540.87
9	3.5%	\$10,178.23	\$3,073.14	\$5,938.43	\$19,189.80
10	3.5%	\$10,534.47	\$3,180.70	\$6,146.28	\$19,861.45
11	3.5%	\$10,903.18	\$3,292.02	\$6,361.40	\$20,556.60
12	3.5%	\$11,284.79	\$3,407.24	\$6,584.05	\$21,276.08
13	3.5%	\$11,679.76	\$3,526.50	\$6,814.49	\$22,020.74
14	3.5%	\$12,088.55	\$3,649.92	\$7,052.99	\$22,791.47
15	3.5%	\$12,511.65	\$3,777.67	\$7,299.85	\$23,589.17
16	3.5%	\$12,949.56	\$3,909.89	\$7,555.34	\$24,414.79
17	3.5%	\$13,402.79	\$4,046.74	\$7,819.78	\$25,269.31
18	3.5%	\$13,871.89	\$4,188.37	\$8,093.47	\$26,153.73
19	3.5%	\$14,357.40	\$4,334.97	\$8,376.74	\$27,069.11
20	3.5%	\$14,859.91	\$4,486.69	\$8,669.93	\$28,016.53
21	3.5%	\$15,380.01	\$4,643.72	\$8,973.38	\$28,997.11
22	3.5%	\$15,918.31	\$4,806.25	\$9,287.45	\$30,012.01

EXHIBIT D
FACILITY OPERATING PARAMETERS &
UTILITY SAVINGS CALCULATION METHODS

Payment shall be on an annual basis until the end of the Guarantee Term or until the Owner terminates the on-going services. Annual payment shall be invoiced at the end of the period.

Termination of the TSA can be done by the Owner in writing any time prior to the start of work on the current years M&V report. Termination of the TSA automatically terminates the Guaranteed Energy Savings Agreement, and renders the Contractor's savings guarantee null and void.

Energy Saving Calculations:

Guaranteed energy savings shown in Exhibit A scope summary are based on calculations and assumptions presented in this exhibit.

Utility Cost Savings and/or unit savings provided in this exhibit may differ from those provided in Exhibit A and Exhibit E. The Annual Guaranteed Savings Amount and/or unit savings provided in Exhibit A and Exhibit E include a safety/risk factor.

EXHIBIT D
FACILITY OPERATING PARAMETERS &
UTILITY SAVINGS CALCULATION METHODS

Lighting Upgrade

Room by room lighting audit and savings shall be found following this exhibit in Exhibit D.1: Lighting Upgrade.

Savings Summary:

kWh: 1,445,911

kW: 4,535

Total kBtu: 4,933,450

Total CO₂e Reduction (Metric Tons): 664

EXHIBIT D
FACILITY OPERATING PARAMETERS &
UTILITY SAVINGS CALCULATION METHODS

Water Conservation

Room by room water audit and savings shall be found following this exhibit in Exhibit D.2: Water Conservation.

Savings Summary:

Therms: 1,260

MWh: 49

kGal: 3,828

Total kBtu: 294,367

Total CO₂e Reduction (Metric Tons): 16

EXHIBIT D
FACILITY OPERATING PARAMETERS &
UTILITY SAVINGS CALCULATION METHODS

Building Envelope

Building envelope equipment and savings shall be found following this exhibit in Exhibit D.3: Building Envelope.

Savings Summary:

kWh: 111,128

Therms: 13,317

MWh: 415

T-h: 32,376

Total kBtu: 3,514,383

Total CO2e Reduction (Metric Tons): 220

EXHIBIT D FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

Generator Heat Pump

Location	Gen. Type	Existing (Block) Heater			Proposed Heat Pump		Savings
		Qty.	Power [kW]	Consumption [kWh]	Type	Consumption [kWh]	Total
Courthouse	CAT 3512	2	6	42,048	HE:18	7,884	34,164
	Cummins KTT19	1	4	17,520	HE:12	4,380	13,140
LEC	CAT 3508	1	6	26,280	HE:12	5,256	21,024
RCCF	Kohler 750ROZDD4	1	6	26,280	HE:12	5,256	21,024

Savings Summary:

kWh: 89,352

Total kBtu: 304,869

Total CO2e Reduction (Metric Tons): 41

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

AHU Controls Modifications

Metro Square Valve Replacement

Energy Calculations - Energy Valve Improvements

Location: Metro Square

Design GPM: 1759 GPM
Baseline Diversity Factor: 0.18 Proposed Diversity Factor: 0.27
DT: 12 deg-F

		Baseline					Proposed				
Temperature Bin		Cooling	Flow	DT	Weight Flow	Weight DT	Flow		Weight Flow	Weight DT [deg-	
Hours [deg-F]	Hrs in Bin	[Tons]	[GPM]	[deg-F]	[GPM]	[deg-F]	Cooling [Tons]	[GPM]	DT [deg-F]	[GPM]	F]
92.5	42	158.3	316.6	12	13298.04	504	158.3	316.6	12	13298.04	504
87.5	92	146.4	319.5	11	29393.84945	1012	143.9	287.7	12	26471.0151	1104
82.5	295	134.6	323.0	10	95270.958	2950	129.4	258.8	12	76356.87075	3540
77.5	351	122.7	294.5	10	103354.2666	3510	115.0	229.9	12	80710.79153	4212
72.5	374	110.8	295.5	9	110521.488	3366	100.5	201.1	12	75194.0838	4488
67.5	316	98.9	263.9	9	83376.6	2844	86.1	172.2	12	54403.2315	3792
62.5	341	87.1	261.2	8	89073.1215	2728	71.6	143.3	12	48855.25755	4092
57.5	312	75.2	225.6	8	70384.626	2496	57.2	114.4	12	35686.2402	3744
52.5	306	63.3	190.0	8	58131.432	2448	42.7	85.5	12	26159.1444	3672

Total Hours
2429

Weighted Avg Flow [GPM]	Weighted Avg DT [deg-F]
268.7543769	8.998764924

Weighted Avg Flow [GPM]	Weighted Avg DT [deg-F]
179.9648723	12

Hour of Operation
AHU are occupied from 5:30AM to 5:00
Monday to Friday and off on Saturday and Sunday

BASELINE		PROPOSED		SAVINGS	
Flow GPM	Cooling T-h	Flow GPM	Cooling T-h	Flow GPM	Cooling T-h
2,490	244,768	1,809	218,567	680	26,201

VARIABLES

See Table Above ...PRESENT HRS/WK OF SYSTEM OPERATION (HVACHRS)
See Table Above ...Measured KW / Data Logger KW (FANKW)
4915 ...HEATING HRS/YR FROM WEATHER DATA (HHPY)
See Table Above ...TOTAL SUPPLY FAN CFM (CFM)
See Table Above ...TOTAL OA CFM (OACFM)
62 ...UNOCCUPIED HRS. SPACE HEATING SETPOINT (HTSPUNOC)
27.17 ...AVERAGE O.A. TEMP. DURING HEATING SEASON (AVEDBT)
3327 ...COOLING HRS/YR FROM WEATHER DATA (CHPY)
19.8 ...COOLING WEEKS PER YEAR (CWPY) = (CHPY/168)
9.38 ...COOLING ENTHALPY DELTA (ENTHALPY)
55 ...MIXED AIR TEMPERATURE SETPOINT (MAT)

Unit #	GPM
AHU-1	603
AHU-2	438
AHU-5	402
AHU-6	100
AHU-7	216

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

Courthouse Valve Replacement

Energy Calculations - Energy Valve Improvements

Location: Courthouse

Design GPM: 1173 GPM
Baseline Diversity Factor: 0.18 Proposed Diversity Factor: 0.3
DT: 18 deg-F

		Baseline					Proposed				
Temperature Bin		Cooling	Flow	DT	Weight Flow	Weight DT		Flow	Weight Flow	Weight DT	
Hours [deg-F]	Hrs in Bin	[Tons]	[GPM]	[deg-F]	[GPM]	[deg-F]	Cooling [Tons]	[GPM]	[GPM]	[deg-F]	F]
92.5	42	158.4	211.1	18	8867.88	756	158.4	211.1	18	8867.88	756
87.5	92	146.5	206.8	17	19024.956	1564	144.5	192.7	18	17725.203	1656
82.5	295	134.6	201.9	16	59561.27438	4720	130.6	174.2	18	51386.1975	5310
77.5	351	122.7	196.4	15	68922.4302	5265	116.8	155.7	18	54656.22825	6318
72.5	374	110.8	190.0	14	71069.724	5236	102.9	137.2	18	51328.134	6732
67.5	316	99.0	169.7	14	53614.47857	4424	89.1	118.8	18	37530.135	5688
62.5	341	87.1	160.8	13	54829.80969	4433	75.2	100.3	18	34199.4015	6138
57.5	312	75.2	138.9	13	43325.928	4056	61.4	81.8	18	25526.826	5616
52.5	306	63.3	116.9	13	35783.35754	3978	47.5	63.3	18	19382.652	5508

Total Hours
2429

Weighted Avg Flow [GPM]	Weighted Avg DT [deg-F]
170.852136	14.17538082

Weighted Avg Flow [GPM]	Weighted Avg DT [deg-F]
123.7557255	18

Hour of Operation
AHU are occupied from 5:30AM to 4:45PM
Monday to Friday and off on Saturday and Sunday

	BASELINE		PROPOSED		SAVINGS	
	Flow GPM	Cooling T-h	Flow GPM	Cooling T-h	Flow GPM	Cooling T-h
TOTAL	1,592	245,116	1,235	225,452	357	19,664

VARIABLES

See Table Above	...PRESENT HRS/WK OF SYSTEM OPERATION (HVACHRS)
See Table Above	...Measured KW / Data Logger KW (FANKW)
4915	...HEATING HRS/YR FROM WEATHER DATA (HHPY)
See Table Above	...TOTAL SUPPLY FAN CFM (CFM)
See Table Above	...TOTAL OA CFM (OACFM)
62	...UNOCCUPIED HRS. SPACE HEATING SETPOINT (HTSPUNOC)
27.17	...AVERAGE O.A. TEMP. DURING HEATING SEASON (AVEDBT)
3327	...COOLING HRS/YR FROM WEATHER DATA (CHPY)
19.8	...COOLING WEEKS PER YEAR (CWPY) = (CHPY/168)
9.38	...COOLING ENTHALPY DELTA (ENTHALPY)
55	...MIXED AIR TEMPERATURE SETPOINT (MAT)

Unit #		Su	M	T	W	Th	F	Sa		GPM
AHU-1	Start			14:00	7:00	9:00	14:30			33
	End			17:00	15:30	18:00	17:45			
S1	Start			5:00	5:30	5:30	5:30	5:30		360
	End			16:45	16:45	16:45	16:45	16:45		
S2	Start			5:30	6:00	6:00	6:00	6:00		360
	End			16:45	16:45	16:45	16:45	16:45		
S3	Start			4:45	6:00	6:00	6:00	6:00		210
	End			16:45	16:45	16:45	16:45	16:45		
S4	Start			5:00	6:15	6:00	6:15	6:15		210
	End			16:45	16:45	16:45	16:45	16:45		

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

Law Enforcement Center Valve Replacement

Energy Calculations - Energy Valve Improvements

Location: Law Enforcement Center

Design GPM: 307 GPM
 Baseline Diversity Factor: 0.18 Proposed Diversity Factor: 0.27
 DT: 18 deg-F

			Baseline					Proposed				
Temperature Bin	Hours [deg-F]	Hrs in Bin	Cooling [Tons]	Flow [GPM]	DT [deg-F]	Weight Flow [GPM]	Weight DT [deg-F]	Cooling [Tons]	Flow [GPM]	DT [deg-F]	Weight Flow [GPM]	Weight DT [deg-F]
92.5	39	41.5	55.3	18	2157.948	702	41.5	55.3	18	2157.948	702	
87.5	110	38.4	54.2	17	5961.209294	1870	37.7	50.3	18	5531.12505	1980	
82.5	342	35.3	52.9	16	18095.63895	5472	33.9	45.2	18	15469.99722	6156	
77.5	499	32.2	51.5	15	25677.92124	7485	30.1	40.2	18	20052.24764	8982	
72.5	534	29.0	49.8	14	26592.5592	7476	26.4	35.1	18	18762.52788	9612	
67.5	711	25.9	44.5	14	31613.34536	9954	22.6	30.1	18	21391.69703	12798	
62.5	726	22.8	42.1	13	30591.78591	9438	18.8	25.0	18	18177.39198	13068	
57.5	516	19.7	36.4	13	18777.97828	6708	15.0	20.0	18	10314.16146	9288	
52.5	549	16.6	30.6	13	16824.33305	7137	11.2	14.9	18	8201.86236	9882	

Total Hours	4026
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Weighted Avg Flow [GPM]	Weighted Avg DT [deg-F]
43.78855422	13.96969697

Weighted Avg Flow [GPM]	Weighted Avg DT [deg-F]
29.82090378	18

BASELINE		PROPOSED		SAVINGS	
Flow GPM	Cooling T-h	Flow GPM	Cooling T-h	Flow GPM	Cooling T-h
417	102,615	316	90,044	101	12,571

TOTAL

VARIABLES

See Table Above	...PRESENT HRS/WK OF SYSTEM OPERATION (HVACHRS)
See Table Above	...Measured KW / Data Logger KW (FANKW)
4915	...HEATING HRS/YR FROM WEATHER DATA (HHPY)
See Table Above	...TOTAL SUPPLY FAN CFM (CFM)
See Table Above	...TOTAL OA CFM (OACFM)
62	...UNOCCUPIED HRS. SPACE HEATING SETPOINT (HTSPUNOC)
27.17	...AVERAGE O.A. TEMP. DURING HEATING SEASON (AVEDBT)
3327	...COOLING HRS/YR FROM WEATHER DATA (CHPY)
19.8	...COOLING WEEKS PER YEAR (CWPY) = (CHPY/168)
9.38	...COOLING ENTHALPY DELTA (ENTHALPY)
55	...MIXED AIR TEMPERATURE SETPOINT (MAT)

Unit #	Su	M	T	W	Th	F	Sa	GPM
AHU-3	Start	24/7						9
	End							
AHU-4	Start	4:00	4:00	4:00	4:00	4:00	4:00	27
	End	17:00	17:00	17:00	17:00	17:00	17:00	
AHU-6	Start	24/7						78
	End							
AHU-7	Start	24/7						59
	End							
AHU-8	Start	24/7						11
	End							
AHU-9	Start	24/7						48
	End							
AHU-10	Start	24/7						58
	End							
AHU-12	Start	24/7						18
	End							

EXHIBIT D
FACILITY OPERATING PARAMETERS &
UTILITY SAVINGS CALCULATION METHODS

Savings Summary:

T-h: 58,435

Total kBtu: 701,222

Total CO2e Reduction (Metric Tons): 41

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

RTU Replacement

Maplewood Library RTU Replacement Savings Calculations

AHU #	AREA SERVED	HVACHRS							BASELINE			PROPOSED			SAVINGS		
		SUPPLY CFM	O.A. CFM	Measured KW	Baseline Hrs/Wk	Affected Hrs/Wk	Proposed Hrs/Wk	Baseline % Flow	Proposed S.F. CFM	Proposed O.A. CFM	Proposed % Flow	Fan Energy KWH	Ventilation Therms	Cooling KWH	Fan Energy KWH	Ventilation Therms	Cooling KWH
RTU-1	Old	2,380	476	1.19	82.00	82	0	50%	0	0	0%	636	473	1,862	0	0	0
RTU-2	Old	2,100	420	1.19	82.00	82	0	50%	0	0	0%	636	418	1,643	0	0	0
RTU-1	New	4,480	1120	2.98	0.00	0	82	0%	3,168	792	50%	0	0	0	1,590	787	1,831
RTU-3	Old	2,400	480	1.19	4.00	4	0	75%	0	0	0%	105	23	92	0	0	0
RTU-2	New	2,400	600	1.19	0.00	0	4	0%	2,078	520	75%	0	0	0	105	25	59
RTU-4	Old	15,000	2250	14.92	82.00	82	0	50%	0	0	0%	7,952	2,237	8,801	0	0	0
RTU-3	New	15,000	2250	9.55	0.00	0	82	0%	10,807	1,591	50%	0	0	0	5,090	1,582	3,679
0	0	0	0	0.00	0.00	0	0	100%	0	0	0	0	0	0	0	0	0
0	0	0	0	0.00	0.00	0	0	100%	0	0	0	0	0	0	0	0	0
0	0	0	0	0.00	0.00	0	0	100%	0	0	0	0	0	0	0	0	0
0	0	0	0	0.00	0.00	0	0	100%	0	0	0	0	0	0	0	0	0
0	0	0	0	0.00	0.00	0	0	100%	0	0	0	0	0	0	0	0	0
0	0	0	0	0.00	0.00	0	0	100%	0	0	0	0	0	0	0	0	0
0	0	0	0	0.00	0.00	0	0	100%	0	0	0	0	0	0	0	0	0
0	0	0	0	0.00	0.00	0	0	100%	0	0	0	0	0	0	0	0	0
TOTAL												9,329	3,151	12,397	6,785	2,394	5,569
															2,545	757	6,829

Assumptions

- The "Proposed O.A. CFM" was calculated using Fan Law #2, where the ratio of Static Pressure is equal to the square of the CFM ratio.
- The "Proposed KW" was calculated using both Fan Law #2 and #3, where #3 states the ratio of Break Horse Power (KW) equals the cube of the CFM ratio.
- Measured KW is the Supply Fan energy.
- ELECCOST is the rate of electricity during off-peak hours
- HEATCOST is the rate of heating BTU
- ENTHALPHY is the difference in enthalpy of Mixed Air (76F db, 50% RH) and Discharge Air (55F db, Saturated).
- KWTON is the efficiency of the DX unit.
- For Ventilation calculations, we have used trend data from Metasys to verify the assumption that when outside temperature is greater than 30F, there is no need for heating the outside because the air is mixed with return air to maintain the mixed air temp

VARIABLES

See Table Above	...PRESENT HRS/WK OF SYSTEM OPERATION (HVACHRS)
See Table Above	...Measured KW / Data Logger KW (FANKW)
4977	...HEATING HRS/YR FROM WEATHER DATA (HHPY)
See Table Above	...TOTAL SUPPLY FAN CFM (CFM)
See Table Above	...TOTAL OA CFM (OACFM)
62	...UNOCCUPIED HRS: SPACE HEATING SETPOINT (HTSPUNOC)
27.9	...AVERAGE O.A. TEMP. DURING HEATING SEASON (AVEDBT)
	...\$/BTU COST OF HEATING ENERGY (HEATCOST)
0.9	...BOILER EFFICIENCY (BTU)
1.4	...CHILLER EFFICIENCY IN KW/TON (KWTON)
0.827586207	...PROPOSED CHILLER EFFICIENCY IN KW/TON (KWTON)
2462	...COOLING HRS/YR FROM WEATHER DATA (CHPY)
14.7	...COOLING WEEKS PER YEAR (CWPY) = (CHPY/168)
6.2	...COOLING ENTHALPHY DELTA (ENTHALPY)
55	...MIXED AIR TEMPERATURE SETPOINT (MAT)

CALCULATIONS

PROPOSED O.A. CFM
PROPOSED KW
therefore: (CFMn/CFMo) ³ = KWn/Kwo
FAN ENERGY (KWH/YR.)
Baseline = (WINTER KW * HVACHRS * (HHPY/168)) + (SUMMER KW * HVACHRS * (52-(HHPY/168)))
Proposed = (PROPOSED WINTER KW * HVACHRS * (HHPY/168)) + (PROPOSED SUMMER KW * HVACHRS * (52-(HHPY/168)))
FAN ENERGY COST (\$/YR.)
= FAN ENERGY * ELECCOST
VENTILATION (BTU/YR.)
Baseline = ((BIN-DELTA T-HRS) * OACFM * 1.08) + (0.4 * (BIN-DELTA T-HRS) * TOTAL-CFM * 1.08)
Proposed = ((BIN-DELTA T-HRS) * PROPOSED OACFM * 1.08) + (0.4 * (BIN-DELTA T-HRS) * PROPOSED TOTAL-CFM * 1.08)
VENTILATION COST (\$/YR.)
= VENTILATION COST * HEATCOST
COOLING (KWH/YR.)
Baseline = (HVACHRS * CWPY * OACFM * 4.5 * ENTHALPHY / 12,000) * KWTON
Proposed = (HVACHRS * CWPY * PROPOSED OACFM * 4.5 * ENTHALPHY / 12,000) * KWTON
COOLING COST (\$/YR.)
= COOLING COST * ELECCOST

AHU #	AREA SERVED	SUPPLY	Design O.A.	O.A.	SYSTEM	SUPPLY FAN				VOLTAGE	HOURS /
						FAN	HP	KW	FAN		
		CFM	%	CFM	TYPE	CFM			CTRL		WEEK
RTU-1	Old	2,380	20%	476		2380	2	1.19		460-3-60	82.00
RTU-1	New	4,480	25%	1120		4480	5	2.98		460-3-60	0.00
RTU-2	Old	2,100	20%	420		2100	2	1.19		460-3-60	82.00
RTU-2	New	2,400	25%	600		2400	2	1.19		460-3-60	0.00
RTU-3	Old	2,400	20%	480		2400	2	1.19		460-3-60	4.00
RTU-3	New	15,000	15%	2250		15000	16	9.55		460-3-60	0.00
RTU-4	Old	15,000	15%	2250		15000	25	14.92		460-3-60	82.00

Unit #		Su	M	T	W	Th	F	Sa		Total Time	VFD%
RTU-1	Start	7:00	7:00	7:00	7:00	7:00	7:00	7:00			
	End	17:00	20:00	20:00	20:00	20:00	17:00	17:00		82:00	82.00
RTU-2	Start	7:00	7:00	7:00	7:00	7:00	7:00	7:00			
	End	17:00	20:00	20:00	20:00	20:00	17:00	17:00		82:00	82.00
RTU-3	Start	Off	Off	Off	Off	8:00	Off	Off			
	End					12:00				4:00	4.00
RTU-4	Start	7:00	7:00	7:00	7:00	7:00	7:00	7:00			
	End	17:00	20:00	20:00	20:00	20:00	17:00	17:00		82:00	82.00

EXHIBIT D
FACILITY OPERATING PARAMETERS &
UTILITY SAVINGS CALCULATION METHODS

Savings Summary:

kWh: 9,373

Therms: 757

Total kBtu: 107,641

Total CO₂e Reduction (Metric Tons): 8

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

Chiller Replacement

Energy Calculations - Chiller Improvements

Pct Load Cap Ton Inp Pwr kW/Ton Cap # Units

EER = BTU/Watt

1 Number of Units

New									
Bin Hours	Total Hrs	Tons	Compressor kW	Unit Eff	# Chillers	Kw New	Kw Old	KWH New	KWH Old
92.5	39	124.7	156	1.050	1.0	130.94	145.28	5106.5	5666.0
87.5	110	109.1	121.1	1.050	1.0	114.56	127.11	12601.1	13981.7
82.5	342	101.3	103.7	1.050	1.0	106.37	118.02	36376.8	40362.6
77.5	499	93.5	86	1.050	1.0	98.18	108.93	48989.3	54357.1
72.5	534	77.95	67.3	1.050	1.0	81.85	90.82	43706.6	48495.5
67.5	711	62.4	48	1.050	1.0	65.52	72.70	46584.7	51689.0
62.5	726	46.8	35.15	1.050	1.0	49.14	54.52	35675.6	39584.6
57.5	516	39	28.575	1.050	1.0	40.95	45.44	21130.2	23445.4
52.5	549	31.2	22	1.050	1.0	32.76	36.35	17985.2	19955.9
47.5							0.00	0.0	0.0
42.5							0.00	0.0	0.0
37.5							0.00	0.0	0.0
HRS	4026							268156.0	297537.9
	77.42308							kwh Saved:	29,381.87

Existing Unit				10
Chillers	kW/Ton	Ton	GPM	
1	1.165	124.7	299.28	
1	1.165	109.1	261.84	
1	1.165	101.3	243.12	
1	1.165	93.5	224.4	
1	1.165	77.95	187.08	
1	1.165	62.4	149.76	
1	1.165	46.8	112.32	
1	1.165	39	93.6	
1	1.165	31.2	74.88	

BASELINE				PROPOSED				SAVINGS				MAX Saved	MIN
Fan Energy KWH	Ventilation MBTU	Cooling KWH	Motor kW	Fan Energy KWH	Ventilation MBTU	Cooling KWH	Motor kW	Fan Energy KWH	Ventilation MBTU	Cooling KWH	Motor kW	14.35	0.00
TOTAL		297,538	1,017			268,156	917			29,382	100		

VARIABLES	
See Table Above	...PRESENT HRS/WK OF SYSTEM OPERATION (HVACHRS)
See Table Above	...Measured KW / Data Logger KW (FANKW)
See Table Above	...TOTAL SUPPLY FAN CFM (CFM)
See Table Above	...TOTAL OA CFM (OACFM)
3327	...COOLING HRS/YR FROM WEATHER DATA (CHPY)
19.8	...COOLING WEEKS PER YEAR (CWPY) = (CHPY/168)
9.38	...COOLING ENTHALPY DELTA (ENTHALPY)
55	...MIXED AIR TEMPERATURE SETPOINT (MAT)

	January Hrs	February Hrs	March Hrs	April Hrs	May Hrs	June Hrs	July Hrs	August Hrs	September Hrs	October Hrs	November Hrs	December Hrs
92.5 90 to 95	42					6		5	22	9		
87.5 85 to 90	92					8	6	21	32	25		
82.5 80 to 85	295			10	26	60	94	63	40	2		
77.5 75 to 80	351			6	34	77	133	59	36	6		
72.5 70 to 75	374			11	26	99	107	88	33	10		
67.5 65 to 70	316			16	48	73	45	80	38	16		
62.5 60 to 65	341			31	58	62	24	62	58	46		
57.5 55 to 60	312			44	72	24	5	23	72	72		
52.5 50 to 55	306			6	58	75	16	4	39	102	6	
Total Hrs												
Mid-pts DB (F)												
92.5 90 to 95	8											
87.5 85 to 90	35											
82.5 80 to 85	235											
77.5 75 to 80	411											
72.5 70 to 75	572											
67.5 65 to 70	636											
62.5 60 to 65	886											
57.5 55 to 60	544											
52.5 50 to 55	518											
VFD Usage												
Regular Usage												
Savings												

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

January Hrs	Kw VFD	Kw Constant	February Hrs	Kw VFD	Kw Constant	March Hrs	Kw VFD	Kw Constant	April Hrs	Kw VFD	Kw Constant	May Hrs	Kw VFD	Kw Constant	June Hrs	Kw VFD	Kw Constant
0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		6	130.94	145.28		0.00	0.00
0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		8	114.56	127.11	6	114.56	127.11
0.00	0.00		0.00	0.00		0.00	0.00		10	106.37	118.02	26	106.37	118.02	60	106.37	118.02
0.00	0.00		0.00	0.00		0.00	0.00		6	98.18	108.93	34	98.18	108.93	77	98.18	108.93
0.00	0.00		0.00	0.00		0.00	0.00		11	81.85	90.82	26	81.85	90.82	99	81.85	90.82
0.00	0.00		0.00	0.00		0.00	0.00		16	65.52	72.70	48	65.52	72.70	73	65.52	72.70
0.00	0.00		0.00	0.00		0.00	0.00		31	49.14	54.52	58	49.14	54.52	62	49.14	54.52
0.00	0.00		0.00	0.00		0.00	0.00		44	40.95	45.44	72	40.95	45.44	24	40.95	45.44
0.00	0.00		0.00	0.00		6	32.76	36.35	58	32.76	36.35	75	32.76	36.35	16	32.76	36.35
0.00			0.00				32.76			106.37			130.94			114.56	
0.00	0.00			0.00				36.35			118.02			145.28			127.11
0.00			0.00			3.59			11.65			14.35			12.55		
July Hrs	Kw VFD	Kw Constant	August Hrs	Kw VFD	Kw Constant	September Hrs	Kw VFD	Kw Constant	October Hrs	Kw VFD	Kw Constant	November Hrs	Kw VFD	Kw Constant	December Hrs	Kw VFD	Kw Constant
130.94	145.28	22	130.94	145.28	9	130.94	145.28		0.00	0.00		0.00	0.00		0.00	0.00	
114.56	127.11	32	114.56	127.11	25	114.56	127.11		0.00	0.00		0.00	0.00		0.00	0.00	
106.37	118.02	63	106.37	118.02	40	106.37	118.02	2	106.37	118.02		0.00	0.00		0.00	0.00	
98.18	108.93	59	98.18	108.93	36	98.18	108.93	6	98.18	108.93		0.00	0.00		0.00	0.00	
81.85	90.82	88	81.85	90.82	33	81.85	90.82	10	81.85	90.82		0.00	0.00		0.00	0.00	
65.52	72.70	80	65.52	72.70	38	65.52	72.70	16	65.52	72.70		0.00	0.00		0.00	0.00	
49.14	54.52	62	49.14	54.52	58	49.14	54.52	46	49.14	54.52		0.00	0.00		0.00	0.00	
40.95	45.44	23	40.95	45.44	72	40.95	45.44	72	40.95	45.44		0.00	0.00		0.00	0.00	
0.00	0.00	4	32.76	36.35	39	32.76	36.35	102	32.76	36.35	6	32.76	36.35		0.00	0.00	
130.94			130.94			130.94			106.37			32.76			0.00		916.55
	145.28			145.28			145.28			118.02			36.35			0.00	1,016.97
14.35			14.35			14.35			11.65			3.59			0.00		100.43

Savings Summary:

kWh: 29,382

kW: 100

Total kBtu: 100,251

Total CO2e Reduction (Metric Tons): 14

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

Solar

Law Enforcement Center Solar PV Savings

System Details:		Utility Rates	
Watts	590	Solar Value (Per kWh)	\$ 0.0722
Degradation	0.5%	Escalation	3.5%

kWh Production	\$ / kWh	Production Revenue	PV Demand Credit Rider	Total Revenue	Cash Position
1	\$ 0.0722	\$ 0.0722	\$ 0.0321	\$ 0.1043	\$ 0.1043

Year	kWh Production*	\$ / kWh*	Revenues			Annual	Cumulative
			Production Revenue	PV Demand Credit Rider*	Total Revenue	Cashflow	Cashflow
1	641,319	\$ 0.0722	\$ 46,303	\$ 20,809	\$ 67,112	\$ 67,112	\$ 67,112
2	638,112	\$ 0.0747	\$ 47,684	\$ 20,705	\$ 68,389	\$ 68,389	\$ 135,501
3	634,921	\$ 0.0773	\$ 49,106	\$ 20,601	\$ 69,708	\$ 69,708	\$ 205,208
4	631,747	\$ 0.0800	\$ 50,571	\$ 20,498	\$ 71,069	\$ 71,069	\$ 276,277
5	628,588	\$ 0.0829	\$ 52,079	\$ 20,396	\$ 72,475	\$ 72,475	\$ 348,752
6	625,445	\$ 0.0858	\$ 53,633	\$ 20,294	\$ 73,926	\$ 73,926	\$ 422,678
7	622,318	\$ 0.0888	\$ 55,232	\$ 20,192	\$ 75,424	\$ 75,424	\$ 498,103
8	619,206	\$ 0.0919	\$ 56,879	\$ 20,091	\$ 76,971	\$ 76,971	\$ 575,073
9	616,110	\$ 0.0951	\$ 58,576	\$ 19,991	\$ 78,567	\$ 78,567	\$ 653,640
10	613,030	\$ 0.0984	\$ 60,323	\$ 19,891	\$ 80,214	\$ 80,214	\$ 733,854
11	609,965	\$ 0.1018	\$ 62,122	\$ 19,791	\$ 81,913	\$ 81,913	\$ 815,767
12	606,915	\$ 0.1054	\$ 63,975	\$ 19,692	\$ 83,667	\$ 83,667	\$ 899,434
13	603,880	\$ 0.1091	\$ 65,883	\$ 19,594	\$ 85,477	\$ 85,477	\$ 984,911
14	600,861	\$ 0.1129	\$ 67,848	\$ 19,496	\$ 87,344	\$ 87,344	\$ 1,072,255
15	597,857	\$ 0.1169	\$ 69,871	\$ 19,399	\$ 89,270	\$ 89,270	\$ 1,161,525
16	594,867	\$ 0.1210	\$ 71,955	\$ 19,302	\$ 91,257	\$ 91,257	\$ 1,252,781
17	591,893	\$ 0.1252	\$ 74,101	\$ 19,205	\$ 93,306	\$ 93,306	\$ 1,346,088
18	588,933	\$ 0.1296	\$ 76,311	\$ 19,109	\$ 95,420	\$ 95,420	\$ 1,441,508
19	585,989	\$ 0.1341	\$ 78,587	\$ 19,013	\$ 97,601	\$ 97,601	\$ 1,539,109
20	583,059	\$ 0.1388	\$ 80,931	\$ 18,918	\$ 99,850	\$ 99,850	\$ 1,638,959
21	580,144	\$ 0.1437	\$ 83,345	\$ 18,824	\$ 102,169	\$ 102,169	\$ 1,741,127
22	577,243	\$ 0.1487	\$ 85,831	\$ 18,730	\$ 104,560	\$ 104,560	\$ 1,845,688
23	574,357	\$ 0.1539	\$ 88,391	\$ 18,636	\$ 107,027	\$ 107,027	\$ 1,952,714
24	571,485	\$ 0.1593	\$ 91,027	\$ 18,543	\$ 109,570	\$ 109,570	\$ 2,062,284
25	568,627	\$ 0.1649	\$ 93,742	\$ 18,450	\$ 112,192	\$ 112,192	\$ 2,174,476
Totals:	15,106,870		\$ 1,684,307	\$ 490,169	\$ 2,174,476	\$ 2,174,476	

*Estimation based on Historical Data

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

Ramsey County Correctional Facility Solar PV Savings

inBYLT Tax Equity Partnership Solar Model

System Details:

Watts 1,460
Degradation 0.5%

Utility Rates

Solar Value (Per kWh) \$ 0.0768
Escalation 3.5%

kWh Production	\$ / kWh	Production Revenue	PV Demand Credit Rider	Total Revenue	Cash Position
1	\$ 0.0768	\$ 0.0768	\$ 0.0321	\$ 0.1089	\$ 0.1089

Year	kWh Production*	\$ / kWh*	Revenues			Annual	Cumulative
			Production Revenue	PV Demand Credit Rider*	Total Revenue	Cashflow	Cashflow
1	2,129,704	\$ 0.0768	\$ 163,533	\$ 69,102	\$ 232,635	\$ 232,635	\$ 232,635
2	2,119,055	\$ 0.0795	\$ 168,411	\$ 68,756	\$ 237,167	\$ 237,167	\$ 469,802
3	2,108,460	\$ 0.0823	\$ 173,434	\$ 68,413	\$ 241,846	\$ 241,846	\$ 711,649
4	2,097,918	\$ 0.0851	\$ 178,606	\$ 68,071	\$ 246,677	\$ 246,677	\$ 958,326
5	2,087,428	\$ 0.0881	\$ 183,933	\$ 67,730	\$ 251,663	\$ 251,663	\$ 1,209,989
6	2,076,991	\$ 0.0912	\$ 189,419	\$ 67,392	\$ 256,811	\$ 256,811	\$ 1,466,799
7	2,066,606	\$ 0.0944	\$ 195,068	\$ 67,055	\$ 262,123	\$ 262,123	\$ 1,728,922
8	2,056,273	\$ 0.0977	\$ 200,886	\$ 66,719	\$ 267,606	\$ 267,606	\$ 1,996,528
9	2,045,992	\$ 0.1011	\$ 206,878	\$ 66,386	\$ 273,263	\$ 273,263	\$ 2,269,792
10	2,035,762	\$ 0.1047	\$ 213,048	\$ 66,054	\$ 279,102	\$ 279,102	\$ 2,548,893
11	2,025,583	\$ 0.1083	\$ 219,402	\$ 65,724	\$ 285,126	\$ 285,126	\$ 2,834,019
12	2,015,455	\$ 0.1121	\$ 225,946	\$ 65,395	\$ 291,341	\$ 291,341	\$ 3,125,360
13	2,005,378	\$ 0.1160	\$ 232,684	\$ 65,068	\$ 297,752	\$ 297,752	\$ 3,423,112
14	1,995,351	\$ 0.1201	\$ 239,624	\$ 64,743	\$ 304,367	\$ 304,367	\$ 3,727,479
15	1,985,374	\$ 0.1243	\$ 246,771	\$ 64,419	\$ 311,190	\$ 311,190	\$ 4,038,669
16	1,975,447	\$ 0.1286	\$ 254,131	\$ 64,097	\$ 318,228	\$ 318,228	\$ 4,356,897
17	1,965,570	\$ 0.1331	\$ 261,710	\$ 63,776	\$ 325,487	\$ 325,487	\$ 4,682,384
18	1,955,742	\$ 0.1378	\$ 269,516	\$ 63,457	\$ 332,973	\$ 332,973	\$ 5,015,357
19	1,945,963	\$ 0.1426	\$ 277,554	\$ 63,140	\$ 340,695	\$ 340,695	\$ 5,356,052
20	1,936,233	\$ 0.1476	\$ 285,832	\$ 62,824	\$ 348,657	\$ 348,657	\$ 5,704,709
21	1,926,552	\$ 0.1528	\$ 294,357	\$ 62,510	\$ 356,868	\$ 356,868	\$ 6,061,576
22	1,916,920	\$ 0.1581	\$ 303,137	\$ 62,198	\$ 365,334	\$ 365,334	\$ 6,426,911
23	1,907,335	\$ 0.1637	\$ 312,178	\$ 61,887	\$ 374,064	\$ 374,064	\$ 6,800,975
24	1,897,798	\$ 0.1694	\$ 321,488	\$ 61,577	\$ 383,066	\$ 383,066	\$ 7,184,041
25	1,888,309	\$ 0.1753	\$ 331,077	\$ 61,270	\$ 392,346	\$ 392,346	\$ 7,576,387
Totals:	50,167,197		\$ 5,948,624	\$ 1,627,763	\$ 7,576,387	\$ 7,576,387	

*Estimation based on Historical Data

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

Shoreview Library Solar PV Savings

inBYLT Tax Equity Partnership Solar Model

<u>System Details:</u>		<u>Utility Rates</u>	
Watts	269	Solar Value (Per kWh)	\$ 0.1076
Degradation	0.5%	Escalation	3.5%

kWh Production	\$ / kWh	Production Revenue	PV Demand Credit Rider	Total Revenue	Cash Position
1	\$ 0.1076	\$ 0.1076	\$ 0.0321	\$ 0.1397	\$ 0.1397

Year	kWh Production*	\$ / kWh*	Revenues			Annual	Cumulative
			Production Revenue	PV Demand Credit Rider*	Total Revenue	Cashflow	Cashflow
1	294,840	\$ 0.1076	\$ 31,711	\$ 9,567	\$ 41,278	\$ 41,278	\$ 41,278
2	293,366	\$ 0.1113	\$ 32,657	\$ 9,519	\$ 42,176	\$ 42,176	\$ 83,454
3	291,899	\$ 0.1152	\$ 33,631	\$ 9,471	\$ 43,102	\$ 43,102	\$ 126,556
4	290,440	\$ 0.1192	\$ 34,634	\$ 9,424	\$ 44,058	\$ 44,058	\$ 170,613
5	288,987	\$ 0.1234	\$ 35,667	\$ 9,377	\$ 45,044	\$ 45,044	\$ 215,657
6	287,542	\$ 0.1277	\$ 36,731	\$ 9,330	\$ 46,061	\$ 46,061	\$ 261,718
7	286,105	\$ 0.1322	\$ 37,826	\$ 9,283	\$ 47,109	\$ 47,109	\$ 308,827
8	284,674	\$ 0.1368	\$ 38,954	\$ 9,237	\$ 48,191	\$ 48,191	\$ 357,018
9	283,251	\$ 0.1416	\$ 40,116	\$ 9,191	\$ 49,307	\$ 49,307	\$ 406,325
10	281,835	\$ 0.1466	\$ 41,313	\$ 9,145	\$ 50,457	\$ 50,457	\$ 456,782
11	280,425	\$ 0.1517	\$ 42,545	\$ 9,099	\$ 51,644	\$ 51,644	\$ 508,426
12	279,023	\$ 0.1570	\$ 43,814	\$ 9,053	\$ 52,867	\$ 52,867	\$ 561,293
13	277,628	\$ 0.1625	\$ 45,120	\$ 9,008	\$ 54,129	\$ 54,129	\$ 615,422
14	276,240	\$ 0.1682	\$ 46,466	\$ 8,963	\$ 55,429	\$ 55,429	\$ 670,851
15	274,859	\$ 0.1741	\$ 47,852	\$ 8,918	\$ 56,770	\$ 56,770	\$ 727,621
16	273,485	\$ 0.1802	\$ 49,279	\$ 8,874	\$ 58,153	\$ 58,153	\$ 785,774
17	272,117	\$ 0.1865	\$ 50,749	\$ 8,829	\$ 59,578	\$ 59,578	\$ 845,353
18	270,757	\$ 0.1930	\$ 52,263	\$ 8,785	\$ 61,048	\$ 61,048	\$ 906,400
19	269,403	\$ 0.1998	\$ 53,821	\$ 8,741	\$ 62,563	\$ 62,563	\$ 968,963
20	268,056	\$ 0.2068	\$ 55,427	\$ 8,698	\$ 64,124	\$ 64,124	\$ 1,033,087
21	266,715	\$ 0.2140	\$ 57,080	\$ 8,654	\$ 65,734	\$ 65,734	\$ 1,098,821
22	265,382	\$ 0.2215	\$ 58,782	\$ 8,611	\$ 67,393	\$ 67,393	\$ 1,166,213
23	264,055	\$ 0.2293	\$ 60,535	\$ 8,568	\$ 69,103	\$ 69,103	\$ 1,235,316
24	262,735	\$ 0.2373	\$ 62,341	\$ 8,525	\$ 70,866	\$ 70,866	\$ 1,306,182
25	261,421	\$ 0.2456	\$ 64,200	\$ 8,482	\$ 72,682	\$ 72,682	\$ 1,378,864
Totals:	6,945,239		\$ 1,153,513	\$ 225,350	\$ 1,378,864	\$ 1,378,864	

*Estimation based on Historical Data

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

Maplewood Library Solar PV Savings

System Details:

Watts 139
Degradation 0.5%

Utility Rates

Solar Value (Per kWh) \$ 0.0744
Escalation 3.5%

kWh Production	\$ / kWh	Production Revenue	PV Demand Credit Rider	Total Revenue	Cash Position
1	\$ 0.0744	\$ 0.0744	\$ 0.0321	\$ 0.1065	\$ 0.1065

Year	kWh Production*	\$ / kWh*	Revenues			Annual	Cumulative
			Production Revenue	PV Demand Credit Rider*	Total Revenue	Cashflow	Cashflow
1	161,066	\$ 0.0744	\$ 11,983	\$ 5,226	\$ 17,209	\$ 17,209	\$ 17,209
2	160,260	\$ 0.0770	\$ 12,341	\$ 5,200	\$ 17,541	\$ 17,541	\$ 34,750
3	159,459	\$ 0.0797	\$ 12,709	\$ 5,174	\$ 17,883	\$ 17,883	\$ 52,633
4	158,662	\$ 0.0825	\$ 13,088	\$ 5,148	\$ 18,236	\$ 18,236	\$ 70,868
5	157,868	\$ 0.0854	\$ 13,478	\$ 5,122	\$ 18,600	\$ 18,600	\$ 89,469
6	157,079	\$ 0.0884	\$ 13,880	\$ 5,097	\$ 18,977	\$ 18,977	\$ 108,446
7	156,294	\$ 0.0915	\$ 14,294	\$ 5,071	\$ 19,365	\$ 19,365	\$ 127,811
8	155,512	\$ 0.0947	\$ 14,720	\$ 5,046	\$ 19,766	\$ 19,766	\$ 147,577
9	154,735	\$ 0.0980	\$ 15,159	\$ 5,021	\$ 20,180	\$ 20,180	\$ 167,757
10	153,961	\$ 0.1014	\$ 15,612	\$ 4,996	\$ 20,607	\$ 20,607	\$ 188,364
11	153,191	\$ 0.1049	\$ 16,077	\$ 4,971	\$ 21,048	\$ 21,048	\$ 209,412
12	152,425	\$ 0.1086	\$ 16,557	\$ 4,946	\$ 21,502	\$ 21,502	\$ 230,915
13	151,663	\$ 0.1124	\$ 17,050	\$ 4,921	\$ 21,971	\$ 21,971	\$ 252,886
14	150,905	\$ 0.1164	\$ 17,559	\$ 4,896	\$ 22,455	\$ 22,455	\$ 275,341
15	150,150	\$ 0.1204	\$ 18,083	\$ 4,872	\$ 22,955	\$ 22,955	\$ 298,296
16	149,399	\$ 0.1246	\$ 18,622	\$ 4,848	\$ 23,470	\$ 23,470	\$ 321,766
17	148,652	\$ 0.1290	\$ 19,177	\$ 4,823	\$ 24,001	\$ 24,001	\$ 345,766
18	147,909	\$ 0.1335	\$ 19,749	\$ 4,799	\$ 24,549	\$ 24,549	\$ 370,315
19	147,170	\$ 0.1382	\$ 20,338	\$ 4,775	\$ 25,114	\$ 25,114	\$ 395,429
20	146,434	\$ 0.1430	\$ 20,945	\$ 4,751	\$ 25,696	\$ 25,696	\$ 421,125
21	145,702	\$ 0.1480	\$ 21,570	\$ 4,728	\$ 26,297	\$ 26,297	\$ 447,422
22	144,973	\$ 0.1532	\$ 22,213	\$ 4,704	\$ 26,917	\$ 26,917	\$ 474,339
23	144,248	\$ 0.1586	\$ 22,876	\$ 4,680	\$ 27,556	\$ 27,556	\$ 501,895
24	143,527	\$ 0.1641	\$ 23,558	\$ 4,657	\$ 28,215	\$ 28,215	\$ 530,110
25	142,809	\$ 0.1699	\$ 24,260	\$ 4,634	\$ 28,894	\$ 28,894	\$ 559,004
Totals:	3,794,053		\$ 435,899	\$ 123,105	\$ 559,004	\$ 559,004	

*Estimation based on Historical Data

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

Emergency Communications Center Solar PV Savings

System Details:

Watts 122
Degradation 0.5%

Utility Rates

Solar Value (Per kWh) \$ 0.0738
Escalation 3.5%

kWh Production	\$ / kWh	Production Revenue	PV Demand Credit Rider	Total Revenue	Cash Position
1	\$ 0.0738	\$ 0.0738	\$ 0.0321	\$ 0.1059	\$ 0.1059

Year	kWh Production*	\$ / kWh*	Revenues			Annual	Cumulative
			Production Revenue	PV Demand Credit Rider*	Total Revenue	Cashflow	Cashflow
1	144,340	\$ 0.0738	\$ 10,652	\$ 4,683	\$ 15,336	\$ 15,336	\$ 15,336
2	143,619	\$ 0.0764	\$ 10,970	\$ 4,660	\$ 15,630	\$ 15,630	\$ 30,966
3	142,901	\$ 0.0791	\$ 11,297	\$ 4,637	\$ 15,934	\$ 15,934	\$ 46,900
4	142,186	\$ 0.0818	\$ 11,634	\$ 4,613	\$ 16,248	\$ 16,248	\$ 63,147
5	141,475	\$ 0.0847	\$ 11,981	\$ 4,590	\$ 16,572	\$ 16,572	\$ 79,719
6	140,768	\$ 0.0877	\$ 12,338	\$ 4,567	\$ 16,906	\$ 16,906	\$ 96,625
7	140,064	\$ 0.0907	\$ 12,706	\$ 4,545	\$ 17,251	\$ 17,251	\$ 113,876
8	139,364	\$ 0.0939	\$ 13,085	\$ 4,522	\$ 17,607	\$ 17,607	\$ 131,483
9	138,667	\$ 0.0972	\$ 13,476	\$ 4,499	\$ 17,975	\$ 17,975	\$ 149,458
10	137,973	\$ 0.1006	\$ 13,878	\$ 4,477	\$ 18,354	\$ 18,354	\$ 167,812
11	137,284	\$ 0.1041	\$ 14,292	\$ 4,454	\$ 18,746	\$ 18,746	\$ 186,558
12	136,597	\$ 0.1077	\$ 14,718	\$ 4,432	\$ 19,150	\$ 19,150	\$ 205,708
13	135,914	\$ 0.1115	\$ 15,157	\$ 4,410	\$ 19,567	\$ 19,567	\$ 225,275
14	135,235	\$ 0.1154	\$ 15,609	\$ 4,388	\$ 19,997	\$ 19,997	\$ 245,272
15	134,558	\$ 0.1195	\$ 16,074	\$ 4,366	\$ 20,440	\$ 20,440	\$ 265,712
16	133,886	\$ 0.1236	\$ 16,554	\$ 4,344	\$ 20,898	\$ 20,898	\$ 286,610
17	133,216	\$ 0.1280	\$ 17,047	\$ 4,322	\$ 21,370	\$ 21,370	\$ 307,980
18	132,550	\$ 0.1324	\$ 17,556	\$ 4,301	\$ 21,857	\$ 21,857	\$ 329,836
19	131,887	\$ 0.1371	\$ 18,079	\$ 4,279	\$ 22,359	\$ 22,359	\$ 352,195
20	131,228	\$ 0.1419	\$ 18,619	\$ 4,258	\$ 22,877	\$ 22,877	\$ 375,072
21	130,572	\$ 0.1468	\$ 19,174	\$ 4,237	\$ 23,411	\$ 23,411	\$ 398,483
22	129,919	\$ 0.1520	\$ 19,746	\$ 4,215	\$ 23,961	\$ 23,961	\$ 422,444
23	129,269	\$ 0.1573	\$ 20,335	\$ 4,194	\$ 24,529	\$ 24,529	\$ 446,973
24	128,623	\$ 0.1628	\$ 20,941	\$ 4,173	\$ 25,115	\$ 25,115	\$ 472,088
25	127,980	\$ 0.1685	\$ 21,566	\$ 4,153	\$ 25,718	\$ 25,718	\$ 497,806
Totals:	3,400,075		\$ 387,485	\$ 110,321	\$ 497,806	\$ 497,806	

*Estimation based on Historical Data

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

Sheriff's Water Patrol Station Solar PV Savings

System Details:		Utility Rates	
Watts	65	Solar Value (Per kWh)	\$ 0.1810
Degradation	0.5%	Escalation	3.5%

kWh Production	\$ / kWh	Production Revenue	PV Demand Credit Rider	Total Revenue	Cash Position
1	\$ 0.1810	\$ 0.1810	\$ 0.0321	\$ 0.2131	\$ 0.2131

Year	kWh Production*	\$ / kWh*	Revenues			Annual	Cumulative
			Production Revenue	PV Demand Credit Rider*	Total Revenue	Cashflow	Cashflow
1	70,107	\$ 0.1810	\$ 12,689	\$ 2,275	\$ 14,964	\$ 14,964	\$ 14,964
2	69,757	\$ 0.1873	\$ 13,068	\$ 2,263	\$ 15,331	\$ 15,331	\$ 30,295
3	69,408	\$ 0.1939	\$ 13,458	\$ 2,252	\$ 15,710	\$ 15,710	\$ 46,005
4	69,061	\$ 0.2007	\$ 13,859	\$ 2,241	\$ 16,100	\$ 16,100	\$ 62,105
5	68,716	\$ 0.2077	\$ 14,272	\$ 2,230	\$ 16,502	\$ 16,502	\$ 78,607
6	68,372	\$ 0.2150	\$ 14,698	\$ 2,218	\$ 16,917	\$ 16,917	\$ 95,524
7	68,030	\$ 0.2225	\$ 15,136	\$ 2,207	\$ 17,344	\$ 17,344	\$ 112,867
8	67,690	\$ 0.2303	\$ 15,588	\$ 2,196	\$ 17,784	\$ 17,784	\$ 130,651
9	67,352	\$ 0.2383	\$ 16,053	\$ 2,185	\$ 18,238	\$ 18,238	\$ 148,890
10	67,015	\$ 0.2467	\$ 16,532	\$ 2,174	\$ 18,706	\$ 18,706	\$ 167,596
11	66,680	\$ 0.2553	\$ 17,025	\$ 2,164	\$ 19,188	\$ 19,188	\$ 186,784
12	66,346	\$ 0.2643	\$ 17,532	\$ 2,153	\$ 19,685	\$ 19,685	\$ 206,469
13	66,015	\$ 0.2735	\$ 18,055	\$ 2,142	\$ 20,197	\$ 20,197	\$ 226,666
14	65,685	\$ 0.2831	\$ 18,594	\$ 2,131	\$ 20,725	\$ 20,725	\$ 247,391
15	65,356	\$ 0.2930	\$ 19,148	\$ 2,121	\$ 21,269	\$ 21,269	\$ 268,660
16	65,029	\$ 0.3032	\$ 19,719	\$ 2,110	\$ 21,829	\$ 21,829	\$ 290,489
17	64,704	\$ 0.3139	\$ 20,308	\$ 2,099	\$ 22,407	\$ 22,407	\$ 312,896
18	64,381	\$ 0.3248	\$ 20,913	\$ 2,089	\$ 23,002	\$ 23,002	\$ 335,898
19	64,059	\$ 0.3362	\$ 21,537	\$ 2,079	\$ 23,615	\$ 23,615	\$ 359,514
20	63,739	\$ 0.3480	\$ 22,179	\$ 2,068	\$ 24,247	\$ 24,247	\$ 383,761
21	63,420	\$ 0.3602	\$ 22,841	\$ 2,058	\$ 24,899	\$ 24,899	\$ 408,660
22	63,103	\$ 0.3728	\$ 23,522	\$ 2,047	\$ 25,569	\$ 25,569	\$ 434,229
23	62,787	\$ 0.3858	\$ 24,224	\$ 2,037	\$ 26,261	\$ 26,261	\$ 460,490
24	62,473	\$ 0.3993	\$ 24,946	\$ 2,027	\$ 26,973	\$ 26,973	\$ 487,463
25	62,161	\$ 0.4133	\$ 25,690	\$ 2,017	\$ 27,707	\$ 27,707	\$ 515,170
Totals:	1,651,447		\$ 461,586	\$ 53,584	\$ 515,170	\$ 515,170	

*Estimation based on Historical Data

Total Solar Savings Summary:

kWh: 3,441,376

Total kBtu: 11,741,974

Total CO2e Reduction (Metric Tons): 1,581

EXHIBIT D
FACILITY OPERATING PARAMETERS &
UTILITY SAVINGS CALCULATION METHODS

STANDARD OF SERVICE AND COMFORT

Space temperature set points for locations served by new controls and programmable thermostats will be set and maintained by Owner as shown in the tables below. CONTRACTOR shall not be responsible for existing HVAC equipment (HVAC equipment not replaced as part of project) ability to meet the space temperatures provided in the following tables. For locations where CONTRACTOR is installing new HVAC equipment all new equipment shall provide space comfort conditions during the applicable warranty period as specified in the individual FIM Scope of Work provided in Exhibit A.

Space Temperature Tables

All temperature and occupancy setpoints shall follow the county standards. These standards are base on the following document:

Policy Title Facility Energy Management Policy
Department Ramsey County Property Management
Effective Date Thursday, December 12, 2019

This document will be the standard for all space guidelines for this contract.

EXHIBIT D
FACILITY OPERATING PARAMETERS &
UTILITY SAVINGS CALCULATION METHODS

OPERATIONAL AND MAINTENANCE SAVINGS

The first-year annual operational savings identified in the Annual Operational Savings Table below are Stipulated Operational Savings for the First Guarantee Year documented by the calculations and methodologies described below and are not subject to measurement or verification.

These savings have been reviewed and analyzed by the Parties and may include but are not limited to repair and maintenance cost reductions; deferred maintenance backlog cost reductions; and other long term operating cost savings. In each subsequent Guarantee Year, the Stipulated Operational Savings in below table shall be escalated at a rate of 3.2% per year to determine the Stipulated Savings from operating savings for such Guarantee Year. The Owner agrees and accepts that upon Substantial Completion of the Project, the Stipulated Operational Savings set forth below shall be deemed achieved and included, with appropriate escalation as set forth herein, in the Annual Savings determined for such Guarantee Year.

Annual Operational & Maintenance Savings

<i>FIM/Building</i>	<i>Stipulated Savings</i>	<i>Notes</i>
Lighting Upgrade	\$35,105	Engineering Estimates
Water Conservation	\$2,097	Engineering Estimates

The above values are based on CONTRACTOR's estimate of annual costs (maintenance & repair) associated with these FIM's and includes both internal and external costs related to the proposed FIM's. The Engineering Estimate above are based on experience, age, physical condition / state of the systems and equipment, site evaluations, discussions with Owner personnel, and review of existing costing associated with maintenance of these items.

EXHIBIT D

FACILITY OPERATING PARAMETERS & UTILITY SAVINGS CALCULATION METHODS

One Time Operational & Maintenance Savings

<i>FIM</i>	<i>Stipulated Savings</i>	<i>Notes</i>
Roofing Replacement – Replace roofs at Law Enforcement Center, Emergency Communications Center, and Maplewood Library	\$3,453,800	
AHU Control Modifications – Installation of Belimo energy valves on each AHU at Metro Square, Courthouse, and Law Enforcement Center	\$1,268,353	
AHU Coil Replacement – Replacement of all Courthouse AHU cooling coils	\$1,095,956	
Steam Trap Replacement – Replacement of select steam traps with Imperium Technologies’ Intelitraps at the Ramsey County Correctional Facility	\$12,660	
Chiller Replacement – Replacement of the North end chiller at the Ramsey County Correctional Facility	\$318,487	
RTU Replacement – Replacement of all RTUs at the Emergency Communications Center and select RTUs at the Maplewood Library	\$1,133,033	

One time O&M Savings are operational savings associated with future expenditures by the Owner. Owner has agreed that performing the scopes of work that have associated one time O&M Savings will result in a reduction of future expenditures, which is being captured in this one time O&M Savings.

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
1	Emergency Communications Center	1st Floor	Parking garage - leased by St. Paul pd	F-F28T8-2	Industrial-1X4-No Lens-Chain-4100-*.*	2	48	0.096	5,840	561	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	5,840	245	0.054	315		0.000	0	0.049	315	
2	Emergency Communications Center	1st Floor	Parking garage - leased by St. Paul pd	F-F28T8-2	Industrial-1X4-No Lens-Surface-4100-*.*	54	48	2.592	3,504	9,082	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	54	21	1.134	90%	3,504	3,974	1.458	5,109		0.000	0	1.312	5,109	
1	Juvenile and Family Justice Center	First Fl	B126	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	1	24	0.024	2,184	52	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,184	46	0.003	7	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted, (4) Wireless	0.000	0	0.003	7	
2	Juvenile and Family Justice Center	First Fl	B126	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	11	24	0.264	3,120	824	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	11	21	0.231	90%	2,184	721	0.033	103		0.000	216	0.030	319	
3	Juvenile and Family Justice Center	First Fl	Elevator rm	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	1	24	0.024	8,760	210	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	100%	8,760	184	0.003	26		0.000	0	0.003	26	
4	Juvenile and Family Justice Center	First Fl	Court side office	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	18	24	0.432	3,120	1,348	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	18	21	0.378	90%	2,184	1,179	0.054	168	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted, (4) Wireless	0.000	354	0.049	522	
5	Juvenile and Family Justice Center	First Fl	Court side office	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	9	24	0.216	3,120	674	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	9	21	0.189	90%	2,184	590	0.027	84	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted, (4) Wireless	0.000	177	0.024	261	
6	Juvenile and Family Justice Center	First Fl	Court side office	LIN-LED-L12T8LED-1	De -LAMPED 3-1-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	10	12	0.120	3,120	374	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	10	21	0.210	90%	2,184	655	-0.090	-281	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted, (4) Wireless	0.000	197	-0.081	-84	
8	Juvenile and Family Justice Center	First Fl	Court side office	LIN-LED-L12T8LED-2	Wall Wsh-4ft-Open-Recessed- Tile-4000-Type-A-*	15	24	0.360	3,120	1,123	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	15	21	0.315	90%	2,184	983	0.045	140	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted, (4) Wireless	0.000	295	0.041	435	
9	Juvenile and Family Justice Center	First Fl	Court side office	CFL-PL4P42W-1	Flood-4-Pin PL-T Horizontal-Uplight-Wall-4000-*.*	4	46	0.184	3,120	574	Retrofit	LED 4-pin CFL G24q UL Type-B HOR 16W 1850L 4000K 120-277V	4	16	0.064	90%	2,184	200	0.120	374	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	60	0.108	434	
10	Juvenile and Family Justice Center	First Fl	Court side office	LED-L25-1	12-in Downlight Round-LED screw in-Open-Recessed- Tile-*.*.*	5	25	0.125	3,120	390	Do Nothing	Do Nothing	5	25	0.125	90%	3,120	390	0.000	0		0.000	0	0.000	0	
11	Juvenile and Family Justice Center	First Fl	Court side office	F-F17T8-2	Decorative wrap-2ft-Diffuse-Wall-4100-*.*	1	33	0.033	3,120	103	Retrofit	2ft 2-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	1	14	0.014	90%	2,184	44	0.019	59	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	13	0.017	72	
7	Juvenile and Family Justice Center	First Fl	Data closet	LIN-LED-L12T8LED-2	Strip-4ft-Open-Chain-4000-Type-A-*	1	24	0.024	500	12	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	350	11	0.003	2	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	3	0.002	5	
12	Juvenile and Family Justice Center	First Fl	Court side reception	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	3	24	0.072	3,120	225	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	2,184	197	0.009	28	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	59	0.008	87	
13	Juvenile and Family Justice Center	First Fl	Hotel office	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	1	24	0.024	3,120	75	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,184	66	0.003	9	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	20	0.003	29	
14	Juvenile and Family Justice Center	First Fl	Court side office 140	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	2,184	105	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	92	0.006	13		0.000	0	0.005	13	
15	Juvenile and Family Justice Center	First Fl	Court side office 139	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	4	24	0.096	2,184	210	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	183	0.012	26		0.000	0	0.011	26	
16	Juvenile and Family Justice Center	First Fl	Court side office 138	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	2,184	105	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	92	0.006	13		0.000	0	0.005	13	
17	Juvenile and Family Justice Center	First Fl	Court side office 137	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	2,184	105	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	92	0.006	13		0.000	0	0.005	13	
18	Juvenile and Family Justice Center	First Fl	Court side office 137	LED-L9-1	6-in Downlight Round-A19-A19-Recessed- Tile-3000-*.*	3	9	0.027	2,184	59	Do Nothing	Do Nothing	3	9	0.027	90%	2,184	59	0.000	0		0.000	0	0.000	0	
19	Juvenile and Family Justice Center	First Fl	Court side office 136	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	4	24	0.096	1,540	148	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	1,540	129	0.012	18		0.000	0	0.011	18	
20	Juvenile and Family Justice Center	First Fl	Court side office 135	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	2,184	105	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	92	0.006	13		0.000	0	0.005	13	
21	Juvenile and Family Justice Center	First Fl	Court side office 131	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	4	24	0.096	2,184	210	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	183	0.012	26		0.000	0	0.011	26	
22	Juvenile and Family Justice Center	First Fl	Court side office 141	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	2,184	105	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	92	0.006	13		0.000	0	0.005	13	
23	Juvenile and Family Justice Center	First Fl	Court side office 142	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	2,184	105	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	1,529	92	0.006	13		0.000	28	0.005	41	
24	Juvenile and Family Justice Center	First Fl	Bathroom men	LIN-LED-L12T8LED-2	Wall Wsh-4ft-Open-Recessed- Tile-4000-Type-A-*	2	24	0.048	2,000	96	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,000	84	0.006	12		0.000	0	0.005	12	
25	Juvenile and Family Justice Center	First Fl	Bathroom women	LIN-LED-L12T8LED-2	Wall Wsh-4ft-Open-Recessed- Tile-4000-Type-A-*	2	24	0.048	2,000	96	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,000	84	0.006	12		0.000	0	0.005	12	
26																										

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
48	Juvenile and Family Justice Center	First Fl	B111	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	1	24	0.024	2,184	52	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,184	46	0.003	7		0.000	0	0.003	7
49	Juvenile and Family Justice Center	First Fl	B112	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	2,184	105	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	92	0.006	13		0.000	0	0.005	13
50	Juvenile and Family Justice Center	First Fl	B108	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	2,184	105	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	92	0.006	13		0.000	0	0.005	13
51	Juvenile and Family Justice Center	First Fl	B122	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	5	24	0.120	3,120	374	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	21	0.105	90%	2,184	328	0.015	47	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Downward (4) Wireless	0.000	98	0.014	145
52	Juvenile and Family Justice Center	First Fl	B122	CFL-PL2P26W-1	Horizontal-No Lens-Recessed- Hard-3000-Type-A-*	2	32	0.064	2,184	140	Retrofit	1-AAA Downlight Kit 6 0-10V Dim 7/8 12W 600-1000L 3000/3500/4000/5000K 120-277V 4-Pin PL-C	2	12	0.024	90%	2,184	52	0.040	87		0.000	0	0.036	87
295	Juvenile and Family Justice Center	First Fl	D stairwell	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	10	24	0.240	8,760	2,102	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	10	21	0.210	100%	8,760	1,840	0.030	263		0.000	0	0.030	263
296	Juvenile and Family Justice Center	First Fl	E stairwell	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	9	24	0.216	8,760	1,892	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	9	21	0.189	100%	8,760	1,656	0.027	237		0.000	0	0.027	237
297	Juvenile and Family Justice Center	First Fl	Garage area	LIN-LED-L12T8LED-2	Vapor Tight-4ft-Prismatic-Chain-4000-Type-A-*	20	24	0.480	8,760	4,205	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	20	21	0.420	100%	8,760	3,679	0.060	526		0.000	0	0.060	526
299	Juvenile and Family Justice Center	First Fl	Garage area	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-Type-A-*	1	59	0.059	8,760	517	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	100%	8,760	184	0.038	333		0.000	0	0.038	333
298	Juvenile and Family Justice Center	First Fl	Generator rm	LIN-LED-L12T8LED-2	Vapor Tight-4ft-Prismatic-Chain-4000-Type-A-*	3	24	0.072	1,000	72	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	50%	1,000	63	0.009	9		0.000	0	0.005	9
300	Juvenile and Family Justice Center	First Fl	Loading dock	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	6	24	0.144	8,760	1,261	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	100%	8,760	1,104	0.018	158		0.000	0	0.018	158
301	Juvenile and Family Justice Center	First Fl	Maintenance office	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	7	24	0.168	3,120	524	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	7	21	0.147	90%	2,184	459	0.021	66	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Downward (4) Wireless	0.000	138	0.019	203
302	Juvenile and Family Justice Center	First Fl	Maintenance office 108	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	2	24	0.048	3,120	150	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	131	0.006	19	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	39	0.005	58
303	Juvenile and Family Justice Center	First Fl	Maintenance office 113	LIN-LED-L12T8LED-1	De -LAMPED 3-1-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	4	12	0.048	3,120	150	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	262	-0.036	-112	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	79	-0.032	-34
304	Juvenile and Family Justice Center	First Fl	Kitchen hall	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	13	24	0.312	8,760	2,733	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	13	21	0.273	100%	8,760	2,391	0.039	342		0.000	0	0.039	342
305	Juvenile and Family Justice Center	First Fl	Kitchen hall	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	1	24	0.024	8,760	210	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	100%	8,760	184	0.003	26		0.000	0	0.003	26
306	Juvenile and Family Justice Center	First Fl	Kitchen 114	LIN-LED-L12T8LED-1	De -LAMPED 3-1-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	12	12	0.144	2,200	317	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	12	21	0.252	90%	2,200	554	-0.108	-238		0.000	0	-0.097	-238
307	Juvenile and Family Justice Center	First Fl	Kitchen 114	LIN-LED-L12T8LED-2	Troffer-2X4-Vandal Proof-Recessed- Hard-4000-Type-A-*	3	24	0.072	2,200	158	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	2,200	139	0.009	20		0.000	0	0.008	20
308	Juvenile and Family Justice Center	First Fl	Kitchen janitor	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	1	24	0.024	500	12	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	500	11	0.003	2		0.000	0	0.002	2
309	Juvenile and Family Justice Center	First Fl	Kitchen office-sup	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-Type-A-*	2	89	0.178	3,120	555	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	197	0.115	359	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	59	0.104	418
310	Juvenile and Family Justice Center	First Fl	Kitchen bath	F-F32T8-2	Wrap Narrow-4ft-Prismatic-Wall-4100-Type-A-*	1	59	0.059	3,120	184	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,184	66	0.038	119	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	20	0.034	138
311	Juvenile and Family Justice Center	First Fl	Freezer cooler	F-F40T12-2	Vapor Tight-4ft-Diffuse-Surface-4100-Type-A-*	5	86	0.430	2,200	946	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	21	0.105	90%	2,200	231	0.325	715		0.000	0	0.293	715
312	Juvenile and Family Justice Center	First Fl	Kitchen office-food	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-Type-A-*	4	89	0.356	3,120	1,111	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	32	0.126	90%	2,184	393	0.230	718	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	118	0.207	836
313	Juvenile and Family Justice Center	First Fl	Kitchen hall pass thru	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	2	24	0.048	8,760	420	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	100%	8,760	368	0.006	53		0.000	0	0.006	53
314	Juvenile and Family Justice Center	First Fl	A118	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	2	24	0.048	1,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	1,000	42	0.006	6		0.000	0	0.003	6
315	Juvenile and Family Justice Center	First Fl	A132	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	4	24	0.096	1,000	96	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	50%	1,000	84	0.012	12		0.000	0	0.006	12
316	Juvenile and Family Justice Center	First Fl	Elevator lobby	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	2	24	0.048	8,760	420	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	100%	8,760	368	0.006	53		0.000	0	0.006	53
317	Juvenile and Family Justice Center	First Fl	Vetch sally port	LIN-LED-L12T8LED-2	Vapor Tight-4ft-Prismatic-Chain-4000-Type-A-*	6	24	0.1																	

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
339	Juvenile and Family Justice Center	First Fl	E110 office	LIN-LED-L12T8LED-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	4	36	0.144	2,184	314	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	32	0.126	90%	2,184	275	0.018	39		0.000	0	0.016	39	
340	Juvenile and Family Justice Center	First Fl	E111 office	LIN-LED-L12T8LED-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	1	36	0.036	2,184	79	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	69	0.005	10		0.000	0	0.004	10	
341	Juvenile and Family Justice Center	First Fl	Truancy mop closet	CFL-CFS23W-1	Keyless-Screw-In Candelabra E11-No Lens-Wall-3000-**-*	1	23	0.023	3,120	72	Retrofit	(1) LED A21 Omni-Directional E26 JAR-120 100W Inc EQ Dim 90CRI 16W 1600L 3000K 120-277V Add Conf-Sign	1	16	0.016	90%	3,120	50	0.007	22		0.000	0	0.006	22	
342	Juvenile and Family Justice Center	First Fl	Truancy hall	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	2	36	0.072	8,760	631	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	100%	8,760	552	0.009	79		0.000	0	0.009	79	
343	Juvenile and Family Justice Center	First Fl	Truancy hall	CFL-PL4P36W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Tile-3000-**-*	2	46	0.092	8,760	806	Retrofit	17 LED A21 Omni-Directional E26 JAR-120V 1100-2000L 3000/3500/4000/5000K 120-277V Add Conf-Sign	2	14	0.028	100%	8,760	245	0.064	561		0.000	0	0.064	561	
344	Juvenile and Family Justice Center	First Fl	Detached garage	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	2	24	0.048	5,840	280	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	5,840	245	0.006	35		0.000	0	0.005	35	
345	Juvenile and Family Justice Center	First Fl	Detached garage	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	37	24	0.888	5,840	5,186	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	37	21	0.777	90%	5,840	4,538	0.111	648		0.000	0	0.100	648	
346	Juvenile and Family Justice Center	First Fl	Detached garage	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-**-**-*	2	25	0.050	5,840	292	Do Nothing	Do Nothing	2	25	0.050	90%	5,840	292	0.000	0		0.000	0	0.000	0	
347	Juvenile and Family Justice Center	First Fl	JDC sallyport	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	1	24	0.024	5,840	140	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	5,840	123	0.003	18		0.000	0	0.003	18	
348	Juvenile and Family Justice Center	First Fl	JDC sallyport	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	2	24	0.048	5,840	280	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	5,840	245	0.006	35		0.000	0	0.005	35	
349	Juvenile and Family Justice Center	First Fl	Garage storage	INCAN-ISO-1	Keyless-Screw in-Clear-Surface-3000-**-*	2	50	0.100	1,000	100	Retrofit	Omni-Directional Relamp E26 25W 3530L 3000K 120-277V	2	25	0.050	50%	1,000	50	0.050	50		0.000	0	0.025	50	
350	Juvenile and Family Justice Center	First Fl	Garage storage 2	LED-L10-1	Jelly Jar-A19-Clear-Wall-**-**-*	2	10	0.020	1,000	20	Do Nothing	Do Nothing	2	10	0.020	50%	1,000	20	0.000	0		0.000	0	0.000	0	
351	Juvenile and Family Justice Center	First Fl	Garage storage 3	CFL-CFS23W-1	Keyless-Screw-In Candelabra E11-No Lens-Wall-3000-**-*	1	23	0.023	1,000	23	Retrofit	(1) LED A21 Omni-Directional E26 JAR-120 100W Inc EQ Dim 90CRI 16W 1600L 3000K 120-277V Add Conf-Sign	1	16	0.016	50%	1,000	16	0.007	7		0.000	0	0.004	7	
385	Juvenile and Family Justice Center	First Fl	JP100	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-Prismatic-Recessed-Tile-4000-Type-A-*	3	24	0.072	4,000	288	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	4,000	252	0.009	36		0.000	0	0.008	36	
386	Juvenile and Family Justice Center	First Fl	JP100	CFL-PL4P26W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Tile-3000-**-*	2	27	0.054	4,000	216	Retrofit	17 LED A21 Omni-Directional E26 JAR-120V 600-1000L 3000/3500/4000/5000K 120-277V Add Conf-Sign	2	12	0.024	90%	4,000	96	0.030	120		0.000	0	0.027	120	
399	Juvenile and Family Justice Center	First Fl	JP100	F-F32T8-2	Delamped 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4100-**-*	36	59	2.124	4,000	8,496	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	36	21	0.756	90%	4,000	3,024	1.368	5,472		0.000	0	1.231	5,472	
400	Juvenile and Family Justice Center	First Fl	JP100	LED-L10-1	6-in Downlight Round-A19-Clear-**-**-*	1	10	0.010	4,000	40	Do Nothing	Do Nothing	1	10	0.010	90%	4,000	40	0.000	0		0.000	0	0.000	0	
387	Juvenile and Family Justice Center	First Fl	JP 100 bath M	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	2,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6	
388	Juvenile and Family Justice Center	First Fl	JP 100 bath M	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	2,000	48	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6	
389	Juvenile and Family Justice Center	First Fl	JP 100 bath W	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	2,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6	
390	Juvenile and Family Justice Center	First Fl	JP 100 bath W	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	2,000	48	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6	
391	Juvenile and Family Justice Center	First Fl	E151	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	2,184	105	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	92	0.006	13		0.000	0	0.005	13	
392	Juvenile and Family Justice Center	First Fl	E152	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	4	24	0.096	2,184	210	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	183	0.012	26		0.000	0	0.011	26	
393	Juvenile and Family Justice Center	First Fl	JP waiting rm	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	2,184	105	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	92	0.006	13		0.000	0	0.005	13	
394	Juvenile and Family Justice Center	First Fl	E158	F-F32T8-2	Delamped 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4100-**-*	2	59	0.118	1,540	182	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	1,540	65	0.076	117		0.000	0	0.068	117	
395	Juvenile and Family Justice Center	First Fl	E157	F-F32T8-2	Delamped 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4100-**-*	4	59	0.236	2,184	515	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	183	0.152	332		0.000	0	0.137	332	
396	Juvenile and Family Justice Center	First Fl	E156	F-F32T8-2	Delamped 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4100-**-*	2	59	0.118	2,184	258	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	92	0.076	166		0.000	0	0.068	166	
397	Juvenile and Family Justice Center	First Fl	E167	F-F32T8-2	Delamped 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4100-**-*	3	59	0.177	2,184	387	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	2,184	138	0.114	249		0.000	0	0.103	249	
398	Juvenile and Family Justice Center	First Fl																								

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
65	Juvenile and Family Justice Center	2nd FL	B219	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	3	24	0.072	2,184	157	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	2,184	138	0.009	20		0.000	0	0.008	20
66	Juvenile and Family Justice Center	2nd FL	B224	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	3	24	0.072	2,184	157	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	2,184	138	0.009	20		0.000	0	0.008	20
67	Juvenile and Family Justice Center	2nd FL	B220	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	3	24	0.072	2,184	157	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	2,184	138	0.009	20		0.000	0	0.008	20
68	Juvenile and Family Justice Center	2nd FL	B 225	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	8	24	0.192	3,120	599	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	8	21	0.168	90%	2,184	524	0.024	75	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom-Recessed-(4) Wireless	0.000	157	0.022	232
69	Juvenile and Family Justice Center	2nd FL	B common restrooms	LIN-LED-L10T8LED-2	Wall Wsh-3ft-Open-Recessed- Hard-4000-Type-A-*	2	20	0.040	2,000	80	Retrofit	3ft 2-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	2	24	0.048	90%	2,000	96	-0.008	-16		0.000	0	-0.007	-16
70	Juvenile and Family Justice Center	2nd FL	B holding cell area	CFL-PL4P36W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Hard-3000-**-*	3	46	0.138	3,120	431	Retrofit	1700L Downlight Kit 6-0-10V Dim 14-10/24W 600-1000L 3000/3500/4000/5000K 120-277V, add to 14W, Add Conf. sig.	3	14	0.042	90%	3,120	131	0.096	300		0.000	0	0.086	300
71	Juvenile and Family Justice Center	2nd FL	B holding cell area	CFL-PL4P36W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Hard-3000-**-*	1	46	0.046	3,120	144	Retrofit	1700L Downlight Kit 6-0-10V Dim 14-10/24W 600-1000L 3000/3500/4000/5000K 120-277V, add to 14W, Add Conf. sig.	1	14	0.014	90%	3,120	44	0.032	100		0.000	0	0.029	100
72	Juvenile and Family Justice Center	2nd FL	B holding cell area	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	2,184	52	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,184	46	0.003	7		0.000	0	0.003	7
73	Juvenile and Family Justice Center	2nd FL	Large IT	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	2	24	0.048	1,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	700	42	0.006	6	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	13	0.003	19
74	Juvenile and Family Justice Center	2nd FL	Prisoners bath	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	1	24	0.024	2,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6
75	Juvenile and Family Justice Center	2nd FL	Elevator hall	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	4	24	0.096	8,760	841	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	100%	8,760	736	0.012	105		0.000	0	0.012	105
76	Juvenile and Family Justice Center	2nd FL	Elevator hall	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-Prismatic-Recessed-Tile-4000-Type-A-*	1	24	0.024	6,132	147	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	6,132	129	0.003	18		0.000	0	0.003	18
77	Juvenile and Family Justice Center	2nd FL	235B	LIN-LED-L12T8LED-1	De -LAMPED 3-1-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	6	12	0.072	6,132	442	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	6,132	773	-0.054	-331		0.000	0	-0.049	-331
78	Juvenile and Family Justice Center	2nd FL	Holding cells	UFL-FU31T8/1-1	Vandal proof-Prison wrap -2'-Vandal Proof-Wall-4100-Night light built in-*	6	28	0.168	3,120	524	Retrofit	U-bend 1-5/8in 1-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	6	13	0.078	90%	3,120	243	0.090	281		0.000	0	0.081	281
79	Juvenile and Family Justice Center	2nd FL	Holding cells	CFL-PL2P9W-1	Prison wrap-2-Pin PL-S Horizontal-Polycarbonate-Wall-**-*	6	13	0.078	2,184	170	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	6	4	0.021	90%	2,184	46	0.057	124		0.000	0	0.051	124
80	Juvenile and Family Justice Center	2nd FL	Holding cells	LIN-LED-L12T8LED-2	Wrap-4ft-Vandal Proof-Wall-4000-Type-A-*	6	24	0.144	2,184	314	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	2,184	275	0.018	39		0.000	0	0.016	39
81	Juvenile and Family Justice Center	2nd FL	Holding cells call rm	LIN-LED-L12T8LED-2	Wrap-4ft-Vandal Proof-Wall-4000-Type-A-*	3	24	0.072	3,120	225	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	3,120	197	0.009	28		0.000	0	0.008	28
82	Juvenile and Family Justice Center	2nd FL	Holding cell perimeter	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	17	24	0.408	8,760	3,574	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	17	21	0.357	100%	8,760	3,127	0.051	447		0.000	0	0.051	447
83	Juvenile and Family Justice Center	2nd FL	Sheriff data closet	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	2	24	0.048	1,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	700	42	0.006	6	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	13	0.003	19
84	Juvenile and Family Justice Center	2nd FL	C stairwell	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	5	24	0.120	8,760	1,051	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	21	0.105	100%	8,760	920	0.015	131		0.000	0	0.015	131
85	Juvenile and Family Justice Center	2nd FL	250	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	6	24	0.144	1,000	144	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	50%	1,000	126	0.018	18		0.000	0	0.009	18
407	Juvenile and Family Justice Center	2nd FL	JP 200 bath M	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	2,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6
408	Juvenile and Family Justice Center	2nd FL	JP 200 bath M	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	2,000	48	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6
409	Juvenile and Family Justice Center	2nd FL	JP 200 bath W	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	2,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6
410	Juvenile and Family Justice Center	2nd FL	JP 200 bath W	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	2,000	48	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6
411	Juvenile and Family Justice Center	2nd FL	Electric closet	INCAN-I50-1	Keyless-Screw in-Clear-Surface-3000-**-*	1	50	0.050	1,000	50	Retrofit	Omni-Directional Relamp E26 25W 3530L 3000K 120-277V	1	25	0.025	50%	1,000	25	0.025	25		0.000	0	0.013	25
412	Juvenile and Family Justice Center	2nd FL	252	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	15	24	0.360	3,120	1,123	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	15	21	0.315	90%	2,184	983	0.045	140	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom-Recessed-(4) Wireless	0.000	295	0.041	435
413	Juvenile and Family Justice Center	2nd FL	259	LIN-LED-L12T8LED-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	12	36	0.432																	

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
498	Juvenile and Family Justice Center	2nd FL	Laundry	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	6	24	0.144	3,120	449	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	2,184	393	0.018	56	Wireless Large Motion 360 degree Ceiling Sensor - PIR, Return Downward 143.75microns	0.000	118	0.016	174
499	Juvenile and Family Justice Center	2nd FL	Laundry	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-**-*	2	59	0.118	3,120	368	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	131	0.076	237		0.000	39	0.068	276
502	Juvenile and Family Justice Center	2nd FL	Laundry	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-**-**,*	2	25	0.050	3,120	156	Do Nothing	Do Nothing	2	25	0.050	90%	3,120	156	0.000	0		0.000	0	0.000	0
500	Juvenile and Family Justice Center	2nd FL	Laundry storage	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-**-*	2	59	0.118	1,000	118	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	1,000	42	0.076	76		0.000	0	0.038	76
501	Juvenile and Family Justice Center	2nd FL	Laundry mop area	LED-L40-1	Strip 4ft-Na-Diffuse-Surface-4000-**-*	1	40	0.040	1,000	40	Do Nothing	Do Nothing	1	40	0.040	50%	1,000	40	0.000	0		0.000	0	0.000	0
503	Juvenile and Family Justice Center	2nd FL	Pod 200	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-**-**,*	11	25	0.275	3,120	858	Do Nothing	Do Nothing	11	25	0.275	90%	3,120	858	0.000	0		0.000	0	0.000	0
504	Juvenile and Family Justice Center	2nd FL	Pod 200	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	2	24	0.048	2,184	105	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	92	0.006	13		0.000	0	0.005	13
505	Juvenile and Family Justice Center	2nd FL	Pod 200 cells	LIN-LED-L12T8LED-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4000-Type-A-*	8	24	0.192	3,120	599	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	8	21	0.168	90%	3,120	524	0.024	75		0.000	0	0.022	75
506	Juvenile and Family Justice Center	2nd FL	Pod 200 cells	CFL-PL2P7W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-**-**,*	8	12	0.096	3,120	300	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	8	4	0.028	90%	3,120	87	0.068	212		0.000	0	0.061	212
507	Juvenile and Family Justice Center	2nd FL	Pod 200 showers	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-**-**,*	3	25	0.075	3,120	234	Do Nothing	Do Nothing	3	25	0.075	90%	3,120	234	0.000	0		0.000	0	0.000	0
508	Juvenile and Family Justice Center	2nd FL	Pod 200 mech	CFL-CFS23W-1	Keyless-Screw-In Candelabra E11-No Lens-Wall-3000-**-*	1	23	0.023	1,000	23	Retrofit	(1) LED A21 Omni-Directional E26 JAR-120 100W Inc EQ Dim 90CRI 16W 1600L 3000K 120V	1	16	0.016	50%	1,000	16	0.007	7		0.000	0	0.004	7
509	Juvenile and Family Justice Center	2nd FL	Pod 300	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-**-**,*	11	25	0.275	3,120	858	Do Nothing	Do Nothing	11	25	0.275	90%	3,120	858	0.000	0		0.000	0	0.000	0
510	Juvenile and Family Justice Center	2nd FL	Pod 300	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	2	24	0.048	2,184	105	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	92	0.006	13		0.000	0	0.005	13
511	Juvenile and Family Justice Center	2nd FL	Pod 300 cells	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-**-*	10	59	0.590	3,120	1,841	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	10	21	0.210	90%	3,120	655	0.380	1,186		0.000	0	0.342	1,186
512	Juvenile and Family Justice Center	2nd FL	Pod 300 cells	CFL-PL2P7W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-**-**,*	10	12	0.120	3,120	374	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	10	4	0.035	90%	3,120	109	0.085	265		0.000	0	0.077	265
513	Juvenile and Family Justice Center	2nd FL	Pod 300 showers	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-**-**,*	3	25	0.075	3,120	234	Do Nothing	Do Nothing	3	25	0.075	90%	3,120	234	0.000	0		0.000	0	0.000	0
514	Juvenile and Family Justice Center	2nd FL	Pod 300 mech	CFL-CFS23W-1	Keyless-Screw-In Candelabra E11-No Lens-Wall-3000-**-*	1	23	0.023	1,000	23	Retrofit	(1) LED A21 Omni-Directional E26 JAR-120 100W Inc EQ Dim 90CRI 16W 1600L 3000K 120V	1	16	0.016	50%	1,000	16	0.007	7		0.000	0	0.004	7
515	Juvenile and Family Justice Center	2nd FL	Pod 300 common baths	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-**-**,*	2	25	0.050	4,000	200	Do Nothing	Do Nothing	2	25	0.050	90%	4,000	200	0.000	0		0.000	0	0.000	0
516	Juvenile and Family Justice Center	2nd FL	Shift supervisor	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	4	24	0.096	3,120	300	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	262	0.012	37	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	79	0.011	116
517	Juvenile and Family Justice Center	2nd FL	Operations	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	3	24	0.072	3,120	225	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	2,184	197	0.009	28	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	59	0.008	87
518	Juvenile and Family Justice Center	2nd FL	Cafe hall	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	20	24	0.480	8,760	4,205	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	20	21	0.420	100%	8,760	3,679	0.060	526		0.000	0	0.060	526
520	Juvenile and Family Justice Center	2nd FL	Phone booths	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	3	24	0.072	2,184	157	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	2,184	138	0.009	20		0.000	0	0.008	20
521	Juvenile and Family Justice Center	2nd FL	Telecom	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-**-*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38
522	Juvenile and Family Justice Center	2nd FL	Cafe hall	F-F32T8-2	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	13	59	0.767	8,760	6,719	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	13	21	0.273	100%	8,760	2,391	0.494	4,327		0.000	0	0.494	4,327
523	Juvenile and Family Justice Center	2nd FL	Elevator lobby to cafe	F-F32T8-2	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	2	59	0.118	8,760	1,034	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	100%	8,760	368	0.076	666		0.000	0	0.076	666
524	Juvenile and Family Justice Center	2nd FL	Elevator lobby to cafe	CFL-PL4P26W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Tile-3000-**-*	1	27	0.027	6,132	166	Retrofit	18A Downlight NTC 0-10V Dim 79/12W 600-1000L 3000/3500/4000/5000K 120-277V 18W Add Confine	1	12	0.012	90%	6,132	74	0.015	92		0.000	0	0.014	92
525	Juvenile and Family Justice Center	2nd FL	Health services	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-Prismatic-Recessed-Tile-4000-Type-A-*	4	24	0.096	3,120	300	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	262	0.012	37	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	79	0.011	116
526	Juvenile and Family Justice Center	2nd FL	Health services	LIN-LED-L12T8LED-1	De -LAMPED 3-1-2X4-Prismatic-Recessed-Tile-4000-Type-A-*	4	12	0.048	2,184	105	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	183	-0.036	-79		0.000	0	-0.032	-79
527	Juvenile and Family Justice Center	2nd FL	Health services bath	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	2,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5													

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
599	Juvenile and Family Justice Center	2nd FL	North stairs	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	6	24	0.144	8,760	1,261	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	100%	8,760	1,104	0.018	158		0.000	0	0.018	158	
642	Juvenile and Family Justice Center	2nd FL	Stair well B continuation	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	4	24	0.096	6,132	589	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	6,132	515	0.012	74		0.000	0	0.011	74	
86	Juvenile and Family Justice Center	3rd FL	Conference rm 319	CFL-PL4P26W-2	10-in Downlight Round-4-Pin PL-S Horizontal-No Lens-Recessed- Tile-3000-**-*	4	52	0.208	2,200	458	Retrofit	1000-1000L 3000/3500/4000/5000K 120-277V, add neutral, add 14W	4	18	0.072	90%	2,200	158	0.136	299		0.000	0	0.122	299	
87	Juvenile and Family Justice Center	3rd FL	Conference rm 320	CFL-PL4P26W-2	10-in Downlight Round-4-Pin PL-S Horizontal-No Lens-Recessed- Tile-3000-**-*	4	52	0.208	2,200	458	Retrofit	1000-1000L 3000/3500/4000/5000K 120-277V, add neutral, add 14W	4	18	0.072	90%	2,200	158	0.136	299		0.000	0	0.122	299	
88	Juvenile and Family Justice Center	3rd FL	Conference rm 321	CFL-PL4P26W-2	10-in Downlight Round-4-Pin PL-S Horizontal-No Lens-Recessed- Tile-3000-**-*	4	52	0.208	2,200	458	Retrofit	1000-1000L 3000/3500/4000/5000K 120-277V, add neutral, add 14W	4	18	0.072	90%	2,200	158	0.136	299		0.000	0	0.122	299	
89	Juvenile and Family Justice Center	3rd FL	Conference rm 325	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	1,540	74	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	1,540	65	0.006	9		0.000	0	0.005	9	
90	Juvenile and Family Justice Center	3rd FL	Court rm 326	CFL-PL4P36W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Hard-3000-**-*	15	46	0.690	1,540	1,063	Retrofit	1000-1000L 3000/3500/4000/5000K 120-277V, add neutral, add 14W	15	14	0.210	90%	1,540	323	0.480	739		0.000	0	0.432	739	
91	Juvenile and Family Justice Center	3rd FL	Court rm 326	CFL-PL4P55W-1	8-in Downlight Round-4-Pin PL-L Vertical-No Lens-Recessed- Hard-4000-**-*	8	58	0.464	1,540	715	Retrofit	1000-1000L 3000/3500/4000/5000K 120-277V, add neutral, add 14W	8	24	0.192	90%	1,540	296	0.272	419		0.000	0	0.245	419	
92	Juvenile and Family Justice Center	3rd FL	Court rm 326	CFL-PL4P36W-2	10-in Downlight Round-4-Pin PL-C Horizontal-No Lens-Recessed- Hard-3000-**-*	4	89	0.356	1,540	548	Retrofit	1000-1000L 3000/3500/4000/5000K 120-277V, add neutral, add 14W	4	24	0.096	90%	1,540	148	0.260	400		0.000	0	0.234	400	
93	Juvenile and Family Justice Center	3rd FL	Court rm 326	CFL-PL4P36W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Hard-3000-Emergency Ballast-*	2	46	0.092	1,540	142	Retrofit	1000-1000L 3000/3500/4000/5000K 120-277V, add 14W, add neutral	2	14	0.028	90%	1,540	43	0.064	99		0.000	0	0.058	99	
94	Juvenile and Family Justice Center	3rd FL	Court rm 326	F-F32T8-1	Court room wall wash-4ft-No Lens-Cove-4100-**-*	21	31	0.651	1,540	1,003	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	21	11	0.221	90%	1,540	340	0.431	663		0.000	0	0.387	663	
95	Juvenile and Family Justice Center	3rd FL	Court rm 326	F-F25T8-1	Court room wall wash-3ft-No Lens-Cove-4100-**-*	8	26	0.208	1,540	320	Retrofit	3ft 1-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	8	12	0.096	90%	1,540	148	0.112	172		0.000	0	0.101	172	
96	Juvenile and Family Justice Center	3rd FL	Court rm 326	LED-L10-2	Dec court light-A19-Diffuse-**-**-*	1	20	0.020	1,540	31	Do Nothing	Do Nothing	1	20	0.020	90%	1,540	31	0.000	0		0.000	0	0.000	0	
97	Juvenile and Family Justice Center	3rd FL	Court rm 326	CFL-CFS13W-1	6-in Downlight Round-Screw-In Candelabra E11-No Lens-**-**-*	1	13	0.013	1,540	20	Retrofit	1000-1000L 3000/3500/4000/5000K 120-277V, add 21W	1	7	0.007	90%	1,540	11	0.006	9		0.000	0	0.005	9	
98	Juvenile and Family Justice Center	3rd FL	Court rm 326	CFL-PL4P26W-1	Court room sconce-4-Pin PL-T Vertical-Diffuse-Wall-3000-**-*	2	27	0.054	1,540	83	Retrofit	LED 4-pin CFL G24q UL Type-B HOR 8W 900L 3000K 120-277V	2	8	0.016	90%	1,540	25	0.038	59		0.000	0	0.034	59	
99	Juvenile and Family Justice Center	3rd FL	Court holding cell	LIN-LED-L12T8LED-2	Wrap-4ft-Vandal Proof-Wall-4000-Type-A-*	2	24	0.048	3,120	150	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	3,120	131	0.006	19		0.000	0	0.005	19	
100	Juvenile and Family Justice Center	3rd FL	Court holding bath	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	1	24	0.024	4,000	96	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.003	12	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.003	54	
101	Juvenile and Family Justice Center	3rd FL	Court holding hall	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	3	24	0.072	8,760	631	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	100%	8,760	552	0.009	79		0.000	0	0.009	79	
102	Juvenile and Family Justice Center	3rd FL	Court vestibule 326	CFL-PL4P26W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Tile-3000-**-*	2	27	0.054	8,760	473	Retrofit	1000-1000L 3000/3500/4000/5000K 120-277V, add 14W, Add Configno	2	12	0.024	100%	8,760	210	0.030	263		0.000	0	0.030	263	
103	Juvenile and Family Justice Center	3rd FL	Conference rm 327	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	1,540	74	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	1,540	65	0.006	9		0.000	0	0.005	9	
104	Juvenile and Family Justice Center	3rd FL	Conference rm 332	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	5	24	0.120	2,184	262	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	21	0.105	90%	2,184	229	0.015	33		0.000	0	0.014	33	
105	Juvenile and Family Justice Center	3rd FL	Court rm 336	CFL-PL4P36W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Hard-3000-**-*	15	46	0.690	1,540	1,063	Retrofit	1000-1000L 3000/3500/4000/5000K 120-277V, add 14W, add neutral	15	14	0.210	90%	1,540	323	0.480	739		0.000	0	0.432	739	
106	Juvenile and Family Justice Center	3rd FL	Court rm 336	CFL-PL4P55W-1	8-in Downlight Round-4-Pin PL-L Vertical-No Lens-Recessed- Hard-4000-**-*	8	58	0.464	1,540	715	Retrofit	1000-1000L 3000/3500/4000/5000K 120-277V, add neutral, add 14W	8	24	0.192	90%	1,540	296	0.272	419		0.000	0	0.245	419	
107	Juvenile and Family Justice Center	3rd FL	Court rm 336	CFL-PL4P36W-2	10-in Downlight Round-4-Pin PL-C Horizontal-No Lens-Recessed- Hard-3000-**-*	4	89	0.356	1,540	548	Retrofit	1000-1000L 3000/3500/4000/5000K 120-277V, add neutral, add 14W	4	24	0.096	90%	1,540	148	0.260	400		0.000	0	0.234	400	
108	Juvenile and Family Justice Center	3rd FL	Court rm 336	CFL-PL4P36W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Hard-3000-Emergency Ballast-*	2	46	0.092	1,540	142	Retrofit	1000-1000L 3000/3500/4000/5000K 120-277V, add 14W, add neutral	2	14	0.028	90%	1,540	43	0.064	99		0.000	0	0.058	99	
109	Juvenile and Family Justice Center	3rd FL	Court rm 336	LIN-LED-L12T8LED-1	Court rm cove-4ft-Open-Cove-4000-Type-A-*	21	12	0.252	1,540	388	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	21	11	0.221	90%	1,540	340	0.032	49		0.000	0	0.028	49	
110	Juvenile and Family Justice Center	3rd FL	Court rm 336	LIN-LED-L10T8LED-1	Courtroom cove-3ft-Open-Cove-3000-Type-A-*	8	10	0.080	1,540	123	Retrofit	3ft 1-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	8	12	0.096	90%	1,540	148	-0.016	-25		0.000	0	-0.014	-25	
111																										

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
133	Juvenile and Family Justice Center	3rd FL	301 bath	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	4,000	96	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	84	0.003	12	Wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted (4) Wireless	0.000	42	0.003	54	
134	Juvenile and Family Justice Center	3rd FL	301 bath	CFL-PL4P26W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Tile-3000-.*	1	27	0.027	4,000	108	Retrofit	1700L Downlight Kit 6" 0-10V Dim 7/8" 12W 600-1000L 3000/3500/4000/5000K 120-277V 4-pin 40W Add Ceiling	1	12	0.012	90%	2,000	48	0.015	60		0.000	24	0.014	84	
135	Juvenile and Family Justice Center	3rd FL	Back hall to court rms	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	11	24	0.264	4,000	1,056	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	11	21	0.231	90%	4,000	924	0.033	132		0.000	0	0.030	132	
136	Juvenile and Family Justice Center	3rd FL	Back hall to court rms	CFL-PL4P26W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Tile-3000-.*	2	27	0.054	4,000	216	Retrofit	1700L Downlight Kit 6" 0-10V Dim 7/8" 12W 600-1000L 3000/3500/4000/5000K 120-277V 4-pin 40W Add Ceiling	2	12	0.024	90%	4,000	96	0.030	120		0.000	0	0.027	120	
137	Juvenile and Family Justice Center	3rd FL	Court rm it 1	LIN-LED-L12T8LED-2	Strip-4ft-Open-Chain-4000-Type-A-*	1	24	0.024	1,000	24	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	700	21	0.003	3	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	6	0.002	9	
138	Juvenile and Family Justice Center	3rd FL	Court rm it 2	LIN-LED-L12T8LED-2	Strip-4ft-Open-Chain-4000-Type-A-*	1	24	0.024	1,000	24	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	700	21	0.003	3	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	6	0.002	9	
139	Juvenile and Family Justice Center	3rd FL	342	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	4	24	0.096	2,184	210	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	183	0.012	26		0.000	0	0.011	26	
140	Juvenile and Family Justice Center	3rd FL	343	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	6	24	0.144	2,184	314	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	2,184	275	0.018	39		0.000	0	0.016	39	
141	Juvenile and Family Justice Center	3rd FL	342 hall	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	5	24	0.120	6,132	736	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	21	0.105	90%	6,132	644	0.015	92		0.000	0	0.014	92	
142	Juvenile and Family Justice Center	3rd FL	Janitor	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	1	24	0.024	500	12	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	500	11	0.003	2		0.000	0	0.002	2	
143	Juvenile and Family Justice Center	3rd FL	Restroom family	LIN-LED-L10T8LED-1	Courtroom cove-3ft-Open-Cove-3000-Type-A-*	2	10	0.020	2,000	40	Retrofit	3ft 1-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	2	12	0.024	90%	2,000	48	-0.004	-8		0.000	0	-0.004	-8	
144	Juvenile and Family Justice Center	3rd FL	Restroom family	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	2,000	48	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6	
145	Juvenile and Family Justice Center	3rd FL	Restroom men	CFL-PL4P26W-2	12-in Downlight Square-4-Pin PL-S Horizontal-4 cell Parabolic Louver-Recessed- Used 3000-.*	1	52	0.052	2,000	104	Retrofit	(2) LED 4-pin CFL G24q UL Type-B HOR 8W 950L 4000K 120-277V	1	16	0.016	90%	2,000	32	0.036	72		0.000	0	0.032	72	
146	Juvenile and Family Justice Center	3rd FL	Restroom men	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	2,000	48	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6	
147	Juvenile and Family Justice Center	3rd FL	Restroom women	CFL-PL4P26W-2	12-in Downlight Square-4-Pin PL-S Horizontal-4 cell Parabolic Louver-Recessed- Used 3000-.*	1	52	0.052	2,000	104	Retrofit	(2) LED 4-pin CFL G24q UL Type-B HOR 8W 950L 4000K 120-277V	1	16	0.016	90%	2,000	32	0.036	72		0.000	0	0.032	72	
148	Juvenile and Family Justice Center	3rd FL	Restroom women	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	2,000	48	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6	
149	Juvenile and Family Justice Center	3rd FL	It	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	1	24	0.024	500	12	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	350	11	0.003	2	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	3	0.002	5	
225	Juvenile and Family Justice Center	3rd FL	Elevator hall	CFL-PL4P26W-2	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Tile-3000-.*	9	52	0.468	4,000	1,872	Retrofit	1700L Downlight Kit 6" 0-10V Dim 7/8" 12W 1100-2000L 3000/3500/4000/5000K 120-277V 4-pin 40W Add Ceiling	9	18	0.162	90%	4,000	648	0.306	1,224		0.000	0	0.275	1,224	
361	Juvenile and Family Justice Center	3rd FL	Class rm 500	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	9	24	0.216	3,120	674	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	9	21	0.189	90%	2,184	590	0.027	84	Wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted (4) Wireless	0.000	177	0.024	261	
362	Juvenile and Family Justice Center	3rd FL	Ci bath 500	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	1	24	0.024	3,120	75	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	1,560	66	0.003	9	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	33	0.003	42	
363	Juvenile and Family Justice Center	3rd FL	CR off 500	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	3,120	150	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	131	0.006	19	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	39	0.005	58	
364	Juvenile and Family Justice Center	3rd FL	Class rm 600	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	11	24	0.264	3,120	824	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	11	21	0.231	90%	2,184	721	0.033	103	Wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted (4) Wireless	0.000	216	0.030	319	
365	Juvenile and Family Justice Center	3rd FL	Ci bath 600	F-F32T8-2	Wrap Narrow-4ft-Prismatic-Wall-4100-.*	1	59	0.059	3,120	184	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	3,120	66	0.038	119		0.000	0	0.034	119	
366	Juvenile and Family Justice Center	3rd FL	CR off 600	F-F32T8-2	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	2	59	0.118	3,120	368	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	131	0.076	237	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	39	0.068	276	
426	Juvenile and Family Justice Center	3rd FL	JP 300 bath M	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	2,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6	
427	Juvenile and Family Justice Center	3rd FL	JP 300 bath M	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	2,000	48	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6	
428	Juvenile and Family Justice Center	3rd FL	JP 300 bath W	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	2,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	42								

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
451	Juvenile and Family Justice Center	3rd FL	JP 300 EHM	LIN-LED-L12T8LED-1	Court rm cove-4ft-Open-Cove-4000-Type-A-*	2	12	0.024	3,120	75	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,184	66	0.003	9	wireless Large motion 360 degree Ceiling Sensor - PIR, Bottom Mounted (4) Wireless	0.000	20	0.003	29
452	Juvenile and Family Justice Center	3rd FL	JP 300 EHM	LIN-LED-L10T8LED-1	Courtroom cove-3ft-Open-Cove-3000-Type-A-*	2	10	0.020	3,120	62	Retrofit	3ft 1-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	2	12	0.024	90%	2,184	75	-0.004	-12		0.000	22	-0.004	10
453	Juvenile and Family Justice Center	3rd FL	EHM bath	LIN-LED-L12T8LED-1	Wrap-4ft-Bathroom-Wall-4000-Type-A-*	1	12	0.012	2,000	24	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	11	0.011	90%	2,000	21	0.002	3		0.000	0	0.001	3
454	Juvenile and Family Justice Center	3rd FL	Kitchen	LIN-LED-L12T8LED-2	Troffer-1X4-Prismatic-Recessed- Tile-4000-Type-A-*	1	24	0.024	2,184	52	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,184	46	0.003	7		0.000	0	0.003	7
455	Juvenile and Family Justice Center	3rd FL	Janitor	LIN-LED-L12T8LED-2	Troffer-1X4-Prismatic-Recessed- Tile-4000-Type-A-*	1	24	0.024	500	12	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	500	11	0.003	2		0.000	0	0.002	2
456	Juvenile and Family Justice Center	3rd FL	Open office	LIN-LED-L12T8LED-2	Troffer-1X4-Prismatic-Recessed- Tile-4000-Type-A-*	4	24	0.096	3,120	300	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	262	0.012	37	wireless Large motion 360 degree Ceiling Sensor - PIR, Bottom Mounted (4) Wireless	0.000	79	0.011	116
457	Juvenile and Family Justice Center	3rd FL	Back stair	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	8,760	210	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	100%	8,760	184	0.003	26		0.000	0	0.003	26
458	Juvenile and Family Justice Center	3rd FL	JP conference rm 4	LED-L10-1	10-in Downlight Round-A19-Clear-**-**-*	8	10	0.080	2,200	176	Do Nothing	Do Nothing	8	10	0.080	90%	2,200	176	0.000	0		0.000	0	0.000	0
459	Juvenile and Family Justice Center	3rd FL	JP conference rm 4	LIN-LED-L12T8LED-1	Court rm cove-4ft-Open-Cove-4000-Type-A-*	10	12	0.120	2,200	264	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	10	11	0.105	90%	2,200	231	0.015	33		0.000	0	0.014	33
460	Juvenile and Family Justice Center	3rd FL	JP conference rm 4	LIN-LED-L10T8LED-1	Courtroom cove-3ft-Open-Cove-3000-Type-A-*	2	10	0.020	2,200	44	Retrofit	3ft 1-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	2	12	0.024	90%	2,200	53	-0.004	-9		0.000	0	-0.004	-9
461	Juvenile and Family Justice Center	3rd FL	JP office director	LED-L40-1	Troffer 2x4-Troffer-Volumetric-Recessed-Tile-4000-**-*	2	40	0.080	3,120	250	Do Nothing	Do Nothing	2	40	0.080	90%	3,120	250	0.000	0		0.000	0	0.000	0
462	Juvenile and Family Justice Center	3rd FL	JP office super	LED-L40-1	Troffer 2x4-Troffer-Volumetric-Recessed-Tile-4000-**-*	1	40	0.040	3,120	125	Do Nothing	Do Nothing	1	40	0.040	90%	3,120	125	0.000	0		0.000	0	0.000	0
463	Juvenile and Family Justice Center	3rd FL	JP office super 1	LED-L40-1	Troffer 2x4-Troffer-Volumetric-Recessed-Tile-4000-**-*	1	40	0.040	3,120	125	Do Nothing	Do Nothing	1	40	0.040	90%	3,120	125	0.000	0		0.000	0	0.000	0
464	Juvenile and Family Justice Center	3rd FL	JP office super 2	LED-L40-1	Troffer 2x4-Troffer-Volumetric-Recessed-Tile-4000-**-*	1	40	0.040	3,120	125	Do Nothing	Do Nothing	1	40	0.040	90%	3,120	125	0.000	0		0.000	0	0.000	0
465	Juvenile and Family Justice Center	3rd FL	JP office focus	LED-L40-1	Troffer 2x4-Troffer-Volumetric-Recessed-Tile-4000-**-*	1	40	0.040	3,120	125	Do Nothing	Do Nothing	1	40	0.040	90%	3,120	125	0.000	0		0.000	0	0.000	0
466	Juvenile and Family Justice Center	3rd FL	JP office intake	LED-L40-1	Troffer 2x4-Troffer-Volumetric-Recessed-Tile-4000-**-*	2	40	0.080	3,120	250	Do Nothing	Do Nothing	2	40	0.080	90%	3,120	250	0.000	0		0.000	0	0.000	0
468	Juvenile and Family Justice Center	3rd FL	JP 300 open office	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	3	24	0.072	4,000	288	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	4,000	252	0.009	36		0.000	0	0.008	36
469	Juvenile and Family Justice Center	3rd FL	JP 300 open office	LED-L10-1	6-in Downlight Round-A19-Clear-**-**-*	8	10	0.080	4,000	320	Do Nothing	Do Nothing	8	10	0.080	90%	4,000	320	0.000	0		0.000	0	0.000	0
470	Juvenile and Family Justice Center	3rd FL	JP 300 open office	LIN-LED-L12T8LED-1	Court rm cove-4ft-Open-Cove-4000-Type-A-*	32	12	0.384	4,000	1,536	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	32	11	0.336	90%	4,000	1,344	0.048	192		0.000	0	0.043	192
471	Juvenile and Family Justice Center	3rd FL	300 back hall	LIN-LED-L12T8LED-2	Troffer-1X4-Prismatic-Recessed- Tile-4000-Type-A-*	4	24	0.096	4,000	384	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	4,000	336	0.012	48		0.000	0	0.011	48
472	Juvenile and Family Justice Center	3rd FL	300 back hall	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	4,000	96	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	4,000	84	0.003	12		0.000	0	0.003	12
548	Juvenile and Family Justice Center	3rd FL	Pod 600 mech	INCAN-I50-1	Keyless-Screw in-Clear-Surface-3000-**-*	4	50	0.200	1,000	200	Retrofit	Omni-Directional Relamp E26 25W 3530L 3000K 120-277V	4	25	0.100	50%	1,000	100	0.100	100		0.000	0	0.050	100
549	Juvenile and Family Justice Center	3rd FL	Pod 600 mop	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-**-*	1	59	0.059	500	30	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	500	11	0.038	19		0.000	0	0.019	19
550	Juvenile and Family Justice Center	3rd FL	Pod 600 storage	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-**-*	3	59	0.177	1,000	177	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	50%	1,000	63	0.114	114		0.000	0	0.057	114
551	Juvenile and Family Justice Center	3rd FL	Pod 600 showers	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-**-**-*	2	25	0.050	3,120	156	Do Nothing	Do Nothing	2	25	0.050	90%	3,120	156	0.000	0		0.000	0	0.000	0
552	Juvenile and Family Justice Center	3rd FL	Pod 600 cells	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-**-*	12	59	0.708	3,120	2,209	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	12	21	0.252	90%	3,120	786	0.456	1,423		0.000	0	0.410	1,423
553	Juvenile and Family Justice Center	3rd FL	Pod 600 cells	CFL-PL2P7W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-**-**-*	12	12	0.144	3,120	449	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	12	4	0.042	90%	3,120	131	0.102	318		0.000	0	0.092	318
554	Juvenile and Family Justice Center	3rd FL	Pod 600 cells	UFL-FU31T8/1-1	Prison bath fixture-2'-Vandal Proof-Wall-4100-Night light built in-*	12	28	0.336	2,184	734	Retrofit	U-bend 1-5/8in 1-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	12	13	0.156	90%	2,184	341	0.180	393		0.000	0	0.162	393
555	Juvenile and Family Justice Center	3rd FL	Pod 600	CFL-PL2P7W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-**-**-*	2	12	0.024	3,120	75	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	2	4	0.007	90%	3,120	22	0.017	53		0.000	0	0.015	53
556	Juvenile and Family Justice Center	3rd FL	Pod 600	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*																				

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
576	Juvenile and Family Justice Center	3rd FL	Hall to E building	LIN-LED-L12T8LED-2	Troffer-1X4-Prismatic-Recessed- Tile-4000-Type-A-*	10	24	0.240	8,760	2,102	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	10	21	0.210	100%	8,760	1,840	0.030	263		0.000	0	0.030	263	
577	Juvenile and Family Justice Center	3rd FL	E building common	LIN-LED-L12T8LED-2	Troffer-1X4-Prismatic-Recessed- Tile-4000-Type-A-*	2	24	0.048	8,760	420	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	100%	8,760	368	0.006	53		0.000	0	0.006	53	
578	Juvenile and Family Justice Center	3rd FL	E building common	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	4	24	0.096	8,760	841	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	100%	8,760	736	0.012	105		0.000	0	0.012	105	
579	Juvenile and Family Justice Center	3rd FL	Lockers	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	3	24	0.072	6,132	442	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	6,132	386	0.009	55		0.000	0	0.008	55	
580	Juvenile and Family Justice Center	3rd FL	Special janitors	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	1,000	24	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.003	3		0.000	0	0.002	3	
582	Juvenile and Family Justice Center	3rd FL	Special housing common	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	6	24	0.144	4,000	576	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	4,000	504	0.018	72		0.000	0	0.016	72	
583	Juvenile and Family Justice Center	3rd FL	Special housing common	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-*,*,*,*	4	25	0.100	4,000	400	Do Nothing	Do Nothing	4	25	0.100	90%	4,000	400	0.000	0		0.000	0	0.000	0	
584	Juvenile and Family Justice Center	3rd FL	Special housing rm	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	1,000	24	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.003	3		0.000	0	0.002	3	
585	Juvenile and Family Justice Center	3rd FL	Special housing cells	CFL-PL2P7W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-*,*,*,*	4	12	0.048	1,000	48	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	4	4	0.014	50%	1,000	14	0.034	34		0.000	0	0.017	34	
586	Juvenile and Family Justice Center	3rd FL	Special housing cells	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-*,*	4	59	0.236	1,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	50%	1,000	84	0.152	152		0.000	0	0.076	152	
587	Juvenile and Family Justice Center	3rd FL	Special housing shower	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-*,*,*,*	3	25	0.075	1,000	75	Do Nothing	Do Nothing	3	25	0.075	50%	1,000	75	0.000	0		0.000	0	0.000	0	
588	Juvenile and Family Justice Center	3rd FL	Training	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-*,*	2	59	0.118	3,120	368	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	131	0.076	237	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	39	0.068	276	
589	Juvenile and Family Justice Center	3rd FL	Supervisor	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-*,*	4	59	0.236	3,120	736	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	262	0.152	474	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	79	0.137	553	
590	Juvenile and Family Justice Center	3rd FL	Supervisor 2	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-*,*	2	59	0.118	3,120	368	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	131	0.076	237	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	39	0.068	276	
591	Juvenile and Family Justice Center	3rd FL	Admin off hall	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-*,*	5	59	0.295	4,000	1,180	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	21	0.105	90%	4,000	420	0.190	760		0.000	0	0.171	760	
592	Juvenile and Family Justice Center	3rd FL	Admin off open	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-*,*	21	59	1.239	3,120	3,866	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	21	21	0.441	90%	2,184	1,376	0.798	2,490	wireless large motion 300 degree Ceiling Sensor - PIR, Motion Deceased/On Wireless	0.000	413	0.718	2,903	
593	Juvenile and Family Justice Center	3rd FL	Supervisor 3	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-*,*	2	59	0.118	3,120	368	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	131	0.076	237	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	39	0.068	276	
594	Juvenile and Family Justice Center	3rd FL	Supervisor 3	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	3,120	75	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,184	66	0.003	9	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	20	0.003	29	
595	Juvenile and Family Justice Center	3rd FL	Conference	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	2	24	0.048	2,200	106	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,200	92	0.006	13		0.000	0	0.005	13	
596	Juvenile and Family Justice Center	3rd FL	Superintendent	F-F32T8-2	Wrap Narrow-4ft-Prismatic-Surface-4100-*,*	2	59	0.118	3,120	368	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	131	0.076	237	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	39	0.068	276	
597	Juvenile and Family Justice Center	3rd FL	Superintendent Liz Reetz	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	2	24	0.048	3,120	150	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	131	0.006	19	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	39	0.005	58	
598	Juvenile and Family Justice Center	3rd FL	Admin office storage	INCAN-IS0-1	Keyless-Screw in-Clear-Surface-3000-*,*	1	50	0.050	1,000	50	Retrofit	Omni-Directional Relamp E26 25W 3530L 3000K 120-277V	1	25	0.025	50%	1,000	25	0.025	25		0.000	0	0.013	25	
600	Juvenile and Family Justice Center	3rd FL	Admin office baths	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-*,*,*,*	2	25	0.050	2,000	100	Do Nothing	Do Nothing	2	25	0.050	90%	2,000	100	0.000	0		0.000	0	0.000	0	
601	Juvenile and Family Justice Center	3rd FL	JDC entry	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	8,760	210	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	100%	8,760	184	0.003	26		0.000	0	0.003	26	
602	Juvenile and Family Justice Center	3rd FL	Control rm	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	3	24	0.072	3,120	225	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	2,184	197	0.009	28	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	59	0.008	87	
641	Juvenile and Family Justice Center	3rd FL	318	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	3	24	0.072	1,000	72	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	50%	1,000	63	0.009	9		0.000	0	0.005	9	
150	Juvenile and Family Justice Center	4th FL	Conference rm 419	CFL-PL4P26W-2	10-in Downlight Round-4-Pin PL-S Horizontal-No Lens-Recessed- Tile-3000-*,*	4	52	0.208	2,200	458	Retrofit	10-in Downlight Round-4-Pin PL-S Horizontal-No Lens-Recessed- Tile-3000-*,*	4	18	0.072	90%	2,200	158	0.136	299		0.000	0	0.122	299	
151	Juvenile and Family Justice Center	4th FL	Conference rm 420	CFL-PL4P26W-2	10-in Downlight Round-4-Pin PL-S Horizontal-No Lens-Recessed- Tile-3000-*,*	4	52	0.208	2,200	458	Retrofit	10-in Downlight Round-4-Pin PL-S Horizontal-No Lens-Recessed- Tile-3000-*,*	4	18	0.072	90%	2,200	158	0.136	299		0.000	0	0.122	299	
152	Juvenile and Family Justice Center	4th FL	Conference rm 4																							

Lighting Upgrade Savings Calculations Methods

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fxt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fxt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
473	Juvenile and Family Justice Center	4th FL	JP 400 bath M	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	2,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6
474	Juvenile and Family Justice Center	4th FL	JP 400 bath M	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	2,000	48	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6
475	Juvenile and Family Justice Center	4th FL	JP 400 bath W	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	2,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6
476	Juvenile and Family Justice Center	4th FL	JP 400 bath W	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	2,000	48	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6
477	Juvenile and Family Justice Center	4th FL	Hall to East stairs	LED-L10-1	10-in Downlight Round-A19-Clear-*.**.*	2	10	0.020	8,760	175	Do Nothing	Do Nothing	2	10	0.020	100%	8,760	175	0.000	0		0.000	0	0.000	0
478	Juvenile and Family Justice Center	4th FL	Conference rm	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	5	24	0.120	1,540	185	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	21	0.105	90%	1,540	162	0.015	23		0.000	0	0.014	23
479	Juvenile and Family Justice Center	4th FL	Conference rm	LED-L10-1	10-in Downlight Round-A19-Clear-*.**.*	1	10	0.010	2,200	22	Do Nothing	Do Nothing	1	10	0.010	90%	2,200	22	0.000	0		0.000	0	0.000	0
480	Juvenile and Family Justice Center	4th FL	Conference rm main	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	5	24	0.120	2,200	264	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	21	0.105	90%	2,200	231	0.015	33		0.000	0	0.014	33
481	Juvenile and Family Justice Center	4th FL	Back Hall to stairs	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	3	24	0.072	8,760	631	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	100%	8,760	552	0.009	79		0.000	0	0.009	79
485	Juvenile and Family Justice Center	4th FL	Locked office	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	1	24	0.024	3,120	75	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,184	66	0.003	9	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	20	0.003	29
603	Juvenile and Family Justice Center	4th FL	Pod 800 mech	INCAN-I50-1	Keyless-Screw in-Clear-Surface-3000-*.*	4	50	0.200	1,000	200	Retrofit	Omni-Directional Relamp E26 25W 3530L 3000K 120-277V	4	25	0.100	50%	1,000	100	0.100	100		0.000	0	0.050	100
604	Juvenile and Family Justice Center	4th FL	Pod 800 storage	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	3	24	0.072	1,000	72	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	50%	1,000	63	0.009	9		0.000	0	0.005	9
605	Juvenile and Family Justice Center	4th FL	Pod 800 showers	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-*.**.*	2	25	0.050	3,120	156	Do Nothing	Do Nothing	2	25	0.050	90%	3,120	156	0.000	0		0.000	0	0.000	0
606	Juvenile and Family Justice Center	4th FL	Pod 800 cells	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-*.*	12	59	0.708	3,120	2,209	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	12	21	0.252	90%	3,120	786	0.456	1,423		0.000	0	0.410	1,423
607	Juvenile and Family Justice Center	4th FL	Pod 800 cells	CFL-PL2P7W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-*.**.*	12	12	0.144	3,120	449	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	12	4	0.042	90%	3,120	131	0.102	318		0.000	0	0.092	318
608	Juvenile and Family Justice Center	4th FL	Pod 800 cells	UFL-FU31T8/1-1	Prison bath fixture-2'-Vandal Proof-Wall-4100-Night light built in-*	12	28	0.336	2,184	734	Retrofit	U-bend 1-5/8in 1-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	12	13	0.156	90%	2,184	341	0.180	393		0.000	0	0.162	393
609	Juvenile and Family Justice Center	4th FL	Pod 800	CFL-PL2P7W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-*.**.*	2	12	0.024	3,120	75	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	2	4	0.007	90%	3,120	22	0.017	53		0.000	0	0.015	53
610	Juvenile and Family Justice Center	4th FL	Pod 800	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	6	24	0.144	2,184	314	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	2,184	275	0.018	39		0.000	0	0.016	39
611	Juvenile and Family Justice Center	4th FL	Pod 800	LIN-LED-L12T8LED-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4000-Type-A-*	11	24	0.264	2,184	577	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	11	21	0.231	90%	2,184	505	0.033	72		0.000	0	0.030	72
612	Juvenile and Family Justice Center	4th FL	419	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-*.*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38
613	Juvenile and Family Justice Center	4th FL	Pod 700	CFL-PL2P7W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-*.**.*	2	12	0.024	3,120	75	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	2	4	0.007	90%	3,120	22	0.017	53		0.000	0	0.015	53
614	Juvenile and Family Justice Center	4th FL	Pod 700	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Surface-4000-Type-A-*	6	24	0.144	2,184	314	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	2,184	275	0.018	39		0.000	0	0.016	39
615	Juvenile and Family Justice Center	4th FL	Pod 700	LIN-LED-L12T8LED-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4000-Type-A-*	8	24	0.192	2,184	419	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	8	21	0.168	90%	2,184	367	0.024	52		0.000	0	0.022	52
616	Juvenile and Family Justice Center	4th FL	Pod 700 cells	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-*.*	12	59	0.708	3,120	2,209	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	12	21	0.252	90%	3,120	786	0.456	1,423		0.000	0	0.410	1,423
617	Juvenile and Family Justice Center	4th FL	Pod 700 cells	CFL-PL2P7W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-*.**.*	12	12	0.144	3,120	449	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	12	4	0.042	90%	3,120	131	0.102	318		0.000	0	0.092	318
618	Juvenile and Family Justice Center	4th FL	Pod 700 cells	UFL-FU31T8/1-1	Prison bath fixture-2'-Vandal Proof-Wall-4100-Night light built in-*	12	28	0.336	2,184	734	Retrofit	U-bend 1-5/8in 1-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	12	13	0.156	90%	2,184	341	0.180	393		0.000	0	0.162	393
619	Juvenile and Family Justice Center	4th FL	Pod 700 showers	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-*.**.*	2	25	0.050	3,120	156	Do Nothing	Do Nothing	2	25	0.050	90%	3,120	156	0.000	0		0.000	0	0.000	0
620	Juvenile and Family Justice Center	4th FL	Pod 800 mop	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	1	24	0.024	1,000	24	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.003	3		0.000	0	0.002	3
621	Juvenile and Family Justice Center	4th FL	Pod 700 mop	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-*.*	1	59	0.059	500	30	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%									

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fxt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fxt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
374	Juvenile and Family Justice Center	E old building	Basement hall	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	6	24	0.144	8,760	1,261	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	100%	8,760	1,104	0.018	158		0.000	0	0.018	158	
375	Juvenile and Family Justice Center	E old building	Workshop	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	11	24	0.264	3,120	824	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	11	21	0.231	90%	3,120	721	0.033	103		0.000	0	0.030	103	
376	Juvenile and Family Justice Center	E old building	East stairs	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	14	24	0.336	1,000	336	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	14	21	0.294	50%	1,000	294	0.042	42		0.000	0	0.021	42	
377	Juvenile and Family Justice Center	E old building	Sprinkler rm	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	13	24	0.312	1,000	312	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	13	21	0.273	50%	1,000	273	0.039	39		0.000	0	0.020	39	
378	Juvenile and Family Justice Center	E old building	Electric	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	2	24	0.048	1,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	1,000	42	0.006	6		0.000	0	0.003	6	
379	Juvenile and Family Justice Center	E old building	Electric	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	4	24	0.096	1,000	96	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	50%	1,000	84	0.012	12		0.000	0	0.006	12	
380	Juvenile and Family Justice Center	E old building	South stairs	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	14	24	0.336	1,000	336	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	14	21	0.294	50%	1,000	294	0.042	42		0.000	0	0.021	42	
381	Juvenile and Family Justice Center	E old building	Storage	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	1	24	0.024	1,000	24	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.003	3		0.000	0	0.002	3	
382	Juvenile and Family Justice Center	E old building	Old it	LIN-LED-L12T8LED-1	De -LAMPED 2-1-4ft-Open-Recessed- Tile-4000-Type-A-*	2	12	0.024	1,000	24	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	1,000	42	-0.018	-18		0.000	0	-0.009	-18	
383	Juvenile and Family Justice Center	E old building	Service electric	LIN-LED-L12T8LED-1	De -LAMPED 2-1-4ft-Open-Recessed- Tile-4000-Type-A-*	3	12	0.036	1,000	36	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	50%	1,000	63	-0.027	-27		0.000	0	-0.014	-27	
384	Juvenile and Family Justice Center	E old building	Open work area	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	10	24	0.240	8,760	2,102	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	10	21	0.210	100%	8,760	1,840	0.030	263		0.000	0	0.030	263	
227	Juvenile and Family Justice Center	5th FL	Conference rm 519	CFL-PL4P26W-2	10-in Downlight Round-4-Pin PL-S Horizontal-No Lens-Recessed- Tile-3000-**-*	4	52	0.208	2,200	458	Retrofit	1000-2000L 3000/3500/4000/5000K 120-277V, add to 24W, add conf. sig.	4	18	0.072	90%	2,200	158	0.136	299		0.000	0	0.122	299	
228	Juvenile and Family Justice Center	5th FL	Conference rm 520	CFL-PL4P26W-2	10-in Downlight Round-4-Pin PL-S Horizontal-No Lens-Recessed- Tile-3000-**-*	4	52	0.208	2,200	458	Retrofit	1000-2000L 3000/3500/4000/5000K 120-277V, add to 24W, add conf. sig.	4	18	0.072	90%	2,200	158	0.136	299		0.000	0	0.122	299	
229	Juvenile and Family Justice Center	5th FL	Conference rm 521	CFL-PL4P26W-2	10-in Downlight Round-4-Pin PL-S Horizontal-No Lens-Recessed- Tile-3000-**-*	4	52	0.208	2,200	458	Retrofit	1000-2000L 3000/3500/4000/5000K 120-277V, add to 24W, add conf. sig.	4	18	0.072	90%	2,200	158	0.136	299		0.000	0	0.122	299	
230	Juvenile and Family Justice Center	5th FL	Conference rm 525	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	1,540	74	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	1,540	65	0.006	9		0.000	0	0.005	9	
240	Juvenile and Family Justice Center	5th FL	Court holding cell	LIN-LED-L12T8LED-2	Wrap-4ft-Vandal Proof-Wall-4000-Type-A-*	2	24	0.048	3,120	150	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	3,120	131	0.006	19		0.000	0	0.005	19	
241	Juvenile and Family Justice Center	5th FL	Court holding hall	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	2	24	0.048	8,760	420	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	100%	8,760	368	0.006	53		0.000	0	0.006	53	
352	Juvenile and Family Justice Center	5th FL	Court rm 526	CFL-PL4P36W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Hard-3000-**-*	15	46	0.690	1,540	1,063	Retrofit	1000-2000L 3000/3500/4000/5000K 120-277V, add to 24W, add conf. sig.	15	14	0.210	90%	1,540	323	0.480	739		0.000	0	0.432	739	
353	Juvenile and Family Justice Center	5th FL	Court rm 526	CFL-PL4P55W-1	8-in Downlight Round-4-Pin PL-L Vertical-No Lens-Recessed- Hard-4000-**-*	8	58	0.464	1,540	715	Retrofit	1000-2000L 3000/3500/4000/5000K 120-277V, add to 24W, add conf. sig.	8	24	0.192	90%	1,540	296	0.272	419		0.000	0	0.245	419	
354	Juvenile and Family Justice Center	5th FL	Court rm 526	CFL-PL4P36W-2	10-in Downlight Round-4-Pin PL-C Horizontal-No Lens-Recessed- Hard-3000-**-*	4	89	0.356	1,540	548	Retrofit	1000-2000L 3000/3500/4000/5000K 120-277V, add to 24W, add conf. sig.	4	24	0.096	90%	1,540	148	0.260	400		0.000	0	0.234	400	
355	Juvenile and Family Justice Center	5th FL	Court rm 526	CFL-PL4P36W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Hard-3000-Emergency Release	2	46	0.092	1,540	142	Retrofit	1000-2000L 3000/3500/4000/5000K 120-277V, add to 24W, add conf. sig.	2	14	0.028	90%	1,540	43	0.064	99		0.000	0	0.058	99	
356	Juvenile and Family Justice Center	5th FL	Court rm 526	F-F32T8-1	Court room wall wash-4ft-No Lens-Cove-4100-**-*	21	31	0.651	1,540	1,003	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	21	11	0.221	90%	1,540	340	0.431	663		0.000	0	0.387	663	
357	Juvenile and Family Justice Center	5th FL	Court rm 526	F-F25T8-1	Court room wall wash-3ft-No Lens-Cove-4100-**-*	8	26	0.208	1,540	320	Retrofit	3ft 1-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	8	12	0.096	90%	1,540	148	0.112	172		0.000	0	0.101	172	
358	Juvenile and Family Justice Center	5th FL	Court rm 526	LED-L10-2	Dec court light-A19-Diffuse-**-**-*	1	20	0.020	1,540	31	Do Nothing	Do Nothing	1	20	0.020	90%	1,540	31	0.000	0		0.000	0	0.000	0	
359	Juvenile and Family Justice Center	5th FL	Court rm 526	CFL-CFS13W-1	6-in Downlight Round-Screw-In Candelabra E11-No Lens-**-**-*	1	13	0.013	1,540	20	Retrofit	1000-2000L 3000/3500/4000/5000K 120-277V, add to 24W, add conf. sig.	1	7	0.007	90%	1,540	11	0.006	9		0.000	0	0.005	9	
360	Juvenile and Family Justice Center	5th FL	Court rm 526	CFL-PL4P26W-1	Court room scone-4-Pin PL-T Vertical-Diffuse-Wall-3000-**-*	2	27	0.054	1,540	83	Retrofit	LED 4-pin CFL G24q UL Type-B HOR 8W 900L 3000K 120-277V	2	8	0.016	90%	1,540	25	0.038	59		0.000	0	0.034	59	
242	Juvenile and Family Justice Center	5th FL	Court vestibule 526	CFL-PL4P26W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Tile-3000-**-*	2	27	0.054	6,132	331	Retrofit	1000-2000L 3000/3500/4000/5000K 120-277V, add to 24W, add conf. sig.	2	12	0.024	90%	6,132	147	0.030	184		0.000	0	0.027	184	
243	Juvenile and Family Justice Center	5th FL	Conference rm 527	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	24	0.048	1,540	74	Retrofit	4ft 2-lamp T8 TLED Type-B glass SLED														

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fxt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fxt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
265	Juvenile and Family Justice Center	5th FL	B546	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	4	24	0.096	2,184	210	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	183	0.012	26		0.000	0	0.011	26	
266	Juvenile and Family Justice Center	5th FL	Jury bath	LIN-LED-L10T8LED-2	Wall Wsh-3ft-Open-Recessed- Hard-4000-Type-A-*	1	20	0.020	2,000	40	Retrofit	3ft 2-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	1	24	0.024	90%	2,000	48	-0.004	-8		0.000	0	-0.004	-8	
267	Juvenile and Family Justice Center	5th FL	Jury bath 2	LIN-LED-L10T8LED-2	Wall Wsh-3ft-Open-Recessed- Hard-4000-Type-A-*	1	20	0.020	2,000	40	Retrofit	3ft 2-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	1	24	0.024	90%	2,000	48	-0.004	-8		0.000	0	-0.004	-8	
268	Juvenile and Family Justice Center	5th FL	Jury bath hall	LIN-LED-L12T8LED-1	De -LAMPED 3-1-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	12	0.024	8,760	210	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	100%	8,760	368	-0.018	-158		0.000	0	-0.018	-158	
269	Juvenile and Family Justice Center	5th FL	Court rm it 1	LIN-LED-L12T8LED-2	Strip-4ft-Open-Chain-4000-Type-A-*	1	24	0.024	1,000	24	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	700	21	0.003	3	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	6	0.002	9	
270	Juvenile and Family Justice Center	5th FL	Court rm it 2	LIN-LED-L12T8LED-2	Strip-4ft-Open-Chain-4000-Type-A-*	1	24	0.024	1,000	24	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	700	21	0.003	3	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	6	0.002	9	
271	Juvenile and Family Justice Center	5th FL	Back hall to court rms	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	14	24	0.336	4,000	1,344	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	14	21	0.294	90%	4,000	1,176	0.042	168		0.000	0	0.038	168	
272	Juvenile and Family Justice Center	5th FL	Back hall to court rms	CFL-PL4P26W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Tile-3000-**-*	1	27	0.027	4,000	108	Retrofit	17A Downlight Kit 6-0-10V Dim 7/8-12W 600-1000L 3000/3500/4000/5000K 120-277V 4000K 4000K 4000K 4000K	1	12	0.012	90%	4,000	48	0.015	60		0.000	0	0.014	60	
273	Juvenile and Family Justice Center	5th FL	509 hall	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	8	24	0.192	4,000	768	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	8	21	0.168	90%	4,000	672	0.024	96		0.000	0	0.022	96	
274	Juvenile and Family Justice Center	5th FL	505	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	4	24	0.096	2,184	210	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	183	0.012	26		0.000	0	0.011	26	
275	Juvenile and Family Justice Center	5th FL	506	LIN-LED-L12T8LED-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	36	0.072	2,184	157	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.009	20		0.000	0	0.008	20	
276	Juvenile and Family Justice Center	5th FL	506	LED-L25-1	6-in Downlight Round-LED can-Open-Recessed- Tile-**-*	5	25	0.125	2,184	273	Do Nothing	Do Nothing	5	25	0.125	90%	2,184	273	0.000	0		0.000	0	0.000	0	
277	Juvenile and Family Justice Center	5th FL	506 bath	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	4,000	96	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	84	0.003	12	Wireless Large motion-300 degree Ceiling Sensor - PIR, Motion-Devised-41 Wireless	0.000	42	0.003	54	
278	Juvenile and Family Justice Center	5th FL	506 bath	CFL-PL4P26W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Tile-3000-**-*	1	27	0.027	4,000	108	Retrofit	17A Downlight Kit 6-0-10V Dim 7/8-12W 600-1000L 3000/3500/4000/5000K 120-277V 4000K 4000K 4000K 4000K	1	12	0.012	90%	2,000	48	0.015	60		0.000	24	0.014	84	
279	Juvenile and Family Justice Center	5th FL	504	LIN-LED-L12T8LED-2	De -LAMPED 3-2-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	4	24	0.096	2,184	210	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,184	183	0.012	26		0.000	0	0.011	26	
280	Juvenile and Family Justice Center	5th FL	501	LIN-LED-L12T8LED-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-4000-Type-A-*	2	36	0.072	2,184	157	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.009	20		0.000	0	0.008	20	
281	Juvenile and Family Justice Center	5th FL	501	LED-L25-1	6-in Downlight Round-LED can-Open-Recessed- Tile-**-*	5	25	0.125	2,184	273	Do Nothing	Do Nothing	5	25	0.125	90%	2,184	273	0.000	0		0.000	0	0.000	0	
282	Juvenile and Family Justice Center	5th FL	501 bath	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	4,000	96	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	84	0.003	12	Wireless Large motion-300 degree Ceiling Sensor - PIR, Motion-Devised-41 Wireless	0.000	42	0.003	54	
283	Juvenile and Family Justice Center	5th FL	501 bath	CFL-PL4P26W-1	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Tile-3000-**-*	1	27	0.027	4,000	108	Retrofit	17A Downlight Kit 6-0-10V Dim 7/8-12W 600-1000L 3000/3500/4000/5000K 120-277V 4000K 4000K 4000K 4000K	1	12	0.012	90%	2,000	48	0.015	60		0.000	24	0.014	84	
284	Juvenile and Family Justice Center	5th FL	Janitor	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	1	24	0.024	500	12	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	500	11	0.003	2		0.000	0	0.002	2	
285	Juvenile and Family Justice Center	5th FL	Restroom family	LIN-LED-L10T8LED-1	Courtroom cove-3ft-Open-Cove-3000-Type-A-*	2	10	0.020	2,000	40	Retrofit	3ft 1-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	2	12	0.024	90%	2,000	48	-0.004	-8		0.000	0	-0.004	-8	
286	Juvenile and Family Justice Center	5th FL	Restroom family	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	2,000	48	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6	
287	Juvenile and Family Justice Center	5th FL	Restroom men	CFL-PL4P26W-2	12-in Downlight Square-4-Pin CFLS Horizontal-4 cell Parabolic Louver-Recessed- Tile-3000-**-*	1	52	0.052	2,000	104	Retrofit	(2) LED 4-pin CFL G24q UL Type-B HOR 8W 950L 4000K 120-277V	1	16	0.016	90%	2,000	32	0.036	72		0.000	0	0.032	72	
288	Juvenile and Family Justice Center	5th FL	Restroom men	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	2,000	48	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6	
289	Juvenile and Family Justice Center	5th FL	Restroom women	CFL-PL4P26W-2	12-in Downlight Square-4-Pin CFLS Horizontal-4 cell Parabolic Louver-Recessed- Tile-3000-**-*	1	52	0.052	2,000	104	Retrofit	(2) LED 4-pin CFL G24q UL Type-B HOR 8W 950L 4000K 120-277V	1	16	0.016	90%	2,000	32	0.036	72		0.000	0	0.032	72	
290	Juvenile and Family Justice Center	5th FL	Restroom women	LIN-LED-L12T8LED-1	Wall Wsh-4ft-Bathroom-Cove-4000-Type-A-*	2	12	0.024	2,000	48	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	11	0.021	90%	2,000	42	0.003	6		0.000	0	0.003	6	
291	Juvenile and Family Justice Center	5th FL	It	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	1	24	0.024	500	12	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	350	11	0.003	2	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	3	0.002	5	
292	Juvenile and Family Justice Center	5th FL	Elevator hall	CFL-PL4P26W-2	8-in Downlight Round-4-Pin PL-T Vertical-No Lens-Recessed- Tile-3000-**-*	9	52	0.																		

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
13	Public Works Facility	Public Works	R1-009	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
14	Public Works Facility	Public Works	Open cubical	LED-L35-1	Troffer 2x2-Fixture-Flat Panel-Recessed-Tile-4000-.*	1	35	0.035	3,120	109	Do Nothing	Do Nothing	1	35	0.035	90%	3,120	109	0.000	0		0.000	0	0.000	0
15	Public Works Facility	Public Works	Open cubical	CFL-PL4P42W-1	8-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Tile-3500-.*	1	46	0.046	3,120	144	Retrofit	1100-2000L 3000/3500/4000/5000K 120-032V-coated 40W-add-neof-line	1	18	0.018	90%	2,184	56	0.028	87	Wireless Large motion 300 degree Ceiling Sensor - PIR, Battery Powered (2) Wireless	0.000	17	0.025	104
16	Public Works Facility	Public Works	Open cubical	F-F32T8-2	Indirect-Direct-4ft-Diffuse-Suspended-3500-.*	3	59	0.177	3,120	552	Retrofit	4ft 2-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	3	30	0.090	90%	2,184	281	0.087	271		0.000	84	0.078	356
17	Public Works Facility	Public Works	Open cubical	F-F32T8-4	Indirect-Direct-8ft-Diffuse-Suspended-3500-.*	11	112	1.232	3,120	3,844	Retrofit	4ft 4-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	11	60	0.660	90%	2,184	2,059	0.572	1,785		0.000	618	0.515	2,402
18	Public Works Facility	Public Works	Open cubical	F-F32T8-6	Indirect-Direct-12ft-Diffuse-Suspended-3500-.*	33	175	5.775	3,120	18,018	Retrofit	4ft 6-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	33	90	2.970	90%	2,184	9,266	2.805	8,752		0.000	2,780	2.525	11,532
19	Public Works Facility	Public Works	Open cubical	EXIT-LED1.5W-1	Exit-White-Red Letters-Wall-.*.*	1	2	0.002	3,120	6	Do Nothing	Do Nothing	1	2	0.002	90%	3,120	6	0.000	0		0.000	0	0.000	0
20	Public Works Facility	Public Works	Vestibule	CFL-PL4P42W-1	8-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Tile-3500-.*	2	46	0.092	8,760	806	Retrofit	1100-2000L 3000/3500/4000/5000K 120-032V-coated 40W-add-neof-line	2	18	0.036	100%	8,760	315	0.056	491		0.000	0	0.056	491
21	Public Works Facility	Public Works	Vestibule	EXIT-LED1.5W-1	Exit-White-Red Letters-Wall-.*.*	1	2	0.002	8,760	18	Do Nothing	Do Nothing	1	2	0.002	100%	8,760	18	0.000	0		0.000	0	0.000	0
22	Public Works Facility	Public Works	Main Corridor	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	25	53	1.325	4,000	5,300	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	25	26	0.650	90%	4,000	2,600	0.675	2,700		0.000	0	0.608	2,700
23	Public Works Facility	Public Works	Main Corridor	EXIT-LED1.5W-1	Exit-White-Red Letters-Wall-.*.*	1	2	0.002	8,760	18	Do Nothing	Do Nothing	1	2	0.002	100%	8,760	18	0.000	0		0.000	0	0.000	0
24	Public Works Facility	Public Works	Main Corridor	CFL-PL4P42W-1	8-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Tile-3500-.*	2	46	0.092	4,000	368	Retrofit	1100-2000L 3000/3500/4000/5000K 120-032V-coated 40W-add-neof-line	2	18	0.036	90%	4,000	144	0.056	224		0.000	0	0.050	224
25	Public Works Facility	Public Works	Main Corridor	CFL-PL4P42W-1	8-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Tile-3500-.*	3	46	0.138	4,000	552	Retrofit	1100-2000L 3000/3500/4000/5000K 120-032V-coated 40W-add-neof-line	3	18	0.054	90%	4,000	216	0.084	336		0.000	0	0.076	336
30	Public Works Facility	Public Works	Main Corridor	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	3	89	0.267	4,000	1,068	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	32	0.095	90%	4,000	378	0.173	690		0.000	0	0.155	690
31	Public Works Facility	Public Works	Main Corridor	LIN-LED-L15T8LED-2	Troffer-2X2-Diffuse-Recessed- Tile-5000-Bar kits-*	1	30	0.030	4,000	120	Do Nothing	Do Nothing	1	30	0.030	90%	4,000	120	0.000	0		0.000	0	0.000	0
26	Public Works Facility	Public Works	Vestibule -rear	CFL-PL4P42W-1	8-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Tile-3500-.*	1	46	0.046	8,760	403	Retrofit	1100-2000L 3000/3500/4000/5000K 120-032V-coated 40W-add-neof-line	1	18	0.018	100%	8,760	158	0.028	245		0.000	0	0.028	245
27	Public Works Facility	Public Works	Vestibule -rear	EXIT-LED1.5W-1	Exit-White-Red Letters-Wall-.*.*	1	2	0.002	8,760	18	Do Nothing	Do Nothing	1	2	0.002	100%	8,760	18	0.000	0		0.000	0	0.000	0
28	Public Works Facility	Public Works	R1-041	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	6	53	0.318	1,540	490	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	6	26	0.156	90%	1,540	240	0.162	249		0.000	0	0.146	249
29	Public Works Facility	Public Works	R1-042	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	6	53	0.318	1,540	490	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	6	26	0.156	90%	1,540	240	0.162	249		0.000	0	0.146	249
32	Public Works Facility	Public Works	1-036 server	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	6	89	0.534	1,000	534	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	32	0.189	50%	700	189	0.345	345	Wireless Large motion 300 degree Ceiling Sensor - PIR, Battery Powered (4) Wireless	0.000	57	0.173	402
33	Public Works Facility	Public Works	1-034	F-F32T8-2	Industrial-4ft-Wire Cage-Chain-4100-.*	1	59	0.059	1,000	59	Replace	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38
34	Public Works Facility	Public Works	RR	F-F32T8-2	Wall Wash-4ft-Diffuse-Recessed- Tile-3500-.*	4	59	0.236	2,000	472	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,000	168	0.152	304		0.000	0	0.137	304
35	Public Works Facility	Public Works	RR	F-F17T8-2	Wall Wash-2ft-Diffuse-Recessed- Tile-3500-.*	1	33	0.033	2,000	66	Retrofit	2ft 2-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	1	14	0.014	90%	2,000	28	0.019	38		0.000	0	0.017	38
36	Public Works Facility	Public Works	RR	LED-L10-1	8-in Downlight Round-Fixture-Clear-Recessed- Tile-3500-White-*	1	10	0.010	2,000	20	Do Nothing	Do Nothing	1	10	0.010	90%	2,000	20	0.000	0		0.000	0	0.000	0
37	Public Works Facility	Public Works	RR	CFL-PL4P13W-1	8-in Downlight Round-4-Pin PL-T Horizontal-Glass- Prismatic-Recessed- Tile-3500-.*	1	16	0.016	2,000	32	Retrofit	600-1000L 3000/3500/4000/5000K 120-032V-coated 7W-add-neof-line	1	7	0.007	90%	2,000	14	0.009	18		0.000	0	0.008	18
38	Public Works Facility	Public Works	RR	F-F32T8-2	Wall Wash-4ft-Diffuse-Recessed- Tile-3500-.*	2	59	0.118	2,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,000	84	0.076	152		0.000	0	0.068	152
39	Public Works Facility	Public Works	RR	F-F17T8-2	Wall Wash-2ft-Diffuse-Recessed- Tile-3500-.*	4	33	0.132	2,000	264	Retrofit	2ft 2-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	4	14	0.056	90%	2,000	112	0.076	152		0.000	0	0.068	152
41	Public Works Facility	Public Works	RR	CFL-PL4P13W-1	8-in Downlight Round-4-Pin PL-T Horizontal-Glass- Prismatic-Recessed- Tile-3500-.*	2	16	0.032	2,000	64	Retrofit	600-1000L 3000/3500/4000/5000K 120-032V-coated 7W-add-neof-line	2	7	0.014	90%	2,000	28	0.018	36		0.000	0	0.016	36
42	Public Works Facility	Public Works	R1-024	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	6	53	0.318	1,540	490	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	6	26	0.156	90%	1,540	240	0.162	249		0.000	0	0.146	249

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fict Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fict Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
63	Public Works Facility	Public Works	1-047	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	8	89	0.712	2,184	1,555	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	8	32	0.252	90%	2,184	550	0.460	1,005		0.000	0	0.414	1,005	
64	Public Works Facility	Public Works	1-085B	F-F32T8-2	Industrial-4ft-Wire Cage-Chain-4100-.*	16	59	0.944	1,000	944	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	16	21	0.336	50%	1,000	336	0.608	608		0.000	0	0.304	608	
65	Public Works Facility	Public Works	1-085B	F-F32T8-3	Troffer-2X4-Paracube-Suspended-3500-.*	1	89	0.089	1,000	89	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	50%	1,000	32	0.058	58		0.000	0	0.029	58	
66	Public Works Facility	Public Works	Arden Hills Public Works	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	11	53	0.583	2,184	1,273	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	11	26	0.286	90%	2,184	625	0.297	649		0.000	0	0.267	649	
67	Public Works Facility	Public Works	Office 1	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	4	53	0.212	2,184	463	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	4	26	0.104	90%	2,184	227	0.108	236		0.000	0	0.097	236	
68	Public Works Facility	Public Works	Jeff Frid office	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	2	53	0.106	2,184	232	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	2	26	0.052	90%	2,184	114	0.054	118		0.000	0	0.049	118	
69	Public Works Facility	Public Works	1-063	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	7	53	0.371	2,200	816	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	7	26	0.182	90%	2,200	400	0.189	416		0.000	0	0.170	416	
70	Public Works Facility	Public Works	1-056	LIN-LED-L15T8LED-2	Industrial- Turret-4ft-Wire Cage-Chain-5000-Type-A-*	24	30	0.720	4,380	3,154	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	24	21	0.504	90%	4,380	2,208	0.216	946		0.000	0	0.194	946	
71	Public Works Facility	Public Works	1-056	LED-L50-1	Strip 8ft-Fixture-Diffuse-Chain-4000-.*	2	50	0.100	4,380	438	Do Nothing	Do Nothing	2	50	0.100	90%	4,380	438	0.000	0		0.000	0	0.000	0	
72	Public Works Facility	Public Works	Main garage	LED-L50-1	Strip 8ft-Fixture-Diffuse-Chain-4000-.*	3	50	0.150	4,380	657	Do Nothing	Do Nothing	3	50	0.150	90%	4,380	657	0.000	0		0.000	0	0.000	0	
73	Public Works Facility	Public Works	Main garage	LED-L100-1	Troffer 2x2-Fixture-Diffuse-Chain-5000-White-*	14	100	1.400	4,380	6,132	Do Nothing	Do Nothing	14	100	1.400	90%	4,380	6,132	0.000	0		0.000	0	0.000	0	
74	Public Works Facility	Public Works	Mounds view storage garage	LED-L100-1	Troffer 2x2-Fixture-Diffuse-Chain-5000-White-*	4	100	0.400	4,380	1,752	Do Nothing	Do Nothing	4	100	0.400	90%	4,380	1,752	0.000	0		0.000	0	0.000	0	
75	Public Works Facility	Public Works	Arden hill mech shop	LED-L100-1	Troffer 2x2-Fixture-Diffuse-Chain-5000-White-*	3	100	0.300	3,066	920	Do Nothing	Do Nothing	3	100	0.300	90%	3,066	920	0.000	0		0.000	0	0.000	0	
76	Public Works Facility	Public Works	Mounds view mech shop	LED-L200-1	Troffer 2x2-Fixture-Diffuse-Chain-5000-White-*	3	200	0.600	3,066	1,840	Do Nothing	Do Nothing	3	200	0.600	90%	3,066	1,840	0.000	0		0.000	0	0.000	0	
77	Public Works Facility	Public Works	Break rm	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-.*	15	89	1.335	2,200	2,937	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	15	32	0.473	90%	2,200	1,040	0.863	1,898		0.000	0	0.776	1,898	
78	Public Works Facility	Public Works	Break rm	LED-L10-1	6-in Downlight Round-Fixture-Clear-Recessed- Tile-3500-White-*	2	10	0.020	2,200	44	Do Nothing	Do Nothing	2	10	0.020	90%	2,200	44	0.000	0		0.000	0	0.000	0	
79	Public Works Facility	Public Works	1-065	F-F32T8-2	Wall Wash-4ft-Diffuse-Recessed- Hard-3500-.*	1	59	0.059	2,000	118	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	42	0.038	76		0.000	0	0.034	76	
80	Public Works Facility	Public Works	1-065	CFL-PL4P42W-1	6-in Downlight Round-4-Pin PL-T Vertical-Glass- Prismatic-Recessed- Hard-3500-.*	2	46	0.092	2,000	184	Retrofit	1100-2000L 3000/3500/4000/5000K 120-227V 100W 4.4A	2	14	0.028	90%	2,000	56	0.064	128		0.000	0	0.058	128	
81	Public Works Facility	Public Works	1-067	F-F32T8-2	Wall Wash-4ft-Diffuse-Recessed- Tile-3500-.*	3	59	0.177	2,000	354	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	2,000	126	0.114	228		0.000	0	0.103	228	
82	Public Works Facility	Public Works	1-067	CFL-PL4P42W-1	6-in Downlight Round-4-Pin PL-T Vertical-Glass- Prismatic-Recessed- Hard-3500-.*	2	46	0.092	2,000	184	Retrofit	1100-2000L 3000/3500/4000/5000K 120-227V 100W 4.4A	2	14	0.028	90%	2,000	56	0.064	128		0.000	0	0.058	128	
83	Public Works Facility	Public Works	1-067	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-.*	4	89	0.356	2,000	712	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	32	0.126	90%	2,000	252	0.230	460		0.000	0	0.207	460	
84	Public Works Facility	Public Works	1-067	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Hard-3500-.*	1	89	0.089	2,000	178	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,000	63	0.058	115		0.000	0	0.052	115	
85	Public Works Facility	Public Works	1-067	CFL-PL4P42W-1	6-in Downlight Round-4-Pin PL-T Vertical-Glass- Prismatic-Recessed- Hard-3500-.*	5	46	0.230	2,000	460	Retrofit	1100-2000L 3000/3500/4000/5000K 120-227V 100W 4.4A	5	14	0.070	90%	2,000	140	0.160	320		0.000	0	0.144	320	
86	Public Works Facility	Public Works	Laundry	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-.*	1	89	0.089	2,200	196	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	1,540	69	0.058	127	wireless Large motion 300 degree Ceiling Sensor - PIR, Battery Replaced (4) Wireless	0.000	21	0.052	147	
87	Public Works Facility	Public Works	1-066	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	6	53	0.318	3,120	992	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	6	26	0.156	90%	2,184	487	0.162	505	wireless Large motion 300 degree Ceiling Sensor - PIR, Battery Replaced (4) Wireless	0.000	146	0.146	651	
88	Public Works Facility	Public Works	1-068	LED-L35-1	Troffer 2x4-Fixture-Center Basket-Recessed- Tile-4000-.*	3	35	0.105	2,184	229	Do Nothing	Do Nothing	3	35	0.105	90%	2,184	229	0.000	0		0.000	0	0.000	0	
89	Public Works Facility	Public Works	Shop supply rm	LED-L50-1	Strip 8ft-Fixture-Diffuse-Chain-4000-.*	2	50	0.100	3,066	307	Do Nothing	Do Nothing	2	50	0.100	90%	3,066	307	0.000	0		0.000	0	0.000	0	
90	Public Works Facility	Public Works	Floor plans	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-.*	1	89	0.089	2,200	196	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	1,540	69	0.058	127	wireless Large motion 300 degree Ceiling Sensor - PIR, Battery Replaced (4) Wireless	0.000	21	0.052	147	
91	Public Works Facility	Public Works	Back green hall	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	49	53	2.597	4,000	10,388	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	49	26	1.274	90%	4,000	5,096	1.323	5,292		0.000	0	1.191	5,292	

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
112	Public Works Facility	Public Works	1-127	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-.*	18	89	1.602	2,200	3,524	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	18	32	0.567	90%	2,200	1,247	1.035	2,277		0.000	0	0.932	2,277
113	Public Works Facility	Public Works	Sign shop vestibule	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	1	53	0.053	4,000	212	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	1	26	0.026	90%	4,000	104	0.027	108		0.000	0	0.024	108
114	Public Works Facility	Public Works	1-104	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	26	89	2.314	2,184	5,054	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	26	32	0.819	90%	2,184	1,789	1.495	3,265		0.000	0	1.346	3,265
115	Public Works Facility	Public Works	Sign shop Private office	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	3,120	555	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	197	0.115	359	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted (4) Wireless	0.000	59	0.104	418
116	Public Works Facility	Public Works	Sign storage	F-F32T8-4	Industrial- Turret-8ft-No Lens-Chain-4100-.*	6	112	0.672	3,066	2,060	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	42	0.252	90%	3,066	773	0.420	1,288		0.000	0	0.378	1,288
117	Public Works Facility	Public Works	Sign storage	F-F32T8-3	Troffer-2X4-Paracube-Suspended-3500-.*	2	89	0.178	4,380	780	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	4,380	276	0.115	504		0.000	0	0.104	504
118	Public Works Facility	Public Works	Garage door 165	F-F32T8-4	Industrial- Turret-8ft-No Lens-Chain-4100-.*	6	112	0.672	3,066	2,060	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	42	0.252	90%	3,066	773	0.420	1,288		0.000	0	0.378	1,288
119	Public Works Facility	Public Works	Landscaping shop	F-F32T8-4	Industrial- Turret-8ft-No Lens-Chain-4100-.*	4	112	0.448	4,380	1,962	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	42	0.168	90%	4,380	736	0.280	1,226		0.000	0	0.252	1,226
120	Public Works Facility	Public Works	Landscaping shop	LIN-LED-L15T8LED-4	Industrial- Turret-8ft-Open-Surface-4000-Type-A-*	3	60	0.180	4,380	788	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	42	0.126	90%	4,380	552	0.054	237		0.000	0	0.049	237
121	Public Works Facility	Public Works	Landscaping shop	F-F32T8-2	Industrial-4ft-Wire Cage-Chain-4100-.*	1	59	0.059	4,380	258	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	4,380	92	0.038	166		0.000	0	0.034	166
123	Public Works Facility	Public Works	Landscaping shop	LIN-LED-L15T8LED-2	Wrap-4ft-Missing Lens-Wall-5000-Type-A-*	2	30	0.060	4,380	263	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	4,380	184	0.018	79		0.000	0	0.016	79
124	Public Works Facility	Public Works	1-075B	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	20	89	1.780	2,000	3,560	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	20	32	0.630	90%	2,000	1,260	1.150	2,300		0.000	0	1.035	2,300
126	Public Works Facility	Public Works	1-075B	CFL-PL4P42W-1	6-in Downlight Round-4-Pin PL-T Vertical-Glass- Prismatic-Recessed- Tile-3500-.*	2	46	0.092	2,000	184	Retrofit	1100-2000L 3000/3500/4000/5000K 120-227V max 14W	2	14	0.028	90%	2,000	56	0.064	128		0.000	0	0.058	128
127	Public Works Facility	Public Works	1-075B	LED-L10-1	6-in Downlight Round-Fixture-Clear-Recessed- Tile-3500-White-*	9	10	0.090	2,000	180	Do Nothing	Do Nothing	9	10	0.090	90%	2,000	180	0.000	0		0.000	0	0.000	0
128	Public Works Facility	Public Works	1-075B	CFL-PL4P42W-1	6-in Downlight Round-4-Pin PL-T Vertical-Glass- Prismatic-Recessed- Hard-3500-.*	3	46	0.138	2,000	276	Retrofit	1100-2000L 3000/3500/4000/5000K 120-227V max 14W	3	14	0.042	90%	2,000	84	0.096	192		0.000	0	0.086	192
129	Public Works Facility	Public Works	1-075B	F-F32T8-2	Wall Wash-4ft-Diffuse-Recessed- Tile-3500-.*	13	59	0.767	2,000	1,534	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	13	21	0.273	90%	2,000	546	0.494	988		0.000	0	0.445	988
125	Public Works Facility	Public Works	Back hall to shop	LED-L10-1	6-in Downlight Round-Fixture-Clear-Recessed- Tile-3500-White-*	2	10	0.020	4,000	80	Do Nothing	Do Nothing	2	10	0.020	90%	4,000	80	0.000	0		0.000	0	0.000	0
130	Public Works Facility	Public Works	1-083	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	10	89	0.890	2,000	1,780	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	10	32	0.315	90%	2,000	630	0.575	1,150		0.000	0	0.518	1,150
131	Public Works Facility	Public Works	1-083	CFL-PL4P42W-1	6-in Downlight Round-4-Pin PL-T Vertical-Glass- Prismatic-Recessed- Tile-3500-.*	4	46	0.184	2,000	368	Retrofit	1100-2000L 3000/3500/4000/5000K 120-227V max 14W	4	14	0.056	90%	2,000	112	0.128	256		0.000	0	0.115	256
133	Public Works Facility	Public Works	1-083	CFL-PL4P42W-1	6-in Downlight Round-4-Pin PL-T Vertical-Glass- Prismatic-Recessed- Hard-3500-.*	4	46	0.184	2,000	368	Retrofit	1100-2000L 3000/3500/4000/5000K 120-227V max 14W	4	14	0.056	90%	2,000	112	0.128	256		0.000	0	0.115	256
134	Public Works Facility	Public Works	1-083	F-F32T8-2	Wall Wash-4ft-Diffuse-Recessed- Tile-3500-.*	5	59	0.295	2,000	590	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	21	0.105	90%	2,000	210	0.190	380		0.000	0	0.171	380
135	Public Works Facility	Public Works	West Entry to heavy equipment	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	1	53	0.053	4,000	212	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	1	26	0.026	90%	4,000	104	0.027	108		0.000	0	0.024	108
136	Public Works Facility	Public Works	Small hall to heavy equipment	F-F54T5/HO-8	Indirect-Direct-8ft-Eggcrate-Chain-4100-.*	2	468	0.936	4,000	3,744	Retrofit	4ft 8-lamp T5HO TLED Type-B coated glass S/D ended 25W 3500L 4000K	2	200	0.400	90%	4,000	1,600	0.536	2,144		0.000	0	0.482	2,144
137	Public Works Facility	Public Works	Small hall to heavy equipment	CFL-PL4P42W-1	6-in Downlight Round-4-Pin PL-T Vertical-Glass- Prismatic-Recessed- Hard-3500-.*	2	46	0.092	4,000	368	Retrofit	1100-2000L 3000/3500/4000/5000K 120-227V max 14W	2	14	0.028	90%	4,000	112	0.064	256		0.000	0	0.058	256
138	Public Works Facility	Public Works	East Entry to heavy equipment	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	1	53	0.053	4,000	212	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	1	26	0.026	90%	4,000	104	0.027	108		0.000	0	0.024	108
139	Public Works Facility	Public Works	1-127	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-.*	6	89	0.534	1,540	822	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	32	0.189	90%	1,540	291	0.345	531		0.000	0	0.311	531
140	Public Works Facility	Public Works	Vehicle maintenance	LED-L100-1	Troffer 2x2-Fixture-Diffuse-Chain-5000-White-*	95	100	9.500	5,840	55,480	Do Nothing	Do Nothing	95	100	9.500	90%	5,840	55,480	0.000	0		0.000	0	0.000	0
142	Public Works Facility	Public Works	Vehicle maintenance	LIN-LED-L15T8LED-4	Industrial- Turret-8ft-Open-Surface-4000-Type-A-*	12	60	0.720	5,840	4,205	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	12	42	0.504	90%	5,840	2,943	0.216	1,261		0.000	0	0.194	1,261
141	Public Works Facility																								

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
167	Public Works Facility	Public Works	Plows and vehicles	LED-L100-1	Washdown-Fixture-Diffuse-Chain-5000-White-*	15	100	1.500	3,504	5,256	Do Nothing	Do Nothing	15	100	1.500	90%	3,504	5,256	0.000	0		0.000	0	0.000	0
163	Public Works Facility	Public Works	Soils lab 1-109	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-**-*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
165	Public Works Facility	Public Works	Soils lab storage	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-**-*	2	89	0.178	1,000	178	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	50%	1,000	63	0.115	115		0.000	0	0.058	115
166	Public Works Facility	Public Works	Soils lab	F-F32T8-4	Industrial- Turret-8ft-No Lens-Chain-4100-**-*	4	112	0.448	1,540	690	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	42	0.168	90%	1,540	259	0.280	431		0.000	0	0.252	431
168	Public Works Facility	Public Works	1-029	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-**-*	1	89	0.089	1,540	137	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	1,540	49	0.058	89		0.000	0	0.052	89
169	Public Works Facility	Public Works	Demark comm	F-F32T8-2	Industrial-4ft-Wire Cage-Chain-4100-**-*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38
170	Public Works Facility	Out buildings	K9 garage	F-F54T5/HO-8	Indirect-Direct-8ft-Eggcrate-Chain-4100-**-*	2	468	0.936	3,504	3,280	Retrofit	4ft 8-lamp T5HO TLED Type-B coated glass S/D ended 25W 3500L 4000K	2	200	0.400	90%	3,504	1,402	0.536	1,878		0.000	0	0.482	1,878
171	Public Works Facility	Out buildings	Conference area	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-**-*	9	89	0.801	1,540	1,234	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	9	32	0.284	90%	1,540	437	0.518	797		0.000	0	0.466	797
172	Public Works Facility	Out buildings	Storage	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-**-*	2	89	0.178	1,000	178	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	50%	1,000	63	0.115	115		0.000	0	0.058	115
173	Public Works Facility	Out buildings	Commander John	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-**-*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	0	0.104	251
174	Public Works Facility	Out buildings	4-104 restroom	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-**-*	1	89	0.089	4,380	390	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,190	138	0.058	252		0.000	69	0.052	321
175	Public Works Facility	Out buildings	4-105	F-F32T8-2	Industrial-4ft-Wire Cage-Chain-4100-**-*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38
176	Public Works Facility	Out buildings	Salt shed led nis	LED-L200-1	Troffer 2x2-Fixture-Diffuse-Chain-5000-White-*	6	200	1.200	1,000	1,200	Do Nothing	Do Nothing	6	200	1.200	50%	1,000	1,200	0.000	0		0.000	0	0.000	0
177	Public Works Facility	Out buildings	Semi storage led Nis	LED-L200-1	Troffer 2x2-Fixture-Diffuse-Chain-5000-White-*	1	200	0.200	1,000	200	Do Nothing	Do Nothing	1	200	0.200	50%	1,000	200	0.000	0		0.000	0	0.000	0
418	Ramsey County Correctional Facility	Penthouse	Penthouse stairs	LIN-LED-L12T8LED-2	Wrap-4ft-Open-Surface-4000-Type-C-*	2	24	0.048	8,760	420	Do Nothing	Do Nothing	2	24	0.048	100%	8,760	420	0.000	0		0.000	0	0.000	0
419	Ramsey County Correctional Facility	Penthouse	Penthouse main	LIN-LED-L12T8LED-4	Strip-8ft-Open-Surface-4000-Type-C-*	1	48	0.048	1,000	48	Do Nothing	Do Nothing	1	48	0.048	50%	1,000	48	0.000	0		0.000	0	0.000	0
420	Ramsey County Correctional Facility	Penthouse	Penthouse main	F-F32T8-4	Industrial- Turret-8ft-No Lens-Chain-4100-**-*	12	112	1.344	1,000	1,344	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	12	42	0.504	50%	1,000	504	0.840	840		0.000	0	0.420	840
421	Ramsey County Correctional Facility	Penthouse	Penthouse small	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-**-*	3	59	0.177	1,000	177	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	50%	1,000	63	0.114	114		0.000	0	0.057	114
319	Ramsey County Correctional Facility	2nd FI	400	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-**-*	40	59	2.360	3,120	7,363	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	40	21	0.840	90%	3,120	2,621	1.520	4,742		0.000	0	1.368	4,742
320	Ramsey County Correctional Facility	2nd FI	400	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-**-*	7	59	0.413	3,120	1,289	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	7	21	0.147	90%	3,120	459	0.266	830		0.000	0	0.239	830
321	Ramsey County Correctional Facility	2nd FI	400	CFL-PL2P13W-2	Dorm shower-2-Pin PL-C Horizontal-Vandal proof-Recessed- Hard-3500-**-*	1	35	0.035	3,120	109	Retrofit	(2) LED 2-pin CFL GX23 UL Type-B HOR 6W 500L 3500K 120-277V	1	12	0.012	90%	3,120	37	0.023	72		0.000	0	0.021	72
322	Ramsey County Correctional Facility	2nd FI	400	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-**-**-*	8	11	0.088	3,120	275	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	8	4	0.028	90%	3,120	87	0.060	187		0.000	0	0.054	187
323	Ramsey County Correctional Facility	2nd FI	400	CFL-PL2P18W-2	Carlopy-2-Pin PL-C Horizontal-Dimuse-Surface-Catwalk vandalism proof assuming-**-*	2	45	0.090	3,120	281	Retrofit	(2) LED 2-pin CFL GX23 UL Type-B HOR 6W 550L 4000K 120-277V	2	12	0.024	90%	3,120	75	0.066	206		0.000	0	0.059	206
324	Ramsey County Correctional Facility	2nd FI	400	INCAN-I10-1	Step Light-See Pictures-Frosted-Wall-2700-**-*	15	10	0.150	3,120	468	Retrofit	0.8W LED T6 2700K candelabra base 120V	15	1	0.015	90%	3,120	47	0.135	421		0.000	0	0.122	421
325	Ramsey County Correctional Facility	2nd FI	300	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-**-*	32	59	1.888	3,120	5,891	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	32	21	0.672	90%	3,120	2,097	1.216	3,794		0.000	0	1.094	3,794
326	Ramsey County Correctional Facility	2nd FI	300	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-**-*	7	59	0.413	3,120	1,289	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	7	21	0.147	90%	3,120	459	0.266	830		0.000	0	0.239	830
327	Ramsey County Correctional Facility	2nd FI	300	CFL-PL2P13W-2	Dorm shower-2-Pin PL-C Horizontal-Vandal proof-Recessed- Hard-3500-**-*	1	35	0.035	3,120	109	Retrofit	(2) LED 2-pin CFL GX23 UL Type-B HOR 6W 500L 3500K 120-277V	1	12	0.012	90%	3,120	37	0.023	72		0.000	0	0.021	72
328	Ramsey County Correctional Facility	2nd FI	300	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-**-**-*	8	11	0.088	3,120	275	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	8	4	0.028	90%	3,120	87	0.060	187		0.000	0	0.054	187
329	Ramsey County Correctional Facility	2nd FI	300	CFL-PL2P18W-2	Carlopy-2-Pin PL-C Horizontal-Dimuse-Surface-Catwalk vandalism proof assuming-**-*	2	45	0.090	3,120	281	Retrofit	(2) LED 2-pin CFL GX23 UL Type-B HOR 6W 550L 4000K 120-277V	2	12	0.024	90%	3,120	75	0.066	206		0.000	0	0.059	206

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fxt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fxt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
376	Ramsey County Correctional Facility	2nd Fl	Dorm 600 janitors	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-.*	1	59	0.059	3,120	184	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	3,120	66	0.038	119		0.000	0	0.034	119	
377	Ramsey County Correctional Facility	2nd Fl	Dorm 500	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-.*	12	59	0.708	3,120	2,209	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	12	21	0.252	90%	3,120	786	0.456	1,423		0.000	0	0.410	1,423	
378	Ramsey County Correctional Facility	2nd Fl	Dorm 500	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-.*	3	59	0.177	3,120	552	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	3,120	197	0.114	356		0.000	0	0.103	356	
379	Ramsey County Correctional Facility	2nd Fl	Dorm 500	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-.*-.*	6	11	0.066	3,120	206	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	6	4	0.021	90%	3,120	66	0.045	140		0.000	0	0.041	140	
380	Ramsey County Correctional Facility	2nd Fl	Dorm 500 janitors	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-.*	1	59	0.059	3,120	184	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	3,120	66	0.038	119		0.000	0	0.034	119	
381	Ramsey County Correctional Facility	2nd Fl	Sprinkler mech	F-F32T8-2	Strip-4ft-No Lens-Chain-4100-.*	9	59	0.531	1,000	531	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	9	21	0.189	50%	1,000	189	0.342	342		0.000	0	0.171	342	
382	Ramsey County Correctional Facility	2nd Fl	Program rm 2A	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	6	89	0.534	3,120	1,666	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	32	0.189	90%	2,184	590	0.345	1,076	Wall Switch Sensor - 2-Pole Kit w/ PIR Sensor & Sidecar Switch, Manual On, <xx = color> (1)	0.000	177	0.311	1,253	
383	Ramsey County Correctional Facility	2nd Fl	Program rm 2B	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	6	89	0.534	3,120	1,666	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	32	0.189	90%	2,184	590	0.345	1,076	Wall Switch Sensor - 2-Pole Kit w/ PIR Sensor & Sidecar Switch, Manual On, <xx = color> (1)	0.000	177	0.311	1,253	
384	Ramsey County Correctional Facility	2nd Fl	Utility closet	F-F32T8-4	Industrial- Turret-8ft-No Lens-Chain-4100-.*	1	112	0.112	500	56	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	42	0.042	50%	500	21	0.070	35		0.000	0	0.035	35	
385	Ramsey County Correctional Facility	2nd Fl	Staff baths hall	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	1	89	0.089	8,760	780	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	100%	8,760	276	0.058	504		0.000	0	0.058	504	
386	Ramsey County Correctional Facility	2nd Fl	Staff baths w	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	1	89	0.089	4,000	356	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,000	126	0.058	230	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	63	0.052	293	
387	Ramsey County Correctional Facility	2nd Fl	Staff baths m	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	1	89	0.089	4,000	356	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,000	126	0.058	230	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	63	0.052	293	
388	Ramsey County Correctional Facility	2nd Fl	Inmate bath	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Hard-4100-.*	1	89	0.089	4,000	356	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,000	126	0.058	230	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	63	0.052	293	
389	Ramsey County Correctional Facility	2nd Fl	Program rm 2C	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	6	89	0.534	3,120	1,666	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	32	0.189	90%	2,184	590	0.345	1,076	Wall Switch Sensor - 2-Pole Kit w/ PIR Sensor & Sidecar Switch, Manual On, <xx = color> (1)	0.000	177	0.311	1,253	
390	Ramsey County Correctional Facility	2nd Fl	Program rm 2C closet	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	500	11	0.038	19		0.000	0	0.019	19	
392	Ramsey County Correctional Facility	2nd Fl	Case worker hall	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	2	89	0.178	8,760	1,559	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	100%	8,760	552	0.115	1,007		0.000	0	0.115	1,007	
393	Ramsey County Correctional Facility	2nd Fl	Chem health RR	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	29	0.052	209	
394	Ramsey County Correctional Facility	2nd Fl	Chem health 2	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	29	0.052	209	
395	Ramsey County Correctional Facility	2nd Fl	Case worker closet	F-F32T8-1	Wrap Narrow-4ft-Prismatic-Wall-4100-.*	1	31	0.031	500	16	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	11	0.011	50%	500	5	0.021	10		0.000	0	0.010	10	
396	Ramsey County Correctional Facility	2nd Fl	Chem health 3 KJ	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	29	0.052	209	
397	Ramsey County Correctional Facility	2nd Fl	LMS	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	29	0.052	209	
398	Ramsey County Correctional Facility	2nd Fl	Field Training	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	29	0.052	209	
399	Ramsey County Correctional Facility	2nd Fl	Program rm 2D	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	2	89	0.178	3,120	555	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	197	0.115	359	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	59	0.104	418	
400	Ramsey County Correctional Facility	2nd Fl	Women's learning back hall	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	1	89	0.089	8,760	780	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	100%	8,760	276	0.058	504		0.000	0	0.058	504	
401	Ramsey County Correctional Facility	2nd Fl	Women's learning offices	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	29	0.052	209	
402	Ramsey County Correctional Facility	2nd Fl	Women's learning offices	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	29	0.052	209	
403	Ramsey County Correctional Facility	2nd Fl	Women's learning offices	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	29	0.052		

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
74	Ramsey County Correctional Facility	1st Fl main	Supply 1000	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	2	24	0.048	1,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	1,000	42	0.006	6		0.000	0	0.003	6	
75	Ramsey County Correctional Facility	1st Fl main	Supply 1000 2nd Fl	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	2	24	0.048	1,000	48	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	1,000	42	0.006	6		0.000	0	0.003	6	
76	Ramsey County Correctional Facility	1st Fl main	Showers 1000	CFL-PL2P13W-2	Dorm shower-2-Pin PL-C Horizontal-Vandal proof-Recessed- Hard-3500-**-*	4	35	0.140	6,132	858	Retrofit	(2) LED 2-pin CFL GX23 UL Type-B HOR 6W 500L 3500K 120-277V	4	12	0.048	90%	6,132	294	0.092	564		0.000	0	0.083	564	
77	Ramsey County Correctional Facility	1st Fl main	1000 Private office	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-**-*	2	59	0.118	3,120	368	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	131	0.076	237	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	39	0.068	276	
78	Ramsey County Correctional Facility	1st Fl main	1100	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	12	89	1.068	3,120	3,332	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	12	32	0.378	90%	2,184	1,179	0.690	2,153	Wireless Large motion 300 degree Ceiling Sensor - PIR, Manual On, <xx = color> (1)	0.000	354	0.621	2,507	
79	Ramsey County Correctional Facility	1st Fl main	1100	F-F32T8-3	Troffer-2X4-Vandal Proof-Surface-4100-**-*	3	89	0.267	3,120	833	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	32	0.095	90%	2,184	295	0.173	538	Wireless Large motion 300 degree Ceiling Sensor - PIR, Manual On, <xx = color> (1)	0.000	88	0.155	627	
80	Ramsey County Correctional Facility	1st Fl main	1100	F-F32T8-2	Wrap Narrow-4ft-Prismatic-Wall-4100-**-*	1	59	0.059	3,120	184	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,184	66	0.038	119	Wireless Large motion 300 degree Ceiling Sensor - PIR, Manual On, <xx = color> (1)	0.000	20	0.034	138	
81	Ramsey County Correctional Facility	1st Fl main	1100	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Hard-4000-Type-A-*	7	36	0.252	3,120	786	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	7	32	0.221	90%	2,184	688	0.032	98		0.000	206	0.028	305	
82	Ramsey County Correctional Facility	1st Fl main	1200	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	15	89	1.335	3,120	4,165	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	15	32	0.473	90%	2,184	1,474	0.863	2,691	Wireless Large motion 300 degree Ceiling Sensor - PIR, Manual On, <xx = color> (1)	0.000	442	0.776	3,133	
83	Ramsey County Correctional Facility	1st Fl main	1200	INCAN-ISO-1	8-in Downlight-Screw in-Clear-Recessed-Tile-3000-**-*	2	50	0.100	3,120	312	Retrofit	1X 8-in Downlight Kit's - 8-in-Dia 140-1824W 1100-2000L 3000/3500/4000/5000K 120-277V, 3000K 40W, add conf. disc.	2	18	0.036	90%	2,184	112	0.064	200	Wireless Large motion 300 degree Ceiling Sensor - PIR, Manual On, <xx = color> (1)	0.000	34	0.058	233	
85	Ramsey County Correctional Facility	1st Fl main	1200	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Hard-4000-Type-A-*	7	36	0.252	3,120	786	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	7	32	0.221	90%	2,184	688	0.032	98		0.000	206	0.028	305	
86	Ramsey County Correctional Facility	1st Fl main	Office 1	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	2	89	0.178	3,120	555	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	197	0.115	359	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	59	0.104	418	
87	Ramsey County Correctional Facility	1st Fl main	Supply	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-**-*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38	
88	Ramsey County Correctional Facility	1st Fl main	Interview rm	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	29	0.052	209	
89	Ramsey County Correctional Facility	1st Fl main	Interview rm 2	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	29	0.052	209	
90	Ramsey County Correctional Facility	1st Fl main	Women's admin	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	7	36	0.252	4,000	1,008	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	7	32	0.221	90%	4,000	882	0.032	126		0.000	0	0.028	126	
92	Ramsey County Correctional Facility	1st Fl main	Women's admin	CFL-CFS23W-3	Track-Screw-In Candelabra E11-No Lens-Track-3000-**-*	3	69	0.207	4,000	828	Retrofit	(3) LED PAR38 25 degree E26 13.2w 1280L 3000K 120V	3	40	0.119	90%	4,000	475	0.088	353		0.000	0	0.079	353	
91	Ramsey County Correctional Facility	1st Fl main	Interview rm 3	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	29	0.052	209	
93	Ramsey County Correctional Facility	1st Fl main	Dorm hall	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	6	89	0.534	8,760	4,678	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	32	0.189	100%	8,760	1,656	0.345	3,022		0.000	0	0.345	3,022	
94	Ramsey County Correctional Facility	1st Fl main	Admin locker	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	3	89	0.267	8,760	2,339	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	32	0.095	90%	5,256	828	0.173	1,511	Wireless Large motion 300 degree Ceiling Sensor - PIR, Manual On, <xx = color> (1)	0.000	331	0.155	1,842	
95	Ramsey County Correctional Facility	1st Fl main	Search rm	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Hard-4000-Type-A-*	1	36	0.036	8,760	315	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	100%	8,760	276	0.005	39		0.000	0	0.005	39	
96	Ramsey County Correctional Facility	1st Fl main	Holding cell	LIN-LED-L12T8LED-3	Troffer-1X4-Vandal Proof-Surface-4000-Type-A-*	2	36	0.072	8,760	631	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	100%	8,760	552	0.009	79		0.000	0	0.009	79	
97	Ramsey County Correctional Facility	1st Fl main	Holding cell small	LIN-LED-L12T8LED-3	Troffer-1X4-Vandal Proof-Surface-4000-Type-A-*	1	36	0.036	8,760	315	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	100%	8,760	276	0.005	39		0.000	0	0.005	39	
98	Ramsey County Correctional Facility	1st Fl main	Clothing rm	LIN-LED-L12T8LED-4	Industrial- Turret-8ft-Open-Chain-4000-Type-A-*	1	48	0.048	8,760	420	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	42	0.042	100%	8,760	368	0.006	53		0.000	0	0.006	53	
99	Ramsey County Correctional Facility	1st Fl main	Property rm	F-F32T8-4	Industrial- Turret-8ft-No Lens-Chain-4100-**-*	2	112	0.224	8,760	1,962	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	42	0.084	100%	8,760	736	0.140	1,226		0.000	0	0.140	1,226	
100	Ramsey County Correctional Facility	1st Fl main	Rec yard entry	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Hard-4100-**-*	1	89	0.089	8,760	780	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	100%	8,760	276	0.058	504		0.000	0	0.058	504	
101	Ramsey County Correctional Facility	1st Fl main	Admin Assistance	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	2	89	0.178	3,120	555	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	197	0.115	359	Wall Switch Sensor - P					

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
122	Ramsey County Correctional Facility	1st Fl main	Staff baths	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	1	36	0.036	4,000	144	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,000	126	0.005	18	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	63	0.004	81	
123	Ramsey County Correctional Facility	1st Fl main	Staff baths	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	1	36	0.036	4,000	144	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,000	126	0.005	18	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	63	0.004	81	
124	Ramsey County Correctional Facility	1st Fl main	Janitor	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-**-*	1	59	0.059	500	30	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	500	11	0.038	19	Wireless Large motion 300 degree Ceiling Sensor - PIR, Motion Deactivated (1) Wireless	0.000	0	0.019	19	
125	Ramsey County Correctional Facility	1st Fl main	MH offices	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	5	89	0.445	3,120	1,388	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	32	0.158	90%	2,184	491	0.288	897	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	147	0.259	1,044	
126	Ramsey County Correctional Facility	1st Fl main	Program rm 1A	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	4	89	0.356	2,200	783	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	32	0.126	90%	2,200	277	0.230	506		0.000	0	0.207	506	
127	Ramsey County Correctional Facility	1st Fl main	North building hall	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	10	24	0.240	8,760	2,102	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	10	21	0.210	100%	8,760	1,840	0.030	263		0.000	0	0.030	263	
128	Ramsey County Correctional Facility	1st Fl main	Main hall	LIN-LED-L12T8LED-1	Wrap-4ft-Vandal Proof-Wall-4000-Type-C-*	12	12	0.144	8,760	1,261	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	12	11	0.126	100%	8,760	1,104	0.018	158		0.000	0	0.018	158	
129	Ramsey County Correctional Facility	1st Fl main	100	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-**-*	34	59	2.006	3,120	6,259	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	34	21	0.714	90%	3,120	2,228	1.292	4,031		0.000	0	1.163	4,031	
130	Ramsey County Correctional Facility	1st Fl main	100	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-**-*	5	59	0.295	3,120	920	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	21	0.105	90%	3,120	328	0.190	593		0.000	0	0.171	593	
131	Ramsey County Correctional Facility	1st Fl main	100	CFL-PL2P13W-2	Dorm shower-2-Pin PL-C Horizontal-Vandal proof-Recessed- Hard-3500-**-*	1	35	0.035	3,120	109	Retrofit	(2) LED 2-pin CFL GX23 UL Type-B HOR 6W 500L 3500K 120-277V	1	12	0.012	90%	3,120	37	0.023	72		0.000	0	0.021	72	
132	Ramsey County Correctional Facility	1st Fl main	100	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-**-**-*	8	11	0.088	3,120	275	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	8	4	0.028	90%	3,120	87	0.060	187		0.000	0	0.054	187	
161	Ramsey County Correctional Facility	1st Fl main	100	CFL-PL2P18W-2	Canopy-2-Pin PL-C Horizontal-Diffuse-Surface-Catwalk vandalism proof assuming-**-**-*	2	45	0.090	3,120	281	Retrofit	(2) LED 2-pin CFL GX23 UL Type-B HOR 6W 550L 4000K 120-277V	2	12	0.024	90%	3,120	75	0.066	206		0.000	0	0.059	206	
163	Ramsey County Correctional Facility	1st Fl main	100	INCAN-I10-1	Step Light-See Pictures-Frosted-Wall-2700-**-*	15	10	0.150	8,760	1,314	Retrofit	0.8W LED T6 2700K candelabra base 120V	15	1	0.015	100%	8,760	131	0.135	1,183		0.000	0	0.135	1,183	
133	Ramsey County Correctional Facility	1st Fl main	Janitor rms in dorms	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-**-*	2	59	0.118	500	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	500	21	0.076	38		0.000	0	0.038	38	
134	Ramsey County Correctional Facility	1st Fl main	200	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-**-*	40	59	2.360	3,120	7,363	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	40	21	0.840	90%	3,120	2,621	1.520	4,742		0.000	0	1.368	4,742	
135	Ramsey County Correctional Facility	1st Fl main	200	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-**-*	7	59	0.413	3,120	1,289	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	7	21	0.147	90%	3,120	459	0.266	830		0.000	0	0.239	830	
136	Ramsey County Correctional Facility	1st Fl main	200	CFL-PL2P13W-2	Dorm shower-2-Pin PL-C Horizontal-Vandal proof-Recessed- Hard-3500-**-*	1	35	0.035	3,120	109	Retrofit	(2) LED 2-pin CFL GX23 UL Type-B HOR 6W 500L 3500K 120-277V	1	12	0.012	90%	3,120	37	0.023	72		0.000	0	0.021	72	
137	Ramsey County Correctional Facility	1st Fl main	200	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-**-**-*	8	11	0.088	3,120	275	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	8	4	0.028	90%	3,120	87	0.060	187		0.000	0	0.054	187	
164	Ramsey County Correctional Facility	1st Fl main	200	CFL-PL2P18W-2	Canopy-2-Pin PL-C Horizontal-Diffuse-Surface-Catwalk vandalism proof assuming-**-**-*	2	45	0.090	3,120	281	Retrofit	(2) LED 2-pin CFL GX23 UL Type-B HOR 6W 550L 4000K 120-277V	2	12	0.024	90%	3,120	75	0.066	206		0.000	0	0.059	206	
165	Ramsey County Correctional Facility	1st Fl main	200	INCAN-I10-1	Step Light-See Pictures-Frosted-Wall-2700-**-*	15	10	0.150	3,120	468	Retrofit	0.8W LED T6 2700K candelabra base 120V	15	1	0.015	90%	3,120	47	0.135	421		0.000	0	0.122	421	
138	Ramsey County Correctional Facility	1st Fl main	Janitor rms in dorms 200	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-**-*	2	59	0.118	500	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	500	21	0.076	38		0.000	0	0.038	38	
139	Ramsey County Correctional Facility	1st Fl main	Health services	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	11	24	0.264	3,120	824	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	11	21	0.231	90%	2,184	721	0.033	103	wireless Large motion 300 degree Ceiling Sensor - PIR, Motion Deactivated (1) Wireless	0.000	216	0.030	319	
155	Ramsey County Correctional Facility	1st Fl main	Health services	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	2	36	0.072	3,120	225	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	197	0.009	28		0.000	59	0.008	87	
140	Ramsey County Correctional Facility	1st Fl main	Health bath	F-F32T8-3	Troffer-2X4-Vandal Proof-Surface-4100-**-*	1	89	0.089	4,000	356	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,000	126	0.058	230	wireless Large motion 300 degree Ceiling Sensor - PIR, Motion Deactivated (1) Wireless	0.000	63	0.052	293	
141	Ramsey County Correctional Facility	1st Fl main	Med rm	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-**-*	1	59	0.059	3,120	184	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,184	66	0.038	119	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	20	0.034	138	
142	Ramsey County Correctional Facility	1st Fl main	Patient rms	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	4	89	0.356	3,120	1,111	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	32	0.126	90%	2,184	393	0.230	718	Wall Switch Sensor - 2-Pole Kit w/ PIR Sensor & Sidecar Switch, <xx = color> (1)	0.000	118	0.207	836	
143	Ramsey County Correctional Facility	1st Fl main	Patient rms	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-**-*	4	89	0.356	3,120	1,111	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	32	0.126	90%	2,184	393	0.230	718	Wall Switch Sensor - 2-Pole Kit w/ PIR Sensor & Sidecar Switch, <xx = color> (1)	0.000	118	0.207	836	
144	Ramsey County Correctional Facility	1st Fl main	ISO rm	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-**-*	1	59	0.059																		

Lighting Upgrade Savings Calculations Methods

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
220	Ramsey County Correctional Facility	1st Fl main	Supervisor hall	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-*.*	3	89	0.267	3,120	833	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	32	0.095	90%	3,120	295	0.173	538		0.000	0	0.155	538	
221	Ramsey County Correctional Facility	1st Fl main	Supervisor	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-*.*	2	89	0.178	3,120	555	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	197	0.115	359	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	59	0.104	418	
222	Ramsey County Correctional Facility	1st Fl main	Deputy director	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-*.*	2	89	0.178	3,120	555	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	197	0.115	359	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	59	0.104	418	
223	Ramsey County Correctional Facility	1st Fl main	Locker closet	F-F32T8-2	Strip-4ft-No Lens-Chain-4100-*.*	1	59	0.059	500	30	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	500	11	0.038	19		0.000	0	0.019	19	
224	Ramsey County Correctional Facility	1st Fl main	Lieutenant	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-*.*	3	89	0.267	3,120	833	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	32	0.095	90%	2,184	295	0.173	538	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	88	0.155	627	
225	Ramsey County Correctional Facility	1st Fl main	Ass. Super	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-*.*	3	89	0.267	3,120	833	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	32	0.095	90%	2,184	295	0.173	538	Wall Switch Sensor - 2-Pole Kit w/ PIR Sensor & Sidecar Switch, <xx = color> (1)	0.000	88	0.155	627	
226	Ramsey County Correctional Facility	1st Fl main	Supervisor bath	CFL-PL2P18W-2	Canopy-2-Pin CFLs horizontal-dimuse-Surface-Catwalk vandalism proof assuming-*.*	1	45	0.045	4,000	180	Retrofit	(2) LED 2-pin CFL GX23 UL Type-B HOR 6W 550L 4000K 120-277V	1	12	0.012	90%	2,000	48	0.033	132	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	24	0.030	156	
227	Ramsey County Correctional Facility	1st Fl main	Supervisor bath	LED-L10-3	Vanity-Globe-Open-Wall-*.*.*	1	30	0.030	4,000	120	Do Nothing	Do Nothing	1	30	0.030	90%	4,000	120	0.000	0		0.000	0	0.000	0	
228	Ramsey County Correctional Facility	1st Fl main	Superintendent	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-*.*	4	89	0.356	3,120	1,111	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	32	0.126	90%	2,184	393	0.230	718	Wall Switch Sensor - 2-Pole Kit w/ PIR Sensor & Sidecar Switch, <xx = color> (1)	0.000	118	0.207	836	
229	Ramsey County Correctional Facility	1st Fl main	Storage closet	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-*.*	1	89	0.089	500	45	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	50%	500	16	0.058	29		0.000	0	0.029	29	
230	Ramsey County Correctional Facility	1st Fl main	Supervisor hall	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-*.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	3,120	98	0.058	179		0.000	0	0.052	179	
231	Ramsey County Correctional Facility	1st Fl main	Interview room 4	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-*.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wall Switch Sensor - 2-Pole Kit w/ PIR Sensor & Sidecar Switch, <xx = color> (1)	0.000	29	0.052	209	
232	Ramsey County Correctional Facility	1st Fl main	Interview room 3	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-*.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wall Switch Sensor - 2-Pole Kit w/ PIR Sensor & Sidecar Switch, <xx = color> (1)	0.000	29	0.052	209	
233	Ramsey County Correctional Facility	1st Fl main	Hall to dining	LIN-LED-L12T8LED-1	Wrap-4ft-Vandal Proof-Wall-4000-Type-C-*	5	12	0.060	4,000	240	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	11	0.053	90%	4,000	210	0.008	30		0.000	0	0.007	30	
234	Ramsey County Correctional Facility	1st Fl main	Staff bath men	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	1	24	0.024	4,000	96	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.003	12	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.003	54	
235	Ramsey County Correctional Facility	1st Fl main	Staff bath women	LIN-LED-L12T8LED-2	Wrap-4ft-Prismatic-Wall-4000-Type-A-*	1	24	0.024	4,000	96	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.003	12	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.003	54	
236	Ramsey County Correctional Facility	1st Fl main	Storage clothing	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	1	36	0.036	1,000	36	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	50%	1,000	32	0.005	5		0.000	0	0.002	5	
237	Ramsey County Correctional Facility	1st Fl main	Staff bath hall	LIN-LED-L12T8LED-2	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	2	24	0.048	8,760	420	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	100%	8,760	368	0.006	53		0.000	0	0.006	53	
238	Ramsey County Correctional Facility	1st Fl main	Sally port	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Tile-4100-*.*	4	59	0.236	4,000	944	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	4,000	336	0.152	608		0.000	0	0.137	608	
239	Ramsey County Correctional Facility	1st Fl main	Laundry	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	15	36	0.540	3,120	1,685	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	15	32	0.473	90%	2,184	1,474	0.068	211	Wireless Large motion 300 degree Ceiling Sensor - PIR, Battery Powered (2) Wireless	0.000	442	0.061	653	
240	Ramsey County Correctional Facility	1st Fl main	Laundry	LED-L40-1	Strip 4ft-Na-Diffuse-Surface-4000-*.*	5	40	0.200	3,120	624	Do Nothing	Do Nothing	5	40	0.200	90%	3,120	624	0.000	0		0.000	0	0.000	0	
241	Ramsey County Correctional Facility	1st Fl main	Laundry	F-F32T8-3	Troffer-2X4-Prismatic-Surface-4100-*.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	Wireless Power Pack Load Controller, 20A (1)	0.000	29	0.052	209	
242	Ramsey County Correctional Facility	1st Fl main	Laundry bath	LIN-LED-L12T8LED-3	Troffer-2X4-Vandal Proof-Recessed- Hard-4000-Type-A-*	1	36	0.036	4,000	144	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,000	126	0.005	18	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	63	0.004	81	
243	Ramsey County Correctional Facility	1st Fl main	Operations	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-4100-*.*	8	89	0.712	3,120	2,221	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	8	32	0.252	90%	2,184	786	0.460	1,435	Wall Switch Sensor - 2-Pole Kit w/ PIR Sensor & Sidecar Switch, <xx = color> (1)	0.000	236	0.414	1,671	
244	Ramsey County Correctional Facility	1st Fl main	Dinning	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	31	36	1.116	2,200	2,455	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	31	32	0.977	90%	2,200	2,148	0.140	307		0.000	0	0.126	307	
245	Ramsey County Correctional Facility	1st Fl main	Dinning	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Surface-4000-Type-A-*	5	36	0.180	2,200	396	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	32	0.158	90%	2,200	347	0.023	50		0.000	0	0.020	50	
246	Ramsey County Correctional Facility	1st Fl main	Inmate clothing	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	4	36	0.144	3,120	449	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	32	0.126	90%	2,184	393	0.018	56	Wall Switch Sensor - 2-Pole Kit w/ PIR Sensor & Sidecar Switch, <xx = color> (1)	0.000	118	0.016	174	
247	Ramsey County Correctional Facility	1st Fl main	Kitchen	F-F32T8-3																						

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
269	Ramsey County Correctional Facility	1st FI main	Control rm	INCAN-175-1	4-in Downlight-Na-Open-Recessed- Tile-A-*	3	75	0.225	8,760	1,971	Retrofit	TAA Downlight Kit 4" 0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V Led-0.04	3	9	0.027	100%	8,760	237	0.198	1,734		0.000	0	0.198	1,734	
270	Ramsey County Correctional Facility	1st FI main	Control key rm	UFL-FU32T8/6-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-4100-*	1	59	0.059	8,760	517	Retrofit	U-bend 6in 2-lamp T8 TLED UL Type-A/B 13W 1900L 4000K 120-277V ES	1	26	0.026	100%	8,760	228	0.033	289		0.000	0	0.033	289	
271	Ramsey County Correctional Facility	1st FI main	Control rm bath	F-F32T8-2	Wrap Narrow-4ft-Prismatic-Wall-4100-*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Recessed (4) Wireless	0.000	42	0.034	194	
272	Ramsey County Correctional Facility	1st FI main	Lieutenant office cameras	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	3	36	0.108	8,760	946	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	32	0.095	100%	8,760	828	0.014	118	wall Switch Sensor - 2-Pole Kit w/ PIR Sensor & Sidecar Switch, 4w, 3 poles (1)	0.000	0	0.014	118	
273	Ramsey County Correctional Facility	1st FI main	Chaplain	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	1	36	0.036	3,120	112	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.005	14		0.000	29	0.004	44	
274	Ramsey County Correctional Facility	1st FI main	Due process hearing	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Recessed- Tile-4000-Type-A-*	1	36	0.036	2,184	79	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	69	0.005	10		0.000	0	0.004	10	
275	Ramsey County Correctional Facility	1st FI main	Chaplain 2	LIN-LED-L12T8LED-3	Troffer-2X4-Prismatic-Surface-4000-Type-A-*	4	36	0.144	3,120	449	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	32	0.126	90%	2,184	393	0.018	56	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	118	0.016	174	
276	Ramsey County Correctional Facility	1st FI main	South hall	LIN-LED-L12T8LED-1	Wrap-4ft-Vandal Proof-Wall-4000-Type-C-*	8	12	0.096	4,000	384	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	8	11	0.084	90%	4,000	336	0.012	48		0.000	0	0.011	48	
283	Ramsey County Correctional Facility	1st FI main	South hall	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-*	2	11	0.022	4,000	88	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	2	4	0.007	90%	4,000	28	0.015	60		0.000	0	0.014	60	
277	Ramsey County Correctional Facility	1st FI main	Electric home monitor rms	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	6	59	0.354	3,120	1,104	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	2,184	393	0.228	711	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Recessed (4) Wireless	0.000	118	0.205	829	
278	Ramsey County Correctional Facility	1st FI main	Electric home monitor rms	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-*	1	11	0.011	3,120	34	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	1	4	0.004	90%	2,184	11	0.008	23		0.000	3	0.007	27	
279	Ramsey County Correctional Facility	1st FI main	South storage	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38	
280	Ramsey County Correctional Facility	1st FI main	South janitorial	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38	
281	Ramsey County Correctional Facility	1st FI main	South locker	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	5	59	0.295	4,000	1,180	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	21	0.105	90%	2,400	420	0.190	760	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Recessed (4) Wireless	0.000	168	0.171	928	
282	Ramsey County Correctional Facility	1st FI main	South locker	CFL-PL2P13W-2	Canopy-2-Pin PL-C Horizontal-Diffuse-Surface-3500-*	1	35	0.035	4,000	140	Retrofit	LED 2-pin CFL GX23 UL Type-B HOR 6W 500L 3500K 120-277V	1	6	0.006	90%	2,400	24	0.029	116		0.000	10	0.026	126	
284	Ramsey County Correctional Facility	1st FI main	South storage / IT	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	3	59	0.177	1,000	177	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	50%	1,000	63	0.114	114		0.000	0	0.057	114	
285	Ramsey County Correctional Facility	1st FI main	South storage cubicle	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	6	59	0.354	3,120	1,104	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	2,184	393	0.228	711	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Recessed (4) Wireless	0.000	118	0.205	829	
286	Ramsey County Correctional Facility	1st FI main	South storage cubicle	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-*	1	11	0.011	3,120	34	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	1	4	0.004	90%	2,184	11	0.008	23		0.000	3	0.007	27	
287	Ramsey County Correctional Facility	1st FI main	SW Isolation W	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	3	59	0.177	3,120	552	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	3,120	197	0.114	356		0.000	0	0.103	356	
288	Ramsey County Correctional Facility	1st FI main	SW Isolation W	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-*	1	11	0.011	3,120	34	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	1	4	0.004	90%	3,120	11	0.008	23		0.000	0	0.007	23	
291	Ramsey County Correctional Facility	1st FI main	SW Isolation W	CFL-PL2P13W-2	Dorm shower-2-Pin PL-C Horizontal-Vandal proof-Recessed- Hard-3500-*	1	35	0.035	3,120	109	Retrofit	(2) LED 2-pin CFL GX23 UL Type-B HOR 6W 500L 3500K 120-277V	1	12	0.012	90%	3,120	37	0.023	72		0.000	0	0.021	72	
289	Ramsey County Correctional Facility	1st FI main	SW Isolation cells W	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	3	59	0.177	3,120	552	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	3,120	197	0.114	356		0.000	0	0.103	356	
290	Ramsey County Correctional Facility	1st FI main	SW Isolation cells W	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-*	3	11	0.033	3,120	103	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	3	4	0.011	90%	3,120	33	0.023	70		0.000	0	0.020	70	
292	Ramsey County Correctional Facility	1st FI main	SW Isolation E	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	2	59	0.118	3,120	368	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	3,120	131	0.076	237		0.000	0	0.068	237	
293	Ramsey County Correctional Facility	1st FI main	SW Isolation E	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-*	1	11	0.011	3,120	34	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	1	4	0.004	90%	3,120	11	0.008	23		0.000	0	0.007	23	
294	Ramsey County Correctional Facility	1st FI main	SW Isolation E	CFL-PL2P13W-2	Dorm shower-2-Pin PL-C Horizontal-Vandal proof-Recessed- Hard-3500-*	1	35	0.035	3,120	109	Retrofit	(2) LED 2-pin CFL GX23 UL Type-B HOR 6W 500L 3500K 120-277V	1	12	0.012	90%	3,120	37	0.023	72		0.000	0	0.021	72	
295	Ramsey County Correctional Facility	1st FI main	SW Isolation cells E	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	3	59	0.177	3,120	552	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	3,120	197	0.114	356		0.000	0	0.103	356	
296	Ramsey County Correctional Facility	1st FI main	SW Isolation cells E	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-*	3	11	0.033	3,120	103	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	3	4												

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
334	Ramsey County Correctional Facility	1st Fl main	Hall to rec yard	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-***	1	11	0.011	4,000	44	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	1	4	0.004	90%	4,000	14	0.008	30		0.000	0	0.007	30
335	Ramsey County Correctional Facility	1st Fl main	Hall to pods	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	9	59	0.531	8,760	4,652	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	9	21	0.189	100%	8,760	1,656	0.342	2,996		0.000	0	0.342	2,996
336	Ramsey County Correctional Facility	1st Fl main	Hall to pods	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-***	2	11	0.022	8,760	193	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	2	4	0.007	100%	8,760	61	0.015	131		0.000	0	0.015	131
337	Ramsey County Correctional Facility	1st Fl main	Hall to pods	LED-L10-1	6-in Downlight Round-A19-Clear-***	4	10	0.040	8,760	350	Do Nothing	Do Nothing	4	10	0.040	100%	8,760	350	0.000	0		0.000	0	0.000	0
338	Ramsey County Correctional Facility	1st Fl main	Pod A	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A*	14	24	0.336	3,120	1,048	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	14	21	0.294	90%	3,120	917	0.042	131		0.000	0	0.038	131
339	Ramsey County Correctional Facility	1st Fl main	Pod A	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	12	59	0.708	3,120	2,209	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	12	21	0.252	90%	3,120	786	0.456	1,423		0.000	0	0.410	1,423
340	Ramsey County Correctional Facility	1st Fl main	Pod A	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-***	4	11	0.044	3,120	137	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	4	4	0.014	90%	3,120	44	0.030	94		0.000	0	0.027	94
341	Ramsey County Correctional Facility	1st Fl main	Pod A cells	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	16	59	0.944	3,120	2,945	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	16	21	0.336	90%	3,120	1,048	0.608	1,897		0.000	0	0.547	1,897
342	Ramsey County Correctional Facility	1st Fl main	Pod A cells	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-***	16	11	0.176	3,120	549	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	16	4	0.056	90%	3,120	175	0.120	374		0.000	0	0.108	374
343	Ramsey County Correctional Facility	1st Fl main	LED shower	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-***	1	25	0.025	8,760	219	Do Nothing	Do Nothing	1	25	0.025	100%	8,760	219	0.000	0		0.000	0	0.000	0
344	Ramsey County Correctional Facility	1st Fl main	Pod B	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A*	14	24	0.336	3,120	1,048	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	14	21	0.294	90%	3,120	917	0.042	131		0.000	0	0.038	131
345	Ramsey County Correctional Facility	1st Fl main	Pod B	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	12	59	0.708	3,120	2,209	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	12	21	0.252	90%	3,120	786	0.456	1,423		0.000	0	0.410	1,423
346	Ramsey County Correctional Facility	1st Fl main	Pod B	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-***	4	11	0.044	3,120	137	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	4	4	0.014	90%	3,120	44	0.030	94		0.000	0	0.027	94
347	Ramsey County Correctional Facility	1st Fl main	Pod B cells	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	16	59	0.944	3,120	2,945	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	16	21	0.336	90%	3,120	1,048	0.608	1,897		0.000	0	0.547	1,897
348	Ramsey County Correctional Facility	1st Fl main	Pod B cells	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-***	16	11	0.176	3,120	549	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	16	4	0.056	90%	3,120	175	0.120	374		0.000	0	0.108	374
349	Ramsey County Correctional Facility	1st Fl main	LED shower	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-***	1	25	0.025	8,760	219	Do Nothing	Do Nothing	1	25	0.025	100%	8,760	219	0.000	0		0.000	0	0.000	0
350	Ramsey County Correctional Facility	1st Fl main	Pod C	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A*	18	24	0.432	3,120	1,348	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	18	21	0.378	90%	3,120	1,179	0.054	168		0.000	0	0.049	168
351	Ramsey County Correctional Facility	1st Fl main	Pod C	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	16	59	0.944	3,120	2,945	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	16	21	0.336	90%	3,120	1,048	0.608	1,897		0.000	0	0.547	1,897
352	Ramsey County Correctional Facility	1st Fl main	Pod C	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-***	4	11	0.044	3,120	137	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	4	4	0.014	90%	3,120	44	0.030	94		0.000	0	0.027	94
353	Ramsey County Correctional Facility	1st Fl main	Pod C cells	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	18	59	1.062	3,120	3,313	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	18	21	0.378	90%	3,120	1,179	0.684	2,134		0.000	0	0.616	2,134
354	Ramsey County Correctional Facility	1st Fl main	Pod C cells	CFL-PL2P5W-1	Built into fixture-2-Pin PL-S Horizontal-Polycarbonate-***	18	11	0.198	3,120	618	Retrofit	(1) LED 2-pin CFL GX23 UL Type-B HOR 3.5W 280L 4000K 120-277V	18	4	0.063	90%	3,120	197	0.135	421		0.000	0	0.122	421
355	Ramsey County Correctional Facility	1st Fl main	LED shower	LED-L25-1	12-in Downlight Square-LED fixture-Diffuse-***	1	25	0.025	8,760	219	Do Nothing	Do Nothing	1	25	0.025	100%	8,760	219	0.000	0		0.000	0	0.000	0
356	Ramsey County Correctional Facility	1st Fl main	Custody stairs	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Surface-4100-*	4	59	0.236	8,760	2,067	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	100%	8,760	736	0.152	1,332		0.000	0	0.152	1,332
1	Ramsey County Correctional Facility	Lower level	Industry area	F-F32T8-2	Strip-4ft-No Lens-Chain-4100-*	3	59	0.177	2,200	389	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	90%	1,540	139	0.114	251	wireless Large motion 300 degree Ceiling Sensor - PIR, Battery Powered (4) Wireless	0.000	42	0.103	292
2	Ramsey County Correctional Facility	Lower level	Industry area	F-F32T8-4	Strip-8ft-No Lens-Chain-4100-*	15	112	1.680	2,200	3,696	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	15	42	0.630	90%	1,540	1,386	1.050	2,310	Wireless Power Pack Load Controller, 20A (1)	0.000	416	0.945	2,726
3	Ramsey County Correctional Facility	Lower level	Industry area	CFL-PL2P13W-2	Canopy-2-Pin PL-C Horizontal-Diffuse-Surface-3500-*	5	35	0.175	2,200	385	Retrofit	LED 2-pin CFL GX23 UL Type-B HOR 6W 500L 3500K 120-277V	5	6	0.030	90%	1,540	66	0.145	319		0.000	20	0.131	339
4	Ramsey County Correctional Facility	Lower level	Storage 1	F-F32T8-4	Industrial- Turret-8ft-No Lens-Chain-4100-*	1	112	0.112	1,000	112	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	42	0.042	50%	1,000	42	0.070	70		0.000	0	0.035	70
5	Ramsey County Correctional Facility	Lower level	Isolation rm	F-F32T8-2	Troffer-2X4-Prismatic-Recessed- Tile-4100-*	2	59	0.118	1,000	118	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	1,000	42	0.076	76		0.000	0	0.038	76
6	Ramsey County Correctional Facility	Lower level	Isolation rm	F-F32T8-2	Troffer-2X4-Prismatic-Recessed- Tile-4100-*	2	59	0.118	1,000	118	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	1,000	42							

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
27	Ramsey County Correctional Facility	Lower level	Wood shop storage	F-F32T8-2	Wrap Narrow-4ft-Prismatic-Surface-4100-1-*	2	59	0.118	1,000	118	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	1,000	42	0.076	76		0.000	0	0.038	76
28	Ramsey County Correctional Facility	Lower level	Wood shop storage	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Chain-4100-1-*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38
29	Ramsey County Correctional Facility	Lower level	Elevator equipment	LIN-LED-L12T8LED-2	Wrap-4ft-Open-Surface-4000-Type-C-*	1	24	0.024	1,000	24	Do Nothing	Do Nothing	1	24	0.024	50%	1,000	24	0.000	0		0.000	0	0.000	0
30	Ramsey County Correctional Facility	Lower level	Wood shop	F-F32T8-2	Strip-4ft-No Lens-Chain-4100-1-*	25	59	1.475	3,120	4,602	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	25	21	0.525	90%	3,120	1,638	0.950	2,964		0.000	0	0.855	2,964
31	Ramsey County Correctional Facility	Lower level	Wood shop	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	2	24	0.048	3,120	150	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	3,120	131	0.006	19		0.000	0	0.005	19
32	Ramsey County Correctional Facility	Lower level	Shop bath	LED-L9-2	Bath glass fixture-A19-A19-Surface-3000-1-*	2	18	0.036	4,000	144	Do Nothing	Do Nothing	2	18	0.036	90%	4,000	144	0.000	0		0.000	0	0.000	0
33	Ramsey County Correctional Facility	Lower level	Dry food storage	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	13	24	0.312	2,184	681	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	13	21	0.273	90%	2,184	596	0.039	85		0.000	0	0.035	85
34	Ramsey County Correctional Facility	Lower level	Change rm	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	6	24	0.144	2,184	314	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	2,184	275	0.018	39		0.000	0	0.016	39
35	Ramsey County Correctional Facility	Lower level	Parts rm	F-F32T8-2	Strip-4ft-No Lens-Chain-4100-1-*	10	59	0.590	1,000	590	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	10	21	0.210	50%	1,000	210	0.380	380		0.000	0	0.190	380
36	Ramsey County Correctional Facility	Lower level	Parts rm	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	5	24	0.120	1,000	120	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	21	0.105	50%	1,000	105	0.015	15		0.000	0	0.008	15
37	Ramsey County Correctional Facility	Lower level	Garage	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	28	24	0.672	5,840	3,924	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	28	21	0.588	90%	5,840	3,434	0.084	491		0.000	0	0.076	491
38	Ramsey County Correctional Facility	Lower level	Electric	F-F32T8-4	Industrial- Turret-8ft-No Lens-Chain-4100-1-*	1	112	0.112	1,000	112	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	42	0.042	50%	1,000	42	0.070	70		0.000	0	0.035	70
39	Ramsey County Correctional Facility	Lower level	Exterior rms led	LED-L10-1	Jelly Jar-A19-Clear-Wall-1-1-*	1	10	0.010	8,760	88	Do Nothing	Do Nothing	1	10	0.010	100%	8,760	88	0.000	0		0.000	0	0.000	0
40	Ramsey County Correctional Facility	Lower level	Boiler rm	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-C-*	18	24	0.432	1,000	432	Do Nothing	Do Nothing	18	24	0.432	50%	1,000	432	0.000	0		0.000	0	0.000	0
41	Ramsey County Correctional Facility	Lower level	Boiler rm	LED-L100-1	High Bay-Fixture-Diffuse-1-1-1-*	1	100	0.100	1,000	100	Do Nothing	Do Nothing	1	100	0.100	50%	1,000	100	0.000	0		0.000	0	0.000	0
42	Ramsey County Correctional Facility	Lower level	Transfer switch rm led	LED-L10-1	Jelly Jar-A19-Clear-Wall-1-1-*	1	10	0.010	1,000	10	Do Nothing	Do Nothing	1	10	0.010	50%	1,000	10	0.000	0		0.000	0	0.000	0
43	Ramsey County Correctional Facility	Lower level	Maintenance office shop	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-A-*	14	24	0.336	3,120	1,048	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	14	21	0.294	90%	2,184	917	0.042	131	Wireless Large Motion 300 degree Ceiling Sensor - PIR, Battery Powered (2) Wireless	0.000	275	0.038	406
44	Ramsey County Correctional Facility	Lower level	Maintenance office shop	LED-L9-2	Bath glass fixture-A19-A19-Surface-3000-1-*	1	18	0.018	3,120	56	Do Nothing	Do Nothing	1	18	0.018	90%	3,120	56	0.000	0		0.000	0	0.000	0
45	Ramsey County Correctional Facility	Lower level	Main electrical	LIN-LED-L12T8LED-2	Industrial- Turret-4ft-Open-Chain-4000-Type-A-*	3	24	0.072	1,000	72	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	50%	1,000	63	0.009	9		0.000	0	0.005	9
46	Ramsey County Correctional Facility	Lower level	Lower level man hall	LIN-LED-L12T8LED-2	Strip-4ft-Open-Surface-4000-Type-C-*	4	24	0.096	4,000	384	Do Nothing	Do Nothing	4	24	0.096	90%	4,000	384	0.000	0		0.000	0	0.000	0
47	Ramsey County Correctional Facility	Lower level	Lower level man hall	LIN-LED-L12T8LED-4	Strip-8ft-Open-Surface-4000-Type-C-*	11	48	0.528	4,000	2,112	Do Nothing	Do Nothing	11	48	0.528	90%	4,000	2,112	0.000	0		0.000	0	0.000	0
58	Ramsey County Correctional Facility	Lower level	Lower level man hall	LED-L45-1	Strip 4ft-Fixture-Diffuse-1-1-1-*	4	45	0.180	4,000	720	Do Nothing	Do Nothing	4	45	0.180	90%	4,000	720	0.000	0		0.000	0	0.000	0
59	Ramsey County Correctional Facility	Lower level	Lower level man hall	LIN-LED-L12T8LED-4	Industrial- Turret-8ft-Open-Chain-4000-Type-A-*	4	48	0.192	4,000	768	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	42	0.168	90%	4,000	672	0.024	96		0.000	0	0.022	96
48	Ramsey County Correctional Facility	Lower level	Custody lower level hall	F-F32T8-2	Prison wrap-4ft-Vandal Proof-Chain-4100-1-*	8	59	0.472	4,000	1,888	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	8	21	0.168	90%	4,000	672	0.304	1,216		0.000	0	0.274	1,216
49	Ramsey County Correctional Facility	Lower level	Gym	LED-L9-2	Bath glass fixture-A19-A19-Surface-3000-1-*	4	18	0.072	2,000	144	Do Nothing	Do Nothing	4	18	0.072	90%	2,000	144	0.000	0		0.000	0	0.000	0
50	Ramsey County Correctional Facility	Lower level	Gym	LED-L100-1	High Bay-Fixture-Diffuse-1-1-1-*	15	100	1.500	2,000	3,000	Do Nothing	Do Nothing	15	100	1.500	90%	2,000	3,000	0.000	0		0.000	0	0.000	0
51	Ramsey County Correctional Facility	Lower level	Gym side rms	F-F32T8-2	Strip-4ft-No Lens-Chain-4100-1-*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38
52	Ramsey County Correctional Facility	Lower level	Gym side rms	F-F32T8-2	Wrap Narrow-4ft-Prismatic-Surface-4100-1-*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38
53	Ramsey County Correctional Facility	Lower level	Gym side rms	LIN-LED-L12T8LED-2	Wrap-4ft-Open-Surface-4000-Type-C-*	1	24	0.024	1,000	24	Do Nothing	Do Nothing	1	24	0.024	50%	1,000	24	0.000	0		0.000	0	0.000	0
54	Ramsey County Correctional Facility	Lower level	Gym side rms led	LED-L9-2	Bath glass fixture-A19-A19-Surface-3000-1-*	1	18	0.018	1,000	18	Do Nothing	Do Nothing	1	18	0.018	50%	1,000	18	0.000	0		0.000	0	0.000	0
55	Ramsey County Correctional Facility	Lower level	Gym side rms led stairs	LED-L9-2	Bath glass fixture-A19-A19-Surface-3000-1-*	2	18	0.036	8,760	315	Do Nothing	Do Nothing	2	18	0.036	100%	8,760	315	0.000						

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
15	Roseville Library	Lower Level	Breaker room	F-F32T8/25-2	Industrial-4ft-No Lens-Chain-3500-*.*	4	44	0.176	1,000	176	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	50%	1,000	84	0.092	92		0.000	0	0.046	92
16	Roseville Library	Lower Level	Janitor	F-F32T8/25-2	Industrial-4ft-No Lens-Chain-3500-*.*	1	44	0.044	500	22	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	500	11	0.023	12		0.000	0	0.012	12
17	Roseville Library	Lower Level	Men's rr	F-F32T8L-2	Troffer-2X4-Prismatic-Recessed- Tile-3500-*.*	2	48	0.096	2,000	192	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,000	84	0.054	108		0.000	0	0.049	108
18	Roseville Library	Lower Level	Hallway	F-F32T8L-2	Troffer-2X4-Prismatic-Recessed- Tile-3500-*.*	6	48	0.288	2,800	806	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	2,800	353	0.162	454		0.000	0	0.146	454
19	Roseville Library	Lower Level	Hallway	F-F32T8/25-2	Troffer-2X4-Prismatic-Recessed- Tile-3500-*.*	5	44	0.220	2,800	616	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	5	21	0.105	90%	2,800	294	0.115	322		0.000	0	0.104	322
23	Roseville Library	Lower Level	Hallway	EXIT-LED3W-1	Exit-Metallic-Green Letters-Wall-4100-*.*	2	3	0.006	6,132	37	Do Nothing	Do Nothing	2	3	0.006	90%	6,132	37	0.000	0		0.000	0	0.000	0
20	Roseville Library	Lower Level	Women's rr	F-F32T8L-2	Troffer-2X4-Prismatic-Recessed- Tile-3500-*.*	1	48	0.048	2,000	96	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	42	0.027	54		0.000	0	0.024	54
21	Roseville Library	Lower Level	Hallway	F-F32T8L-2	Troffer-2X4-Prismatic-Recessed- Tile-3500-*.*	4	48	0.192	2,800	538	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,800	235	0.108	302		0.000	0	0.097	302
22	Roseville Library	Lower Level	Hallway	F-F32T8L-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-*.*	1	71	0.071	2,800	199	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,800	88	0.040	111		0.000	0	0.036	111
24	Roseville Library	Lower Level	Hallway	EXIT-LED3W-1	Exit-Metallic-Green Letters-Wall-4100-*.*	1	3	0.003	6,132	18	Do Nothing	Do Nothing	1	3	0.003	90%	6,132	18	0.000	0		0.000	0	0.000	0
25	Roseville Library	Lower Level	Maint office	F-F32T8/25-2	Industrial-4ft-No Lens-Chain-3500-*.*	2	44	0.088	3,120	275	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,184	131	0.046	144	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	39	0.041	183
26	Roseville Library	Lower Level	Storage and sprinkler	F-F32T8L-2	Troffer-2X4-Prismatic-Recessed- Tile-3500-*.*	10	48	0.480	1,000	480	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	10	21	0.210	50%	1,000	210	0.270	270		0.000	0	0.135	270
27	Roseville Library	Lower Level	Stairwell	F-F32T8L-2	Wrap Wide-4ft-Diffuse-Wall-3500-*.*	8	48	0.384	4,380	1,682	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	8	21	0.168	90%	4,380	736	0.216	946		0.000	0	0.194	946
28	Roseville Library	Lower Level	Stairwell	EXIT-LED3W-1	Exit-White-Green Letters-Wall-4100-*.*	2	3	0.006	8,760	53	Do Nothing	Do Nothing	2	3	0.006	100%	8,760	53	0.000	0		0.000	0	0.000	0
29	Roseville Library	Lower Level	Mechanical	F-F32T8/25-2	Industrial-4ft-No Lens-Chain-3500-*.*	11	44	0.484	1,000	484	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	11	21	0.231	50%	1,000	231	0.253	253		0.000	0	0.127	253
30	Roseville Library	Lower Level	Boiler	F-F32T8/25-2	Industrial-4ft-No Lens-Chain-3500-*.*	3	44	0.132	1,000	132	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	21	0.063	50%	1,000	63	0.069	69		0.000	0	0.035	69
31	Roseville Library	Lower Level	Server room	F-F32T8/25-3	Industrial-4ft-No Lens-Chain-3500-2 ballast A/B-*	9	66	0.594	1,000	594	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	9	32	0.284	50%	1,000	284	0.311	311		0.000	0	0.155	311
32	Roseville Library	Lower Level	IT ROOM	F-F32T8L-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-*.2 Ballast A/B	25	71	1.775	2,184	3,877	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	25	32	0.788	90%	2,184	1,720	0.988	2,157		0.000	0	0.889	2,157
33	Roseville Library	Lower Level	It conference	F-F32T8L-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-*.2 Ballast A/B	3	71	0.213	1,540	328	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	32	0.095	90%	1,540	146	0.119	182		0.000	0	0.107	182
2	Roseville Library	1st Floor	Women's rr	F-F32T8L-4	Indirect-Direct-8ft-Diffuse-Wall-3500-*.*	3	95	0.285	2,000	570	Retrofit	4ft 4-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	3	60	0.180	90%	2,000	360	0.105	210		0.000	0	0.095	210
3	Roseville Library	1st Floor	Mens rr	F-F32T8L-4	Indirect-Direct-8ft-Diffuse-Wall-3500-*.*	3	95	0.285	2,000	570	Retrofit	4ft 4-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	3	60	0.180	90%	2,000	360	0.105	210		0.000	0	0.095	210
34	Roseville Library	1st Floor	Elevator	F-F40T12/ES-2	Strip-4ft-No Lens-Surface-3500-*.*	2	72	0.144	4,000	576	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	4,000	168	0.102	408		0.000	0	0.092	408
35	Roseville Library	1st Floor	Garage	F-F32T8/25-2	Industrial-4ft-No Lens-Chain-3500-*.*	12	44	0.528	1,000	528	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	12	21	0.252	50%	1,000	252	0.276	276		0.000	0	0.138	276
36	Roseville Library	1st Floor	Employee entree	F-F32T8L-3	Troffer-2X4-Center Basket-Recessed- Hard-3500-*.*	1	71	0.071	2,800	199	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	1	45	0.045	90%	2,800	126	0.026	73		0.000	0	0.023	73
37	Roseville Library	1st Floor	Jacket drop	F-F32T8L-3	Troffer-2X4-Center Basket-Recessed- Hard-3500-*.*	2	71	0.142	2,800	398	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	2	45	0.090	90%	2,800	252	0.052	146		0.000	0	0.047	146
38	Roseville Library	1st Floor	Jacket drop	EXIT-LED3W-1	Exit-White-Green Letters-Wall-4100-*.*	1	3	0.003	2,800	8	Do Nothing	Do Nothing	1	3	0.003	90%	2,800	8	0.000	0		0.000	0	0.000	0
39	Roseville Library	1st Floor	Hall	F-F32T8L-3	Troffer-2X4-Center Basket-Recessed- Hard-3500-*.*	3	71	0.213	2,800	596	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	3	45	0.135	90%	2,800	378	0.078	218		0.000	0	0.070	218
40	Roseville Library	1st Floor	Hall	F-F32T8L-2	Troffer-2X4-Center Basket-Recessed- Hard-3500-*.*	2	48	0.096	2,800	269	Retrofit	4ft 2-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	2	30	0.060	90%	2,800	168	0.036	101		0.000	0	0.032	101
41	Roseville Library	1st Floor	Private restroom	F-F32T8L-2	Indirect-Direct-4ft-Diffuse-Wall-3500-*.*	1	48	0.048	2,000	96	Retrofit	4ft 2-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	1	30	0.030	90%	2,000	60	0.018	36		0.000	0	0.016	36
42	Roseville Library	1st Floor	Private restroom	F-F32T8L-2	Indirect-Direct-4ft-Diffuse-Wall-3500-*.*	1	48	0.048	2,000	96	Retrofit	4ft 2-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	1	30	0.030	90%	2,000	60	0.						

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
62	Roseville Library	1st Floor	Kitchen	F-F32T8L-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-*2 Ballast A/B	1	71	0.071	1,000	71	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	50%	1,000	32	0.040	40		0.000	0	0.020	40
63	Roseville Library	1st Floor	Circulation desk	F-F17T8-2	Linear-2ft-Diffuse-Aircraft Cable-3500-*.*	12	33	0.396	2,800	1,109	Retrofit	2ft 2-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	12	14	0.168	90%	2,800	470	0.228	638		0.000	0	0.205	638
64	Roseville Library	1st Floor	Low ceiling library area	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500-*.*	18	71	1.278	2,800	3,578	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	18	45	0.810	90%	2,800	2,268	0.468	1,310		0.000	0	0.421	1,310
65	Roseville Library	1st Floor	High ceiling main library	F-F54T5/HO-1	Indirect-4ft-Diffuse-Aircraft Cable-3500-*.*	52	59	3.068	2,800	8,590	Retrofit	4ft 1-lamp T5HO TLED Type-B coated glass S/D ended 25W 3500L 4000K	52	25	1.300	90%	2,800	3,640	1.768	4,950		0.000	0	1.591	4,950
66	Roseville Library	1st Floor	High ceiling main library	F-F54T5/HO-1	Indirect-4ft-Diffuse-Aircraft Cable-3500-*.*	24	59	1.416	2,800	3,965	Retrofit	4ft 1-lamp T5HO TLED Type-B coated glass S/D ended 25W 3500L 4000K	24	25	0.600	90%	2,800	1,680	0.816	2,285		0.000	0	0.734	2,285
67	Roseville Library	1st Floor	High ceiling main library	F-F54T5/HO-1	Indirect-4ft-Diffuse-Aircraft Cable-3500-*.*	24	59	1.416	2,800	3,965	Retrofit	4ft 1-lamp T5HO TLED Type-B coated glass S/D ended 25W 3500L 4000K	24	25	0.600	90%	2,800	1,680	0.816	2,285		0.000	0	0.734	2,285
68	Roseville Library	1st Floor	High ceiling main library	F-F54T5/HO-1	Indirect-4ft-Diffuse-Aircraft Cable-3500-*.*	24	59	1.416	2,800	3,965	Retrofit	4ft 1-lamp T5HO TLED Type-B coated glass S/D ended 25W 3500L 4000K	24	25	0.600	90%	2,800	1,680	0.816	2,285		0.000	0	0.734	2,285
69	Roseville Library	1st Floor	High ceiling main library	F-F54T5/HO-1	Linear-4ft-Paracube-Wall-3500-*.*	13	59	0.767	2,800	2,148	Retrofit	4ft 1-lamp T5HO TLED Type-B coated glass S/D ended 25W 3500L 4000K	13	25	0.325	90%	2,800	910	0.442	1,238		0.000	0	0.398	1,238
70	Roseville Library	1st Floor	High ceiling main library	F-F39T5/HO-1	Linear-3ft-Paracube-Wall-3500-*.*	3	42	0.127	2,800	356	Retrofit	3ft 1-lamp T5HO TLED Type-B coated glass single-ended 16W 1850L 4000K	3	16	0.048	90%	2,800	134	0.079	222		0.000	0	0.071	222
71	Roseville Library	1st Floor	Learning lab	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500-*.*	4	71	0.284	2,800	795	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	4	45	0.180	90%	2,800	504	0.104	291		0.000	0	0.094	291
72	Roseville Library	1st Floor	Area in front of service center	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500-*.*	12	71	0.852	2,800	2,386	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	12	45	0.540	90%	2,800	1,512	0.312	874		0.000	0	0.281	874
73	Roseville Library	1st Floor	Service center	LED-L10-1	Track-Medium-PAR20-Track-3000-White-*	13	10	0.130	2,800	364	Do Nothing	Do Nothing	13	10	0.130	90%	2,800	364	0.000	0		0.000	0	0.000	0
98	Roseville Library	1st Floor	Service center	HAL-H45-1	Track-Medium-PAR20-Track-3000-*.*	15	45	0.675	2,800	1,890	Relamp	(1) LED PAR20 40 Degree E26 50W Inc EQ Dim 80CRI 5W 500L 3000K 120V	15	5	0.075	90%	2,800	210	0.600	1,680		0.000	0	0.540	1,680
99	Roseville Library	1st Floor	Service center	HAL-H90-1	Cylinder-Medium-PAR30 Long-Surface-3000-White-*	4	90	0.360	2,800	1,008	Relamp	(1) KT-LED11.5PAR38-F-930 /G2	4	12	0.046	90%	2,800	129	0.314	879		0.000	0	0.283	879
100	Roseville Library	1st Floor	Service center	HAL-H90-1	Cylinder-Medium-PAR30 Long-Pendant-3000-Black-*	10	90	0.900	2,800	2,520	Relamp	(1) KT-LED11.5PAR38-F-930 /G2	10	12	0.115	90%	2,800	322	0.785	2,198		0.000	0	0.707	2,198
101	Roseville Library	1st Floor	Service center	EXIT-LED5W-1	Exit Combo-White-Red Letters-Surface-4100-*.*	1	5	0.005	500	3	Do Nothing	Do Nothing	1	5	0.005	50%	500	3	0.000	0		0.000	0	0.000	0
102	Roseville Library	1st Floor	Service center	EXIT-LED5W-1	Emergency-White-EM 2-Head-Wall-4100-*.*	1	5	0.005	500	3	Do Nothing	Do Nothing	1	5	0.005	50%	500	3	0.000	0		0.000	0	0.000	0
103	Roseville Library	1st Floor	Service center	LED-L15-1	Sconce-Medium-Diffuse-Wall-3000-White-A- lamp	2	15	0.030	2,800	84	Do Nothing	Do Nothing	2	15	0.030	90%	2,800	84	0.000	0		0.000	0	0.000	0
104	Roseville Library	1st Floor	Service center	EXIT-LED5W-1	Exit Combo-White-Red Letters-Pendant-4100-*.*	2	5	0.010	2,800	28	Do Nothing	Do Nothing	2	5	0.010	90%	2,800	28	0.000	0		0.000	0	0.000	0
105	Roseville Library	1st Floor	Service center	CFL-PL4P26W-1	Decorative-4-Pin PL-T Vertical-No Lens-Surface-3500-White-*	2	27	0.054	2,800	151	Retrofit	LED Combination PL-T Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250L 3000/3500/4000K	2	9	0.018	90%	2,800	50	0.036	101		0.000	0	0.032	101
74	Roseville Library	1st Floor	Office	F-F32T8L-3	Troffer-2X4-Center Basket-Recessed- Tile-3500-*.*	3	71	0.213	2,184	465	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	3	45	0.135	90%	2,184	295	0.078	170		0.000	0	0.070	170
75	Roseville Library	1st Floor	Server room	F-F32T8/25-2	Industrial-4ft-No Lens-Chain-3500-*.*	2	44	0.088	1,000	88	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	50%	1,000	42	0.046	46		0.000	0	0.023	46
76	Roseville Library	1st Floor	Children's area entry hall	F-F54T5/HO-2	Linear-8ft-Diffuse-Surface-3500-*.*	8	117	0.936	4,000	3,744	Retrofit	4ft 2-lamp T5HO TLED Type-B coated glass S/D ended 25W 3500L 4000K	8	50	0.400	90%	4,000	1,600	0.536	2,144		0.000	0	0.482	2,144
77	Roseville Library	1st Floor	Children's area entry hall	F-F32T8/25-3	Linear-4ft-Diffuse-Recessed- Hard-3500-*.*	3	66	0.198	4,000	792	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	32	0.095	90%	4,000	378	0.104	414		0.000	0	0.093	414
78	Roseville Library	1st Floor	Children's area entry hall	TBD-TBD-1	Existing LED-RGB-Decorative-N/A-*.*.*	16	1	0.016	4,000	64	Do Nothing	Do Nothing	16	1	0.016	90%	4,000	64	0.000	0		0.000	0	0.000	0
79	Roseville Library	1st Floor	Children's area by decorative fixtures	F-F32T8L-2	Troffer-4ft-Diffuse-Recessed- Tile-3500-*.*	14	48	0.672	2,800	1,882	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	14	21	0.294	90%	2,800	823	0.378	1,058		0.000	0	0.340	1,058
80	Roseville Library	1st Floor	Children's area by decorative fixtures	CFL-PL4P26W-1	Decorative-4-Pin PL-T Vertical-No Lens-Surface-3500-White-*	8	27	0.216	2,800	605	Retrofit	LED Combination PL-T Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250L 3000/3500/4000K	8	9	0.072	90%	2,800	202	0.144	403		0.000	0	0.130	403
81	Roseville Library	1st Floor	Main children's area	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500-*.*	111	71	7.881	2,800	22,067	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	111	45	4.995	90%	2,800	13,986	2.886	8,081		0.000	0	2.597	8,081
82	Roseville Library	1st Floor	Main children's area	F-F32T8L-2	Troffer-4ft-Diffuse-Recessed- Tile-3500-*.*	15	48	0.720	2,800	2,016	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	15	21	0.315	90%	2,800	882	0.405	1,134		0.000	0	0.365	1,134
85	Roseville Library	1st Floor	Restroom	F-F32T8/25-2	Indirect-Direct-4ft-Diffuse-Wall-3500-*.*	1	44	0.044	2,000	88	Retrofit	4ft 2-lamp T8 TLED Type-B glass D ended 15W 1													

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
113	Roseville Library	1st Floor	Storage	F-F32T8L-3	Troffer-2X4-Center Basket-Recessed- Tile-3500-.*	1	71	0.071	1,000	71	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	1	45	0.045	50%	1,000	45	0.026	26		0.000	0	0.013	26
114	Roseville Library	1st Floor	Restroom	F-F32T8L-2	Indirect-Direct-4ft-Diffuse-Wall-3500-.*	1	48	0.048	2,000	96	Retrofit	4ft 2-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	1	30	0.030	90%	2,000	60	0.018	36		0.000	0	0.016	36
115	Roseville Library	1st Floor	Restroom	F-F32T8L-2	Indirect-Direct-4ft-Diffuse-Wall-3500-.*	1	48	0.048	2,000	96	Retrofit	4ft 2-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	1	30	0.030	90%	2,000	60	0.018	36		0.000	0	0.016	36
116	Roseville Library	1st Floor	Elec closet and water heater	F-F32T8/25-2	Industrial-4ft-No Lens-Chain-3500-.*	1	44	0.044	1,000	44	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.023	23		0.000	0	0.012	23
117	Roseville Library	1st Floor	Elevator	F-F40T12/ES-1	Strip-4ft-No Lens-Surface-3500-Behind lense-*	1	43	0.043	8,760	377	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	11	0.011	100%	8,760	92	0.033	285		0.000	0	0.033	285
147	Roseville Library	1st Floor	Em stairwell	F-F32T8L-2	Wrap Wide-4ft-Diffuse-Wall-3500-.*	4	48	0.192	4,380	841	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	4,380	368	0.108	473		0.000	0	0.097	473
4	Roseville Library	2nd Floor	Women's rr	F-F32T8L-4	Indirect-Direct-8ft-Diffuse-Wall-3500-.*	2	95	0.190	2,000	380	Retrofit	4ft 4-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	2	60	0.120	90%	2,000	240	0.070	140		0.000	0	0.063	140
5	Roseville Library	2nd Floor	Women's rr	F-F32T8L-2	Indirect-Direct-4ft-Diffuse-Wall-3500-.*	2	48	0.096	2,000	192	Retrofit	4ft 2-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	2	30	0.060	90%	2,000	120	0.036	72		0.000	0	0.032	72
6	Roseville Library	2nd Floor	Mens rr	F-F32T8L-4	Indirect-Direct-8ft-Diffuse-Wall-3500-.*	1	95	0.095	2,000	190	Retrofit	4ft 4-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	1	60	0.060	90%	2,000	120	0.035	70		0.000	0	0.032	70
7	Roseville Library	2nd Floor	Mens rr	F-F32T8L-2	Indirect-Direct-4ft-Diffuse-Wall-3500-.*	2	48	0.096	2,000	192	Retrofit	4ft 2-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	2	30	0.060	90%	2,000	120	0.036	72		0.000	0	0.032	72
118	Roseville Library	2nd Floor	Reading area	F-F54T5/HO-1	Linear-4ft-Diffuse-Recessed- Hard-3500-.*	20	59	1.180	2,800	3,304	Retrofit	4ft 1-lamp T5HO TLED Type-B coated glass S/D ended 25W 3500L 4000K	20	25	0.500	90%	2,800	1,400	0.680	1,904		0.000	0	0.612	1,904
119	Roseville Library	2nd Floor	Reading area	F-F54T5/HO-4	Indirect-4X4-Diffuse-Recessed- Hard-3500-.*	1	234	0.234	2,800	655	Retrofit	4ft 4-lamp T5HO TLED Type-B coated glass S/D ended 25W 3500L 4000K	1	100	0.100	90%	2,800	280	0.134	375		0.000	0	0.121	375
120	Roseville Library	2nd Floor	Reading area	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500-.*	13	71	0.923	2,800	2,584	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	13	45	0.585	90%	2,800	1,638	0.338	946		0.000	0	0.304	946
121	Roseville Library	2nd Floor	Board room	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500-2 ballast - Ab switched-*	8	71	0.568	1,540	875	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	8	45	0.360	90%	1,540	554	0.208	320		0.000	0	0.187	320
122	Roseville Library	2nd Floor	Study room	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500-2 ballast - Ab switched-*	1	71	0.071	2,800	199	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	1	45	0.045	90%	2,800	126	0.026	73		0.000	0	0.023	73
123	Roseville Library	2nd Floor	Study room	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500-2 ballast - Ab switched-*	1	71	0.071	2,800	199	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	1	45	0.045	90%	2,800	126	0.026	73		0.000	0	0.023	73
124	Roseville Library	2nd Floor	Electrical	F-F32T8/25-2	Industrial-4ft-No Lens-Chain-3500-.*	1	44	0.044	1,000	44	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.023	23		0.000	0	0.012	23
125	Roseville Library	2nd Floor	Main library north side	F-F32T8L-2	Troffer-4ft-Prismatic-Recessed- Hard-3500-.*	33	48	1.584	2,800	4,435	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	33	21	0.693	90%	2,800	1,940	0.891	2,495		0.000	0	0.802	2,495
126	Roseville Library	2nd Floor	Main library north side	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500-.*	95	71	6.745	4,000	26,980	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	95	45	4.275	90%	4,000	17,100	2.470	9,880		0.000	0	2.223	9,880
133	Roseville Library	2nd Floor	Main library north side	EXIT-LED3W-1	Exit-White-Green Letters-Wall-4100-.*	1	3	0.003	4,000	12	Do Nothing	Do Nothing	1	3	0.003	90%	4,000	12	0.000	0		0.000	0	0.000	0
148	Roseville Library	2nd Floor	Main library north side	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Wall-3500-.*	6	71	0.426	2,800	1,193	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	6	45	0.270	90%	2,800	756	0.156	437		0.000	0	0.140	437
127	Roseville Library	2nd Floor	Library - east part	F-F32T8L-2	Troffer-4ft-Prismatic-Recessed- Hard-3500-.*	30	48	1.440	2,800	4,032	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	30	21	0.630	90%	2,800	1,764	0.810	2,268		0.000	0	0.729	2,268
128	Roseville Library	2nd Floor	Library - east part	F-F32T8L-2	Troffer-1X4-Prismatic-Recessed- Hard-3500-.*	27	48	1.296	4,000	5,184	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	27	21	0.567	90%	4,000	2,268	0.729	2,916		0.000	0	0.656	2,916
129	Roseville Library	2nd Floor	Library - east part	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500-.*	42	71	2.982	4,000	11,928	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	42	45	1.890	90%	4,000	7,560	1.092	4,368		0.000	0	0.983	4,368
130	Roseville Library	2nd Floor	Library - east part	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500-.*	74	71	5.254	4,000	21,016	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	74	45	3.330	90%	4,000	13,320	1.924	7,696		0.000	0	1.732	7,696
131	Roseville Library	2nd Floor	Library - east part	EXIT-LED3W-1	Exit-Metallic-Green Letters-Pendant-4100-.*	2	3	0.006	8,760	53	Do Nothing	Do Nothing	2	3	0.006	100%	8,760	53	0.000	0		0.000	0	0.000	0
132	Roseville Library	2nd Floor	Library - east part	EXIT-LED3W-1	Exit-Metallic-Green Letters-Surface-4100-.*	2	3	0.006	4,000	24	Do Nothing	Do Nothing	2	3	0.006	90%	4,000	24	0.000	0		0.000	0	0.000	0
134	Roseville Library	2nd Floor	Conference	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500-2 ballast - Ab switched-*	3	71	0.213	2,800	596	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	3	45	0.135	90%	2,800	378	0.078	218		0.000	0	0.070	218
135	Roseville Library	2nd Floor	Conference	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500-2 ballast - Ab switched-*	3	71	0.213	2,800	596	Retrofit	4ft 3-lamp T8 TLED Type-B glass D ended 15W 2200L 4000K	3	45	0.135	90%	2,800	378	0.078	218		0.000	0	0.070	218
136	Roseville Library	2nd Floor	Study	F-F32T8L-3	Indirect-Direct-4ft-Diffuse-Aircraft Cable-3500																				

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fxt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fxt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
11	Sheriff's Patrol Station	1st Floor	IS LAN Specialist	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
12	Sheriff's Patrol Station	1st Floor	Sergeant	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
13	Sheriff's Patrol Station	1st Floor	1-379	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
14	Sheriff's Patrol Station	1st Floor	LED k 9 training	LED-L35-1	Troffer 2x4-Fixture-Center Basket-Recessed- Tile-4000-.*	15	35	0.525	2,184	1,147	Do Nothing	Do Nothing	15	35	0.525	90%	2,184	1,147	0.000	0		0.000	0	0.000	0
15	Sheriff's Patrol Station	1st Floor	LED conference rm	LED-L35-1	Troffer 2x4-Fixture-Center Basket-Recessed- Tile-4000-.*	6	35	0.210	2,184	459	Do Nothing	Do Nothing	6	35	0.210	90%	2,184	459	0.000	0		0.000	0	0.000	0
16	Sheriff's Patrol Station	1st Floor	Back up communication center	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	18	89	1.602	3,120	4,998	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	18	32	0.567	90%	3,120	1,769	1.035	3,229		0.000	0	0.932	3,229
17	Sheriff's Patrol Station	1st Floor	Back up communication center	HAL-H60-1	4-in Downlight-Replace-MR16 120V-Recessed- Tile-3000-.*	20	60	1.200	3,120	3,744	Replace	4-in Downlight-Replace-MR16 120V-Recessed- Tile-3000-.*	20	7	0.140	90%	3,120	437	1.060	3,307		0.000	0	0.954	3,307
18	Sheriff's Patrol Station	1st Floor	Main entrance	CFL-PL4P42W-1	8-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Tile-3500-.*	11	46	0.506	8,760	4,433	Retrofit	8-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Tile-3500-.*	11	18	0.198	100%	8,760	1,734	0.308	2,698		0.000	0	0.308	2,698
19	Sheriff's Patrol Station	1st Floor	Main entrance vestibule	CFL-PL4P42W-1	8-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Hard-3500-.*	2	46	0.092	8,760	806	Retrofit	8-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Hard-3500-.*	2	18	0.036	100%	8,760	315	0.056	491		0.000	0	0.056	491
20	Sheriff's Patrol Station	1st Floor	303-RR	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-.*	1	59	0.059	2,000	118	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	42	0.038	76		0.000	0	0.034	76
21	Sheriff's Patrol Station	1st Floor	Admin investigation	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	7	89	0.623	6,132	3,820	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	7	32	0.221	90%	6,132	1,352	0.403	2,468		0.000	0	0.362	2,468
22	Sheriff's Patrol Station	1st Floor	Admin investigation	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	7	53	0.371	6,132	2,275	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	7	26	0.182	90%	6,132	1,116	0.189	1,159		0.000	0	0.170	1,159
23	Sheriff's Patrol Station	1st Floor	Admin investigation	EXIT-LED1.5W-1	Exit-White-Red Letters-Wall-.*.*	3	2	0.006	6,132	37	Do Nothing	Do Nothing	3	2	0.006	90%	6,132	37	0.000	0		0.000	0	0.000	0
24	Sheriff's Patrol Station	1st Floor	Interview rm	LED-L10-1	8-in Downlight Round-Fixture-Clear-Recessed- Tile-3500-White-*	4	10	0.040	2,184	87	Do Nothing	Do Nothing	4	10	0.040	90%	2,184	87	0.000	0		0.000	0	0.000	0
25	Sheriff's Patrol Station	1st Floor	1-383	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	3,120	98	0.058	179		0.000	0	0.052	179
26	Sheriff's Patrol Station	1st Floor	1-319	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
27	Sheriff's Patrol Station	1st Floor	1-381	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
28	Sheriff's Patrol Station	1st Floor	1-379	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
29	Sheriff's Patrol Station	1st Floor	1-375	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
30	Sheriff's Patrol Station	1st Floor	1-374	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
31	Sheriff's Patrol Station	1st Floor	1-373	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
32	Sheriff's Patrol Station	1st Floor	1-372	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
33	Sheriff's Patrol Station	1st Floor	1-371	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
34	Sheriff's Patrol Station	1st Floor	1-380	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
35	Sheriff's Patrol Station	1st Floor	1-380 main room	LED-L35-1	Troffer 2x4-Fixture-Center Basket-Recessed- Tile-4000-.*	3	35	0.105	2,184	229	Do Nothing	Do Nothing	3	35	0.105	90%	2,184	229	0.000	0		0.000	0	0.000	0
36	Sheriff's Patrol Station	1st Floor	Break room	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,200	392	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,200	139	0.115	253		0.000	0	0.104	253
37	Sheriff's Patrol Station	1st Floor	Server rm	F-F32T8-2	Wrap Narrow-4ft-Prismatic-Chain-4100-.*	9	59	0.531	1,000	531	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	9	21	0.189	50%	1,000	189	0.342	342	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	0	0.171	342
38	Sheriff's Patrol Station	1st Floor	Main hall	LIN-LED-L20T8LED-2	Troffer-2X4-Diffuse-Recessed- Tile-4000-Type-C-*	18	40	0.720	6,132	4,415	Do Nothing	Do Nothing	18	40	0.720	90%	6,132	4,415	0.000	0		0.000	0	0.000	0
85	Sheriff's Patrol Station	1st Floor	Main hall	CFL-PL4P42W-1	8-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Tile-3500-.*	3	46	0.138	6,132	846	Retrofit	8-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Tile-3500-.*	3	18	0.054	90%	6,132								

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
59	Sheriff's Patrol Station	1st Floor	334 A	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-.*	1	89	0.089	4,000	356	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	4,000	126	0.058	230		0.000	0	0.052	230
60	Sheriff's Patrol Station	1st Floor	386A	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	9	89	0.801	2,200	1,762	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	9	32	0.284	90%	2,200	624	0.518	1,139		0.000	0	0.466	1,139
61	Sheriff's Patrol Station	1st Floor	388A	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	4	89	0.356	2,184	778	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	32	0.126	90%	2,184	275	0.230	502		0.000	0	0.207	502
62	Sheriff's Patrol Station	1st Floor	Property evidence rm	LIN-LED-L18T8LED-4	Industrial- Turret-8ft-Open-Chain-4000-Type-A*	30	72	2.160	6,132	13,245	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	30	42	1.260	90%	6,132	7,726	0.900	5,519		0.000	0	0.810	5,519
64	Sheriff's Patrol Station	1st Floor	Property evidence rm	LIN-LED-L18T8LED-4	Strip-8ft-Open-Chain-4000-Type-A*	3	72	0.216	6,132	1,325	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	3	42	0.126	90%	6,132	773	0.090	552		0.000	0	0.081	552
63	Sheriff's Patrol Station	1st Floor	Drug rm	LIN-LED-L18T8LED-4	Industrial- Turret-8ft-Open-Chain-4000-Type-A*	2	72	0.144	1,000	144	Retrofit	4ft 4-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	42	0.084	50%	1,000	84	0.060	60		0.000	0	0.030	60
65	Sheriff's Patrol Station	1st Floor	386 office	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	3,120	555	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	3,120	197	0.115	359		0.000	0	0.104	359
66	Sheriff's Patrol Station	1st Floor	386 dark rm	F-F32T8-2	Troffer-2X4-Prismatic-Recessed- Tile-4100-.*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38
67	Sheriff's Patrol Station	1st Floor	386 garage	F-F32T8-2	Wall Wash-4ft-Diffuse-Wall-4100-.*	8	59	0.472	5,840	2,756	Replace	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	8	21	0.168	90%	5,840	981	0.304	1,775		0.000	0	0.274	1,775
68	Sheriff's Patrol Station	1st Floor	Evidence hall	LIN-LED-L20T8LED-2	Troffer-2X4-Diffuse-Recessed- Tile-4000-Type-C*	4	40	0.160	4,000	640	Do Nothing	Do Nothing	4	40	0.160	90%	4,000	640	0.000	0		0.000	0	0.000	0
69	Sheriff's Patrol Station	1st Floor	Evidence hall	LIN-LED-L20T8LED-3	Troffer-2X4-Diffuse-Recessed- Tile-4000-Type-C*	4	60	0.240	2,800	672	Do Nothing	Do Nothing	4	60	0.240	90%	2,800	672	0.000	0		0.000	0	0.000	0
70	Sheriff's Patrol Station	1st Floor	Evidence hall	UFL-FU31T8/1-2	Troffer-2x2-9 cell Parabolic Louver-Recessed- Tile-3500-.*	1	53	0.053	2,800	148	Retrofit	U-bend 1-5/8in 2-lamp T8 TLED Type-B Glass Single Ended 13W 1800L 4000K	1	26	0.026	90%	2,800	73	0.027	76		0.000	0	0.024	76
71	Sheriff's Patrol Station	1st Floor	Fleet services	LIN-LED-L15T8LED-2	Troffer-4ft-Vandal Proof-Recessed- Hard-4000-Type-A*	2	30	0.060	3,120	187	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	3,120	131	0.018	56		0.000	0	0.016	56
72	Sheriff's Patrol Station	1st Floor	Fleet services	LIN-LED-L15T8LED-2	Troffer-2X4-Prismatic-Recessed- Hard-4000-Type-A*	1	30	0.030	2,184	66	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,184	46	0.009	20		0.000	0	0.008	20
73	Sheriff's Patrol Station	1st Floor	Garage hall	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	1	89	0.089	4,000	356	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	4,000	126	0.058	230		0.000	0	0.052	230
74	Sheriff's Patrol Station	1st Floor	Garage	LED-L200-1	Troffer 2x2-Fixture-Diffuse-Chain-5000-White*	8	200	1.600	6,132	9,811	Replace	UCL Compact High Bay, 4 Lever Wattage Adjustable, Gen 2, CCT Selectable, White finish, 160W, w/Gen Sensor	8	160	1.280	90%	6,132	7,849	0.320	1,962		0.000	0	0.288	1,962
75	Sheriff's Patrol Station	1st Floor	Squad rm hall	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-.*	6	89	0.534	2,800	1,495	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	32	0.189	90%	2,800	529	0.345	966		0.000	0	0.311	966
76	Sheriff's Patrol Station	1st Floor	Squad rm hall	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	6	89	0.534	2,800	1,495	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	32	0.189	90%	2,800	529	0.345	966		0.000	0	0.311	966
77	Sheriff's Patrol Station	1st Floor	Holding cells	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-.*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38
78	Sheriff's Patrol Station	1st Floor	Holding cells	F-F32T8-2	Troffer-1X4-Vandal Proof-Recessed- Hard-4100-.*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38
79	Sheriff's Patrol Station	1st Floor	1-365	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3500-.*	2	89	0.178	2,184	389	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	32	0.063	90%	2,184	138	0.115	251		0.000	0	0.104	251
80	Sheriff's Patrol Station	1st Floor	Squad conference rm	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-.*	9	89	0.801	1,540	1,234	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	9	32	0.284	90%	1,540	437	0.518	797		0.000	0	0.466	797
81	Sheriff's Patrol Station	1st Floor	Report writing rms	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	3,120	98	0.058	179	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted (2) Wireless	0.000	0	0.052	179
82	Sheriff's Patrol Station	1st Floor	Report writing rms	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted (2) Wireless	0.000	29	0.052	209
83	Sheriff's Patrol Station	1st Floor	Report writing rms	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted (2) Wireless	0.000	29	0.052	209
84	Sheriff's Patrol Station	1st Floor	Report writing rms	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3500-.*	1	89	0.089	3,120	278	Retrofit	4ft 3-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	32	0.032	90%	2,184	98	0.058	179	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted (2) Wireless	0.000	29	0.052	209
86	Sheriff's Patrol Station	1st Floor	Vestibule to PW	CFL-PL4P42W-1	8-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Tile-3500-.*	1	46	0.046	4,000	184	Retrofit	1X4 Downlight Round-4-Pin PL-T Horizontal-1100-2000L 3000/3500/4000/5000K 120-022V, 160W, add proofing	1	18	0.018	90%	4,000	72	0.028	112		0.000	0	0.025	112
87	Sheriff's Patrol Station	1st Floor	Comm closet	F-F32T8-2	Industrial-4ft-Wire Cage-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	500	11	0.038	19		0.000	0	0.019	19
88	Sheriff's Patrol Station	1st Floor	Garage storage locked	F-F32T8-2	Industrial																				

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
83	Metro Square	Main Level	1735	F-F32T8-2	Troffer-2X4-Center Basket-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	4	22	0.088	90%	2,184	275	0.148	462	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	82	0.133	544
84	Metro Square	Main Level	1732	F-F32T8-2	Troffer-2X4-Center Basket-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	4	22	0.088	90%	2,184	275	0.148	462	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	82	0.133	544
85	Metro Square	Main Level	Data	F-F32T8-2	Troffer-2X4-Center Basket-Recessed- Tile-3000-.*	1	59	0.059	500	30	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	1	22	0.022	50%	500	11	0.037	19		0.000	0	0.019	19
86	Metro Square	Main Level	SZ files	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	1	89	0.089	500	45	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	1	28	0.028	50%	500	14	0.061	31		0.000	0	0.031	31
87	Metro Square	Main Level	Cap rm	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	12	59	0.708	3,120	2,209	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	12	20	0.240	90%	2,184	749	0.468	1,460	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Deceased (4) Wireless	0.000	225	0.421	1,685
88	Metro Square	Main Level	Warehouse	F-F32T8-2	Industrial-4ft-No Lens-Chain-4100-.*	24	59	1.416	1,000	1,416	Retrofit	4ft LED Volumetric Troffer Kit Controls Ready, 23/34/47W 3400/4990/6760L	24	23	0.552	50%	1,000	552	0.864	864		0.000	0	0.432	864
89	Metro Square	Main Level	Warehouse	MH-MH400-1	High Bay-Single-Glass- Frosted-Pendant-4000-.*	7	458	3.206	1,000	3,206	Retrofit	7ft LED Volumetric Troffer Kit Controls Wattage Adjustable, Gen 3, CCT Selectable, 23/34/47W 3400/4990/6760L	7	96	0.672	50%	1,000	672	2.534	2,534		0.000	0	1.267	2,534
90	Metro Square	Main Level	Warehouse	F-F32T8-2	Industrial-4ft-No Lens-Surface-4100-.*	10	59	0.590	1,000	590	Retrofit	4ft LED Volumetric Troffer Kit Controls Ready, 23/34/47W 3400/4990/6760L	10	23	0.230	50%	1,000	230	0.360	360		0.000	0	0.180	360
91	Metro Square	Main Level	Warehouse	F-F96T12/HO-2	Industrial-8ft-No Lens-Surface-4100-.*	5	237	1.185	1,000	1,185	Retrofit	8ft 2-lamp HO T8 TLED Type-B Double-ended 42W 5500L 4000K	5	84	0.420	50%	1,000	420	0.765	765		0.000	0	0.383	765
92	Metro Square	Main Level	Elevator Rest 1	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	1	89	0.089	4,000	356	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	1	28	0.028	90%	2,000	112	0.061	244	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	56	0.055	300
93	Metro Square	Main Level	Elevator Rest 2	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	1	89	0.089	4,000	356	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	1	28	0.028	90%	2,000	112	0.061	244	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	56	0.055	300
35	Metro Square	2nd Floor	IS storage	F-F32T8-2	Troffer-2X4-Prismatic-Recessed- Tile-3000-.*	32	59	1.888	1,000	1,888	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	32	22	0.704	50%	1,000	704	1.184	1,184		0.000	0	0.592	1,184
36	Metro Square	2nd Floor	WFS LOBBY	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	6	89	0.534	4,000	2,136	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	6	28	0.168	90%	4,000	672	0.366	1,464		0.000	0	0.329	1,464
37	Metro Square	2nd Floor	WFS conference 1	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	6	89	0.534	2,200	1,175	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	6	28	0.168	90%	2,200	370	0.366	805		0.000	0	0.329	805
38	Metro Square	2nd Floor	Focus rm	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Deceased (4) Wireless	0.000	52	0.110	433
39	Metro Square	2nd Floor	Closet safe	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	500	89	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	50%	500	28	0.122	61		0.000	0	0.061	61
40	Metro Square	2nd Floor	Open office	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	39	89	3.471	3,120	10,830	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	39	28	1.092	90%	2,184	3,407	2.379	7,422	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Deceased (4) Wireless	0.000	1,022	2.141	8,445
41	Metro Square	2nd Floor	PO37	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433
42	Metro Square	2nd Floor	PO36	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433
43	Metro Square	2nd Floor	PO35	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433
44	Metro Square	2nd Floor	PO34	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433
45	Metro Square	2nd Floor	PO33	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433
46	Metro Square	2nd Floor	Break area	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	7	89	0.623	3,120	1,944	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	7	28	0.196	90%	3,120	612	0.427	1,332		0.000	0	0.384	1,332
47	Metro Square	2nd Floor	Data electric	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	4	59	0.236	500	118	Retrofit	4ft LED Volumetric Troffer Kit Controls Ready, 23/34/47W 3400/4990/6760L	4	23	0.092	50%	500	46	0.144	72		0.000	0	0.072	72
48	Metro Square	2nd Floor	Main data rm	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	27	89	2.403	1,000	2,403	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	27	28	0.756	50%	700	756	1.647	1,647	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Deceased (2) Wireless	0.000	227	0.824	1,874
49	Metro Square	2nd Floor	Data rm exit	F-F32T8-2	Wrap Narrow-4ft-Prismatic-Surface-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	4,000	84	0.038	152		0.000	0	0.034	152
50	Metro Square	2nd Floor	Small data rm	F-F32T8-4	Troffer-2X4-Ice cube parabolic-Recessed- Tile-3000-.*	5	112	0.560	1,000	560	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	5	34	0.170	50%	700	170	0.390	390	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Deceased (4) Wireless	0.000	51	0.195	441
51	Metro Square	2nd Floor	Data control rm	F-F32T8-4	Troffer-2X4-Ice cube parabolic-Recessed- Tile-3000-.*	3	112	0.336	3,120	1,048	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	3	34	0.102	90%	2,184	318	0.234	730	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	95	0.211	826
52	Metro Square	2nd Floor	Data hall	F-F32T8-4	Troffer-2X4-Ice cube parabolic-Recessed- Tile-3000-.*	5	112	0.560	4,000	2,240	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	5	34	0.170	90%	2,800	680	0.390	1,560	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	204	0.351	1,764
53	Metro Square	2nd Floor	Safe zone lobby	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	6	89	0.534	4,000	2,136	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	6	28	0.168	90%	4,000	672	0.366	1,464		0.000	0	0.329	1,464
54	Metro Square	2nd Floor	SZ OPEN AREA	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	32	89	2.848	3,120	8,886	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	32	28	0.896	90%	3,120	2,796	1.952	6,090		0.000	0	1.757	6,090
55	Metro Square	2nd Floor	SZ OFFICE 1	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433
56	Metro Square	2nd Floor	SZ OFFICE 2	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	1	89	0.089	3,120	278	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	1	28	0.028	90%	2,184	87	0.061	190	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	26	0.055	217
57	Metro Square	2nd Floor	SZ OFFICE 3	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	1	89	0.089	3,120	278	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	1	28	0.028	90%	2,184	87	0.061	190	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	26	0.055	217
58	Metro Square	2nd Floor	SZ OFFICE 4	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433
59	Metro Square	2nd Floor	SZ OFFICE 5 locked	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433
60	Metro Square	2nd Floor	SZ supply	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	500	89	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	50%	500	28	0.122	61		0.000	0	0.061	61
61	Metro Square	2nd Floor	SZ kit	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3000-.*	5	89	0.445	2,200	979	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	5	28	0.140	90%	2,200	308	0.305	671		0.000	0	0.275	671
62	Metro Square	2nd Floor	Staff restroom	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3000-.*	2	89	0.178	4,000	712	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,000	224	0.122	488	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	112	0.110	600
63	Metro Square	2nd Floor	Public restroom	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3000-.*	3	89	0.267	4,000	1,068	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	3	28	0.084	90%	2,000	336	0.183	732	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Deceased (4) Wireless	0.000	168	0.165	900
2	Metro Square	3rd Floor	Main lobby Explore Minnesota	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	6	89	0.534	4,000	2,136	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	6	28	0.168	90%	4,000	672	0.366	1,464		0.000	0	0.329	1,464
3	Metro Square	3rd Floor	Open office area ME	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	53	89	4.717	2,184	10,302	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	53	28	1.484	90%	2,184	3,241	3.233	7,061		0.000	0	2.910	7,061

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
11	Metro Square	3rd Floor	Office 1	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433	
12	Metro Square	3rd Floor	M Meyer	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433	
13	Metro Square	3rd Floor	Under construction locked	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	4	89	0.356	3,120	1,111	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	4	28	0.112	90%	2,184	349	0.244	761	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	105	0.220	866	
14	Metro Square	3rd Floor	B Helle	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433	
15	Metro Square	3rd Floor	D Cox	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433	
16	Metro Square	3rd Floor	C Morgan	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433	
17	Metro Square	3rd Floor	K Hill	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433	
18	Metro Square	3rd Floor	J Ramer	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433	
19	Metro Square	3rd Floor	J Ramer 2	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	1	89	0.089	3,120	278	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	1	28	0.028	90%	2,184	87	0.061	190	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	26	0.055	217	
20	Metro Square	3rd Floor	Quiet rm	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	1	89	0.089	3,120	278	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	1	28	0.028	90%	2,184	87	0.061	190	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	26	0.055	217	
22	Metro Square	3rd Floor	File rm	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	1	89	0.089	3,120	278	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	1	28	0.028	90%	2,184	87	0.061	190	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	26	0.055	217	
23	Metro Square	3rd Floor	Shared office 1	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	4	89	0.356	3,120	1,111	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	4	28	0.112	90%	2,184	349	0.244	761	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	105	0.220	866	
24	Metro Square	3rd Floor	Quiet rm 2	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	1	89	0.089	3,120	278	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	1	28	0.028	90%	2,184	87	0.061	190	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	26	0.055	217	
25	Metro Square	3rd Floor	Conference 2 TV	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	3	89	0.267	2,200	587	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	3	28	0.084	90%	2,200	185	0.183	403		0.000	0	0.165	403	
26	Metro Square	3rd Floor	Conference 2 TV	LED-L4-1	6-in Downlight Round-Array-Diffuse-Recessed- Tile-3000-.*	3	4	0.012	2,200	26	Do Nothing	Do Nothing	3	4	0.012	90%	2,200	26	0.000	0		0.000	0	0.000	0	
27	Metro Square	3rd Floor	Large Conference 3	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	12	89	1.068	1,540	1,645	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	12	28	0.336	90%	1,540	517	0.732	1,127		0.000	0	0.659	1,127	
28	Metro Square	3rd Floor	Large Conference 3	LED-L4-1	6-in Downlight Round-Array-Diffuse-Recessed- Tile-3000-.*	2	4	0.008	2,200	18	Do Nothing	Do Nothing	2	4	0.008	90%	2,200	18	0.000	0		0.000	0	0.000	0	
29	Metro Square	3rd Floor	Gabes office	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	2	89	0.178	3,120	555	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	2	28	0.056	90%	2,184	175	0.122	381	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.110	433	
30	Metro Square	3rd Floor	Brian's office	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	4	89	0.356	3,120	1,111	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	4	28	0.112	90%	2,184	349	0.244	761	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	105	0.220	866	
31	Metro Square	3rd Floor	Storagee	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	4	89	0.356	3,120	1,111	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	4	28	0.112	90%	3,120	349	0.244	761		0.000	0	0.220	761	
32	Metro Square	3rd Floor	Storagee	CFL-PL4P26W-2	8-in Downlight Round-2-Pin PL-C Horizontal-No Lens-Recessed- Tile-.*-.*	1	52	0.052	3,120	162	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	1	18	0.018	90%	3,120	56	0.034	106		0.000	0	0.031	106	
33	Metro Square	3rd Floor	Shaft led	LED-L50-1	Existing LED-Guess on Wattage-Do not audit-.*-.*	1	50	0.050	1,000	50	Do Nothing	Do Nothing	1	50	0.050	50%	1,000	50	0.000	0		0.000	0	0.000	0	
34	Metro Square	3rd Floor	New construction all LED	LED-L50-1	Existing LED-Guess on Wattage-Do not audit-.*-.*	1	50	0.050	3,120	156	Do Nothing	Do Nothing	1	50	0.050	90%	3,120	156	0.000	0		0.000	0	0.000	0	
1	Metro Square	5th Floor	Elevator control rm	F-F32T8-2	Industrial-4ft-No Lens-Surface-4100-.*-4' 2L STRIP W lamp guards	10	59	0.590	1,000	590	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	10	23	0.230	50%	1,000	230	0.360	360		0.000	0	0.180	360	
94	Metro Square	Lower Level	Mechanical hall	F-F32T8-4	Troffer-2X4-Prismatic-Recessed- Tile-3000-.*	5	112	0.560	4,000	2,240	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	5	34	0.170	90%	4,000	680	0.390	1,560		0.000	0	0.351	1,560	
95	Metro Square	Lower Level	Sprinkler rm	F-F32T8-2	Industrial-4ft-No Lens-Chain-4100-.*	7	59	0.413	1,000	413	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	7	23	0.161	50%	1,000	161	0.252	252		0.000	0	0.126	252	
96	Metro Square	Lower Level	Sprinkler rm	F-F32T8H-4	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	1	144	0.144	1,000	144	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L	1	34	0.034	50%	1,000	34	0.110	110		0.000	0	0.055	110	
97	Metro Square	Lower Level	Sprinkler rm	F-F40T12-1	Strip-4ft-No Lens-Suspended-3000-.*	1	50	0.050	1,000	50	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4														

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fxt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fxt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
120	Metro Square	Lower Level	0104 storage	F-F32T8-2	Wrap Narrow-4ft-Prismatic-Surface-3000- ⁻ .*	1	59	0.059	1,000	59	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	50%	1,000	21	0.038	38		0.000	0	0.019	38
121	Metro Square	Lower Level	0105 storage	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100- ⁻ .*	6	59	0.354	1,000	354	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K TAA SET TO 22W	6	23	0.138	50%	1,000	138	0.216	216		0.000	0	0.108	216
122	Metro Square	Lower Level	0106 storage	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100- ⁻ .*	6	59	0.354	1,000	354	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K TAA SET TO 22W	6	23	0.138	50%	1,000	138	0.216	216		0.000	0	0.108	216
123	Metro Square	Lower Level	0106 Electrical	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100- ⁻ .*	6	59	0.354	1,000	354	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K TAA SET TO 22W	6	23	0.138	50%	1,000	138	0.216	216		0.000	0	0.108	216
124	Metro Square	Lower Level	0107 storage	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100- ⁻ .*	4	59	0.236	1,000	236	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K TAA SET TO 22W	4	23	0.092	50%	1,000	92	0.144	144		0.000	0	0.072	144
125	Metro Square	Lower Level	0108 storage	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100- ⁻ .*	4	59	0.236	1,000	236	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K TAA SET TO 22W	4	23	0.092	50%	1,000	92	0.144	144		0.000	0	0.072	144
126	Metro Square	Lower Level	0109 storage	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100- ⁻ .*	8	59	0.472	1,000	472	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K TAA SET TO 22W	8	23	0.184	50%	1,000	184	0.288	288		0.000	0	0.144	288
127	Metro Square	Lower Level	SZ annex 1	F-F32T8-2	Wrap Narrow-4ft-Prismatic-Surface-3000- ⁻ .*	8	59	0.472	1,000	472	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	8	21	0.168	50%	1,000	168	0.304	304		0.000	0	0.152	304
128	Metro Square	Lower Level	SZ storage	F-F32T8-2	Troffer-2X4-Prismatic-Recessed- Tile-3000- ⁻ .*	29	59	1.711	1,000	1,711	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K TAA SET TO 22W	29	22	0.638	50%	1,000	638	1.073	1,073		0.000	0	0.537	1,073
129	Metro Square	Lower Level	SZ elevator lobby	F-F32T8-2	Troffer-2X4-Prismatic-Recessed- Tile-3000- ⁻ .*	2	59	0.118	4,000	472	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K TAA SET TO 22W	2	22	0.044	90%	4,000	176	0.074	296		0.000	0	0.067	296
130	Metro Square	Lower Level	Carpenters shop	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100- ⁻ .*	17	59	1.003	3,120	3,129	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K TAA SET TO 22W	17	23	0.391	90%	2,184	1,220	0.612	1,909	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Devised (4) Wireless	0.000	366	0.551	2,275
131	Metro Square	Lower Level	Janitors office	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000- ⁻ .*	11	89	0.979	3,120	3,054	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K TAA SET TO 22W	11	28	0.308	90%	2,184	961	0.671	2,094	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Devised (4) Wireless	0.000	288	0.604	2,382
132	Metro Square	Lower Level	Jan closet	F-F32T8-4	Troffer-2X4-Prismatic-Suspended-3000- ⁻ .*	1	112	0.112	500	56	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K TAA SET TO 22W	1	34	0.034	50%	500	17	0.078	39		0.000	0	0.039	39
133	Metro Square	Lower Level	Metro storage	F-F32T8-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000- ⁻ .*	28	89	2.492	3,120	7,775	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K TAA SET TO 22W	28	28	0.784	90%	3,120	2,446	1.708	5,329		0.000	0	1.537	5,329
1	Ramsey County Courthouse	Lower Level	Main corridor led lobby	LIN-LED-L15T8LED-1	Strip-4ft-Diffuse-Surface-3000-Type-B-*	1	15	0.015	4,000	60	Do Nothing	Do Nothing	1	15	0.015	90%	4,000	60	0.000	0		0.000	0	0.000	0
2	Ramsey County Courthouse	Lower Level	Cafe lounge	LED-L10-1	8-in Downlight Round-Plug-in 4 Pin Vertical-Open-Recessed- Hard-3000- ⁻ .*	8	10	0.080	4,000	320	Do Nothing	Do Nothing	8	10	0.080	90%	4,000	320	0.000	0		0.000	0	0.000	0
3	Ramsey County Courthouse	Lower Level	Cafe lounge	F-F32T8-2	Strip-4ft-Staggered-Surface-3000- ⁻ .*	46	59	2.714	4,000	10,856	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	46	21	0.966	90%	4,000	3,864	1.748	6,992		0.000	0	1.573	6,992
4	Ramsey County Courthouse	Lower Level	Cafe lounge	LED-L10-1	Flood-Screw in-PAR38- ⁻ 3000- ⁻ .*	1	10	0.010	4,000	40	Do Nothing	Do Nothing	1	10	0.010	90%	4,000	40	0.000	0		0.000	0	0.000	0
5	Ramsey County Courthouse	Lower Level	Vending led	LIN-LED-L15T8LED-1	Strip-4ft-Diffuse-Surface-3000-Type-B-*	1	15	0.015	4,000	60	Do Nothing	Do Nothing	1	15	0.015	90%	4,000	60	0.000	0		0.000	0	0.000	0
6	Ramsey County Courthouse	Lower Level	Vending led	EXIT-LED-1.5W-1	Exit-White-Red Letters-Wall-3500- ⁻ .*	1	2	0.002	4,000	8	Do Nothing	Do Nothing	1	2	0.002	90%	4,000	8	0.000	0		0.000	0	0.000	0
7	Ramsey County Courthouse	Lower Level	Interpretation led rm 70	LIN-LED-L15T8LED-1	Strip-4ft-Diffuse-Surface-3000-Type-B-*	1	15	0.015	4,000	60	Do Nothing	Do Nothing	1	15	0.015	90%	4,000	60	0.000	0		0.000	0	0.000	0
8	Ramsey County Courthouse	Lower Level	Interpretation led rm 70	LIN-LED-L15T8LED-1	Strip-4ft-Diffuse-Surface-3000-Type-B-*	6	15	0.090	4,000	360	Do Nothing	Do Nothing	6	15	0.090	90%	4,000	360	0.000	0		0.000	0	0.000	0
9	Ramsey County Courthouse	Lower Level	Interpretation conference led	LIN-LED-L15T8LED-1	Strip-4ft-Diffuse-Surface-3000-Type-B-*	2	15	0.030	4,000	120	Do Nothing	Do Nothing	2	15	0.030	90%	4,000	120	0.000	0		0.000	0	0.000	0
10	Ramsey County Courthouse	Lower Level	Jury room	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000- ⁻ .*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K TAA SET TO 22W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
11	Ramsey County Courthouse	Lower Level	Interpretation office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000- ⁻ .*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K TAA SET TO 22W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
12	Ramsey County Courthouse	Lower Level	Interpretation office 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000- ⁻ .*	3	59	0.177	3,120	552	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K TAA SET TO 22W	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434
13	Ramsey County Courthouse	Lower Level	District court 70 hall left	LED-L10-1	8-in Downlight Round-Plug-in 4 Pin Vertical-Open-Recessed- Hard-3000- ⁻ .*	1	10	0.010	4,000	40	Do Nothing	Do Nothing	1	10	0.010	90%	4,000	40	0.000	0		0.000	0	0.000	0
14	Ramsey County Courthouse	Lower Level	Mechanical	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100- ⁻ .*	7	59	0.413	1,000	413	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K T													

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
126	Ramsey County Courthouse	Lower Level	BSM 11	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-1-*	4	59	0.236	3,120	736	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	4	23	0.092	90%	2,184	287	0.144	449	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.009	106	0.138	555
128	Ramsey County Courthouse	Lower Level	Utility space behind maintenance	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-1-*	7	59	0.413	500	207	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	7	23	0.161	50%	350	81	0.252	126		0.016	30	0.134	156
129	Ramsey County Courthouse	Lower Level	Maintenance all LED	LED-L50-1	Existing LED-Guess on Wattage-Do not audit-1-1-1-*	1	50	0.050	1,000	50	Do Nothing	Do Nothing	1	50	0.050	50%	1,000	50	0.000	0		0.000	0	0.000	0
130	Ramsey County Courthouse	Lower Level	Tunnel entrance all LED	LED-L50-1	Existing LED-Guess on Wattage-Do not audit-1-1-1-*	1	50	0.050	1,000	50	Do Nothing	Do Nothing	1	50	0.050	50%	1,000	50	0.000	0		0.000	0	0.000	0
131	Ramsey County Courthouse	Lower Level	Mezz prisoner hall ALL LED	LED-L50-1	Existing LED-Guess on Wattage-Do not audit-1-1-1-*	1	50	0.050	4,000	200	Do Nothing	Do Nothing	1	50	0.050	90%	4,000	200	0.000	0		0.000	0	0.000	0
132	Ramsey County Courthouse	Lower Level	Mech 20	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-1-*	15	59	0.885	1,000	885	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	15	23	0.345	50%	700	345	0.540	540		0.035	128	0.287	668
133	Ramsey County Courthouse	Lower Level	Mech 20 hall	CFL-PL4P26W-2	Circle decorative main fixture-4-Pin PL-C Horizontal-Decorative-Recessed- Hard-3000-1-*	6	52	0.312	4,000	1,248	Retrofit	Direct/Bypass Lamp, 2/4 Pin, 9W 1250L	6	18	0.108	90%	4,000	432	0.204	816		0.000	0	0.184	816
134	Ramsey County Courthouse	Lower Level	File storage	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1-*	11	59	0.649	1,000	649	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	11	20	0.220	50%	700	220	0.429	429		0.022	81	0.226	510
135	Ramsey County Courthouse	Lower Level	File storage mail rm	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1-*	2	59	0.118	1,000	118	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	50%	700	40	0.078	78		0.004	15	0.041	93
136	Ramsey County Courthouse	Lower Level	File storage 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1-*	3	59	0.177	1,000	177	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	50%	700	60	0.117	117		0.006	22	0.062	139
137	Ramsey County Courthouse	Lower Level	City storage	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-1-*	12	59	0.708	1,000	708	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	12	23	0.276	50%	700	276	0.432	432		0.028	102	0.230	534
138	Ramsey County Courthouse	Lower Level	Tornado	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-1-*	27	59	1.593	1,000	1,593	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	27	23	0.621	50%	700	621	0.972	972		0.062	230	0.517	1,202
139	Ramsey County Courthouse	Lower Level	24 auditor	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1-*	8	59	0.472	3,120	1,473	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	8	20	0.160	90%	2,184	499	0.312	973		0.016	185	0.295	1,158
140	Ramsey County Courthouse	Lower Level	24 auditor private office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1-*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
141	Ramsey County Courthouse	Lower Level	Mail rm	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1-*	4	59	0.236	1,000	236	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	50%	700	80	0.156	156		0.008	30	0.082	186
142	Ramsey County Courthouse	Lower Level	Beverage storage	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1-*	2	59	0.118	1,000	118	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	50%	700	40	0.078	78		0.004	15	0.041	93
143	Ramsey County Courthouse	Lower Level	Mens	F-F32T8-2	Troffer-1X4-Prismatic-Recessed- Hard-3000-1-*	3	59	0.177	4,000	708	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,000	240	0.117	468		0.006	132	0.111	600
144	Ramsey County Courthouse	Lower Level	Mens	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-1-*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152		0.000	42	0.034	194
145	Ramsey County Courthouse	Lower Level	Mens	CFL-PL2P13W-1	6-in Downlight Round-2-Pin PL-C Vertical-Diffuse-Recessed- Hard-3000-1-*	1	16	0.016	4,000	64	Retrofit	1XA Downlight Kit 6" 0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V add neutral wire, not to 20W	1	7	0.007	90%	2,000	28	0.009	36		0.000	14	0.008	50
146	Ramsey County Courthouse	Lower Level	Womens	F-F32T8-2	Troffer-1X4-Prismatic-Recessed- Hard-3000-1-*	3	59	0.177	4,000	708	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,000	240	0.117	468		0.006	132	0.111	600
147	Ramsey County Courthouse	Lower Level	Womens	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-1-*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152		0.000	42	0.034	194
148	Ramsey County Courthouse	Lower Level	Womens	CFL-PL2P13W-1	6-in Downlight Round-2-Pin PL-C Vertical-Diffuse-Recessed- Hard-3000-1-*	1	16	0.016	4,000	64	Retrofit	1XA Downlight Kit 6" 0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V add neutral wire, not to 20W	1	7	0.007	90%	2,000	28	0.009	36		0.000	14	0.008	50
149	Ramsey County Courthouse	Lower Level	Office storage 27	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1-*	9	59	0.531	1,000	531	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	9	20	0.180	50%	700	180	0.351	351		0.018	67	0.185	418
150	Ramsey County Courthouse	Lower Level	40B	F-F17T8-6	Area-4ft-Polycarbonate-Recessed- Hard-3000-1-*	8	102	0.816	2,200	1,795	Retrofit	2ft 6-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	8	42	0.336	90%	2,200	739	0.480	1,056		0.000	0	0.432	1,056
151	Ramsey County Courthouse	Lower Level	40B	CFL-CFS23W-1	8-in Downlight Round-Screw-In Candelabra E11-No Lens-Recessed- Tile-3500-1-*	38	23	0.874	2,200	1,923	Retrofit	1XA Downlight Kit 6" 0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V add neutral wire, not to 20W	38	12	0.456	90%	2,200	1,003	0.418	920		0.000	0	0.376	920
152	Ramsey County Courthouse	Lower Level	40B	CFL-CFS23W-1	8-in Downlight Round-Screw-In Candelabra E11-No Lens-Recessed- Hard-3500-1-*	10	23	0.230	2,200	506	Retrofit	1XA Downlight Kit 6" 0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V add neutral wire, not to 20W	10	14	0.140	90%	2,200	308	0.090	198		0.000	0	0.081	198
153	Ramsey County Courthouse	Lower Level	Conference 40 hallway	CFL-PL4P18W-2	6-in Downlight 12-Square-Pin PL-C Horizontal-Diffuse-Recessed- Hard-3000-1-*	6	35	0.210	4,000	840	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	6	9	0.051	90%	4,000	204	0.159	636		0.000	0	0.143	636
154	Ramsey County Courthouse	Lower Level	Conference 40 hallway	LED-L30-1	Mix of led fixtures-Na-Na-1-1-1-*	1	30	0.030	4,000	120	Do Nothing	Do Nothing	1	30	0.030	90%	4,000	120	0.000	0		0.000	0	0.000	0

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
176	Ramsey County Courthouse	Lower Level	Av conference	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,200	519	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	1,540	176	0.156	343		0.008	65	0.148	408	
177	Ramsey County Courthouse	Lower Level	Equipment depot	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Suspended-3000-.*	4	59	0.236	1,000	236	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	50%	700	80	0.156	156		0.008	30	0.082	186	
178	Ramsey County Courthouse	Lower Level	Equipment depot	F-F32T8-2	Strip-4ft-Diffuse-Surface-3000-.*	3	59	0.177	1,000	177	Retrofit	1X4 LED volumetric Troffer Kit Control Ready, 23/34/47W 3400/4990/6760L	3	23	0.069	50%	700	69	0.108	108		0.007	26	0.057	134	
179	Ramsey County Courthouse	Lower Level	Storage equipment depot	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	1	59	0.059	1,000	59	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	1	20	0.020	50%	700	20	0.039	39		0.002	7	0.021	46	
180	Ramsey County Courthouse	Lower Level	Storage equipment depot	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	1	59	0.059	1,000	59	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	1	20	0.020	50%	700	20	0.039	39		0.002	7	0.021	46	
181	Ramsey County Courthouse	Lower Level	Equipment	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	1,000	177	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	50%	700	60	0.117	117		0.006	22	0.062	139	
182	Ramsey County Courthouse	Lower Level	Av office chase	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
183	Ramsey County Courthouse	Lower Level	Av office bridget	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
184	Ramsey County Courthouse	Lower Level	Av office aubree	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
185	Ramsey County Courthouse	Lower Level	80 records	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	23	59	1.357	1,000	1,357	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	23	20	0.460	50%	700	460	0.897	897		0.046	170	0.472	1,067	
186	Ramsey County Courthouse	Lower Level	Data center	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3000-.*	26	89	2.314	1,000	2,314	Retrofit	2X4 LED volumetric Troffer Kit Control Ready, 22/28/34W 3490/4390/5270L	26	28	0.728	50%	700	728	1.586	1,586		0.073	269	0.829	1,855	
187	Ramsey County Courthouse	Lower Level	86	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
201	Ramsey County Courthouse	Lower Level	86	EXIT-CFT5W-2	Exit-White-Red Letters-Wall-3500-.*	1	20	0.020	3,120	62	Retrofit	LED Exit Sign Kit LED Linear 1.1W Red Letters	1	1	0.001	90%	2,184	3	0.019	59		0.000	1	0.017	60	
188	Ramsey County Courthouse	Lower Level	86 conference rm	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	2,200	779	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	1,540	264	0.234	515		0.012	98	0.221	612	
189	Ramsey County Courthouse	Lower Level	86 office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
190	Ramsey County Courthouse	Lower Level	86 probation	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
191	Ramsey County Courthouse	Lower Level	86 victims	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
192	Ramsey County Courthouse	Lower Level	86 office blank	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
193	Ramsey County Courthouse	Lower Level	86 office media	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
194	Ramsey County Courthouse	Lower Level	86 office hall	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	4,000	708	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,800	240	0.117	468		0.006	67	0.111	535	
200	Ramsey County Courthouse	Lower Level	86 office hall	EXIT-CFT5W-2	Exit-White-Red Letters-Wall-3500-.*	1	20	0.020	4,000	80	Retrofit	LED Exit Sign Kit LED Linear 1.1W Red Letters	1	1	0.001	90%	4,000	4	0.019	76		0.000	0	0.017	76	
195	Ramsey County Courthouse	Lower Level	88	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	12	59	0.708	3,120	2,209	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	12	20	0.240	90%	2,184	749	0.468	1,460		0.024	277	0.443	1,737	
196	Ramsey County Courthouse	Lower Level	88 back cubicles	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	9	59	0.531	3,120	1,657	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	9	20	0.180	90%	2,184	562	0.351	1,095		0.018	208	0.332	1,303	
197	Ramsey County Courthouse	Lower Level	88 private office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	3,120	552	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434	
198	Ramsey County Courthouse	Lower Level	90 lactation locked	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
199	Ramsey County Courthouse	Lower Level	88 wing hall	CFL-PL4P26W-2	Horizontal-Decorative-Recessed- Hard-3000-.*	4	52	0.208	4,000	832	Retrofit	Direct/Bypass Lamp, 2/4 Pin, 9W 1250L	4	18	0.072	90%	4,000	288	0.136	544		0.000	0	0.122	544	
202	Ramsey County Courthouse	Lower Level	72 court records	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	28	59	1.652	3,120	5,154	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	28	20	0.560	90%	2,184	1,747	1.092	3,407		0.056	646	1.033	4,054	
203	Ramsey County Courthouse	Lower Level	72 office storage	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	1,000	236	Retrofit	1X4 LED volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	50%	700	80	0.156	156		0.008	30	0.082	186	
204	Ramsey County Courthouse County																									

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
223	Ramsey County Courthouse	1st Floor	Court room 5	F-F32T8-1	Wall Wash-4ft-Court room-Wall-3000-.*	1	31	0.031	2,184	68	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	11	0.011	90%	2,184	23	0.021	45		0.000	0	0.018	45
224	Ramsey County Courthouse	1st Floor	Court room 6	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	12	59	0.708	2,184	1,546	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	12	20	0.240	90%	2,184	524	0.468	1,022		0.024	52	0.443	1,075
225	Ramsey County Courthouse	1st Floor	Court room 6	F-F32T8-1	Wall Wash-4ft-Court room-Wall-3000-.*	1	31	0.031	2,184	68	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	11	0.011	90%	2,184	23	0.021	45		0.000	0	0.018	45
226	Ramsey County Courthouse	1st Floor	Court room 4	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	12	59	0.708	2,184	1,546	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	12	20	0.240	90%	2,184	524	0.468	1,022		0.024	52	0.443	1,075
227	Ramsey County Courthouse	1st Floor	Court room 4	F-F32T8-1	Wall Wash-4ft-Court room-Wall-3000-.*	1	31	0.031	2,184	68	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	11	0.011	90%	2,184	23	0.021	45		0.000	0	0.018	45
228	Ramsey County Courthouse	1st Floor	Court room 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	12	59	0.708	2,184	1,546	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	12	20	0.240	90%	2,184	524	0.468	1,022		0.024	52	0.443	1,075
229	Ramsey County Courthouse	1st Floor	Court room 3	F-F32T8-1	Wall Wash-4ft-Court room-Wall-3000-.*	1	31	0.031	2,184	68	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	11	0.011	90%	2,184	23	0.021	45		0.000	0	0.018	45
230	Ramsey County Courthouse	1st Floor	Court room 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	12	59	0.708	2,184	1,546	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	12	20	0.240	90%	2,184	524	0.468	1,022		0.024	52	0.443	1,075
231	Ramsey County Courthouse	1st Floor	Court room 2	F-F32T8-1	Wall Wash-4ft-Court room-Wall-3000-.*	1	31	0.031	2,184	68	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	11	0.011	90%	2,184	23	0.021	45		0.000	0	0.018	45
234	Ramsey County Courthouse	1st Floor	Court room 2	CFL-PL4P26W-1	8-in Downlight Round-2-Pin PL-S Vertical-No Lens-Recessed- Hard-3000-.*	2	27	0.054	2,184	118	Retrofit	1X4 Downlight Kit 8"-9-10V Dim 75-12W 600-1000L 3000/3500/4000/5000K 120-277V 1-110-20W	2	12	0.024	90%	2,184	52	0.030	66		0.000	0	0.027	66
232	Ramsey County Courthouse	1st Floor	Court room 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	12	59	0.708	2,184	1,546	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	12	20	0.240	90%	2,184	524	0.468	1,022		0.024	52	0.443	1,075
233	Ramsey County Courthouse	1st Floor	Court room 1	F-F32T8-1	Wall Wash-4ft-Court room-Wall-3000-.*	1	31	0.031	2,184	68	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	11	0.011	90%	2,184	23	0.021	45		0.000	0	0.018	45
237	Ramsey County Courthouse	1st Floor	Spiral stairs to 18	F-F32T8-2	Stair strip with 2' nightlight-4ft-Diffuse-Surface-3000-.*	33	59	1.947	6,132	11,939	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	33	21	0.693	90%	6,132	4,249	1.254	7,690		0.000	0	1.129	7,690
238	Ramsey County Courthouse	1st Floor	Spiral stairs to 18	F-F17T8-1	Night light in stairs-2ft-Diffuse-Recessed-Hard-3000-.*	33	18	0.594	6,132	3,642	Retrofit	2ft 1-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	33	7	0.231	90%	6,132	1,416	0.363	2,226		0.000	0	0.327	2,226
239	Ramsey County Courthouse	1st Floor	Spiral stairs to 18	LED-L30-1	3 triangles led fixture-Na-Na-.*.*.*	1	30	0.030	6,132	184	Do Nothing	Do Nothing	1	30	0.030	90%	6,132	184	0.000	0		0.000	0	0.000	0
240	Ramsey County Courthouse	1st Floor	Spiral stairs to 18	LED-L10-1	Rosebud led-A19-Diffuse-Surface-3000-.*	1	10	0.010	6,132	61	Do Nothing	Do Nothing	1	10	0.010	90%	6,132	61	0.000	0		0.000	0	0.000	0
242	Ramsey County Courthouse	1st Floor	R knalfa	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
243	Ramsey County Courthouse	1st Floor	Rear hall 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	22	59	1.298	4,000	5,192	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	22	20	0.440	90%	2,800	1,760	0.858	3,432		0.044	651	0.812	4,083
244	Ramsey County Courthouse	1st Floor	Rear hall 1	CFL-PL4P26W-1	8-in Downlight Round-2-Pin PL-S Vertical-No Lens-Recessed- Hard-3000-.*	6	27	0.162	4,000	648	Retrofit	1X4 Downlight Kit 8"-9-10V Dim 75-12W 600-1000L 3000/3500/4000/5000K 120-277V 1-110-20W	6	12	0.072	90%	4,000	288	0.090	360		0.000	0	0.081	360
245	Ramsey County Courthouse	1st Floor	113 a	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
246	Ramsey County Courthouse	1st Floor	113 b	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
247	Ramsey County Courthouse	1st Floor	111 a	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
248	Ramsey County Courthouse	1st Floor	111 b	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
249	Ramsey County Courthouse	1st Floor	109 b	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
250	Ramsey County Courthouse	1st Floor	109 a	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
251	Ramsey County Courthouse	1st Floor	107 a	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-327V 1-110-20W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
274	Ramsey County Courthouse	1st Floor	SPII OFFICE	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	2,184	387	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	131	0.117	256		0.006	13	0.111	269	
276	Ramsey County Courthouse	1st Floor	Flex Office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	2,184	387	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	131	0.117	256		0.006	13	0.111	269	
277	Ramsey County Courthouse	1st Floor	SMLS Office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	2,184	387	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	131	0.117	256		0.006	13	0.111	269	
278	Ramsey County Courthouse	1st Floor	Abuse Office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	2,184	387	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	131	0.117	256		0.006	13	0.111	269	
279	Ramsey County Courthouse	1st Floor	County attorney Office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	2,184	387	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	131	0.117	256		0.006	13	0.111	269	
280	Ramsey County Courthouse	1st Floor	Abuse b Office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	2,184	387	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	131	0.117	256		0.006	13	0.111	269	
281	Ramsey County Courthouse	1st Floor	SPII 2 Office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	2,184	387	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	131	0.117	256		0.006	13	0.111	269	
282	Ramsey County Courthouse	1st Floor	Flex b Office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	2,184	387	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	131	0.117	256		0.006	13	0.111	269	
283	Ramsey County Courthouse	1st Floor	SPPD Office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,184	515	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	175	0.156	341		0.008	17	0.148	358	
284	Ramsey County Courthouse	1st Floor	Lounge	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	1,540	273	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	1,540	92	0.117	180		0.006	9	0.111	189	
285	Ramsey County Courthouse	1st Floor	BRIDGES	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	2,184	387	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	131	0.117	256		0.006	13	0.111	269	
286	Ramsey County Courthouse	1st Floor	Advocate Office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	5	59	0.295	2,184	644	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	5	20	0.100	90%	2,184	218	0.195	426		0.010	22	0.185	448	
287	Ramsey County Courthouse	1st Floor	St Paul IP Office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,184	515	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	175	0.156	341		0.008	17	0.148	358	
288	Ramsey County Courthouse	1st Floor	Advocate 2 Office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,184	515	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	175	0.156	341		0.008	17	0.148	358	
289	Ramsey County Courthouse	1st Floor	Advocate 1 Office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,184	515	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	175	0.156	341		0.008	17	0.148	358	
290	Ramsey County Courthouse	1st Floor	Meeting Office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	2,184	258	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	87	0.078	170		0.004	9	0.074	179	
297	Ramsey County Courthouse	1st Floor	Bridges lobby area	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	5	59	0.295	3,120	920	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	5	20	0.100	90%	2,184	312	0.195	608		0.010	115	0.185	724	
298	Ramsey County Courthouse	1st Floor	Bridges lobby area	CFL-PL4P26W-1	8-in Downlight Round-2-Pin PL-S Vertical-No Lens-Recessed- Hard-3000-.*	10	27	0.270	4,000	1,080	Retrofit	800-1000L 3000/3500/4000/5000K 120-277V 12W Add Baseplate	10	12	0.120	90%	4,000	480	0.150	600		0.000	0	0.135	600	
299	Ramsey County Courthouse	1st Floor	Bridges lobby area	LED-L10-1	4" can LED-Medium-Open-Recessed- Tile-3000-.*	16	10	0.160	4,000	640	Do Nothing	Do Nothing	16	10	0.160	90%	4,000	640	0.000	0		0.000	0	0.000	0	
300	Ramsey County Courthouse	1st Floor	Bridges lobby rest	F-F32T8-2	Strip / troffer-4ft-Diffuse-Recessed- Tile-3500-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	4,000	84	0.038	152		0.000	0	0.034	152	
301	Ramsey County Courthouse	1st Floor	Office area rest	F-F32T8-2	Strip / troffer-4ft-Diffuse-Recessed- Tile-3500-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	4,000	84	0.038	152		0.000	0	0.034	152	
302	Ramsey County Courthouse	1st Floor	Violations corner	CFL-PL4P18W-2	Box troffer 12 sq-ft Pin PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	3	35	0.105	3,120	328	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	3	9	0.026	90%	2,184	80	0.080	248	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	24	0.072	272	
303	Ramsey County Courthouse	1st Floor	Violations conference 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
304	Ramsey County Courthouse	1st Floor	Violations conference 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
305	Ramsey County Courthouse	1st Floor	Violations conference 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
306	Ramsey County Courthouse	1st Floor	Violations admin	CFL-PL4P18W-2	Box troffer 12 sq-ft Pin PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	3	35	0.105	3,120	328	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	3	9	0.026	90%	2,184	80	0.080	248	Wireless Large Motion 300 degree Ceiling Sensor - PIR, Battery Powered (4) Wireless	0.000	24	0.072	272	
307	Ramsey County Courthouse	1st Floor	Violations admin	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	42	59	2.478	1,000	2,478	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	42	20	0.840	50%	700	840	1.638	1,638		0.084	311	0.861	1,949	
308	Ramsey County Courthouse	1st Floor	Violations manager	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit															

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
330	Ramsey County Courthouse	1st Floor	South entrance womens	F-F32T8-2	Strip-4ft-Staggered-Surface-3000-1.*	4	59	0.236	4,000	944	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	4,000	336	0.152	608		0.000	0	0.137	608
331	Ramsey County Courthouse	1st Floor	SE janitor	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-1.*	1	59	0.059	500	30	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	350	12	0.036	18		0.002	4	0.019	22
332	Ramsey County Courthouse	1st Floor	Property management	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	11	59	0.649	3,120	2,025	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 13/20/26W 2060/3140/4030L	11	20	0.220	90%	2,184	686	0.429	1,338		0.022	254	0.406	1,592
333	Ramsey County Courthouse	1st Floor	PM Office 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	2	59	0.118	3,120	368	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
334	Ramsey County Courthouse	1st Floor	PM Office 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	2	59	0.118	3,120	368	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
335	Ramsey County Courthouse	1st Floor	PM Office 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	4	59	0.236	3,120	736	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
336	Ramsey County Courthouse	1st Floor	Dock hall	CFL-PL4P18W-2	Box Troffer 12 sq-ft-Pin PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-1.*	7	35	0.245	4,000	980	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	7	9	0.060	90%	4,000	238	0.186	742		0.000	0	0.167	742
337	Ramsey County Courthouse	1st Floor	Dock hall	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	4	59	0.236	4,000	944	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,800	320	0.156	624		0.008	118	0.148	742
338	Ramsey County Courthouse	1st Floor	Michelle's office	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-1.*	2	59	0.118	3,120	368	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	2	23	0.046	90%	2,184	144	0.072	225	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.005	53	0.069	278
339	Ramsey County Courthouse	1st Floor	Cigar shop	CFL-CFS23W-1	Keyless-Screw-In Medium E26-Frosted-Recessed- Hard-3000-1.*	65	23	1.495	3,120	4,664	Retrofit	1700W Inc EQ Dim 90CRI 16W 1600L	65	16	1.040	90%	3,120	3,245	0.455	1,420		0.000	0	0.410	1,420
426	Ramsey County Courthouse	1st Floor	131AB COURTROOM	CFL-PL4P26W-1	8-in Downlight Round-2-Pin PL-S Vertical-No Lens-Recessed- Hard-3000-1.*	22	27	0.594	3,120	1,853	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 600-1000L 3000/3500/4000/5000K 120-277V	22	12	0.264	90%	3,120	824	0.330	1,030		0.000	0	0.297	1,030
427	Ramsey County Courthouse	1st Floor	131AB COURTROOM	F-F32T8H-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-1.*	21	111	2.331	3,120	7,273	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 22/28/34W 3490/4390/5270L	21	34	0.714	90%	2,184	2,228	1.617	5,045		0.071	824	1.520	5,869
428	Ramsey County Courthouse	1st Floor	131A COURTROOM	CFL-PL4P26W-1	8-In Downlight Round-2-Pin PL-S Vertical-No Lens-Recessed- Hard-3000-1.*	22	27	0.594	3,120	1,853	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 600-1000L 3000/3500/4000/5000K 120-277V	22	12	0.264	90%	3,120	824	0.330	1,030		0.000	0	0.297	1,030
429	Ramsey County Courthouse	1st Floor	131A COURTROOM	F-F32T8H-3	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-1.*	21	111	2.331	3,120	7,273	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 22/28/34W 3490/4390/5270L	21	34	0.714	90%	2,184	2,228	1.617	5,045		0.071	824	1.520	5,869
1155	Ramsey County Courthouse	1st Floor	Spiral stairs to 18-2	F-F32T8-2	Stair strip with 2' nightlight-4ft-Diffuse-Surface-3000-1.*	35	59	2.065	6,132	12,663	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	35	21	0.735	90%	6,132	4,507	1.330	8,156		0.000	0	1.197	8,156
1156	Ramsey County Courthouse	1st Floor	Spiral stairs to 18-2	F-F17T8-1	Night light in stairs-2ft-Diffuse-Recessed-Hard-3000-1.*	35	18	0.630	6,132	3,863	Retrofit	2ft 1-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	35	7	0.245	90%	6,132	1,502	0.385	2,361		0.000	0	0.347	2,361
340	Ramsey County Courthouse	2nd Floor	210 ALL LED	1.*,1.*	1.*,1.*,1.*,1.*	1	0	0.000	3,120	0	Do Nothing	Do Nothing	1	0	0.000	90%	3,120	0	0.000	0		0.000	0	0.000	0
341	Ramsey County Courthouse	2nd Floor	Main lobby all common ALL LED	1.*,1.*	1.*,1.*,1.*,1.*	1	0	0.000	4,000	0	Do Nothing	Do Nothing	1	0	0.000	90%	4,000	0	0.000	0		0.000	0	0.000	0
342	Ramsey County Courthouse	2nd Floor	250 270 ALL LED	1.*,1.*	1.*,1.*,1.*,1.*	1	0	0.000	3,120	0	Do Nothing	Do Nothing	1	0	0.000	90%	3,120	0	0.000	0		0.000	0	0.000	0
343	Ramsey County Courthouse	2nd Floor	270 electric	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-1.*	2	59	0.118	1,000	118	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	2	23	0.046	50%	700	46	0.072	72		0.005	17	0.038	89
344	Ramsey County Courthouse	2nd Floor	270 DATA	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-1.*	2	59	0.118	1,000	118	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	2	23	0.046	50%	700	46	0.072	72		0.005	17	0.038	89
345	Ramsey County Courthouse	2nd Floor	County manager office	CFL-PL4P26W-1	Troffer CFL-4-Pin PL-T Vertical-Frosted-Recessed- Tile-1.*,1.*	10	27	0.270	3,120	842	Retrofit	LED 4-pin CFL G24q UL Type-B HOR 8W 900L 3000K 120-277V	10	8	0.080	90%	2,184	250	0.190	593	wireless Large motion 300 degree Ceiling Sensor - PIR, Battery Powered (4) Wireless	0.000	75	0.171	668
346	Ramsey County Courthouse	2nd Floor	County manager office	F-F17T8-2	Strip/troffer-2ft-Diffuse-Recessed- Hard-3000-1.*	10	33	0.330	3,120	1,030	Retrofit	2ft 2-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	10	14	0.140	90%	2,184	437	0.190	593	wireless Large motion 300 degree Ceiling Sensor - PIR, Battery Powered (4) Wireless	0.000	131	0.171	724
347	Ramsey County Courthouse	2nd Floor	County manager lobby	CFL-PL4P26W-1	Troffer CFL-4-Pin PL-T Vertical-Frosted-Recessed- Tile-1.*,1.*	10	27	0.270	3,120	842	Retrofit	LED 4-pin CFL G24q UL Type-B HOR 8W 900L 3000K 120-277V	10	8	0.080	90%	3,120	250	0.190	593		0.000	0	0.171	593
348	Ramsey County Courthouse	2nd Floor	County manager lobby	F-F17T8-2	Strip/troffer-2ft-Diffuse-Recessed- Hard-3000-1.*	10	33	0.330	3,120	1,030	Retrofit	2ft 2-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	10	14	0.140	90%	3,120	437	0.190	593		0.000	0	0.171	593
349	Ramsey County Courthouse	2nd Floor	County manager office 1	CFL-PL4P26W-1	Troffer CFL-4-Pin PL-T Vertical-Frosted-Recessed- Tile-1.*,1.*	4	27	0.108	3,120	337	Retrofit	LED 4-pin CFL G24q UL Type-B HOR 8W 900L 3000K 120-277V	4	8	0.032	90%	2,184	100	0.076	237	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	30	0.068	267
350	Ramsey County Courthouse	2nd Floor	County manager office 1	F-F17T8-2	Strip/troffer-2ft-Diffuse-Recessed- Hard-3000-1.*	4	33	0.132	3,120	412	Retrofit	2ft 2-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	4	14	0.056	90%	2,184	175	0.076	237	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	52	0.068	290
351	Ramsey County Courthouse	2nd Floor	County manager office 2	CFL-PL4P26W-1	Troffer CFL-4-Pin PL-T Vertical-Frosted-Recessed- Tile-1.*,1.*	2	27	0.054	3,120	168	Retrofit	LED 4-pin CFL G24q UL Type-B HOR 8W 900L 3000K 120-277V	2	8	0.016	90%									

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
373	Ramsey County Courthouse	2nd Floor	South womens	F-F25T8-2	Wall Wash-3ft-No Lens-Wall-3000-.*	4	46	0.184	4,000	736	Retrofit	3ft 2-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	4	24	0.096	90%	2,000	384	0.088	352		0.000	192	0.079	544
374	Ramsey County Courthouse	2nd Floor	South womens	F-F32T8-2	Strip-4ft-Staggered-Surface-3000-.*	4	59	0.236	4,000	944	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	2,000	336	0.152	608		0.000	168	0.137	776
375	Ramsey County Courthouse	2nd Floor	Exterior Kellogg entrance lights	F-F96T12/HO-2	Industrial-8ft-No Lens-Surface-4100-.*	32	237	7.584	4,380	33,218	Retrofit	8ft 2-lamp HO T8 TLED Type-B Double-ended 42W 5500L 4000K	32	84	2.688	90%	4,380	11,773	4.896	21,444		0.000	0	4.406	21,444
376	Ramsey County Courthouse	2nd Floor	South janitor led	LED-L50-1	Existing LED-Guess on Wattage-Do not audit-.*-.*-.*	1	50	0.050	4,380	219	Do Nothing	Do Nothing	1	50	0.050	90%	4,380	219	0.000	0		0.000	0	0.000	0
377	Ramsey County Courthouse	2nd Floor	Stairs all led 1	LED-L50-1	Existing LED-Guess on Wattage-Do not audit-.*-.*-.*	1	50	0.050	500	25	Do Nothing	Do Nothing	1	50	0.050	50%	500	25	0.000	0		0.000	0	0.000	0
378	Ramsey County Courthouse	2nd Floor	Stairs all led 2	LED-L50-1	Existing LED-Guess on Wattage-Do not audit-.*-.*-.*	1	50	0.050	8,760	438	Do Nothing	Do Nothing	1	50	0.050	100%	8,760	438	0.000	0		0.000	0	0.000	0
379	Ramsey County Courthouse	2nd Floor	220 lobby	F-F17T8-6	Area-4ft-Polycarbonate-Recessed- Hard-3000-.*	1	102	0.102	3,120	318	Retrofit	2ft 6-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	1	42	0.042	90%	3,120	131	0.060	187		0.000	0	0.054	187
380	Ramsey County Courthouse	2nd Floor	220 lobby	F-F32T8-2	Strip / troffer-4ft-Diffuse-Recessed- Tile-3500-.*	2	59	0.118	3,120	368	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	3,120	131	0.076	237		0.000	0	0.068	237
381	Ramsey County Courthouse	2nd Floor	220 lobby	LED-L10-1	Flood-Screw in-A19-.*-3000-.*	8	10	0.080	3,120	250	Do Nothing	Do Nothing	8	10	0.080	90%	3,120	250	0.000	0		0.000	0	0.000	0
382	Ramsey County Courthouse	2nd Floor	220 copy	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	3,120	552	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434
383	Ramsey County Courthouse	2nd Floor	220 conference c	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	2,200	779	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	1,540	264	0.234	515		0.012	98	0.221	612
384	Ramsey County Courthouse	2nd Floor	220 conference b	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	2,200	779	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	1,540	264	0.234	515		0.012	98	0.221	612
385	Ramsey County Courthouse	2nd Floor	220 rest	F-F25T8-2	Wall Wash-3ft-No Lens-Wall-3000-.*	1	46	0.046	4,000	184	Retrofit	3ft 2-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	1	24	0.024	90%	2,000	96	0.022	88	Wireless Large Motion 300 degree Ceiling Sensor - PIR, Bottom Mounted (4) Wireless	0.000	48	0.020	136
386	Ramsey County Courthouse	2nd Floor	220 rest	F-F32T8-2	Industrial-4ft-No Lens-Surface-4100-.*	1	59	0.059	4,000	236	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	90%	2,000	92	0.036	144		0.002	51	0.034	195
387	Ramsey County Courthouse	2nd Floor	Hall of commissioners	F-F17T8-2	Strip/troffer-2ft-Diffuse-Recessed- Hard-3000-.*	2	33	0.066	4,000	264	Retrofit	2ft 2-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	2	14	0.028	90%	4,000	112	0.038	152		0.000	0	0.034	152
388	Ramsey County Courthouse	2nd Floor	Hall of commissioners	F-F32T8-2	Strip / troffer-4ft-Diffuse-Recessed- Tile-3500-.*	2	59	0.118	4,000	472	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	4,000	168	0.076	304		0.000	0	0.068	304
389	Ramsey County Courthouse	2nd Floor	220 rest 2	F-F25T8-2	Wall Wash-3ft-No Lens-Wall-3000-.*	1	46	0.046	4,000	184	Retrofit	3ft 2-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	1	24	0.024	90%	2,000	96	0.022	88	Wireless Large Motion 300 degree Ceiling Sensor - PIR, Bottom Mounted (4) Wireless	0.000	48	0.020	136
390	Ramsey County Courthouse	2nd Floor	220 rest 2	F-F32T8-2	Industrial-4ft-No Lens-Surface-4100-.*	1	59	0.059	4,000	236	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	90%	2,000	92	0.036	144		0.002	51	0.034	195
391	Ramsey County Courthouse	2nd Floor	220 break	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,200	519	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	1,540	176	0.156	343		0.008	65	0.148	408
392	Ramsey County Courthouse	2nd Floor	220 hall	CFL-PL4P18W-2	Box Troffer 12-34-Pin CFL Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	40	35	1.400	4,000	5,600	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	40	9	0.340	90%	4,000	1,360	1.060	4,240		0.000	0	0.954	4,240
393	Ramsey County Courthouse	2nd Floor	220 hall	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	1	59	0.059	4,000	236	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	1	20	0.020	90%	2,800	80	0.039	156		0.002	22	0.037	178
394	Ramsey County Courthouse	2nd Floor	220 large conference	F-F17T8-6	Area-4ft-Polycarbonate-Recessed- Hard-3000-.*	2	102	0.204	2,200	449	Retrofit	2ft 6-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	2	42	0.084	90%	2,200	185	0.120	264		0.000	0	0.108	264
395	Ramsey County Courthouse	2nd Floor	220 large conference	F-F32T8-2	Strip / troffer-4ft-Diffuse-Recessed- Tile-3500-.*	6	59	0.354	3,120	1,104	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	3,120	393	0.228	711		0.000	0	0.205	711
396	Ramsey County Courthouse	2nd Floor	220 large conference	LED-L10-1	Flood-Screw in-A19-.*-3000-.*	33	10	0.330	3,120	1,030	Do Nothing	Do Nothing	33	10	0.330	90%	3,120	1,030	0.000	0		0.000	0	0.000	0
397	Ramsey County Courthouse	2nd Floor	Kim BURBACK	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	5	59	0.295	3,120	920	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	5	20	0.100	90%	2,184	312	0.195	608		0.010	115	0.185	724
398	Ramsey County Courthouse	2nd Floor	Janitor	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	1	59	0.059	500	30	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	1	20	0.020	50%	350	10	0.039	20		0.002	4	0.021	23
399	Ramsey County Courthouse	2nd Floor	221	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
414	Ramsey County Courthouse	2nd Floor	221	CFL-PL4P18W-2	Box Troffer 12-34-Pin CFL Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	1	35	0.035	3,120	109	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	1	9	0.009	90%	2,184	27	0.027	83	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	8	0.024	91
400	Ramsey County Courthouse	2nd Floor	A Varner	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	R														

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
425	Ramsey County Courthouse	2nd Floor	220 data	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	1,000	118	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 400-277V 120V 120W	2	20	0.040	50%	700	40	0.078	78		0.004	15	0.041	93
1162	Ramsey County Courthouse	2nd Floor	Skyway	F-F32T8-2	Strip / troffer-4ft-Diffuse-Recessed- Tile-3500-.*	18	59	1.062	4,000	4,248	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	18	21	0.378	90%	4,000	1,512	0.684	2,736		0.000	0	0.616	2,736
1163	Ramsey County Courthouse	2nd Floor	Guard break rm	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	4	59	0.236	3,120	736	Retrofit	4ft LED Lensed Strip Retrofit Kit Controls Ready, 23/34/47W 3400/4990/6760L 2600/4000/5000K 400-277V 120V 120W	4	23	0.092	90%	2,184	287	0.144	449	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.009	106	0.138	555
1059	Ramsey County Courthouse	3rd Floor	390 lobby	F-F25T8-2	Strip / troffer-3ft-Diffuse-Recessed- Tile-3500-.*	4	46	0.184	4,000	736	Retrofit	3ft 2-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	4	24	0.096	90%	4,000	384	0.088	352		0.000	0	0.079	352
1060	Ramsey County Courthouse	3rd Floor	390 lobby	F-F32T8-2	Strip / troffer-4ft-Diffuse-Recessed- Tile-3500-.*	4	59	0.236	3,120	736	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	21	0.084	90%	3,120	262	0.152	474		0.000	0	0.137	474
1061	Ramsey County Courthouse	3rd Floor	390 lobby	F-F17T8-2	Strip/troffer-2ft-Diffuse-Recessed- Hard-3000-.*	2	33	0.066	3,120	206	Retrofit	2ft 2-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	2	14	0.028	90%	3,120	87	0.038	119		0.000	0	0.034	119
1062	Ramsey County Courthouse	3rd Floor	Lobby hall	F-F32T8-2	Troffer-4ft-Polycarbonate-Recessed- Tile-3000-.*	2	59	0.118	4,000	472	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	4,000	168	0.076	304		0.000	0	0.068	304
1063	Ramsey County Courthouse	3rd Floor	Mayors office	CFL-PL4P26W-2	10-in Downlight Round-Screw-In PL-L Horizontal-No Lens-Recessed- Hard-3000-.*	4	52	0.208	3,120	649	Retrofit	1X4 Downlight Kit 6-10-10V Dimm 14-18-18-24W 1100-2000L 3000/3500/4000/5000K 120-277V 120W 120W Add Ceiling	4	18	0.072	90%	2,184	225	0.136	424	Wireless Large Motion 300 degree Ceiling Sensor - PIR, Motion Deceased (4) Wireless	0.000	67	0.122	492
1064	Ramsey County Courthouse	3rd Floor	Mayors office	CFL-CFS23W-1	8-in Downlight Round-Screw-In Medium E26-No Lens-Recessed- Tile-3500-.*	8	23	0.184	3,120	574	Retrofit	1X4 Downlight Kit 6-10-10V Dimm 7-9-12W 600-1000L 3000/3500/4000/5000K 120-277V 120W 120W Add Ceiling	8	12	0.096	90%	2,184	300	0.088	275		0.000	90	0.079	364
1065	Ramsey County Courthouse	3rd Floor	Mayors office	INCAN-I40-6	Chandelier-Candelabra-Clear-Chain-3000-Decorative-.*	1	240	0.240	3,120	749	Retrofit	LED B11 Omni-directional E12 40w Inc EQ Dim 90CRI 4.5W 360L 3000K 120V	1	5	0.005	90%	2,184	14	0.236	735		0.000	4	0.212	739
1066	Ramsey County Courthouse	3rd Floor	Phillips	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 400-277V 120V 120W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1067	Ramsey County Courthouse	3rd Floor	Lee	F-F17T8-2	Strip/troffer-2ft-Diffuse-Recessed- Hard-3000-.*	4	33	0.132	3,120	412	Retrofit	2ft 2-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	4	14	0.056	90%	2,184	175	0.076	237	Wireless Large Motion 300 degree Ceiling Sensor - PIR, Motion Deceased (4) Wireless	0.000	52	0.068	290
1068	Ramsey County Courthouse	3rd Floor	Hall open office	CFL-PL4P18W-2	Box troffer 12 sq-ft PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	12	35	0.420	4,000	1,680	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	12	9	0.102	90%	4,000	408	0.318	1,272		0.000	0	0.286	1,272
1069	Ramsey County Courthouse	3rd Floor	Hall open office	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	18	59	1.062	3,120	3,313	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 400-277V 120V 120W	18	20	0.360	90%	2,184	1,123	0.702	2,190		0.036	314	0.664	2,505
1070	Ramsey County Courthouse	3rd Floor	Pederson	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 400-277V 120V 120W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1071	Ramsey County Courthouse	3rd Floor	Electric	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4ft LED Lensed Strip Retrofit Kit Controls Ready, 23/34/47W 3400/4990/6760L 2600/4000/5000K 400-277V 120V 120W	1	23	0.023	50%	350	12	0.036	18		0.002	4	0.019	22
1072	Ramsey County Courthouse	3rd Floor	Data	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4ft LED Lensed Strip Retrofit Kit Controls Ready, 23/34/47W 3400/4990/6760L 2600/4000/5000K 400-277V 120V 120W	1	23	0.023	50%	350	12	0.036	18		0.002	4	0.019	22
1073	Ramsey County Courthouse	3rd Floor	Buss	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 400-277V 120V 120W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1074	Ramsey County Courthouse	3rd Floor	Lor	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 400-277V 120V 120W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1075	Ramsey County Courthouse	3rd Floor	Yang	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 400-277V 120V 120W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1076	Ramsey County Courthouse	3rd Floor	Office 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 400-277V 120V 120W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1077	Ramsey County Courthouse	3rd Floor	Office 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 400-277V 120V 120W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1078	Ramsey County Courthouse	3rd Floor	Grebner	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 400-277V 120V 120W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1079	Ramsey County Courthouse	3rd Floor	Williams	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 400-277V 120V 120W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1080	Ramsey County Courthouse	3rd Floor	Supplies	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 400-277V 120V 120W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
1081	Ramsey County Courthouse	3rd Floor	Conference 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	5																		

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fxt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fxt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
1105	Ramsey County Courthouse	3rd Floor	Copy	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1106	Ramsey County Courthouse	3rd Floor	Jones	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1107	Ramsey County Courthouse	3rd Floor	Vang	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1108	Ramsey County Courthouse	3rd Floor	320a	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	4,000	1,416	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,800	480	0.234	936		0.012	178	0.221	1,114
1109	Ramsey County Courthouse	3rd Floor	Kim	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
1110	Ramsey County Courthouse	3rd Floor	Badri	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1111	Ramsey County Courthouse	3rd Floor	310 hall	CFL-PL4P18W-2	8-in Downlight Round-Array-Clear-Recessed- Hard-3000-.*	14	35	0.490	4,000	1,960	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	14	9	0.119	90%	4,000	476	0.371	1,484		0.000	0	0.334	1,484
1112	Ramsey County Courthouse	3rd Floor	310D	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	4,000	1,416	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,800	480	0.234	936		0.012	178	0.221	1,114
1113	Ramsey County Courthouse	3rd Floor	310d closet	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3000-.*	1	89	0.089	500	45	Retrofit	2X4 LED Volumetric Troffer Kit Control Ready, 22/28/34W 3490/4390/5270L	1	28	0.028	50%	350	14	0.061	31		0.003	5	0.032	36
1114	Ramsey County Courthouse	3rd Floor	Office 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
1115	Ramsey County Courthouse	3rd Floor	Office 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1116	Ramsey County Courthouse	3rd Floor	310 copy	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1117	Ramsey County Courthouse	3rd Floor	310 janitor	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4-ft LED Turret-4ft-No Lens-Chain-4100-.* Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	350	12	0.036	18		0.002	4	0.019	22
1118	Ramsey County Courthouse	3rd Floor	310 conference	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	8	59	0.472	2,200	1,038	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	8	20	0.160	90%	1,540	352	0.312	686		0.016	130	0.295	817
1119	Ramsey County Courthouse	3rd Floor	310C	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	4,000	1,416	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,800	480	0.234	936		0.012	178	0.221	1,114
1120	Ramsey County Courthouse	3rd Floor	310c closet	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3000-.*	1	89	0.089	500	45	Retrofit	2X4 LED Volumetric Troffer Kit Control Ready, 22/28/34W 3490/4390/5270L	1	28	0.028	50%	350	14	0.061	31		0.003	5	0.032	36
1121	Ramsey County Courthouse	3rd Floor	Office 1 c	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
1122	Ramsey County Courthouse	3rd Floor	Office 2 c	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1123	Ramsey County Courthouse	3rd Floor	310b	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	4,000	1,416	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,800	480	0.234	936		0.012	178	0.221	1,114
1124	Ramsey County Courthouse	3rd Floor	310a	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	4,000	1,416	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,800	480	0.234	936		0.012	178	0.221	1,114
1125	Ramsey County Courthouse	3rd Floor	310b closet	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3000-.*	1	89	0.089	500	45	Retrofit	2X4 LED Volumetric Troffer Kit Control Ready, 22/28/34W 3490/4390/5270L	1	28	0.028	50%	350	14	0.061	31		0.003	5	0.032	36
1126	Ramsey County Courthouse	3rd Floor	310a closet	F-F32T8-3	Troffer-2X4-Prismatic-Recessed- Tile-3000-.*	1	89	0.089	500	45	Retrofit	2X4 LED Volumetric Troffer Kit Control Ready, 22/28/34W 3490/4390/5270L	1	28	0.028	50%	350	14	0.061	31		0.003	5	0.032	36
1127	Ramsey County Courthouse	3rd Floor	Office 1 b	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
1128	Ramsey County Courthouse	3rd Floor	Office 1 a	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
1129	Ramsey County Courthouse	3rd Floor	Office 2 b	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1130	Ramsey County Courthouse	3rd Floor	Office 2 a	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1131	Ramsey County Courthouse	3rd Floor	Supplies	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
1132	Ramsey County Courthouse	3rd Floor	Naylor	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	7	59	0.413	3,120	1,289	Retrofit														

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
1154	Ramsey County Courthouse	3rd Floor	329	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-277V 120V 120W	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869	
1158	Ramsey County Courthouse	3rd Floor	330 hall	F-F17T8-2	Strip/troffer-2ft-Diffuse-Recessed- Hard-3000-.*	3	33	0.099	4,000	396	Retrofit	2ft 2-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	3	14	0.042	90%	4,000	168	0.057	228		0.000	0	0.051	228	
1031	Ramsey County Courthouse	4th Floor	Data	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	1,000	59	Retrofit	4ft LED Lensed Strip Retrofit Kit Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	700	23	0.036	36		0.002	9	0.019	45	
1032	Ramsey County Courthouse	4th Floor	Electric	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	1,000	59	Retrofit	4ft LED Lensed Strip Retrofit Kit Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	700	23	0.036	36		0.002	9	0.019	45	
1033	Ramsey County Courthouse	4th Floor	5 mens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-.*	1	16	0.016	4,000	64	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 120-277V 120V add new wiring	1	7	0.007	90%	2,000	28	0.009	36	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom-Devised (4) Wireless	0.000	14	0.008	50	
1034	Ramsey County Courthouse	4th Floor	5 mens	F-F32T8-2	Strip-4ft-Staggered-Surface-3000-.*	2	59	0.118	4,000	472	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,000	168	0.076	304		0.000	84	0.068	388	
1035	Ramsey County Courthouse	4th Floor	5 womens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-.*	1	16	0.016	4,000	64	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 120-277V 120V add new wiring	1	7	0.007	90%	2,000	28	0.009	36	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom-Devised (4) Wireless	0.000	14	0.008	50	
1036	Ramsey County Courthouse	4th Floor	5 womens	F-F32T8-2	Strip-4ft-Staggered-Surface-3000-.*	2	59	0.118	4,000	472	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,000	168	0.076	304		0.000	84	0.068	388	
1037	Ramsey County Courthouse	4th Floor	ONYIA	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
1038	Ramsey County Courthouse	4th Floor	CITTA	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	3,120	552	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434	
1039	Ramsey County Courthouse	4th Floor	Langfeld	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1040	Ramsey County Courthouse	4th Floor	Whatley	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	3,120	552	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434	
1041	Ramsey County Courthouse	4th Floor	Stahley	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	3,120	552	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434	
1042	Ramsey County Courthouse	4th Floor	Hunt	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	3,120	552	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434	
1043	Ramsey County Courthouse	4th Floor	Khan	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	3,120	552	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434	
1044	Ramsey County Courthouse	4th Floor	Hafner	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	3,120	552	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434	
1045	Ramsey County Courthouse	4th Floor	Kennedy	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
1046	Ramsey County Courthouse	4th Floor	Kantner	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
1047	Ramsey County Courthouse	4th Floor	Ladd	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
1048	Ramsey County Courthouse	4th Floor	Swift	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	3,120	552	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434	
1049	Ramsey County Courthouse	4th Floor	STENCHMAN	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1050	Ramsey County Courthouse	4th Floor	EDWARDS	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1051	Ramsey County Courthouse	4th Floor	Lijo	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1052	Ramsey County Courthouse	4th Floor	Kisch	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1053	Ramsey County Courthouse	4th Floor	Gilchrist	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	3,120	552	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434	
1054	Ramsey County Courthouse	4th Floor	Sullivan	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 420-277V 120V 120W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1055	Ramsey County Courthouse	4th Floor	5 copy lobby	CFL-PL2P13W-3	Horizontal-Decorative-Recessed- Hard-3000-.*	3	51	0.153	4,000	612	Retrofit	(3) LED 2-pin CFL GX23 UL Type-B HOR 6W 500L 3000K 120-277V	3	18	0.054	90%	4,000	216	0.099	396		0.000	0	0.089	396	
1056	Ramsey County Courthouse	4th Floor	5 copy lobby	CFL-PL4P26W-2																						

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
1007	Ramsey County Courthouse	5th Floor	Clouse	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1008	Ramsey County Courthouse	5th Floor	Mcconaughey	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1009	Ramsey County Courthouse	5th Floor	Lien	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1010	Ramsey County Courthouse	5th Floor	Nelson	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1011	Ramsey County Courthouse	5th Floor	Larsen	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1012	Ramsey County Courthouse	5th Floor	Buetel	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
1013	Ramsey County Courthouse	5th Floor	Basic	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1014	Ramsey County Courthouse	5th Floor	Yang	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1015	Ramsey County Courthouse	5th Floor	Billion	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1016	Ramsey County Courthouse	5th Floor	Woodgate	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1017	Ramsey County Courthouse	5th Floor	Carr	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
1018	Ramsey County Courthouse	5th Floor	Copy	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	8	59	0.472	3,120	1,473	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	8	20	0.160	90%	2,184	499	0.312	973		0.016	185	0.295	1,158	
1019	Ramsey County Courthouse	5th Floor	Open office EAST	CFL-PL4P18W-2	Box Troffer 12 sq ft 4-pin PL-L Horizontal cell Parabolic Louver-Recessed- Hard-3000-.*	3	35	0.105	3,120	328	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	3	9	0.026	90%	2,184	80	0.080	248	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Deceased (4) Wireless	0.000	24	0.072	272	
1020	Ramsey County Courthouse	5th Floor	Open office EAST	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	19	59	1.121	3,120	3,498	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	19	20	0.380	90%	2,184	1,186	0.741	2,312		0.038	439	0.701	2,751	
1021	Ramsey County Courthouse	5th Floor	Open office north	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	19	59	1.121	3,120	3,498	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	19	20	0.380	90%	2,184	1,186	0.741	2,312		0.038	439	0.701	2,751	
1023	Ramsey County Courthouse	5th Floor	Open office west	CFL-PL4P18W-2	Box Troffer 12 sq ft 4-pin PL-L Horizontal cell Parabolic Louver-Recessed- Hard-3000-.*	2	35	0.070	3,120	218	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	2	9	0.017	90%	2,184	53	0.053	165	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Deceased (4) Wireless	0.000	16	0.048	181	
1024	Ramsey County Courthouse	5th Floor	Open office west	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	22	59	1.298	3,120	4,050	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	22	20	0.440	90%	2,184	1,373	0.858	2,677		0.044	508	0.812	3,185	
1025	Ramsey County Courthouse	5th Floor	Open office south	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	18	59	1.062	3,120	3,313	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	18	20	0.360	90%	2,184	1,123	0.702	2,190		0.036	416	0.664	2,606	
1026	Ramsey County Courthouse	5th Floor	City attorney lobby	CFL-PL2P13W-3	Pyramid decorative hair fixture-2-Pin PL-S Horizontal-Decorative-Recessed- Hard-3000-.*	2	51	0.102	4,000	408	Retrofit	(3) LED 2-pin CFL GX23 UL Type-B HOR 6W 500L 3000K 120-277V	2	18	0.036	90%	4,000	144	0.066	264		0.000	0	0.059	264	
1027	Ramsey County Courthouse	5th Floor	City attorney lobby	CFL-PL4P26W-2	109ft Downlight Round-4-Pin PL-L Horizontal-No Lens-Recessed- Hard-3000-.*	4	52	0.208	4,000	832	Retrofit	1X4 Downlight Kit 6 0-10V Dim 14-10-24W 1100-200L 3000/3500/4000/5000K 120-277V add ceiling notch 400L	4	18	0.072	90%	4,000	288	0.136	544		0.000	0	0.122	544	
1028	Ramsey County Courthouse	5th Floor	Back office area	CFL-PL2P13W-3	Pyramid decorative hair fixture-2-Pin PL-S Horizontal-Decorative-Recessed- Hard-3000-.*	2	51	0.102	3,120	318	Retrofit	(3) LED 2-pin CFL GX23 UL Type-B HOR 6W 500L 3000K 120-277V	2	18	0.036	90%	2,184	112	0.066	206	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Deceased (4) Wireless	0.000	34	0.059	240	
1029	Ramsey County Courthouse	5th Floor	Back office area	CFL-PL4P26W-2	109ft Downlight Round-4-Pin PL-L Horizontal-No Lens-Recessed- Hard-3000-.*	4	52	0.208	3,120	649	Retrofit	1X4 Downlight Kit 6 0-10V Dim 14-10-24W 1100-200L 3000/3500/4000/5000K 120-277V add ceiling notch 400L	4	18	0.072	90%	2,184	225	0.136	424		0.000	67	0.122	492	
1030	Ramsey County Courthouse	5th Floor	Waiting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	4,000	472	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,800	160	0.078	312		0.004	59	0.074	371	
938	Ramsey County Courthouse	6th Floor	Data	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	1,000	59	Retrofit	4ft LED Turret-4ft No Lens Chain-4100-.* Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	700	23	0.036	36		0.002	9	0.019	45	
939	Ramsey County Courthouse	6th Floor	Electric	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	1,000	59	Retrofit	4ft LED Turret-4ft No Lens Chain-4100-.* Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	700	23	0.036	36		0.002	9	0.019	45	
942	Ramsey County Courthouse	6th Floor	6 mens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-.*	1	16	0.016	4,000	64	Retrofit	1X4 Downlight Kit 6 0-10V Dim 14-10-24W 600-1000L 3000/3500/4000/5000K 120-277V add ceiling notch 400L	1	7	0.007	90%	2,000	28	0.009	36	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Deceased (4) Wireless	0.000	14	0.008	50	
943	Ramsey County Courthouse	6th Floor	6 mens	F-F32T8-2	Strip-4ft-Staggered-Surface-3000-.*	2	59	0.118	4,000	472	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21</												

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
950	Ramsey County Courthouse	7th Floor	9 mens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-*.*	1	16	0.016	4,000	64	Retrofit	1x A Downlight Kit 6"-0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V, 10.5W 1700L 4000K	1	7	0.007	90%	2,000	28	0.009	36	Wireless Large motion 360 degree Ceiling Sensor - PIR, Manual On, <xx = color> (1)	0.000	14	0.008	50	
951	Ramsey County Courthouse	7th Floor	9 mens	F-F32T8-2	Strip-4ft-Staggered-Surface-3000-*.*	2	59	0.118	4,000	472	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,000	168	0.076	304		0.000	84	0.068	388	
952	Ramsey County Courthouse	7th Floor	9 womens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-*.*	1	16	0.016	4,000	64	Retrofit	1x A Downlight Kit 6"-0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V, 10.5W 1700L 4000K	1	7	0.007	90%	2,000	28	0.009	36	Wireless Large motion 360 degree Ceiling Sensor - PIR, Manual On, <xx = color> (1)	0.000	14	0.008	50	
953	Ramsey County Courthouse	7th Floor	9 womens	F-F32T8-2	Strip-4ft-Staggered-Surface-3000-*.*	2	59	0.118	4,000	472	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,000	168	0.076	304		0.000	84	0.068	388	
972	Ramsey County Courthouse	7th Floor	7 janitor	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-*.*	1	59	0.059	500	30	Retrofit	4ft LED Lensed strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	350	12	0.036	18		0.002	4	0.019	22	
973	Ramsey County Courthouse	7th Floor	JPARIONA	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	2	59	0.118	2,184	258	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	87	0.078	170		0.004	9	0.074	179	
974	Ramsey County Courthouse	7th Floor	K ANDERSON	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	2	59	0.118	3,120	368	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
975	Ramsey County Courthouse	7th Floor	East	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	6	59	0.354	2,200	779	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	1,540	264	0.234	515		0.012	98	0.221	612	
976	Ramsey County Courthouse	7th Floor	A MEDIGER	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	4	59	0.236	3,120	736	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
977	Ramsey County Courthouse	7th Floor	C GRAYER	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	4	59	0.236	3,120	736	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
978	Ramsey County Courthouse	7th Floor	Office 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	4	59	0.236	3,120	736	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
979	Ramsey County Courthouse	7th Floor	Office 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	4	59	0.236	3,120	736	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
980	Ramsey County Courthouse	7th Floor	C LAFFEY	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	4	59	0.236	3,120	736	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
981	Ramsey County Courthouse	7th Floor	Flowers	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	4	59	0.236	3,120	736	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
982	Ramsey County Courthouse	7th Floor	West	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	4	59	0.236	2,184	515	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	175	0.156	341		0.008	17	0.148	358	
983	Ramsey County Courthouse	7th Floor	Personal	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	2	59	0.118	3,120	368	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
984	Ramsey County Courthouse	7th Floor	Bacher	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	3	59	0.177	3,120	552	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434	
985	Ramsey County Courthouse	7th Floor	Mitchel	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	3	59	0.177	3,120	552	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434	
986	Ramsey County Courthouse	7th Floor	Logsdon	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	3	59	0.177	3,120	552	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434	
987	Ramsey County Courthouse	7th Floor	Conference	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	6	59	0.354	1,540	545	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	1,540	185	0.234	360		0.012	18	0.221	379	
988	Ramsey County Courthouse	7th Floor	McCarthy	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	6	59	0.354	3,120	1,104	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869	
989	Ramsey County Courthouse	7th Floor	Privacy	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	2	59	0.118	3,120	368	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
990	Ramsey County Courthouse	7th Floor	Rolf	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	4	59	0.236	3,120	736	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
991	Ramsey County Courthouse	7th Floor	Brown	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	4	59	0.236	3,120	736	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
992	Ramsey County Courthouse	7th Floor	River	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	4	59	0.236	2,200	519	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	1,540	176	0.156	343		0.008	65	0.148	408	
993	Ramsey County Courthouse	7th Floor	Office 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-*.*	4	59	0.236	3,120	736	Retrofit	2x LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
111	Ramsey County Courthouse	8th Floor	Elevator lobby	LIN-LED-L12T8LED-1	Indirect-3ft-Open-Pendant-3000-Type-B-*	5	12	0.060	4,000	240	Do Nothing	Do Nothing	5	12	0.060	90%	4,000	240	0.000	0		0.000	0	0.000	0	
112	Ramsey County Courthouse	8th Floor	Elevator lobby	CFL-PL2P26W-2	Decorative-2' round bronze trim-Frosted-Surface-3000-Bronze-*	9	58	0.522	4,000	2,088	Retrofit															

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fxt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fxt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
929	Ramsey County Courthouse	8th Floor	Gordon rest	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-1.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	4,000	84	0.038	152		0.000	0	0.034	152	
930	Ramsey County Courthouse	8th Floor	Gordon chambers	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869	
931	Ramsey County Courthouse	8th Floor	Waiting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	4	59	0.236	4,000	944	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,800	320	0.156	624		0.008	118	0.148	742	
932	Ramsey County Courthouse	8th Floor	Waiting 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
933	Ramsey County Courthouse	8th Floor	Waiting 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
934	Ramsey County Courthouse	8th Floor	Waiting 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
935	Ramsey County Courthouse	8th Floor	8 meeting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
89	Ramsey County Courthouse	9th Floor	Elevator lobby	LIN-LED-L12T8LED-1	Indirect-3ft-Open-Pendant-3000-Type-B-*	5	12	0.060	4,000	240	Do Nothing	Do Nothing	5	12	0.060	90%	4,000	240	0.000	0		0.000	0	0.000	0	
90	Ramsey County Courthouse	9th Floor	Elevator lobby	CFL-PL2P26W-2	Decorative-2' round bronze trim-Frosted-Surface-3000-Bronze-*	7	58	0.406	4,000	1,624	Retrofit	(2) LED Omnidirectional PL Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250L 2000/2500/4000K	7	18	0.126	90%	4,000	504	0.280	1,120		0.000	0	0.252	1,120	
435	Ramsey County Courthouse	9th Floor	Elevator lobby	INCAN-I25-1	Elevator Wall wash-Medium-Frosted-Recessed- Tile-3000-1.*	48	25	1.200	4,000	4,800	Retrofit	T10 LED Lamp E26 3.5W 300L 2700K 120V	48	4	0.168	90%	4,000	672	1.032	4,128		0.000	0	0.929	4,128	
91	Ramsey County Courthouse	9th Floor	9 mens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-1.*	1	16	0.016	4,000	64	Retrofit	1X4 Downlight Kit 0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V, 2-pin 2W, add ceiling	1	7	0.007	90%	2,000	28	0.009	36	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted (1) Wireless	0.000	14	0.008	50	
92	Ramsey County Courthouse	9th Floor	9 mens	F-F32T8-2	Strip-4ft-Staggered-Surface-3000-1.*	2	59	0.118	4,000	472	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,000	168	0.076	304		0.000	84	0.068	388	
93	Ramsey County Courthouse	9th Floor	9 womens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-1.*	1	16	0.016	4,000	64	Retrofit	1X4 Downlight Kit 0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V, 2-pin 2W, add ceiling	1	7	0.007	90%	2,000	28	0.009	36	wireless Large motion 300 degree Ceiling Sensor - PIR, Bottom Mounted (1) Wireless	0.000	14	0.008	50	
94	Ramsey County Courthouse	9th Floor	9 womens	F-F32T8-2	Strip-4ft-Staggered-Surface-3000-1.*	2	59	0.118	4,000	472	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,000	168	0.076	304		0.000	84	0.068	388	
95	Ramsey County Courthouse	9th Floor	Data	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-1.*	1	59	0.059	1,000	59	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	700	23	0.036	36		0.002	9	0.019	45	
96	Ramsey County Courthouse	9th Floor	Electric	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-1.*	1	59	0.059	1,000	59	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	700	23	0.036	36		0.002	9	0.019	45	
97	Ramsey County Courthouse	9th Floor	Conference	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	6	59	0.354	2,200	779	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	1,540	264	0.234	515		0.012	98	0.221	612	
98	Ramsey County Courthouse	9th Floor	C Zuber	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
99	Ramsey County Courthouse	9th Floor	K Wilkens	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
100	Ramsey County Courthouse	9th Floor	R Lemke LOCKED	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
101	Ramsey County Courthouse	9th Floor	Open office 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	34	59	2.006	3,120	6,259	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	34	20	0.680	90%	2,184	2,122	1.326	4,137		0.068	785	1.255	4,922	
102	Ramsey County Courthouse	9th Floor	Open office 1	CFL-PL4P18W-2	Box Troffer 12 sq-ft 4-Pin PL-L Horizontal-Glass- Parabolic Louver-Recessed- Hard-3000-1.*	3	35	0.105	3,120	328	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	3	9	0.026	90%	2,184	80	0.080	248		0.000	24	0.072	272	
103	Ramsey County Courthouse	9th Floor	Conference 1	LED-L20-1	Troffer 2x4-Array-Center Basket-Recessed-Tile-3000-1.*	3	20	0.060	2,200	132	Do Nothing	Do Nothing	3	20	0.060	90%	2,200	132	0.000	0		0.000	0	0.000	0	
104	Ramsey County Courthouse	9th Floor	G Upton	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869	
105	Ramsey County Courthouse	9th Floor	C Clausen	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869	
106	Ramsey County Courthouse	9th Floor	Office1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
107	Ramsey County Courthouse	9th Floor	Office 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
108	Ramsey County Courthouse	9th Floor	Office 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-1.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20												

Existing											Proposed - Lighting Only										Controls Only				Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved	
891	Ramsey County Courthouse	10th floor	10 jury b	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	7	59	0.413	2,200	909	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	7	20	0.140	90%	1,540	308	0.273	601		0.014	114	0.258	715	
892	Ramsey County Courthouse	10th floor	Jury meeting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	3,120	552	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434	
893	Ramsey County Courthouse	10th floor	11 meeting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	2,200	260	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	1,540	88	0.078	172		0.004	33	0.074	204	
894	Ramsey County Courthouse	10th floor	1060 court	CFL-PL4P26W-1	8-in Downlight Round-Screw-In Medium E26-No Lens-Recessed- Hard-3000-.*	18	27	0.486	2,184	1,061	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	18	12	0.216	90%	2,184	472	0.270	590		0.000	0	0.243	590	
895	Ramsey County Courthouse	10th floor	1060 court	F-F32T8-2	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	15	59	0.885	3,120	2,761	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready, 22/28/34W 3490/4390/5270L	15	22	0.330	90%	2,184	1,030	0.555	1,732		0.033	381	0.529	2,113	
896	Ramsey County Courthouse	10th floor	1040 court	CFL-PL4P26W-1	8-in Downlight Round-Screw-In Medium E26-No Lens-Recessed- Hard-3000-.*	18	27	0.486	2,184	1,061	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready, 22/28/34W 3490/4390/5270L	18	12	0.216	90%	2,184	472	0.270	590		0.000	0	0.243	590	
897	Ramsey County Courthouse	10th floor	1040 court	F-F32T8-2	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	15	59	0.885	3,120	2,761	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready, 22/28/34W 3490/4390/5270L	15	22	0.330	90%	2,184	1,030	0.555	1,732		0.033	381	0.529	2,113	
898	Ramsey County Courthouse	10th floor	Judge rest 1	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194	
899	Ramsey County Courthouse	10th floor	Judge rest 2	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194	
900	Ramsey County Courthouse	10th floor	Judge rest 3	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194	
901	Ramsey County Courthouse	10th floor	Judge chamber 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869	
902	Ramsey County Courthouse	10th floor	Judge lobby 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869	
903	Ramsey County Courthouse	10th floor	Judge lobby 1	CFL-PL4P26W-1	Cylinder decoration-4-Pin PL-T Vertical-Glass- Clear-Surface-3000-.*	1	27	0.027	2,200	59	Retrofit	Direct/Bypass Lamp, 2/4 Pin, 9W 1250L	1	9	0.009	90%	2,200	20	0.018	40		0.000	0	0.016	40	
904	Ramsey County Courthouse	10th floor	Judge chamber 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869	
905	Ramsey County Courthouse	10th floor	Judge chamber 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869	
906	Ramsey County Courthouse	10th floor	Judge lobby 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869	
907	Ramsey County Courthouse	10th floor	Judge lobby 2	CFL-PL4P26W-1	Cylinder decoration-4-Pin PL-T Vertical-Glass- Clear-Surface-3000-.*	1	27	0.027	3,120	84	Retrofit	Direct/Bypass Lamp, 2/4 Pin, 9W 1250L	1	9	0.009	90%	2,184	28	0.018	56	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	8	0.016	65	
908	Ramsey County Courthouse	10th floor	Judge lobby 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869	
909	Ramsey County Courthouse	10th floor	Judge lobby 3	CFL-PL4P26W-1	Cylinder decoration-4-Pin PL-T Vertical-Glass- Clear-Surface-3000-.*	1	27	0.027	3,120	84	Retrofit	Direct/Bypass Lamp, 2/4 Pin, 9W 1250L	1	9	0.009	90%	2,184	28	0.018	56	wireless Large motion 300 degree Ceiling Sensor - PIR, Motion Devised (1)	0.000	8	0.016	65	
910	Ramsey County Courthouse	10th floor	Waiting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Suspended-3000-.*	4	59	0.236	4,000	944	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,800	320	0.156	624		0.008	118	0.148	742	
911	Ramsey County Courthouse	10th floor	Waiting 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Suspended-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
912	Ramsey County Courthouse	10th floor	Waiting 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Suspended-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579	
913	Ramsey County Courthouse	10th floor	Waiting 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Suspended-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290	
785	Ramsey County Courthouse	11th floor	Elevator lobby	LIN-LED-L12T8LED-1	Indirect-3ft-Open-Pendant-3000-Type-B-*	5	12	0.060	4,000	240	Do Nothing	Do Nothing	5	12	0.060	90%	4,000	240	0.000	0		0.000	0	0.000	0	
786	Ramsey County Courthouse	11th floor	Elevator lobby	CFL-PL2P26W-2	Decorative-2' round bronze trim-Frosted-Surface-3000-Bronze-*	8	58	0.464	4,000	1,856	Retrofit	Direct/Bypass Lamp, 2/4 Pin, 9W 1250L	8	18	0.144	90%	4,000	576	0.320	1,280		0.000	0	0.288	1,280	
787	Ramsey County Courthouse	11th floor	Elevator lobby	INCAN-I25-1	Elevator Wall wash-Medium-Frosted-Recessed- Tile-3000-.*	48	25	1.200	4,000	4,800	Retrofit	T10 LED Lamp E26 3.5W 300L 2700K 120V	48	4	0.168	90%	4,000	672	1.032	4,128		0.000	0	0.929	4,128	
788	Ramsey County Courthouse	11th floor	Electric	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	350	12	0.036	18		0.002	4	0.019	22	
789	Ramsey County Courthouse	11th floor	Data	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	1	23												

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
856	Ramsey County Courthouse	11th floor	1160 court	CFL-PL4P26W-1	8-in Downlight Round-Screw-In Medium E26-No Lens-Recessed- Hard-3000-.*	14	27	0.378	3,120	1,179	Retrofit	1x LED Downlight Kit 6" 0-10V Dim 7.9/12W 600-1000L 3000/3500/4000/5000K 120-277V 100W 16W 1600L	14	12	0.168	90%	3,120	524	0.210	655		0.000	0	0.189	655
857	Ramsey County Courthouse	11th floor	1160 court	CFL-PL4P36W-4	Louver light courts-4-Pin PL-L Horizontal-Biax Lamps-Recessed- Hard-3500-.*	22	173	3.806	3,120	11,875	Retrofit	4x LED Downlight Kit 6" 0-10V Dim 7.9/12W 600-1000L 3000/3500/4000/5000K 120-277V 100W 16W 1600L	22	40	0.880	90%	3,120	2,746	2.926	9,129		0.000	0	2.633	9,129
858	Ramsey County Courthouse	11th floor	1180 court	CFL-PL4P26W-1	8-in Downlight Round-Screw-In Medium E26-No Lens-Recessed- Hard-3000-.*	14	27	0.378	3,120	1,179	Retrofit	1x LED Downlight Kit 6" 0-10V Dim 7.9/12W 600-1000L 3000/3500/4000/5000K 120-277V 100W 16W 1600L	14	12	0.168	90%	3,120	524	0.210	655		0.000	0	0.189	655
859	Ramsey County Courthouse	11th floor	1180 court	CFL-PL4P36W-4	Louver light courts-4-Pin PL-L Horizontal-Biax Lamps-Recessed- Hard-3500-.*	22	173	3.806	3,120	11,875	Retrofit	4x LED Downlight Kit 6" 0-10V Dim 7.9/12W 600-1000L 3000/3500/4000/5000K 120-277V 100W 16W 1600L	22	40	0.880	90%	3,120	2,746	2.926	9,129		0.000	0	2.633	9,129
860	Ramsey County Courthouse	11th floor	Judge rest 2	CFL-CFS23W-1	Keyless-Screw-In Medium E26-Frosted-Recessed- Hard-3000-.*	1	23	0.023	4,000	92	Retrofit	(1) LED AZT On/Off Dimmer Kit Controls Ready 13/20/26W 2060/3140/4030L 100W Inc EQ Dim 90CRI 16W 1600L	1	16	0.016	90%	2,000	64	0.007	28	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	32	0.006	60
861	Ramsey County Courthouse	11th floor	Judge rest 3	CFL-CFS23W-1	Keyless-Screw-In Medium E26-Frosted-Recessed- Hard-3000-.*	1	23	0.023	4,000	92	Retrofit	(1) LED AZT On/Off Dimmer Kit Controls Ready 13/20/26W 2060/3140/4030L 100W Inc EQ Dim 90CRI 16W 1600L	1	16	0.016	90%	2,000	64	0.007	28	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	32	0.006	60
862	Ramsey County Courthouse	11th floor	Judge rest 4	CFL-CFS23W-1	Keyless-Screw-In Medium E26-Frosted-Recessed- Hard-3000-.*	1	23	0.023	4,000	92	Retrofit	(1) LED AZT On/Off Dimmer Kit Controls Ready 13/20/26W 2060/3140/4030L 100W Inc EQ Dim 90CRI 16W 1600L	1	16	0.016	90%	2,000	64	0.007	28	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	32	0.006	60
863	Ramsey County Courthouse	11th floor	Judge lobby 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1x LED Volume Dimmer Kit Controls Ready 13/20/26W 2060/3140/4030L 2500/4000/5000K 120-277V 100W 16W 1600L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
864	Ramsey County Courthouse	11th floor	Judge lobby 2	CFL-PL4P26W-1	Cylinder decoration-4-Pin PL-T Vertical-Glass- Clear-Surface-3000-.*	6	27	0.162	3,120	505	Retrofit	LED Omnidirectional PL Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250L	6	9	0.054	90%	2,184	168	0.108	337	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	51	0.097	388
865	Ramsey County Courthouse	11th floor	Judge lobby 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1x LED Volume Dimmer Kit Controls Ready 13/20/26W 2060/3140/4030L 2500/4000/5000K 120-277V 100W 16W 1600L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
866	Ramsey County Courthouse	11th floor	Judge lobby 3	CFL-PL4P26W-1	Cylinder decoration-4-Pin PL-T Vertical-Glass- Clear-Surface-3000-.*	6	27	0.162	3,120	505	Retrofit	LED Omnidirectional PL Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250L	6	9	0.054	90%	2,184	168	0.108	337	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	51	0.097	388
867	Ramsey County Courthouse	11th floor	Judge lobby 4	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1x LED Volume Dimmer Kit Controls Ready 13/20/26W 2060/3140/4030L 2500/4000/5000K 120-277V 100W 16W 1600L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
868	Ramsey County Courthouse	11th floor	Judge lobby 4	CFL-PL4P26W-1	Cylinder decoration-4-Pin PL-T Vertical-Glass- Clear-Surface-3000-.*	6	27	0.162	3,120	505	Retrofit	LED Omnidirectional PL Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250L	6	9	0.054	90%	2,184	168	0.108	337	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	51	0.097	388
869	Ramsey County Courthouse	11th floor	Judge chamber 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1x LED Volume Dimmer Kit Controls Ready 13/20/26W 2060/3140/4030L 2500/4000/5000K 120-277V 100W 16W 1600L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
870	Ramsey County Courthouse	11th floor	Judge chamber 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1x LED Volume Dimmer Kit Controls Ready 13/20/26W 2060/3140/4030L 2500/4000/5000K 120-277V 100W 16W 1600L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
871	Ramsey County Courthouse	11th floor	Judge chamber 4	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1x LED Volume Dimmer Kit Controls Ready 13/20/26W 2060/3140/4030L 2500/4000/5000K 120-277V 100W 16W 1600L	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
872	Ramsey County Courthouse	11th floor	11 meeting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	3	59	0.177	3,120	552	Retrofit	1x LED Volume Dimmer Kit Controls Ready 13/20/26W 2060/3140/4030L 2500/4000/5000K 120-277V 100W 16W 1600L	3	20	0.060	90%	2,184	187	0.117	365		0.006	69	0.111	434
873	Ramsey County Courthouse	11th floor	11b waiting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	4,000	944	Retrofit	1x LED Volume Dimmer Kit Controls Ready 13/20/26W 2060/3140/4030L 2500/4000/5000K 120-277V 100W 16W 1600L	4	20	0.080	90%	2,800	320	0.156	624		0.008	118	0.148	742
874	Ramsey County Courthouse	11th floor	11b waiting	CFL-PL4P18W-2	Box troffer 12 sq-ft 4-Pin PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	2	35	0.070	4,000	280	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	2	9	0.017	90%	4,000	68	0.053	212		0.000	0	0.048	212
875	Ramsey County Courthouse	11th floor	B mens	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
876	Ramsey County Courthouse	11th floor	B womens	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
774	Ramsey County Courthouse	12th Floor	Elevator lobby	LIN-LED-L12T8LED-1	Indirect-3ft-Open-Pendant-3000-Type-B-*	5	12	0.060	4,000	240	Do Nothing	Do Nothing	5	12	0.060	90%	4,000	240	0.000	0		0.000	0	0.000	0
775	Ramsey County Courthouse	12th Floor	Elevator lobby	CFL-PL2P26W-2	Decorative-2' round bronze trim-Frosted-Surface-3000-Bronze-*	8	58	0.464	4,000	1,856	Retrofit	Direct/Bypass Lamp, 2/4 Pin, 9W 1250L	8	18	0.144	90%	4,000	576	0.320	1,280		0.000	0	0.288	1,280
776	Ramsey County Courthouse	12th Floor	Elevator lobby	INCAN-I25-1	Elevator Wall wash-Medium-Frosted-Recessed- Tile-3000-.*	48	25	1.200	4,000	4,800	Retrofit	T10 LED Lamp E26 3.5W 300L 2700K 120V	48	4	0.168	90%	4,000	672	1.032	4,128		0.000	0	0.929	4,128
777	Ramsey County Courthouse	12th Floor	Electric	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	350	12	0.036	18		0.002	4	0.019	22
778	Ramsey County Courthouse	12th Floor	Data	F-F32T8-2	Industrial-																				

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fxt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fxt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
818	Ramsey County Courthouse	12th Floor	Judge rest 2	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
819	Ramsey County Courthouse	12th Floor	Judge rest 3	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
820	Ramsey County Courthouse	12th Floor	12 chamber hall	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	7	59	0.413	4,000	1,652	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	7	20	0.140	90%	2,800	560	0.273	1,092		0.014	157	0.258	1,249
821	Ramsey County Courthouse	12th Floor	Jury conference 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	7	59	0.413	2,200	909	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	7	20	0.140	90%	1,540	308	0.273	601		0.014	114	0.258	715
822	Ramsey County Courthouse	12th Floor	Jury conference 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	7	59	0.413	2,200	909	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	7	20	0.140	90%	1,540	308	0.273	601		0.014	114	0.258	715
823	Ramsey County Courthouse	12th Floor	Jury rest 1	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
824	Ramsey County Courthouse	12th Floor	Jury rest 2	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
825	Ramsey County Courthouse	12th Floor	Jury rest 3	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
826	Ramsey County Courthouse	12th Floor	Jury rest 4	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
827	Ramsey County Courthouse	12th Floor	Jury meeting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
841	Ramsey County Courthouse	12th Floor	Court Smart	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	12	59	0.708	3,120	2,209	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	12	20	0.240	90%	2,184	749	0.468	1,460		0.024	277	0.443	1,737
726	Ramsey County Courthouse	13th Floor	Elevator lobby	LIN-LED-L12T8LED-1	Indirect-3ft-Open-Pendant-3000-Type-B-*	5	12	0.060	4,000	240	Do Nothing	Do Nothing	5	12	0.060	90%	4,000	240	0.000	0		0.000	0	0.000	0
727	Ramsey County Courthouse	13th Floor	Elevator lobby	CFL-PL2P26W-2	Decorative-2' round bronze trim-Frosted-Surface-3000-Bronze-*	8	58	0.464	4,000	1,856	Retrofit	(2) LED Omnidirectional F.C. Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250L	8	18	0.144	90%	4,000	576	0.320	1,280		0.000	0	0.288	1,280
728	Ramsey County Courthouse	13th Floor	Elevator lobby	INCAN-125-1	Elevator Wall wash-Medium-Frosted-Recessed- Tile-3000-.*	48	25	1.200	4,000	4,800	Retrofit	T10 LED Lamp E26 3.5W 300L 2700K 120V	48	4	0.168	90%	4,000	672	1.032	4,128		0.000	0	0.929	4,128
729	Ramsey County Courthouse	13th Floor	1340 court	CFL-PL4P26W-1	8-in Downlight Round-Screw-In Medium E26-No Lens-Recessed- Hard-3000-.*	18	27	0.486	3,120	1,516	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	18	12	0.216	90%	3,120	674	0.270	842		0.000	0	0.243	842
730	Ramsey County Courthouse	13th Floor	1340 court	F-F32T8-2	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	15	59	0.885	3,120	2,761	Retrofit	2X4 LED Volumetric Troffer Kit Control Ready, 22/28/34W 3490/4390/5270L	15	22	0.330	90%	2,184	1,030	0.555	1,732		0.033	381	0.529	2,113
731	Ramsey County Courthouse	13th Floor	13 waiting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,200	519	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	1,540	176	0.156	343		0.008	65	0.148	408
732	Ramsey County Courthouse	13th Floor	13 conference 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	2,200	260	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	1,540	88	0.078	172		0.004	33	0.074	204
733	Ramsey County Courthouse	13th Floor	13 conference 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,200	519	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	1,540	176	0.156	343		0.008	65	0.148	408
734	Ramsey County Courthouse	13th Floor	Electric	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4ft LED Lensed Strip Retrofit Kit Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	350	12	0.036	18		0.002	4	0.019	22
735	Ramsey County Courthouse	13th Floor	Data	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4ft LED Lensed Strip Retrofit Kit Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	350	12	0.036	18		0.002	4	0.019	22
736	Ramsey County Courthouse	13th Floor	13 mens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-.*	1	16	0.016	4,000	64	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready, 23/34/47W 3400/4990/6760L	1	7	0.007	90%	2,000	28	0.009	36	wireless Large motion 300 degree Ceiling Sensor - PIR, Motion Devised, 24 Wireless	0.000	14	0.008	50
737	Ramsey County Courthouse	13th Floor	13 mens	F-F25T8-2	Wall Wash-3ft-No Lens-Wall-3000-.*	2	46	0.092	4,000	368	Retrofit	3ft 2-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	2	24	0.048	90%	2,000	192	0.044	176		0.000	96	0.040	272
738	Ramsey County Courthouse	13th Floor	13 mens	F-F32T8-2	Strip-4ft-Diffuse-Surface-3000-.*	2	59	0.118	4,000	472	Retrofit	4ft LED Lensed Strip Retrofit Kit Controls Ready, 23/34/47W 3400/4990/6760L	2	23	0.046	90%	2,000	184	0.072	288		0.005	101	0.069	389
739	Ramsey County Courthouse	13th Floor	13 womens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-.*	1	16	0.016	4,000	64	Retrofit	1X4 LED Volumetric Troffer Kit Control Ready, 23/34/47W 3400/4990/6760L	1	7	0.007	90%	2,000	28	0.009	36	wireless Large motion 300 degree Ceiling Sensor - PIR, Motion Devised, 24 Wireless	0.000	14	0.008	50
740	Ramsey County Courthouse	13th Floor	13 womens	F-F25T8-2	Wall Wash-3ft-No Lens-Wall-3000-.*	2	46	0.092	4,000	368	Retrofit	3ft 2-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	2	24	0.048	90%	2,000	192	0.044	176		0.000	96	0.040	272
741	Ramsey County Courthouse	13th Floor	13 womens	F-F32T8-2	Strip-4ft-Diffuse-Surface-3000-.*	2	59	0.118	4,000	472	Retrofit	4ft LED Lensed Strip Retrofit Kit Controls Ready, 23/34/47W 3400/4990/6760L	2	23	0.046	90%	2,000	184	0.072	288		0.005	101	0.069	389
742	Ramsey County Courthouse	13th Floor	Judge chamber 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED Volum													

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
770	Ramsey County Courthouse	13th Floor	Judge rest 2	CFL-CFS23W-1	Keyless-Screw-In Medium E26-Frosted-Recessed- Hard-3000-.*	1	23	0.023	4,000	92	Retrofit	(1) LED A21 Omni-Directional E26 JA6-120 100W Inc EQ Dim 90CRI 16W 1600L	1	16	0.016	90%	2,000	64	0.007	28	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	32	0.006	60
771	Ramsey County Courthouse	13th Floor	Judge rest 3	CFL-CFS23W-1	Keyless-Screw-In Medium E26-Frosted-Recessed- Hard-3000-.*	1	23	0.023	4,000	92	Retrofit	(1) LED A21 Omni-Directional E26 JA6-120 100W Inc EQ Dim 90CRI 16W 1600L	1	16	0.016	90%	2,000	64	0.007	28	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	32	0.006	60
772	Ramsey County Courthouse	13th Floor	13 conference	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Suspended-3000-.*	3	59	0.177	2,200	389	Retrofit	1X4 LED Volume Dim 110Watt Kit Control Ready 13/20/26W 2060/3140/4030L	3	20	0.060	90%	1,540	132	0.117	257		0.006	49	0.111	306
773	Ramsey County Courthouse	13th Floor	13 Janitors	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	350	12	0.036	18		0.002	4	0.019	22
796	Ramsey County Courthouse	13th Floor	1260 court	CFL-PL4P26W-1	8-in Downlight Round-Screw-In Medium E26-No Lens-Recessed- Hard-3000-.*	18	27	0.486	3,120	1,516	Retrofit	1X8 LED Volume Dim 110Watt Kit Control Ready 13/20/26W 2060/3140/4030L	18	12	0.216	90%	3,120	674	0.270	842		0.000	0	0.243	842
797	Ramsey County Courthouse	13th Floor	1260 court	F-F32T8-2	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	15	59	0.885	3,120	2,761	Retrofit	2X4 LED Volume Dim 110Watt Kit Control Ready, 22/28/34W 3490/4390/5270L	15	22	0.330	90%	2,184	1,030	0.555	1,732		0.033	381	0.529	2,113
798	Ramsey County Courthouse	13th Floor	1280 court	CFL-PL4P26W-1	8-in Downlight Round-Screw-In Medium E26-No Lens-Recessed- Hard-3000-.*	18	27	0.486	2,184	1,061	Retrofit	1X8 LED Volume Dim 110Watt Kit Control Ready 13/20/26W 2060/3140/4030L	18	12	0.216	90%	2,184	472	0.270	590		0.000	0	0.243	590
799	Ramsey County Courthouse	13th Floor	1280 court	F-F32T8-2	Troffer-2X4-18 cell Parabolic Louver-Recessed- Tile-3000-.*	15	59	0.885	3,120	2,761	Retrofit	2X4 LED Volume Dim 110Watt Kit Control Ready, 22/28/34W 3490/4390/5270L	15	22	0.330	90%	2,184	1,030	0.555	1,732		0.033	381	0.529	2,113
522	Ramsey County Courthouse	14th Floor	Elevator lobby	LIN-LED-L12T8LED-1	Indirect-3ft-Open-Pendant-3000-Type-B-*	5	12	0.060	4,000	240	Do Nothing	Do Nothing	5	12	0.060	90%	4,000	240	0.000	0		0.000	0	0.000	0
523	Ramsey County Courthouse	14th Floor	Elevator lobby	CFL-PL2P26W-2	Decorative-2' round bronze trim-Frosted-Surface-3000-Bronze-*	8	58	0.464	4,000	1,856	Retrofit	(2) LED Omni-Directional PL Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250L	8	18	0.144	90%	4,000	576	0.320	1,280		0.000	0	0.288	1,280
524	Ramsey County Courthouse	14th Floor	Elevator lobby	INCAN-I25-1	Elevator Wall wash-Medium-Frosted-Recessed- Tile-3000-.*	48	25	1.200	4,000	4,800	Retrofit	T10 LED Lamp E26 3.5W 300L 2700K 120V	48	4	0.168	90%	4,000	672	1.032	4,128		0.000	0	0.929	4,128
681	Ramsey County Courthouse	14th Floor	1440 court	CFL-PL4P26W-1	8-in Downlight Round-Screw-In Medium E26-No Lens-Recessed- Hard-3000-.*	14	27	0.378	3,120	1,179	Retrofit	1X4 Downlight Kit 0-10V Dim 75W 12W 600-1000L 3000/3500/4000/5000K 120-277V	14	12	0.168	90%	3,120	524	0.210	655		0.000	0	0.189	655
682	Ramsey County Courthouse	14th Floor	1440 court	CFL-PL4P36W-4	Louver light courts-4-Pin PL-L Horizontal-Biax Lamps-Recessed- Hard-3500-.*	22	173	3.806	3,120	11,875	Retrofit	10V Dim 33-40W 5379-6520L 3500K 120-277V	22	40	0.880	90%	3,120	2,746	2.926	9,129		0.000	0	2.633	9,129
683	Ramsey County Courthouse	14th Floor	1460 court	CFL-PL4P26W-1	8-in Downlight Round-Screw-In Medium E26-No Lens-Recessed- Hard-3000-.*	14	27	0.378	3,120	1,179	Retrofit	1X4 Downlight Kit 0-10V Dim 75W 12W 600-1000L 3000/3500/4000/5000K 120-277V	14	12	0.168	90%	3,120	524	0.210	655		0.000	0	0.189	655
684	Ramsey County Courthouse	14th Floor	1460 court	CFL-PL4P36W-4	Louver light courts-4-Pin PL-L Horizontal-Biax Lamps-Recessed- Hard-3500-.*	22	173	3.806	3,120	11,875	Retrofit	10V Dim 33-40W 5379-6520L 3500K 120-277V	22	40	0.880	90%	3,120	2,746	2.926	9,129		0.000	0	2.633	9,129
685	Ramsey County Courthouse	14th Floor	1480 court	CFL-PL4P26W-1	8-in Downlight Round-Screw-In Medium E26-No Lens-Recessed- Hard-3000-.*	14	27	0.378	3,120	1,179	Retrofit	1X4 Downlight Kit 0-10V Dim 75W 12W 600-1000L 3000/3500/4000/5000K 120-277V	14	12	0.168	90%	3,120	524	0.210	655		0.000	0	0.189	655
686	Ramsey County Courthouse	14th Floor	1480 court	CFL-PL4P36W-4	Louver light courts-4-Pin PL-L Horizontal-Biax Lamps-Recessed- Hard-3500-.*	22	173	3.806	3,120	11,875	Retrofit	10V Dim 33-40W 5379-6520L 3500K 120-277V	22	40	0.880	90%	3,120	2,746	2.926	9,129		0.000	0	2.633	9,129
687	Ramsey County Courthouse	14th Floor	14 waiting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,200	519	Retrofit	1X4 LED Volume Dim 110Watt Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	1,540	176	0.156	343		0.008	65	0.148	408
688	Ramsey County Courthouse	14th Floor	14 conference 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	2,200	260	Retrofit	2X4 LED Volume Dim 110Watt Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	1,540	88	0.078	172		0.004	33	0.074	204
689	Ramsey County Courthouse	14th Floor	14 conference 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	2,200	260	Retrofit	2X4 LED Volume Dim 110Watt Kit Control Ready 13/20/26W 2060/3140/4030L	2	20	0.040	90%	1,540	88	0.078	172		0.004	33	0.074	204
690	Ramsey County Courthouse	14th Floor	14 conference 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,200	519	Retrofit	1X4 LED Volume Dim 110Watt Kit Control Ready 13/20/26W 2060/3140/4030L	4	20	0.080	90%	1,540	176	0.156	343		0.008	65	0.148	408
691	Ramsey County Courthouse	14th Floor	Electric	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	350	12	0.036	18		0.002	4	0.019	22
692	Ramsey County Courthouse	14th Floor	Data	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	1	23	0.023	50%	350	12	0.036	18		0.002	4	0.019	22
693	Ramsey County Courthouse	14th Floor	14 mens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-.*	1	16	0.016	4,000	64	Retrofit	1X8 LED Volume Dim 110Watt Kit Control Ready 13/20/26W 2060/3140/4030L	1	7	0.007	90%	2,000	28	0.009	36	wireless Large motion 300 degree Ceiling Sensor - PIR, Battery Powered, (2) Wireless	0.000	14	0.008	50
694	Ramsey County Courthouse	14th Floor	14 mens	F-F25T8-2	Wall Wash-3ft-No Lens-Wall-3000-.*	2	46	0.092	4,000	368	Retrofit	3ft 2-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	2	24	0.048	90%	2,000	192	0.044	176		0.000	96	0.040	272
695	Ramsey County Courthouse	14th Floor	14 mens	F-F32T8-2	Strip-4ft-Diffuse-Surface-3000-.*	2	59	0.118	4,000	472	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L	2	23	0.046	90%	2,000	184	0.072	288		0.005	101	0.069	389
696	Ramsey County Courthouse	14th Floor	14 womens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-.*	1	16	0.016	4,000	64	Retrofit	1X8 LED Volume Dim 110Watt Kit Control Ready 13/20/26W 2060/3140/4030L	1	7	0.007	90%	2,000	28							

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fxt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fxt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
719	Ramsey County Courthouse	14th Floor	14 waiting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	4,000	944	Retrofit	1X4 LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 120-277V 120V	4	20	0.080	90%	2,800	320	0.156	624		0.008	118	0.148	742
720	Ramsey County Courthouse	14th Floor	14 waiting	CFL-PL4P26W-1	Cylinder decoration-4-Pin PL-T Vertical-Glass- Clear-Surface-3000-.*	1	27	0.027	4,000	108	Retrofit	Direct/Bypass Lamp, 2/4 Pin, 9W 1250L 2600/3500/4000K	1	9	0.009	90%	4,000	36	0.018	72		0.000	0	0.016	72
721	Ramsey County Courthouse	14th Floor	14a mens	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
722	Ramsey County Courthouse	14th Floor	14a womens	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
723	Ramsey County Courthouse	14th Floor	14a jury	F-F32T8-2	Strip / troffer-4ft-Diffuse-Recessed- Tile-3500-.*	6	59	0.354	2,200	779	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	2,200	277	0.228	502		0.000	0	0.205	502
724	Ramsey County Courthouse	14th Floor	14a jury	CFL-PL4P18W-2	Box troffer 12 sq-ft Pin PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	2	35	0.070	2,200	154	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	2	9	0.017	90%	2,200	37	0.053	117		0.000	0	0.048	117
725	Ramsey County Courthouse	14th Floor	Cell	F-F32T8-2	Troffer-1X4-Prismatic-Recessed- Hard-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 120-277V 120V	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
479	Ramsey County Courthouse	15th Floor	Elevator lobby	LIN-LED-L12T8LED-1	Indirect-3ft-Open-Pendant-3000-Type-B-*	5	12	0.060	4,000	240	Do Nothing	Do Nothing	5	12	0.060	90%	4,000	240	0.000	0		0.000	0	0.000	0
480	Ramsey County Courthouse	15th Floor	Elevator lobby	CFL-PL2P26W-2	Decorative-2' round bronze trim-Frosted-Surface-3000-Bronze-*	8	58	0.464	4,000	1,856	Retrofit	(2) LED omnidirectional PL hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250L 2600/3500/4000K	8	18	0.144	90%	4,000	576	0.320	1,280		0.000	0	0.288	1,280
482	Ramsey County Courthouse	15th Floor	Elevator lobby	INCAN-I25-1	Elevator Wall wash-Medium-Frosted-Recessed- Tile-3000-.*	48	25	1.200	4,000	4,800	Retrofit	T10 LED Lamp E26 3.5W 300L 2700K 120V	48	4	0.168	90%	4,000	672	1.032	4,128		0.000	0	0.929	4,128
483	Ramsey County Courthouse	15th Floor	1520 waiting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,200	519	Retrofit	1X4 LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 120-277V 120V	4	20	0.080	90%	1,540	176	0.156	343		0.008	65	0.148	408
484	Ramsey County Courthouse	15th Floor	1520 conference 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	2,200	260	Retrofit	1X4 LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 120-277V 120V	2	20	0.040	90%	1,540	88	0.078	172		0.004	33	0.074	204
485	Ramsey County Courthouse	15th Floor	1520 conference 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	2,200	260	Retrofit	1X4 LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 120-277V 120V	2	20	0.040	90%	1,540	88	0.078	172		0.004	33	0.074	204
486	Ramsey County Courthouse	15th Floor	1520 conference 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,200	519	Retrofit	1X4 LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 120-277V 120V	4	20	0.080	90%	1,540	176	0.156	343		0.008	65	0.148	408
487	Ramsey County Courthouse	15th Floor	15b jury	F-F32T8-2	Strip / troffer-4ft-Diffuse-Recessed- Tile-3500-.*	6	59	0.354	2,200	779	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	6	21	0.126	90%	2,200	277	0.228	502		0.000	0	0.205	502
490	Ramsey County Courthouse	15th Floor	15b jury	CFL-PL4P18W-2	Box troffer 12 sq-ft Pin PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	2	35	0.070	2,200	154	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	2	9	0.017	90%	2,200	37	0.053	117		0.000	0	0.048	117
488	Ramsey County Courthouse	15th Floor	15b mens	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
489	Ramsey County Courthouse	15th Floor	15b womens	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
491	Ramsey County Courthouse	15th Floor	Cell	F-F32T8-2	Troffer-1X4-Prismatic-Recessed- Hard-3000-.*	4	59	0.236	3,120	736	Retrofit	1X4 LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 120-277V 120V	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
492	Ramsey County Courthouse	15th Floor	1540 court	CFL-PL4P26W-1	8-in Downlight Round-Screw-In Medium E26-No Lens-Recessed- Hard-3000-.*	14	27	0.378	3,120	1,179	Retrofit	1X4 LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 120-277V 120V	14	12	0.168	90%	3,120	524	0.210	655		0.000	0	0.189	655
493	Ramsey County Courthouse	15th Floor	1540 court	CFL-PL4P36W-4	Louver light courts-4-Pin PL-L Horizontal-Biax Lamps-Recessed- Hard-3500-.*	22	173	3.806	3,120	11,875	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10V Dim 33-40W 5379-6520L 3500K 120-277V 120V	22	40	0.880	90%	3,120	2,746	2.926	9,129		0.000	0	2.633	9,129
494	Ramsey County Courthouse	15th Floor	15 waiting	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,200	519	Retrofit	1X4 LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 120-277V 120V	4	20	0.080	90%	1,540	176	0.156	343		0.008	65	0.148	408
495	Ramsey County Courthouse	15th Floor	15 waiting	CFL-PL4P26W-1	Cylinder decoration-4-Pin PL-T Vertical-Glass- Clear-Surface-3000-.*	1	27	0.027	2,200	59	Retrofit	Direct/Bypass Lamp, 2/4 Pin, 9W 1250L 2600/3500/4000K	1	9	0.009	90%	2,200	20	0.018	40		0.000	0	0.016	40
496	Ramsey County Courthouse	15th Floor	15 mens	CFL-CFS23W-1	Keyless-Screw-In Medium E26-Frosted-Recessed- Hard-3000-.*	1	23	0.023	4,000	92	Retrofit	(1) LED A21 omnidirectional E26 JAR-12U 100W Inc EQ Dim 90CRI 16W 1600L 2600/3500/4000K	1	16	0.016	90%	2,000	64	0.007	28	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	32	0.006	60
497	Ramsey County Courthouse	15th Floor	15 womens	CFL-CFS23W-1	Keyless-Screw-In Medium E26-Frosted-Recessed- Hard-3000-.*	1	23	0.023	4,000	92	Retrofit	(1) LED A21 omnidirectional E26 JAR-12U 100W Inc EQ Dim 90CRI 16W 1600L 2600/3500/4000K	1	16	0.016	90%	2,000	64	0.007	28	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	32	0.006	60
498	Ramsey County Courthouse	15th Floor	Mitchell chamber	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1X4 LED volumetric troffer kit Controls Ready 13/20/26W 2060/3140/4030L 2600/4000/5000K 120-277V 120V	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.0	

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
433	Ramsey County Courthouse	16th Floor	Elevator lobby	INCAN-I25-1	Elevator Wall wash-Medium-Frosted-Recessed- Tile-3000-.*	48	25	1.200	4,000	4,800	Retrofit	T10 LED Lamp E26 3.5W 300L 2700K 120V	48	4	0.168	90%	4,000	672	1.032	4,128		0.000	0	0.929	4,128
437	Ramsey County Courthouse	16th Floor	Data	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	500	30	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K, TAA, SET TO 23W	1	23	0.023	50%	350	12	0.036	18		0.002	4	0.019	22
438	Ramsey County Courthouse	16th Floor	Electric	CFL-PL4P18W-2	Box troffer 12' sq-4-Pin PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	1	35	0.035	500	18	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	1	9	0.009	50%	500	4	0.027	13		0.000	0	0.013	13
439	Ramsey County Courthouse	16th Floor	1680 womens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-.*	2	16	0.032	4,000	128	Retrofit	TAA Downlight Kit 8" 0-10V Dim 7/8 12W 600-1000L 3000/3500/4000/5000K 120-277V, add goof ring, set to 18W	2	7	0.014	90%	2,000	56	0.018	72	wireless Large motion 360 degree Ceiling Sensor - PIR, Bottom Powered, (2) Wireless	0.000	28	0.016	100
440	Ramsey County Courthouse	16th Floor	1680 womens	F-F32T8-1	Wall Wash-4ft-Court room-Wall-3000-.*	4	31	0.124	4,000	496	Retrofit	4ft 1-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	4	11	0.042	90%	2,000	168	0.082	328		0.000	84	0.074	412
441	Ramsey County Courthouse	16th Floor	1680 womens	F-F25T8-2	Wall Wash-3ft-No Lens-Wall-3000-.*	4	46	0.184	4,000	736	Retrofit	3ft 2-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	4	24	0.096	90%	2,000	384	0.088	352		0.000	192	0.079	544
442	Ramsey County Courthouse	16th Floor	1680 mens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-.*	2	16	0.032	4,000	128	Retrofit	TAA Downlight Kit 8" 0-10V Dim 7/8 12W 600-1000L 3000/3500/4000/5000K 120-277V, add goof ring, set to 18W	2	7	0.014	90%	2,000	56	0.018	72	wireless Large motion 360 degree Ceiling Sensor - PIR, Bottom Powered, (2) Wireless	0.000	28	0.016	100
443	Ramsey County Courthouse	16th Floor	1680 mens	F-F32T8-2	Strip-4ft-Staggered-Surface-3000-.*	2	59	0.118	4,000	472	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	2	21	0.042	90%	2,000	168	0.076	304		0.000	84	0.068	388
444	Ramsey County Courthouse	16th Floor	1680 mens	F-F25T8-2	Wall Wash-3ft-No Lens-Wall-3000-.*	2	46	0.092	4,000	368	Retrofit	3ft 2-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	2	24	0.048	90%	2,000	192	0.044	176		0.000	96	0.040	272
445	Ramsey County Courthouse	16th Floor	1680 mens	CFL-PL4P18W-2	Box troffer 12' sq-4-Pin PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	2	35	0.070	4,000	280	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	2	9	0.017	90%	2,000	68	0.053	212		0.000	34	0.048	246
446	Ramsey County Courthouse	16th Floor	1680 janitor	CFL-PL4P26W-2	8-in Downlight Round-2-Pin PL-C Horizontal-Glass- Prismatic-Recessed-	1	52	0.052	500	26	Retrofit	TAA Downlight Kit 8" 0-10V Dim 14/18/24W 1100-2000L 3000/3500/4000/5000K 120-277V, add goof ring, set to 18W	1	18	0.018	50%	500	9	0.034	17		0.000	0	0.017	17
447	Ramsey County Courthouse	16th Floor	1680 chambers hall	CFL-PL4P18W-2	Box troffer 12' sq-4-Pin PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	7	35	0.245	4,000	980	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	7	9	0.060	90%	4,000	238	0.186	742		0.000	0	0.167	742
448	Ramsey County Courthouse	16th Floor	1680 chambers mens	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
449	Ramsey County Courthouse	16th Floor	1680 chambers women	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
450	Ramsey County Courthouse	16th Floor	1860 yang lobby	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-	6	59	0.354	3,120	1,104	Retrofit	1x4 LED Volumetric Troffer Kit Control	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
451	Ramsey County Courthouse	16th Floor	1860 YANG	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-	4	59	0.236	3,120	736	Retrofit	1x4 LED Volumetric Troffer Kit Control	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
452	Ramsey County Courthouse	16th Floor	1670 court	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	16	59	0.944	3,120	2,945	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	16	20	0.320	90%	2,184	998	0.624	1,947		0.032	369	0.590	2,316
453	Ramsey County Courthouse	16th Floor	1670 court	CFL-PL4P26W-2	10-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Hard-3000-.*	9	52	0.468	3,120	1,460	Retrofit	TAA Downlight Kit 8" 0-10V Dim 14/18/24W 1100-2000L 3000/3500/4000/5000K 120-277V, add goof ring, set to 18W	9	18	0.162	90%	3,120	505	0.306	955		0.000	0	0.275	955
454	Ramsey County Courthouse	16th Floor	1670 court mens	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
455	Ramsey County Courthouse	16th Floor	1670 court womens	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
456	Ramsey County Courthouse	16th Floor	1670 Court hall	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	4,000	472	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	2,800	160	0.078	312		0.004	45	0.074	357
457	Ramsey County Courthouse	16th Floor	1660 court	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	16	59	0.944	3,120	2,945	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	16	20	0.320	90%	2,184	998	0.624	1,947		0.032	369	0.590	2,316
458	Ramsey County Courthouse	16th Floor	1660 court	CFL-PL4P26W-2	10-in Downlight Round-4-Pin PL-T Horizontal-No Lens-Recessed- Hard-3000-.*	8	52	0.416	3,120	1,298	Retrofit	TAA Downlight Kit 8" 0-10V Dim 14/18/24W 1100-2000L 3000/3500/4000/5000K 120-277V, add goof ring, set to 18W	8	18	0.144	90%	3,120	449	0.272	849		0.000	0	0.245	849
459	Ramsey County Courthouse	16th Floor	1650 chambers hall	CFL-PL4P18W-2	Box troffer 12' sq-4-Pin PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	18	35	0.630	4,000	2,520	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	18	9	0.153	90%	4,000	612	0.477	1,908		0.000	0	0.429	1,908
460	Ramsey County Courthouse	16th Floor	Carey lobby	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
461	Ramsey County Courthouse	16th Floor	Carey chambers	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fxt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fxt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
477	Ramsey County Courthouse	16th Floor	Meeting 16a	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	1	59	0.059	3,120	184	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	1	20	0.020	90%	2,184	62	0.039	122		0.002	23	0.037	145
478	Ramsey County Courthouse	16th Floor	Cells	F-F32T8-2	Troffer-1X4-Prismatic-Recessed- Hard-3000-.*	2	59	0.118	1,000	118	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	50%	700	40	0.078	78		0.004	15	0.041	93
29	Ramsey County Courthouse	17th Floor	Elevator lobby	LIN-LED-L12T8LED-1	Indirect-3ft-Open-Pendant-3000-Type-B-*	5	12	0.060	4,000	240	Do Nothing	Do Nothing	5	12	0.060	90%	4,000	240	0.000	0		0.000	0	0.000	0
30	Ramsey County Courthouse	17th Floor	Elevator lobby	CFL-PL4P26W-2	Decorative-4-Pin PL-T Horizontal-Decorative-Recessed- Hard-3000-.*	5	52	0.260	4,000	1,040	Retrofit	(2) LED 4-pin CFL G24q UL Type-B HOR 8W 900L 3000K 120-277V	5	16	0.080	90%	4,000	320	0.180	720		0.000	0	0.162	720
434	Ramsey County Courthouse	17th Floor	Elevator lobby	INCAN-I25-1	Elevator Wall wash-Medium-Frosted-Recessed- Tile-3000-.*	48	25	1.200	4,000	4,800	Retrofit	T10 LED Lamp E26 3.5W 300L 2700K 120V	48	4	0.168	90%	4,000	672	1.032	4,128		0.000	0	0.929	4,128
31	Ramsey County Courthouse	17th Floor	Data Closet	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	1,000	59	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K, TAA, SET TO 23W	1	23	0.023	50%	700	23	0.036	36	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.002	9	0.019	45
33	Ramsey County Courthouse	17th Floor	Electric 1	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	1	59	0.059	1,000	59	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K, TAA, SET TO 23W	1	23	0.023	50%	700	23	0.036	36		0.002	9	0.019	45
34	Ramsey County Courthouse	17th Floor	Small conference	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	2,200	519	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	4	20	0.080	90%	1,540	176	0.156	343		0.008	65	0.148	408
35	Ramsey County Courthouse	17th Floor	Reception 1750	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
36	Ramsey County Courthouse	17th Floor	Reception 1750	CFL-PL4P18W-2	Box troffer 12' sq-4-Pin PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	1	35	0.035	3,120	109	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	1	9	0.009	90%	3,120	27	0.027	83		0.000	0	0.024	83
37	Ramsey County Courthouse	17th Floor	Reception 1750	CFL-PL4P26W-1	Cylinder decoration-4-Pin PL-T Vertical-Glass- Clear-Surface-3000-.*	1	27	0.027	3,120	84	Retrofit	LED Omnidirectional PL Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250l 3000/3500/4000K	1	9	0.009	90%	3,120	28	0.018	56		0.000	0	0.016	56
38	Ramsey County Courthouse	17th Floor	1750 women's	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
39	Ramsey County Courthouse	17th Floor	1750 mens	F-F32T8-2	Wall Wash-4ft-Bathroom-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	2,000	84	0.038	152	Wall Switch Sensor - PIR, Manual On, <xx = color> (1)	0.000	42	0.034	194
40	Ramsey County Courthouse	17th Floor	No Access locked	LED-L50-1	Existing LED-Guess on Wattage-Do not audit-.*-.*	1	50	0.050	3,120	156	Do Nothing	Do Nothing	1	50	0.050	90%	3,120	156	0.000	0		0.000	0	0.000	0
41	Ramsey County Courthouse	17th Floor	1750 main conference room	CFL-PL4P26W-2	8-in Downlight Round-2-Pin PL-C Horizontal-Glass- Prismatic-Recessed- Hard-3000-.*	4	52	0.208	2,200	458	Retrofit	TAA Downlight Kit 6" 0-10V Dim 14/18/24W 1100-2000L 3000/3500/4000/5000K 120-277V, set to 18W, add goof ring	4	18	0.072	90%	2,200	158	0.136	299		0.000	0	0.122	299
42	Ramsey County Courthouse	17th Floor	1750 main conference room	F-F32T8-2	Troffer-4ft-Polycarbonate-Recessed- Tile-3000-.*	10	59	0.590	2,200	1,298	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	10	21	0.210	90%	2,200	462	0.380	836		0.000	0	0.342	836
43	Ramsey County Courthouse	17th Floor	1750 main conference room	F-F17T8-6	Area-4ft-Polycarbonate-Recessed- Hard-3000-.*	1	102	0.102	2,200	224	Retrofit	2ft 6-lamp T8 TLED Type-B coated glass S/D ended 7W 900L 4000K	1	42	0.042	90%	2,200	92	0.060	132		0.000	0	0.054	132
44	Ramsey County Courthouse	17th Floor	1700 hall	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	13	59	0.767	3,120	2,393	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	13	20	0.260	90%	2,184	811	0.507	1,582		0.026	300	0.480	1,882
45	Ramsey County Courthouse	17th Floor	1700 hall	CFL-PL4P18W-2	Box troffer 12' sq-4-Pin PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	5	35	0.175	3,120	546	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	5	9	0.043	90%	3,120	133	0.133	413		0.000	0	0.119	413
59	Ramsey County Courthouse	17th Floor	1700 hall	CFL-PL4P26W-2	Circle decorative hall fixture-4-Pin PL-T Horizontal-Decorative-Recessed- Hard-3000-.*	4	52	0.208	3,120	649	Retrofit	(2) LED Omnidirectional PL Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250l 3000/3500/4000K	4	18	0.072	90%	3,120	225	0.136	424		0.000	0	0.122	424
60	Ramsey County Courthouse	17th Floor	1700 hall	CFL-PL4P26W-1	Cylinder decoration-4-Pin PL-T Vertical-Glass- Clear-Surface-3000-.*	1	27	0.027	3,120	84	Retrofit	LED Omnidirectional PL Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250l 3000/3500/4000K	1	9	0.009	90%	3,120	28	0.018	56		0.000	0	0.016	56
61	Ramsey County Courthouse	17th Floor	1700 hall	CFL-PL2P13W-3	Pyramid decorative hall fixture-2-Pin PL-S Horizontal-Decorative-Recessed- Hard-3000-.*	1	51	0.051	3,120	159	Retrofit	(3) LED 2-pin CFL GX23 UL Type-B HOR 6W 500L 3000K 120-277V	1	18	0.018	90%	3,120	56	0.033	103		0.000	0	0.030	103
46	Ramsey County Courthouse	17th Floor	Account tech	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
47	Ramsey County Courthouse	17th Floor	Account manager	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
48	Ramsey County Courthouse	17th Floor	Account supervisor	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
49	Ramsey County Courthouse	17th Floor	S Larson	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
50	Ramsey County Courthouse	17th Floor	M Her	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
51	Ramsey County Courthouse	17th Floor	J Syvoraphane	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
52	Ramsey County Courthouse	17th Floor	C Hagensick	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
53	Ramsey County Courthouse	17th Floor	GJones	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	4	59	0.236	3,120	736	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	4	20	0.080	90%	2,184	250	0.156	487		0.008	92	0.148	579
54	Ramsey County Courthouse	17th Floor	H Kendall	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869
55	Ramsey County Courthouse	17th Floor	HR	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
56	Ramsey County Courthouse	17th Floor	J Johnson	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
57	Ramsey County Courthouse	17th Floor	E Hart	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
58	Ramsey County Courthouse	17th Floor	J Degraw	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	2	59	0.118	3,120	368	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	2,184	125	0.078	243		0.004	46	0.074	290
62	Ramsey County Courthouse	17th Floor	Sm conference	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver-Recessed- Tile-3000-.*	6	59	0.354	3,120	1,104	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	6	20	0.120	90%	2,184	374	0.234	730		0.012	139	0.221	869

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
63	Ramsey County Courthouse	17th Floor	Break room	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver- Recessed- Tile-3000-.*	2	59	0.118	2,200	260	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	2	20	0.040	90%	1,540	88	0.078	172		0.004	33	0.074	204
64	Ramsey County Courthouse	17th Floor	1700 mens	F-F32T8-2	Wall Wash-4ft-Staggered-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	4,000	84	0.038	152		0.000	0	0.034	152
65	Ramsey County Courthouse	17th Floor	1700 mens	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-.*	1	16	0.016	4,000	64	Retrofit	TAA Downlight Kit 6" 0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V, set to 7W, add goof ring	1	7	0.007	90%	4,000	28	0.009	36		0.000	0	0.008	36
66	Ramsey County Courthouse	17th Floor	1700 women	F-F32T8-2	Wall Wash-4ft-Staggered-Wall-3000-.*	1	59	0.059	4,000	236	Retrofit	4ft 2-lamp T8 TLED Type-B glass S/D ended 10.5W 1700L 4000K	1	21	0.021	90%	4,000	84	0.038	152		0.000	0	0.034	152
67	Ramsey County Courthouse	17th Floor	1700 women	CFL-PL2P13W-1	8-in Downlight Round-2-Pin PL-S Horizontal-Glass- Prismatic-Surface-3000-.*	1	16	0.016	4,000	64	Retrofit	TAA Downlight Kit 6" 0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V, set to 7W, add goof ring	1	7	0.007	90%	4,000	28	0.009	36		0.000	0	0.008	36
68	Ramsey County Courthouse	17th Floor	No access locked	LED-L50-1	Existing LED-Guess on Wattage-Do not audit-.*-.*	1	50	0.050	4,000	200	Do Nothing	Do Nothing	1	50	0.050	90%	4,000	200	0.000	0		0.000	0	0.000	0
73	Ramsey County Courthouse	18th Floor	Elevator lobby	INCAN-I7.5-4	Box-Medium-A19-Pendant-3000-.*	2	30	0.060	4,000	240	Retrofit	(4) LED Lamp, Frosted, High CRI, E26 Base, 5.5W 500L 3000K	2	22	0.044	90%	4,000	176	0.016	64		0.000	0	0.014	64
74	Ramsey County Courthouse	18th Floor	South side	INCAN-I7.5-6	Decorative-Medium-Frosted-Pendant-3000-.*	6	23	0.135	4,000	540	Retrofit	(6) LED Lamp, Frosted, High CRI, E26 Base, 5.5W 500L 3000K	6	33	0.198	90%	4,000	792	-0.063	-252		0.000	0	-0.057	-252
75	Ramsey County Courthouse	18th Floor	South side	INCAN-I7.5-1	Keyless-Medium-Frosted-Recessed- Tile-3000-.*	18	8	0.144	4,000	576	Retrofit	(1) KT-LED5.5FG25-E26-930-F	18	6	0.099	90%	4,000	396	0.045	180		0.000	0	0.041	180
76	Ramsey County Courthouse	18th Floor	West 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver- Recessed- Tile-3000-.*	12	59	0.708	4,000	2,832	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	12	20	0.240	90%	2,800	960	0.468	1,872		0.024	355	0.443	2,227
77	Ramsey County Courthouse	18th Floor	West 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver- Recessed- Tile-3000-.*	8	59	0.472	4,000	1,888	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	8	20	0.160	90%	2,800	640	0.312	1,248		0.016	237	0.295	1,485
78	Ramsey County Courthouse	18th Floor	West 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver- Recessed- Tile-3000-.*	10	59	0.590	4,000	2,360	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	10	20	0.200	90%	2,800	800	0.390	1,560		0.020	296	0.369	1,856
79	Ramsey County Courthouse	18th Floor	West men's / lobby	CFL-PL2P26W-1	Keyless-2-Pin PL-S Vertical-Frosted-Surface-3000-.*	2	32	0.064	4,000	256	Retrofit	LED Omnidirectional PL Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250l 3000/3500/4000K	2	9	0.018	90%	2,000	72	0.046	184	Wireless Large Motion 360 degree Ceiling Sensor - PIR, Battery Powered (1),Wireless Power Pack Load Controller, 20A (1)	0.000	36	0.041	220
80	Ramsey County Courthouse	18th Floor	North side	INCAN-I7.5-6	Decorative-Medium-Frosted-Pendant-3000-.*	6	23	0.135	4,000	540	Retrofit	(6) LED Lamp, Frosted, High CRI, E26 Base, 5.5W 500L 3000K	6	33	0.198	90%	4,000	792	-0.063	-252		0.000	0	-0.057	-252
81	Ramsey County Courthouse	18th Floor	North side	INCAN-I7.5-1	Keyless-Medium-Frosted-Recessed- Tile-3000-.*	18	8	0.144	4,000	576	Retrofit	(1) KT-LED5.5FG25-E26-930-F	18	6	0.099	90%	4,000	396	0.045	180		0.000	0	0.041	180
82	Ramsey County Courthouse	18th Floor	East women's / lobby	CFL-PL2P26W-1	Keyless-2-Pin PL-S Vertical-Frosted-Surface-3000-.*	2	32	0.064	4,000	256	Retrofit	LED Omnidirectional PL Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250l 3000/3500/4000K	2	9	0.018	90%	2,000	72	0.046	184	Wireless Large Motion 360 degree Ceiling Sensor - PIR, Battery Powered (1),Wireless Power Pack Load Controller, 20A (1)	0.000	36	0.041	220
83	Ramsey County Courthouse	18th Floor	East 1	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver- Recessed- Tile-3000-.*	4	59	0.236	4,000	944	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	4	20	0.080	90%	2,800	320	0.156	624		0.008	118	0.148	742
84	Ramsey County Courthouse	18th Floor	East 2	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver- Recessed- Tile-3000-.*	12	59	0.708	4,000	2,832	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	12	20	0.240	90%	2,800	960	0.468	1,872		0.024	355	0.443	2,227
88	Ramsey County Courthouse	18th Floor	East 2	CFL-PL4P18W-2	Box troffer 12' sq-4-Pin PL-L Horizontal-4 cell Parabolic Louver-Recessed- Hard-3000-.*	2	35	0.070	4,000	280	Retrofit	LED 4-pin CFL PL-L 2G11 UL Type-B 8.5W 950L 4000K 120V-277V	2	9	0.017	90%	4,000	68	0.053	212		0.000	0	0.048	212
85	Ramsey County Courthouse	18th Floor	East 3	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver- Recessed- Tile-3000-.*	6	59	0.354	4,000	1,416	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	6	20	0.120	90%	2,800	480	0.234	936		0.012	178	0.221	1,114
86	Ramsey County Courthouse	18th Floor	East 4	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver- Recessed- Tile-3000-.*	4	59	0.236	4,000	944	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	4	20	0.080	90%	2,800	320	0.156	624		0.008	118	0.148	742
87	Ramsey County Courthouse	18th Floor	East 5	F-F32T8-2	Troffer-1X4-16 cell Parabolic Louver- Recessed- Tile-3000-.*	5	59	0.295	4,000	1,180	Retrofit	1x4 LED Volumetric Troffer Kit Control Ready 13/20/26W 2060/3140/4030L 3500/4000/5000K 120-277V, set to 20W	5	20	0.100	90%	2,800	400	0.195	780		0.010	148	0.185	928
70	Ramsey County Courthouse	19th Floor	All	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	30	59	1.770	1,000	1,770	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K, TAA, SET TO 23W	30	23	0.690	50%	700	690	1.080	1,080		0.069	255	0.575	1,335
69	Ramsey County Courthouse	20th Floor	Mechanical	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	10	59	0.590	1,000	590	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K, TAA, SET TO 23W	10	23	0.230	50%	700	230	0.360	360		0.023	85	0.192	445
71	Ramsey County Courthouse	21st Floor	Elevator rm	F-F32T8-2	Industrial- Turret-4ft-No Lens-Chain-4100-.*	25	59	1.475	1,000	1,475	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K, TAA, SET TO 23W	25	23	0.575	50%	700	575	0.900	900		0.058	213	0.479	1,113
72	Ramsey County Courthouse	21st Floor	Mezz	F-F32T8-2	Industrial-4ft-No Lens-Surface-4100-.*	10	59	0.590	1,000	590	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K, TAA, SET TO 23W	10	23	0.230	50%	700	230	0.360	360		0.023	85	0.192	445
1159	Ramsey County Courthouse	Exterior	4th floor	MV-MV175-1	Shoebox-Mogul-Clear-Surface-4000-Brown-*	32	205	6.560	4,380	28,733	Retrofit	FLF G2 Selectable Flood Light Trnnion 80/110/140/160W 14000-25000L 30/40/50K 120-277V, set to 80W	32	80	2.560	15%	4,380	11,213	4.000	17,520		0.000	0	0.600	17,520
1160	Ramsey County Courthouse	Exterior	2nd fl skyway main entrance	HAL-H55-1	Decorative-G4-Clear-Surface-3000-.*	24	55	1.320	4,380	5,782	Retrofit	LED Round Floodlight bronze Round Tenon Medium Narrow 40D 10.5/20/30W 1400/2800/4200L 30/40/50K 120-277V, set to 20W	24	20	0.480	15%	4,380	2,102	0.840	3,679		0.000	0	0.126	3,679
1161	Ramsey County Courthouse	Exterior	1st fl deco entry lights	F-F25T8-2	Strip / troffer-3ft-Diffuse-Recessed- Tile-3500-.*	6	46	0.276	4,380	1,209	Retrofit	3ft 2-lamp T8 TLED Type-B coated glass S/D ended 12W 1400L 4000K	6	24	0.144	15%	4,380	631	0.132	578		0.000	0	0.020	578
1165	Ramsey County Courthouse	Exterior	17th ext box lights	MV-MV175-1	Shoebox-Mogul-Clear-Surface-4000-Brown-*	54	205	11.070	4,380	48,487	Retrofit	FLF G2 Selectable Flood Light Trnnion 80/110/140/160W 14000-25000L 30/40/50K 120-277V, set to 80W	54	80	4.320	15%	4,380	18,922	6.750	29,565		0.000	0	1.013	29,565
1	White Bear Library	Area	Entry	CFL-PL4P26W-1	Decorative-4-Pin PL-C Vertical-Diffuse-Aircraft Cable-3000-.*	6	27	0.162	4,000	648	Retrofit	LED Omnidirectional PL Hybrid Direct/Bypass Lamp, 2/4 Pin, 9W 1250l 3000/3500/4000K	6	9	0.054	90%	4,000	216	0.108	432		0.000	0	0.097	432
2	White Bear Library	Area	Entry	CFL-CFS23W-1	8-in Downlight Round-Screw-In Medium E26-Diffuse-Recessed- Hard-3000-.*	8	23	0.184	4,000	736	Retrofit	TAA Downlight Kit 6" 0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V, set to 12W, Add Goof ring	8	12	0.096	90%	4,000	384	0.088	352		0.000	0	0.079	352
3	White Bear Library	Area	Hall	LED-L20-1	Linear-Array-Diffuse-Aircraft Cable-4000-.*	3	20	0.060	4,000	240	Do Nothing	Do Nothing	3	20	0.060	90%	4,000	240	0.000	0		0.000	0	0.000	0
4	White Bear Library	Area	Hall	CFL-CFS23W-1	8-in Downlight Round-Screw-In Medium E26-Diffuse-Recessed- Hard-3000-.*	2	23	0.046	4,000	184	Retrofit	TAA Downlight Kit 6" 0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V, set to 12W, Add Goof ring	2	12	0.024	90%	4,000	96	0.022	88		0.000	0	0.020	88
6	White Bear Library	Area	Men's rr	F-F17T8-2	Troffer-2X2-Center Basket-Recessed- Tile-4100-.*	1	33	0.033	2,000	66	Retrofit	2x2 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2010/3080/3970 3500/4000/5000K, set to 13W	1	13	0.013	90%	2,000	26	0.020	40		0.001	3	0.019	43
7	White Bear Library	Area	Women's rr	F-F17T8-2	Troffer-2X2-Center Basket-Recessed- Tile-4100-.*	3	33	0.099	4,000	396	Retrofit	2x2 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2010/3080/3970 3500/4000/5000K, set to 13W	3	13	0.039	90%	2,000	156	0.060	240		0.004	86	0.058	326

Existing											Proposed - Lighting Only										Controls Only			Total	
ID #	Location	Area	Room	Energy Code	Ex Description	Ex Fixt Qty	Ex System Watts	Ex kW	Ex Annual Hours	Ex kWh	ECM Action	Pr Description	Pr Fixt Qty	Pr System Watts	Pr kW	Coincidence Factor	Pr Annual Hours	Pr kWh	ECM kW Saved	ECM kWh Saved	Controls	All Controls kW Saved	All Controls kWh Saved	Total Monthly kW Saved	Total kWh Saved
8	White Bear Library	Area	Storage	F-F32T8-2	Troffer-2X4-Center Basket-Recessed- Tile-4100-**-	3	59	0.177	1,000	177	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K, set to 22W	3	22	0.066	50%	1,000	66	0.111	111		0.007	7	0.059	118
9	White Bear Library	Area	Community room	LED-L20-1	Linear-Array-Diffuse-Aircraft Cable-4000-**-	20	20	0.400	2,800	1,120	Do Nothing	Do Nothing	20	20	0.400	90%	2,800	1,120	0.000	0		0.000	0	0.000	0
10	White Bear Library	Area	Community room	EXIT-LED3W-1	Exit-Edge Lit-Green Letters-Pendant-4100-**-	2	3	0.006	6,132	37	Do Nothing	Do Nothing	2	3	0.006	90%	6,132	37	0.000	0		0.000	0	0.000	0
11	White Bear Library	Area	Main library - includes teen area	LED-L20-1	Linear-Array-Diffuse-Aircraft Cable-4000-**-	127	20	2.540	4,000	10,160	Do Nothing	Do Nothing	127	20	2.540	90%	4,000	10,160	0.000	0		0.000	0	0.000	0
12	White Bear Library	Area	Main library - includes teen area	CFL-CFS23W-1	8-in Downlight Round-Screw-In Medium E26-Diffuse-Recessed- Hard-3000-**-	11	23	0.253	2,800	708	Retrofit	TAA Downlight Kit 6" 0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V, set to 12W, Add Goof ring	11	12	0.132	90%	2,800	370	0.121	339		0.000	0	0.109	339
13	White Bear Library	Area	Main library - includes teen area	EXIT-LED3W-1	Exit-Edge Lit-Green Letters-Pendant-4100-**-	3	3	0.009	4,000	36	Do Nothing	Do Nothing	3	3	0.009	90%	4,000	36	0.000	0		0.000	0	0.000	0
14	White Bear Library	Area	Study	LED-L20-1	Linear-Array-Diffuse-Aircraft Cable-4000-**-	3	20	0.060	2,800	168	Do Nothing	Do Nothing	3	20	0.060	90%	2,800	168	0.000	0		0.000	0	0.000	0
15	White Bear Library	Area	Boardroom	LED-L20-1	Linear-Array-Diffuse-Aircraft Cable-4000-**-	3	20	0.060	1,540	92	Do Nothing	Do Nothing	3	20	0.060	90%	1,540	92	0.000	0		0.000	0	0.000	0
16	White Bear Library	Area	Open office	F-F32T8-2	Troffer-2X4-Center Basket-Recessed- Tile-4100-**-	8	59	0.472	2,184	1,031	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K, set to 22W	8	22	0.176	90%	2,184	384	0.296	646		0.018	38	0.282	685
17	White Bear Library	Area	Office	F-F32T8-2	Troffer-2X4-Center Basket-Recessed- Tile-4100-**-	2	59	0.118	2,184	258	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K, set to 22W	2	22	0.044	90%	2,184	96	0.074	162		0.004	10	0.071	171
18	White Bear Library	Area	Office	F-F32T8-2	Troffer-2X4-Center Basket-Recessed- Tile-4100-**-	1	59	0.059	2,184	129	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K, set to 22W	1	22	0.022	90%	2,184	48	0.037	81		0.002	5	0.035	86
19	White Bear Library	Area	Office	F-F32T8-2	Troffer-2X4-Center Basket-Recessed- Tile-4100-Emergency Battery-*	1	59	0.059	2,184	129	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K, set to 22W	1	22	0.022	90%	2,184	48	0.037	81		0.002	5	0.035	86
20	White Bear Library	Area	Office	F-F32T8-2	Troffer-2X4-Center Basket-Recessed- Tile-4100-**-	8	59	0.472	2,184	1,031	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K, set to 22W	8	22	0.176	90%	2,184	384	0.296	646		0.018	38	0.282	685
21	White Bear Library	Area	Storage	F-F32T8-2	Troffer-2X4-Center Basket-Recessed- Tile-4100-**-	1	59	0.059	1,000	59	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K, set to 22W	1	22	0.022	50%	1,000	22	0.037	37		0.002	2	0.020	39
22	White Bear Library	Area	Book drop	F-F32T8-2	Strip-4ft-No Lens-Chain-4100-**-	1	59	0.059	1,000	59	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K, TAA, SET TO 23W	1	23	0.023	50%	700	23	0.036	36		0.002	9	0.019	45
23	White Bear Library	Area	Hall	F-F32T8-2	Troffer-2X4-Center Basket-Recessed- Tile-4100-**-	4	59	0.236	2,800	661	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K, set to 22W	4	22	0.088	90%	2,800	246	0.148	414		0.009	25	0.141	439
24	White Bear Library	Area	Kitchen	F-F32T8-2	Troffer-2X4-Center Basket-Recessed- Tile-4100-**-	5	59	0.295	2,800	826	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K, set to 22W	5	22	0.110	90%	2,800	308	0.185	518		0.011	31	0.176	549
31	White Bear Library	Area	Kitchen	EXIT-LED3W-1	Exit-Edge Lit-Green Letters-Pendant-4100-**-	2	3	0.006	6,132	37	Do Nothing	Do Nothing	2	3	0.006	90%	6,132	37	0.000	0		0.000	0	0.000	0
25	White Bear Library	Area	Staff rr	F-F17T8-2	Troffer-2X2-Center Basket-Recessed- Tile-4100-**-	1	33	0.033	2,000	66	Retrofit	2x2 LED Volumetric Troffer Kit Controls Ready 13/20/26W 2010/3080/3970 3500/4000/5000K, set to 13W	1	13	0.013	90%	2,000	26	0.020	40		0.001	3	0.019	43
26	White Bear Library	Area	Trash	F-F32T8-2	Troffer-2X4-Center Basket-Recessed- Tile-4100-**-	2	59	0.118	1,000	118	Retrofit	2X4 LED Volumetric Troffer Kit Controls Ready, 22/28/34W 3490/4390/5270L 3500/4000/5000K, set to 22W	2	22	0.044	50%	700	44	0.074	74		0.004	16	0.039	90
29	White Bear Library	Area	Trash	EXIT-LED3W-1	Exit-Edge Lit-Green Letters-Pendant-4100-**-	1	3	0.003	6,132	18	Do Nothing	Do Nothing	1	3	0.003	90%	6,132	18	0.000	0		0.000	0	0.000	0
27	White Bear Library	Area	Data server room	F-F32T8-2	Strip-4ft-No Lens-Chain-4100-**-	3	59	0.177	1,000	177	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K, TAA, SET TO 23W	3	23	0.069	50%	1,000	69	0.108	108		0.007	7	0.057	115
30	White Bear Library	Area	Data server room	EXIT-LED3W-1	Exit-Edge Lit-Green Letters-Pendant-4100-**-	1	3	0.003	6,132	18	Do Nothing	Do Nothing	1	3	0.003	90%	6,132	18	0.000	0		0.000	0	0.000	0
28	White Bear Library	Area	Mech	F-F32T8-2	Strip-4ft-No Lens-Chain-4100-**-	5	59	0.295	1,000	295	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K, TAA, SET TO 23W	5	23	0.115	50%	700	115	0.180	180		0.012	43	0.096	223
32	White Bear Library	Area	Study room	LED-L20-1	Linear-Array-Diffuse-Aircraft Cable-4000-**-	2	20	0.040	2,800	112	Do Nothing	Do Nothing	2	20	0.040	90%	2,800	112	0.000	0		0.000	0	0.000	0
33	White Bear Library	Area	Study room	LED-L20-1	Linear-Array-Diffuse-Aircraft Cable-4000-**-	2	20	0.040	2,800	112	Do Nothing	Do Nothing	2	20	0.040	90%	2,800	112	0.000	0		0.000	0	0.000	0
34	White Bear Library	Area	Study room	LED-L20-1	Linear-Array-Diffuse-Aircraft Cable-4000-**-	2	20	0.040	2,800	112	Do Nothing	Do Nothing	2	20	0.040	90%	2,800	112	0.000	0		0.000	0	0.000	0
35	White Bear Library	Area	Study room	LED-L20-1	Linear-Array-Diffuse-Aircraft Cable-4000-**-	2	20	0.040	2,800	112	Do Nothing	Do Nothing	2	20	0.040	90%	2,800	112	0.000	0		0.000	0	0.000	0
36	White Bear Library	Area	Study room	LED-L20-1	Linear-Array-Diffuse-Aircraft Cable-4000-**-	2	20	0.040	2,800	112	Do Nothing	Do Nothing	2	20	0.040	90%	2,800	112	0.000	0		0.000	0	0.000	0
37	White Bear Library	Area	Book drop	CFL-CFS23W-1	8-in Downlight Round-Screw-In Medium E26-Diffuse-Recessed- Hard-3000-**-	2	23	0.046	4,000	184	Retrofit	TAA Downlight Kit 6" 0-10V Dim 7/9/12W 600-1000L 3000/3500/4000/5000K 120-277V, set to 12W, Add Goof ring	2	12	0.024	90%	4,000	96	0.022	88		0.000	0	0.020	88
38	White Bear Library	Area	Storage	F-F32T8-2	Strip-4ft-No Lens-Chain-4100-**-	2	59	0.118	1,000	118	Retrofit	4ft LED Lensed Strip Retrofit Kit, Controls Ready, 23/34/47W 3400/4990/6760L 3500/4000/5000K, TAA, SET TO 23W	2	23	0.046	50%	1,000	46	0.072	72		0.005	5	0.038	77

Building	Floor	Room	Type	QTY	Pre Retrofit CODE	Pre-Retrofit
RCCF	Basement	Property Management	WATER CLOSET	1	FM TS 12"RI c3.5F/v3.5F <6vBt D	3.5 GPF/3.5 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In <6vBt Diaphragm
RCCF	Basement	Property Management	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	Basement	staff locker	WATER CLOSET	1	FM TS 12"RI ADA c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In ADA 9vBt Diaphragm
RCCF	Basement	staff locker	FAUCET	2	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	Basement	staff locker	URINAL	1	WMU TS 24" c1.0F/v1.0F <6vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 24 Inch <6" Vacuum Breaker
RCCF	Basement	staff locker	SHOWER	1	SH 2.5F	2.5 GPM Standard Showerhead
RCCF	Basement	staff bath	WATER CLOSET	1	FM TS 12"RI ADA c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In ADA 9vBt Diaphragm
RCCF	Basement	staff bath	FAUCET	2	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	Basement	staff bath	URINAL	2	WMU TS 24" c1.0F/v1.0F <6vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 24 Inch <6" Vacuum Breaker
RCCF	Basement	staff training room	WATER CLOSET	1	FM TS 12"RI c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In 9vBt Diaphragm
RCCF	Basement	staff training room	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	Basement	staff training room	SHOWER	4	SH 2.5F	2.5 GPM Standard Showerhead
RCCF	Basement	staff training room	WATER CLOSET	1	FM TS 12"RI ADA c1.6F/v1.6F <6vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In ADA <6vBt Diaphragm
RCCF	Basement	staff training room mens	WATER CLOSET	1	FM TS 12"RI ADA c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In ADA 9vBt Diaphragm
RCCF	Basement	staff training room mens	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	Basement	staff training room mens	URINAL	2	WMU TS 24" c1.0F/v1.0F <6vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 24 Inch <6" Vacuum Breaker
RCCF	Basement	wood shop	WATER CLOSET	1	FM TS 12"RI c3.5F/v3.5F <6vBt D	3.5 GPF/3.5 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In <6vBt Diaphragm
RCCF	Basement	wood shop	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	First	north hallway staff baths	WATER CLOSET	1	WM TS 4B c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Wall Mount Flush Valve Water Closet Top Spud - Exposed 4 Bolt China 9vBt Diaphragm
RCCF	First	north hallway staff baths	FAUCET	1	AER 1.5F	1.5 GPM Faucet Aerator Female
RCCF	First	north hallway staff baths	WATER CLOSET	1	WM TS 4B c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Wall Mount Flush Valve Water Closet Top Spud - Exposed 4 Bolt China 9vBt Diaphragm
RCCF	First	north hallway staff baths	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	First	north hallway inmate bath	WATER CLOSET	1	WM TS 4B c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Wall Mount Flush Valve Water Closet Top Spud - Exposed 4 Bolt China 9vBt Diaphragm
RCCF	First	north hallway inmate bath	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
	First	dorm 1300	TOILET	60	COMB RS-CN c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Floor Mount Stainless Steel Combi (sink and toilet) Rear Spud - Concealed 9vBt Diaphragm
RCCF	First	dorm 1300	SHOWER	8	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	First	dorm 1200	WATER CLOSET	4	FM TS 12"RI c1.6F/v1.6F <6vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In <6vBt Diaphragm
RCCF	First	dorm 1200	FAUCET	3	AER 1.5F	1.5 GPM Faucet Aerator Female
RCCF	First	dorm 1200	SHOWER	3	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	First	dorm 1100	WATER CLOSET	4	FM TS 12"RI c1.6F/v1.6F <6vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In <6vBt Diaphragm
RCCF	First	dorm 1100	FAUCET	3	AER 1.5F	1.5 GPM Faucet Aerator Female
RCCF	First	dorm 1100	SHOWER	3	SHIN 2.5F	2.5 GPM Institutional Showerhead
	First	Dorm 1000	TOILET	28	COMB RS-CN c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Floor Mount Stainless Steel Combi (sink and toilet) Rear Spud - Concealed 9vBt Diaphragm
RCCF	First	Dorm 1000	SHOWER	4	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	second	North hallway inmates	WATER CLOSET	1	WM TS 4B c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Wall Mount Flush Valve Water Closet Top Spud - Exposed 4 Bolt China 9vBt Diaphragm
RCCF	second	North hallway inmates	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	second	north hallway staff baths	WATER CLOSET	2	WM TS 4B c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Wall Mount Flush Valve Water Closet Top Spud - Exposed 4 Bolt China 9vBt Diaphragm
RCCF	second	north hallway staff baths	FAUCET	2	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	second	Dorm 300	SHOWER	4	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	second	Dorm 300	WATER CLOSET	4	FMRO TS c1.6F/v1.6F 21vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Rear Outlet Top Spud - Exposed 21vBt Diaphragm
RCCF	second	Dorm 300	FAUCET	4	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	second	Dorm 300	URINAL	2	WMU TS 19" c1.0F/v1.0F <6vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 19 Inch <6" Vacuum Breaker
RCCF	second	dorm 400	SHOWER	4	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	second	dorm 400	WATER CLOSET	4	FMRO TS c1.6F/v1.6F 21vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Rear Outlet Top Spud - Exposed 21vBt Diaphragm
RCCF	second	dorm 400	FAUCET	4	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	second	dorm 400	URINAL	2	WMU TS 19" c1.0F/v1.0F <6vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 19 Inch <6" Vacuum Breaker
RCCF	second	Dorm 500	FAUCET	2	LS 1.5F	1.5 GPM Lab Faucet Female
RCCF	second	Dorm 500	WATER CLOSET	2	FMRO TS c1.6F/v1.6F 21vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Rear Outlet Top Spud - Exposed 21vBt Diaphragm
RCCF	second	Dorm 500	URINAL	1	WMU TS 24" c1.0F/v1.0F 9vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 24 Inch 9" Vacuum Breaker
RCCF	second	Dorm 500	SHOWER	2	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	second	dorm 600	FAUCET	2	LS 1.5F	1.5 GPM Lab Faucet Female
RCCF	second	dorm 600	WATER CLOSET	2	FMRO TS c1.6F/v1.6F 21vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Rear Outlet Top Spud - Exposed 21vBt Diaphragm
RCCF	second	dorm 600	URINAL	1	WMU TS 24" c1.0F/v1.0F 9vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 24 Inch 9" Vacuum Breaker
RCCF	second	dorm 600	SHOWER	2	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	second	dorm 700	FAUCET	2	LS 1.5F	1.5 GPM Lab Faucet Female
RCCF	second	dorm 700	WATER CLOSET	2	FMRO TS c1.6F/v1.6F 21vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Rear Outlet Top Spud - Exposed 21vBt Diaphragm
RCCF	second	dorm 700	URINAL	1	WMU TS 24" c1.0F/v1.0F 9vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 24 Inch 9" Vacuum Breaker
RCCF	second	dorm 700	SHOWER	2	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	second	dorm 800	WATER CLOSET	2	FMRO TS c1.6F/v1.6F 21vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Rear Outlet Top Spud - Exposed 21vBt Diaphragm
RCCF	second	dorm 800	SHOWER	2	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	First	Dorm 200	SHOWER	4	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	First	Dorm 200	WATER CLOSET	4	FMRO TS c1.6F/v1.6F 21vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Rear Outlet Top Spud - Exposed 21vBt Diaphragm
RCCF	First	Dorm 200	FAUCET	4	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	First	Dorm 200	URINAL	2	WMU TS 19" c1.0F/v1.0F <6vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 19 Inch <6" Vacuum Breaker
RCCF	First	dorm 100	SHOWER	4	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	First	dorm 100	WATER CLOSET	3	FMRO TS c1.6F/v1.6F 21vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Rear Outlet Top Spud - Exposed 21vBt Diaphragm
RCCF	First	dorm 100	FAUCET	4	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	First	dorm 100	URINAL	2	WMU TS 19" c1.0F/v1.0F <6vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 19 Inch <6" Vacuum Breaker
RCCF	First	dorm 100	WATER CLOSET	1	FMRO TS 12"RI ADA c1.6F/v1.6F 21vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Rear Outlet Top Spud - Exposed 12" Rough In ADA 21vBt Diaphragm
RCCF	First	dorm 100	FAUCET	1	LS 1.5F	1.5 GPM Lab Faucet Female
	First	security cells	TOILET	8	COMB RS-CN c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Floor Mount Stainless Steel Combi (sink and toilet) Rear Spud - Concealed 9vBt Diaphragm
RCCF	First	security cells	SHOWER	1	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	First	Health Services	WATER CLOSET	1	WM TS c3.5F/v3.5F 21vBt D	3.5 GPF/3.5 GPF Wall Mount Flush Valve Water Closet Top Spud - Exposed 21vBt Diaphragm
RCCF	First	Health Services	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	First	Medical Ward	WATER CLOSET	1	FMRO TS ADA c3.5F/v3.5F <6vBt D	3.5 GPF/3.5 GPF Floor Mount Flush Valve Water Closet Rear Outlet Top Spud - Exposed ADA <6vBt Diaphragm
RCCF	First	Medical Ward	FAUCET	1	LS 1.5F	1.5 GPM Lab Faucet Female
RCCF	First	Medical Ward	SHOWER	1	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	First	Learning Center Staff	WATER CLOSET	1	WM TS c3.5F/v3.5F 21vBt D	3.5 GPF/3.5 GPF Wall Mount Flush Valve Water Closet Top Spud - Exposed 21vBt Diaphragm
RCCF	First	Learning Center Staff	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	First	Learning center inmate bathroom	WATER CLOSET	3	FMRO TS c1.6F/v1.6F 21vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Rear Outlet Top Spud - Exposed 21vBt Diaphragm
RCCF	First	Learning center inmate bathroom	FAUCET	1	LS 1.5F	1.5 GPM Lab Faucet Female
RCCF	First	Mens admissions	WATER CLOSET	3	WM RS-CN c1.6F/v1.6F D STN	1.6 GPF/1.6 GPF Wall Mount Flush Valve Water Closet Rear Spud - Concealed Diaphragm Stainless Steel
RCCF	First	Mens admissions	FAUCET	3	LS 1.5F	1.5 GPM Lab Faucet Female
RCCF	Lobby	staff mens	WATER CLOSET	1	FM TS 12"RI ADA c1.6F/v1.6F 9vBt D STN	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In ADA 9vBt Diaphragm Stainless Steel
RCCF	Lobby	staff mens	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	Lobby	staff mens	URINAL	1	WMU TS 24" c1.0F/v1.0F <6vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 24 Inch <6" Vacuum Breaker
RCCF	Lobby	staff womens	WATER CLOSET	1	FM TS 12"RI ADA c1.6F/v1.6F 9vBt D STN	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In ADA 9vBt Diaphragm Stainless Steel
RCCF	Lobby	staff womens	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	admin	superintendent	WATER CLOSET	1	FM TS 12"RI c3.5F/v3.5F <6vBt D	3.5 GPF/3.5 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In <6vBt Diaphragm
RCCF	admin	superintendent	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	admin	superintendent	SHOWER	1	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	Lobby	womens	WATER CLOSET	2	WM TS 4B c1.6F/v1.6F WS 9vBt D	1.6 GPF/1.6 GPF Wall Mount Flush Valve Water Closet Top Spud - Exposed 4 Bolt China Wall Mount 9vBt Diaphragm
RCCF	Lobby	womens	FAUCET	2	AER 0.5F	0.5 GPM Faucet Aerator Female
RCCF	Lobby	mens	FAUCET	2	AER 0.5F	0.5 GPM Faucet Aerator Female
RCCF	Lobby	mens	WATER CLOSET	1	WM TS 4B c1.6F/v1.6F WS 9vBt D	1.6 GPF/1.6 GPF Wall Mount Flush Valve Water Closet Top Spud - Exposed 4 Bolt China Wall Mount 9vBt Diaphragm
RCCF	Lobby	mens	URINAL	1	WMU TS 24" c1.0F/v1.0F FS 9vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 24 Inch Faucet Sensor 9" Vacuum Breaker
RCCF	By dining room	staff womens	WATER CLOSET	1	WM TS 4B c3.5F/v3.5F 21vBt D	3.5 GPF/3.5 GPF Wall Mount Flush Valve Water Closet Top Spud - Exposed 4 Bolt China 21vBt Diaphragm
RCCF	By dining room	staff womens	FAUCET	1	AER 1.5F	1.5 GPM Faucet Aerator Female
RCCF	By dining room	staff mens	WATER CLOSET	1	WM TS 4B c3.5F/v3.5F 21vBt D	3.5 GPF/3.5 GPF Wall Mount Flush Valve Water Closet Top Spud - Exposed 4 Bolt China 21vBt Diaphragm
RCCF	By dining room	staff mens	FAUCET	1	AER 1.5F	1.5 GPM Faucet Aerator Female
RCCF	By dining room	Laundry staff	WATER CLOSET	1	FMRO TS c3.5F/v3.5F 21vBt D	3.5 GPF/3.5 GPF Floor Mount Flush Valve Water Closet Rear Outlet Top Spud - Exposed 21vBt Diaphragm
RCCF	By dining room	Laundry staff	FAUCET	1	AER 2.5F	2.5 GPM Faucet Aerator Female
RCCF	By dining room	Laundry staff	URINAL	1	WMU TS 24" c1.0F/v1.0F 9vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 24 Inch 9" Vacuum Breaker
RCCF	Kitchen	Bathroom	WATER CLOSET	1	FM TS 12"RI c1.6F/v1.6F <6vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In <6vBt Diaphragm
RCCF	Kitchen	Bathroom	FAUCET	1	AER 2.5F	2.5 GPM Faucet Aerator Female
RCCF	Kitchen	Kitchen	Kitchen Faucet	1	KHS 2.5 GPM	2.5 GPM Kitchen Hand Faucet
RCCF	Kitchen	Kitchen	PREP SINK	3	PREP 2.5 GPM	2.5 GPM Preparatory Kitchen Faucet
RCCF	Kitchen	Kitchen	DISH SPRAYER	1	DS 1.42 GPM	1.42 GPM Dish Sprayer
RCCF	north hallway	control room	WATER CLOSET	1	FM TS c3.5F/v1.6F D	3.5 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed Diaphragm
RCCF	north hallway	control room	FAUCET	1	AER 2.5F	2.5 GPM Faucet Aerator Female
RCCF	South Wing	dorm 900	WATER CLOSET	3	FM TS 12"RI c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In 9vBt Diaphragm
RCCF	South Wing	dorm 900	FAUCET	3	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	South Wing	dorm 900	URINAL	1	WMU TS c1.0F/v1.0F 9vBt	1.0 GPF/1.0 GPF Wall Mount Urinal Top Spud - Exposed 9" Vacuum Breaker
RCCF	South Wing	dorm 900	SHOWER	2	SHIN 2.5F	2.5 GPM Institutional Showerhead
	South Wing	Isolation	TOILET	3	COMB RS-CN c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Floor Mount Stainless Steel Combi (sink and toilet) Rear Spud - Concealed 9vBt Diaphragm
RCCF	South Wing	Isolation	SHOWER	1	SHIN 2.5F	2.5 GPM Institutional Showerhead
	South Wing	Isolation	TOILET	3	COMB RS-CN c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Floor Mount Stainless Steel Combi (sink and toilet) Rear Spud - Concealed 9vBt Diaphragm
RCCF	South Wing	Isolation	SHOWER	1	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	South Wing	work release staff	WATER CLOSET	1	FM TS 12"RI c3.5F/v3.5F <6vBt D	3.5 GPF/3.5 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In <6vBt Diaphragm
RCCF	South Wing	work release staff	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	South Wing	work release staff	SHOWER	1	SHIN 2.5F	2.5 GPM Institutional Showerhead
RCCF	South Wing	work release locker	WATER CLOSET	1	FM TS 12"RI c3.5F/v3.5F <6vBt D	3.5 GPF/3.5 GPF Floor Mount Flush Valve Water Closet Top Spud - Exposed 12" Rough In <6vBt Diaphragm
RCCF	South Wing	work release locker	FAUCET	1	AER 2.2F	2.2 GPM Faucet Aerator Female
RCCF	South Wing	work release locker	SHOWER	1	SHIN 2.5F	2.5 GPM Institutional Showerhead
	South Wing	c pod	TOILET	18	COMB RS-CN c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Floor Mount Stainless Steel Combi (sink and toilet) Rear Spud - Concealed 9vBt Diaphragm
RCCF	South Wing	c pod	SHOWER	2	SHIN 2.5F	2.5 GPM Institutional Showerhead
	South Wing	b pod	TOILET	16	COMB RS-CN c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Floor Mount Stainless Steel Combi (sink and toilet) Rear Spud - Concealed 9vBt Diaphragm
RCCF	South Wing	b pod	SHOWER	2	SHIN 2.5F	2.5 GPM Institutional Showerhead
	South Wing	a pod	TOILET	16	COMB RS-CN c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Floor Mount Stainless Steel Combi (sink and toilet) Rear Spud - Concealed 9vBt Diaphragm
RCCF	South Wing	a pod	SHOWER	2	SHIN 2.5F	2.5 GPM Institutional Showerhead
JFIC	First Floor b	courts admin womens	WATER CLOSET	2	WM TS 4B c1.6F/v1.6F 9vBt D	1.6 GPF/1.6 GPF Wall Mount Flush Valve Water Closet Top Spud - Exposed 4 Bolt China 9vBt Diaphragm

		EXISTING CONDITIONS									PROPOSED UPGRADE									
Line #	Building	BLD Code	ECM Code	QTY	Length (Ft)	Crack Width (in)	Description	Total Area	Total Square Inches	CFM		Qty	Linear Ft (ea)	Description	Notes		Heating MMBTU's Saved	Total Therms Saved	Cooling MMBTUs Saved	Total kWh Saved
7	Shoreview Library	2	EDS	6	3	1/4	WORN OUT ENTRY DOOR SWEEP	0.37	54.00	33.45		6	3	INSTALL SWEEPS ON ENTRY DOORS			5.00	50.01	0.60	176.58
8	Shoreview Library	2	EDW	6	17	1/6	WORN OUT ENTRY DOOR WEATHERSTRIPPING	1.42	204.00	126.35		6	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS			18.89	188.94	2.28	667.08
9	Shoreview Library	2	EDDS	1	6	1/4	WORN OUT DOUBLE DOOR SWEEP	0.12	18.00	11.15		1	6	INSTALL SWEEPS ON DOUBLE DOORS			1.67	16.67	0.20	58.86
10	Shoreview Library	2	EDDW	1	20	1/6	WORN OUT DOUBLE DOOR WEATHERSTRIPPING	0.28	40.00	24.78		1	20	REPAIR/REPLACE WEATHERSTRIP ON DOUBLE DOORS			3.70	37.05	0.45	130.80
11	Shoreview Library	2	AS	1	7	1/4	WORN/MISSING ASTRAGAL	0.15	21.00	13.01		1	7	REPAIR/REPLACE ASTRAGAL ON DOUBLE DOORS			1.94	19.45	0.23	68.67
12	Shoreview Library	2	EDDS	4	3	1/4	WORN OUT DOUBLE DOOR SWEEP	0.25	36.00	22.30		4	3	INSTALL SWEEPS ON DOUBLE DOORS			3.33	33.34	0.40	117.72
13			GDW																	
14	White Bear Library	3	EDS	6	3	1/4	WORN OUT ENTRY DOOR SWEEP	0.37	54.00	33.45		6	3	INSTALL SWEEPS ON ENTRY DOORS			5.00	50.01	0.60	176.58
15	White Bear Library	3	EDW	6	17	1/6	WORN OUT ENTRY DOOR WEATHERSTRIPPING	1.42	204.00	126.35		6	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS			18.89	188.94	2.28	667.08
16	White Bear Library	3	EDDS	1	6	1/4	WORN OUT DOUBLE DOOR SWEEP	0.12	18.00	11.15		1	6	INSTALL SWEEPS ON DOUBLE DOORS			1.67	16.67	0.20	58.86
17	White Bear Library	3	EDDW	1	20	1/6	WORN OUT DOUBLE DOOR WEATHERSTRIPPING	0.28	40.00	24.78		1	20	REPAIR/REPLACE WEATHERSTRIP ON DOUBLE DOORS			3.70	37.05	0.45	130.80
18	White Bear Library	3	AS	1	7	1/4	WORN/MISSING ASTRAGAL	0.15	21.00	13.01		1	7	REPAIR/REPLACE ASTRAGAL ON DOUBLE DOORS			1.94	19.45	0.23	68.67
18	White Bear Library	3	WJS	180	1	1/16	WALL JOINTS SEAL	0.94	135.00	83.62		180	1	SEAL EXTERIOR WALL JOINTS			12.50	125.03	1.51	441.45
19	Maplewood Library	4	EDS	5	3	1/4	WORN OUT ENTRY DOOR SWEEP	0.31	45.00	27.87		5	3	INSTALL SWEEPS ON ENTRY DOORS			4.17	41.68	0.50	147.15
20	Maplewood Library	4	EDW	4	17	1/6	WORN OUT ENTRY DOOR WEATHERSTRIPPING	0.94	136.00	84.24		4	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS			12.60	125.96	1.52	444.72
21	Maplewood Library	4	EDDS	6	6	1/4	WORN OUT DOUBLE DOOR SWEEP	0.75	108.00	66.89		6	6	INSTALL SWEEPS ON DOUBLE DOORS			10.00	100.03	1.21	353.16
22	Maplewood Library	4	EDDW	1	20	1/6	WORN OUT DOUBLE DOOR WEATHERSTRIPPING	0.28	40.00	24.78		1	20	REPAIR/REPLACE WEATHERSTRIP ON DOUBLE DOORS			3.70	37.05	0.45	130.80
23	Maplewood Library	4	AS	1	7	1/4	WORN/MISSING ASTRAGAL	0.15	21.00	13.01		1	7	REPAIR/REPLACE ASTRAGAL ON DOUBLE DOORS			1.94	19.45	0.23	68.67
24	Roseville Library	5	EDS	15	3	1/4	WORN OUT ENTRY DOOR SWEEP	0.94	135.00	117.39		15	3	INSTALL SWEEPS ON ENTRY DOORS			17.55	175.53	2.11	619.76
25	Roseville Library	5	EDW	15	17	1/6	WORN OUT ENTRY DOOR WEATHERSTRIPPING	3.54	510.00	443.48		15	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS			66.31	663.13	7.99	2341.32
26	Roseville Library	5	EDDS	1	6	1/4	WORN OUT DOUBLE DOOR SWEEP	0.12	18.00	15.65		1	6	INSTALL SWEEPS ON DOUBLE DOORS			2.34	23.40	0.28	82.63
27	Roseville Library	5	EDDW	1	20	1/6	WORN OUT DOUBLE DOOR WEATHERSTRIPPING	0.28	40.00	34.78		1	20	REPAIR/REPLACE WEATHERSTRIP ON DOUBLE DOORS			5.20	52.01	0.63	183.63
28	Roseville Library	5	AS	1	7	1/4	WORN/MISSING ASTRAGAL	0.15	21.00	18.26		1	7	REPAIR/REPLACE ASTRAGAL ON DOUBLE DOORS			2.73	27.31	0.33	96.41
29	Roseville Library	5	GDW	1	30	1/6	WORN OUT GARAGE DOOR WEATHER STRIPPING ONLY	0.42	60.00	52.17		1	30	REPLACE GARAGE DOOR WEATHER STRIPPING ONLY			7.80	78.01	0.94	275.45
34	Family Service Center	7	IRW	866	1	1/8	EXISTING ROOF WALL GAPS - INTERIOR	9.02	1299.00	799.98		866	1	SEAL INTERIOR ROOF/WALL INTERSECTION			119.62	1196.21	14.41	4223.50
35	Family Service Center	7	EDS	12	3	1/4	WORN OUT ENTRY DOOR SWEEP	0.75	108.00	66.51		12	3	INSTALL SWEEPS ON ENTRY DOORS			9.95	99.45	1.20	351.15
36	Family Service Center	7	EDW	12	17	1/6	WORN OUT ENTRY DOOR WEATHERSTRIPPING	2.83	408.00	251.27		12	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS			37.57	375.72	4.53	1326.55
37	Family Service Center	7	EDDS	1	6	1/4	WORN OUT DOUBLE DOOR SWEEP	0.12	18.00	11.09		1	6	INSTALL SWEEPS ON DOUBLE DOORS			1.66	16.58	0.20	58.52
38	Family Service Center	7	EDDW	1	20	1/6	WORN OUT DOUBLE DOOR WEATHERSTRIPPING	0.28	40.00	24.63		1	20	REPAIR/REPLACE WEATHERSTRIP ON DOUBLE DOORS			3.68	36.83	0.44	130.05
39	Family Service Center	7	AS	1	7	1/4	WORN/MISSING ASTRAGAL	0.15	21.00	12.93		1	7	REPAIR/REPLACE ASTRAGAL ON DOUBLE DOORS			1.93	19.34	0.23	68.28
40	Family Service Center	7	AH	1	12	1/4	UNSEALED ATTIC/ROOF HATCH	0.25	36.00	22.17		1	12	REPAIR/REPLACE WEATHERSTRIP ON ATTIC/ROOF HATCH			3.32	33.15	0.40	117.05
41	Medical Examiner's Office	8	IRW	409	1	1/16	EXISTING ROOF WALL GAPS - INTERIOR	2.13	306.75	190.00		409	1	SEAL INTERIOR ROOF/WALL INTERSECTION			36.42	364.23	3.42	11677.55
41	Medical Examiner's Office	8	WJS	240	1	1/16	WALL JOINTS SEAL	1.25	180.00	111.49		240	1	SEAL EXTERIOR WALL JOINTS			21.37	213.73	2.01	6852.35
42	Medical Examiner's Office	8	WW	192	1	1/12	WORN OUT WINDOW WEATHERSTRIPPING	1.33	192.00	118.92		192	1	REPAIR/REPLACE WINDOW WEATHERSTRIPPING GASKET - EXTERIOR ONLY	16 windows		22.80	227.98	2.14	7309.17
43	Medical Examiner's Office	8	EDW	5	17	1/6	WORN OUT ENTRY DOOR WEATHERSTRIPPING	1.18	170.00	105.29		5	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS			20.19	201.85	1.90	6471.66
44	Medical Examiner's Office	8	EDS	5	3	1/4	WORN OUT ENTRY DOOR SWEEP	0.31	45.00	27.87		5	3	INSTALL SWEEPS ON ENTRY DOORS			5.34	53.43	0.50	1713.09
45	Medical Examiner's Office	8	EDDW	1	20	1/6	WORN OUT DOUBLE DOOR WEATHERSTRIPPING	0.28	40.00	24.78		1	20	REPAIR/REPLACE WEATHERSTRIP ON DOUBLE DOORS			4.75	47.50	0.45	1522.74
46	Medical Examiner's Office	8	EDDS	1	6	1/4	WORN OUT DOUBLE DOOR SWEEP	0.12	18.00	11.15		1	6	INSTALL SWEEPS ON DOUBLE DOORS			2.14	21.37	0.20	685.23
47	Medical Examiner's Office	8	AS	1	7	1/4	WORN/MISSING ASTRAGAL	0.15	21.00	13.01		1	7	REPAIR/REPLACE ASTRAGAL ON DOUBLE DOORS			2.49	24.94	0.23	799.44
55	Landmark Center	10	EDW	3	17	1/12	WORN OUT ENTRY DOOR WEATHERSTRIPPING	0.35	51.00	54.14		3	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS			10.38	103.78	0.98	3327.33
56	Landmark Center	10	EDS	3	3	1/12	WORN OUT ENTRY DOOR SWEEP	0.06	9.00	9.55		3	3	INSTALL SWEEPS ON ENTRY DOORS			1.83	18.31	0.17	587.18
57	Landmark Center	10	EDDW	12	20	1/12	WORN OUT DOUBLE DOOR WEATHERSTRIPPING	1.67	240.00	254.76		12	20	REPAIR/REPLACE WEATHERSTRIP ON DOUBLE DOORS			48.84	488.38	4.59	15658.01
58	Landmark Center	10	EDDS	12	6	1/12	WORN OUT DOUBLE DOOR SWEEP	0.50	72.00	76.43		12	6	INSTALL SWEEPS ON DOUBLE DOORS			14.65	146.51	1.38	4697.40
59	Landmark Center	10	AS	12	7	1/12	WORN/MISSING ASTRAGAL	0.58	84.00	89.17		12	7	REPAIR/REPLACE ASTRAGAL ON DOUBLE DOORS			17.09	170.93	1.61	5480.30
60	Landmark Center	10	ND	1	20	1/12	EXTERIOR DOOR REPLACEMENT NEEDED	0.14	20.00	21.23		1	20	INSTALL NEW EXTERIOR DOOR			4.07	40.70	0.38	1304.83
61	Emergency Communications Center	11	EDW	7	17	1/6	WORN OUT ENTRY DOOR WEATHERSTRIPPING	1.65	238.00	206.96		7	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS			39.67	396.74	3.73	1092.62
62	Emergency Communications Center	11	EDS	7	3	1/4	WORN OUT ENTRY DOOR SWEEP	0.44	63.00	54.78		7	3	INSTALL SWEEPS ON ENTRY DOORS			10.50	105.02	0.99	289.22
63	Emergency Communications Center	11	GDW	3	42	1/6	WORN OUT GARAGE DOOR WEATHER STRIPPING ONLY	1.75	252.00	219.13		3	42	REPLACE GARAGE DOOR WEATHER STRIPPING ONLY			42.01	420.08		
64	Emergency Communications Center	11	WJS	60	1	1/12	WALL JOINTS SEAL	0.42	60.00	52.17		60	1	SEAL EXTERIOR WALL JOINTS			10.00	100.02	0.94	275.45
65	402 University	12	EDW	15	17	1/6	WORN OUT ENTRY DOOR WEATHERSTRIPPING	3.54	510.00	443.48		15	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS			85.02	850.16	7.99	2341.32
66	402 University	12	EDS	15	3	1/4	WORN OUT ENTRY DOOR SWEEP	0.94	135.00	117.39		15	3	INSTALL SWEEPS ON ENTRY DOORS			22.50	225.04	2.11	619.76
67	402 University	12	GDW	1	36	1/6	WORN OUT GARAGE DOOR WEATHER STRIPPING ONLY	0.50	72.00	62.61		1	36	REPLACE GARAGE DOOR WEATHER STRIPPING ONLY			12.00	120.02		
68	402 University	12	IRW	767	1	1/12	EXISTING ROOF WALL GAPS - INTERIOR	5.33	767.00	666.95		767	1	SEAL INTERIOR ROOF/WALL INTERSECTION			127.86	1278.58	12.01	3521.16
69	402 University	12	EDDW	1	20	1/6	WORN OUT DOUBLE DOOR WEATHERSTRIPPING	0.28	40.00	34.78		1	20	REPAIR/REPLACE WEATHERSTRIP ON DOUBLE DOORS			6.67	66.68	0.63	183.63
70	402 University	12	EDDS	1	6	1/4	WORN OUT DOUBLE DOOR SWEEP	0.12	18.00	15.65		1	6	INSTALL SWEEPS ON DOUBLE DOORS			3.00	30.01	0.28	82.63
71	402 University	12	AS	1	7	1/4	WORN/MISSING ASTRAGAL	0.15	21.00	18.26		1	7	REPAIR/REPLACE ASTRAGAL ON DOUBLE DOORS			3.50	35.01	0.33	96.41

Line #	Building	EXISTING CONDITIONS					Description	Total Area	Total Square Inches	CFM	PROPOSED UPGRADE				Heating MMBTU's Saved	Total Therms Saved	Cooling MMBTUs Saved	Total kWh Saved
		BLD Code	ECM Code	QTY	Length (Ft)	Crack Width (in)					Qty	Linear Ft (ea)	Description	Notes				
72	Law Enforcement Center	13	EDW	31	17	1/6	WORN OUT ENTRY DOOR WEATHERSTRIPPING	7.32	1054.00	1120.98	31	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS		214.90	2148.97	20.19	5918.19
73	Law Enforcement Center	13	EDS	31	3	1/4	WORN OUT ENTRY DOOR SWEEP	1.94	279.00	296.73	31	3	INSTALL SWEEPS ON ENTRY DOORS		56.88	568.84	5.35	1566.58
74	Law Enforcement Center	13	GDW	7	36	1/6	WORN OUT GARAGE DOOR WEATHER STRIPPING ONLY	3.50	504.00	536.03	7	36	REPLACE GARAGE DOOR WEATHER STRIPPING ONLY		102.76	1027.59	9.66	2829.95
75	Law Enforcement Center	13	WJS	140	1	1/12	WALL JOINTS SEAL	0.97	140.00	148.90	140	1	SEAL EXTERIOR WALL JOINTS		28.54	285.44	2.68	786.10
76	Sheriff's Water Patrol Station	14	EDDW	3	20	1/6	WORN OUT DOUBLE DOOR WEATHERSTRIPPING	0.83	120.00	74.33	3	20	REPAIR/REPLACE WEATHERSTRIP ON DOUBLE DOORS		11.11	111.14	1.34	392.40
77	Sheriff's Water Patrol Station	14	EDDS	3	6	1/4	WORN OUT DOUBLE DOOR SWEEP	0.37	54.00	33.45	3	6	INSTALL SWEEPS ON DOUBLE DOORS		5.00	50.01	0.60	176.58
78	Sheriff's Water Patrol Station	14	AS	3	7	1/4	WORN/MISSING ASTRAGAL	0.44	63.00	39.02	3	7	REPAIR/REPLACE ASTRAGAL ON DOUBLE DOORS		5.83	58.35	0.70	206.01
79	Sheriff's Water Patrol Station	14	EDW	3	17	1/6	WORN OUT ENTRY DOOR WEATHERSTRIPPING	0.71	102.00	63.18	3	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS		9.45	94.47	1.14	333.54
80	Sheriff's Water Patrol Station	14	EDS	3	3	1/4	WORN OUT ENTRY DOOR SWEEP	0.19	27.00	16.72	3	3	INSTALL SWEEPS ON ENTRY DOORS		2.50	25.01	0.30	88.29
81			GDW															
82	Sheriff's Patrol Station	15	WW	1,240	1	1/12	WORN OUT WINDOW WEATHERSTRIPPING	8.61	1240.00	768.03	1,240	1	REPAIR/REPLACE WINDOW WEATHERSTRIPPING GASKET - EXTERIOR ONLY	31 windows	114.84	1148.44	13.84	4054.82
83	Sheriff's Patrol Station	15	WJS	392	1	1/12	WALL JOINTS SEAL	2.72	392.00	242.80	392	1	SEAL EXTERIOR WALL JOINTS		36.31	363.05	4.37	1281.85
84	Sheriff's Patrol Station	15	GDW	2	36	1/6	WORN OUT GARAGE DOOR WEATHER STRIPPING ONLY	1.00	144.00	89.19	2	36	REPLACE GARAGE DOOR WEATHER STRIPPING ONLY		13.34	133.37		
85	Sheriff's Patrol Station	15	EDW	9	17	1/6	WORN OUT ENTRY DOOR WEATHERSTRIPPING	2.12	306.00	189.53	9	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS		28.34	283.40	3.41	1000.62
86	Sheriff's Patrol Station	15	EDS	9	3	1/4	WORN OUT ENTRY DOOR SWEEP	0.56	81.00	50.17	9	3	INSTALL SWEEPS ON ENTRY DOORS		7.50	75.02	0.90	264.87
87			GDW															
88	Public Works Facility	16	WW	1,120	1	1/12	WORN OUT WINDOW WEATHERSTRIPPING	7.78	1120.00	693.71	1,120	1	REPAIR/REPLACE WINDOW WEATHERSTRIPPING GASKET - EXTERIOR ONLY	28 windows	103.73	1037.30	12.50	3662.42
89	Public Works Facility	16	WJS	896	1	1/12	WALL JOINTS SEAL	6.22	896.00	554.97	896	1	SEAL EXTERIOR WALL JOINTS		82.98	829.84	10.00	2929.93
90	Public Works Facility	16	EDW	32	17	1/8	WORN OUT ENTRY DOOR WEATHERSTRIPPING	5.67	816.00	505.42	32	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS		75.57	755.74	9.10	2668.33
91	Public Works Facility	16	EDS	32	3	1/6	WORN OUT ENTRY DOOR SWEEP	1.33	192.00	118.92	32	3	INSTALL SWEEPS ON ENTRY DOORS		17.78	177.82	2.14	627.84
92	Public Works Facility	16	EDDW	10	20	1/8	WORN OUT DOUBLE DOOR WEATHERSTRIPPING	2.08	300.00	185.81	10	20	REPAIR/REPLACE WEATHERSTRIP ON DOUBLE DOORS		27.78	277.85	3.35	981.00
93	Public Works Facility	16	EDDS	10	6	1/6	WORN OUT DOUBLE DOOR SWEEP	0.83	120.00	74.33	10	6	INSTALL SWEEPS ON DOUBLE DOORS		11.11	111.14	1.34	392.40
94	Public Works Facility	16	AS	10	7	1/6	WORN/MISSING ASTRAGAL	0.97	140.00	86.71	10	7	REPAIR/REPLACE ASTRAGAL ON DOUBLE DOORS		12.97	129.66	1.56	457.80
95	Public Works Facility	16	IRW	1,045	1	1/12	EXISTING ROOF WALL GAPS - INTERIOR	7.26	1045.00	647.25	1,045	1	SEAL INTERIOR ROOF/WALL INTERSECTION		96.78	967.83	11.66	3417.16
96	Public Works Facility	16	AH	1	18	1/8	UNSEALED ATTIC/ROOF HATCH	0.19	27.00	16.72	1	18	REPAIR/REPLACE WEATHERSTRIP ON ATTIC/ROOF HATCH		2.50	25.01	0.30	88.29
97	JFJC	17	EDW	11	17	1/6	WORN OUT ENTRY DOOR WEATHERSTRIPPING	2.60	374.00	524.77	11	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS		100.60	1006.01	9.45	2770.51
98	JFJC	17	EDS	19	3	1/4	WORN OUT ENTRY DOOR SWEEP	1.19	171.00	239.93	19	3	INSTALL SWEEPS ON ENTRY DOORS		46.00	459.97	4.32	1266.73
99	JFJC	17	GDW	1	32	1/6	WORN OUT GARAGE DOOR WEATHER STRIPPING ONLY	0.44	64.00	89.80	1	32	REPLACE GARAGE DOOR WEATHER STRIPPING ONLY		17.22	172.15	1.62	474.10
100	JFJC	17	PS	3	1	1/2	UNSEALED PENETRATIONS	0.12	18.00	25.26	3	1	SEAL PENETRATIONS AT VARIOUS LOCATIONS		4.84	48.42	0.45	133.34
101	Wabasha	18	EDW	12	17	1/12	WORN OUT ENTRY DOOR WEATHERSTRIPPING	1.42	204.00	286.24	12	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS		54.87	548.73	5.16	17592.83
102	Wabasha	18	EDS	12	3	1/12	WORN OUT ENTRY DOOR SWEEP	0.25	36.00	50.51	12	3	INSTALL SWEEPS ON ENTRY DOORS		9.68	96.83	0.91	3104.62
103	RCCF	19	EDW	17	17	1/6	WORN OUT ENTRY DOOR WEATHERSTRIPPING	4.01	578.00	502.61	17	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS		75.15	751.54	9.05	2653.49
104	RCCF	19	EDS	33	3	1/4	WORN OUT ENTRY DOOR SWEEP	2.06	297.00	258.26	33	3	INSTALL SWEEPS ON ENTRY DOORS		38.62	386.17	4.65	1363.47
105	RCCF	19	EDDW	5	20	1/6	WORN OUT DOUBLE DOOR WEATHERSTRIPPING	1.39	200.00	173.91	5	20	REPAIR/REPLACE WEATHERSTRIP ON DOUBLE DOORS		26.00	260.05	3.13	918.16
106	RCCF	19	EDDS	5	6	1/4	WORN OUT DOUBLE DOOR SWEEP	0.62	90.00	78.26	5	6	INSTALL SWEEPS ON DOUBLE DOORS		11.70	117.02	1.41	413.17
107	RCCF	19	AS	5	7	1/4	WORN/MISSING ASTRAGAL	0.73	105.00	91.30	5	7	REPAIR/REPLACE ASTRAGAL ON DOUBLE DOORS		13.65	136.53	1.64	482.04
108	RCCF	19	WW	600	1	1/12	WORN OUT WINDOW WEATHERSTRIPPING	4.17	600.00	521.74	600	1	REPAIR/REPLACE WINDOW WEATHERSTRIPPING GASKET - EXTERIOR ONLY	15 windows	78.01	780.15	9.40	2754.49
109	RCCF	19	WJS	20	1	1/12	WALL JOINTS SEAL	0.14	20.00	17.39	20	1	SEAL EXTERIOR WALL JOINTS		2.60	26.00	0.31	91.82
110	RCCF	19	GDW	4	40	1/6	WORN OUT GARAGE DOOR WEATHER STRIPPING ONLY	2.22	320.00	278.26	4	40	REPLACE GARAGE DOOR WEATHER STRIPPING ONLY		41.61	416.08	5.01	1469.06
111	Metro Square	20	EDW	7	17	1/12	WORN OUT ENTRY DOOR WEATHERSTRIPPING	0.83	119.00	166.97	7	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS		32.01	320.09	3.01	10262.48
112	Metro Square	20	EDS	7	3	1/12	WORN OUT ENTRY DOOR SWEEP	0.15	21.00	29.47	7	3	INSTALL SWEEPS ON ENTRY DOORS		5.65	56.49	0.53	1811.03
113	Metro Square	20	EDDW	10	20	1/12	WORN OUT DOUBLE DOOR WEATHERSTRIPPING	1.39	200.00	280.63	10	20	REPAIR/REPLACE WEATHERSTRIP ON DOUBLE DOORS		53.80	537.97	5.06	17247.87
114	Metro Square	20	EDDS	10	6	1/12	WORN OUT DOUBLE DOOR SWEEP	0.42	60.00	84.19	10	6	INSTALL SWEEPS ON DOUBLE DOORS		16.14	161.39	1.52	5174.36
115	Metro Square	20	AS	10	7	1/12	WORN/MISSING ASTRAGAL	0.49	70.00	98.22	10	7	REPAIR/REPLACE ASTRAGAL ON DOUBLE DOORS		18.83	188.29	1.77	6036.76
116	Courthouse	21	PS	2	1	1/2	UNSEALED PENETRATIONS	0.08	12.00	23.81	2	1	SEAL PENETRATIONS AT VARIOUS LOCATIONS		4.56	45.65	0.43	1463.53
117	Courthouse	21	EDS	37	3	1/12	WORN OUT ENTRY DOOR SWEEP	0.77	111.00	220.26	37	3	INSTALL SWEEPS ON ENTRY DOORS		42.22	422.25	3.97	13537.63
118	Courthouse	21	EDW	3	17	1/12	WORN OUT ENTRY DOOR WEATHERSTRIPPING	0.35	51.00	101.20	3	17	REPAIR/REPLACE WEATHERSTRIP ON ENTRY DOORS		19.40	194.01	1.82	6219.99
119	Courthouse	21	IRW	40	1	1/16	EXISTING ROOF WALL GAPS - INTERIOR	0.21	30.00	59.53	40	1	SEAL INTERIOR ROOF/WALL INTERSECTION		11.41	114.12	1.07	3658.82



EXHIBIT E PROJECT SCHEDULE

Exhibit E

Phase 1:

Lighting Upgrade: Projected to start November 2025 for a construction period of 6-8 months

Building Envelope: Projected to start November 2025 for a construction period of 6-8 months

Solar: Fall 2026

Phase 2:

Roofing Design: Summer 2026

Roofing Installation: Spring 2027

Solar: Summer to Fall 2027

EXHIBIT F

CONTRACTOR'S M&V RESPONSIBILITIES

CONTRACTOR'S MEASUREMENT & VERIFICATION RESPONSIBILITIES

Scope of Services: The CONTRACTOR shall provide the services identified in the summary table included in this section:

- All pre-and post-retrofit measurements as needed to verify each Facility Improvement Measure (FIM) as noted in the table.
- First Year Annual Report to the OWNER to verify that guaranteed savings have been met or determine if guaranteed savings have not been met and to establish ongoing units of energy saved for future annual reports.
- Additional Annual Reports to update the Annual Savings with updated utility rates based on the average cost of utilities of the previous 12 months.

This Exhibit details the individual responsibilities of the CONTRACTOR, not otherwise set forth in this Guaranteed Energy Savings Agreement, in connection with the management and administration of the Savings Guarantee.

CONTRACTOR's Equipment: The CONTRACTOR may provide tools, documentation, panels, or other equipment in the facility for the CONTRACTOR's convenience in performing the CONTRACTOR's Measurement and Verification Responsibilities. That equipment shall remain the CONTRACTOR's property. The CONTRACTOR retains the right to remove such items at any time during the term, or upon the termination of CONTRACTOR's Measurement and Verification Responsibilities.

Measurements and Verification Methods: The CONTRACTOR shall use the following methods as outlined in the table, to measure and verify utility savings throughout the term of this Agreement.

The approach to M&V is based on the International Performance Measurement and Verification Protocol (IPMVP) Volume 1 2012 (January 2012). IPMVP Volume 1 is a guidance document describing common practice in measuring, computing, and reporting savings achieved by energy or water efficiency projects at end user facilities. The IPMVP presents a framework and the four M&V options. For purposes of this Agreement, the Parties have also included an additional M&V Option – "Stipulated" savings. "Stipulated" savings are not subject to measurement or verification and do not include M&V activities and is utilized on FIMs where the costs to accurately calculate, measure, or monitor the projected savings would be greater than the anticipated savings value.

Option	Description	Typical Applications
A	IPMVP Type A: Partially Measured Retrofit Isolation with Stipulated Valves	Savings are determined by partial field measurements of key energy uses which is applied to the FIM. Estimates of the non-key parameters are used for the savings calculations.
B	IPMVP Type B: Retrofit Isolation	Savings are determined by field measurement of the energy use of the system which the FIM was applied.
C	IPMVP Type C: Whole Facility	Savings are determined by measuring energy use at the utility meter. Corrections are made for weather and other factors impacting savings.
D	IPMVP Type D: Calibrated Simulation	Savings are determined by building simulation (building modeling).
E	Stipulated Savings	Used where cost to accurately calculate and/or measure savings would exceed anticipated savings.

EXHIBIT F

CONTRACTOR'S M&V RESPONSIBILITIES

Measurement and Verification Plan

Measurement and Verification Options for each FIM

Lighting Upgrade:

1. Measurement and Verification Method: The method for verification of savings associated with this FIM is based on **Option A**.
2. What will be measured: Fixture wattages, on a sample of fixtures consisting of either single fixtures or a circuit of fixtures, shall be measured on fixtures with a population of 100 or more.
3. Sample size to be measured: Measurements shall be taken of a representative sample, the size of which shall not exceed 5% of the population, for unique retrofit types which have a total population of 100 or more. For retrofits with less than this population the manufacturer's published wattages for each fixture type as referenced in the energy calculation section of the contract shall be used.
4. How will measurements be made: Power (watt) measurements will be performed with a handheld true-RMS meter. Where applicable, the measurements will be performed at a wall switch. If it is not possible to isolate the fixtures on one switch, then measurements will be performed at the individual fixture.
5. How will the measurements be used to determine actual savings: The pre-and post-field measurements (watts) will be inserted in the original calculation spreadsheet to determine the actual savings.
6. How often will measurements be performed: Pre-retrofit power measurements will be taken once immediately before work begins. After installation, the post-retrofit power measurements will be taken once to determine actual savings for the first year.
7. Stipulated values used: Burn hours of the fixtures are stipulated as presented in the lighting calculation spreadsheets included in the savings calculation section of the contract. These values were determined through discussions with the Owner and are agreed to by all parties.

Summary: Wattages, determined as previously described, operating hours, as set forth in in the energy calculation section and the savings calculations, as set forth in the energy calculation section, shall be used to determine savings for the entire guarantee period

Water Conservation:

1. Measurement and Verification Method: The method for verification of savings associated with this FIM is based on **Option E**.
2. The pre-retrofit usage and temperature delta will be stipulated as in Exhibit D
3. Post-retrofit, the verification will include review of installed materials and locations to ensure they will meet and exceed the calculation shown in Exhibit D.
4. All other parameters are stipulated, and savings are calculated as summarized in Exhibit D.
5. No Post installation measurement will be performed, and the stipulated value will be used for all calculations throughout the Guarantee Period

Building Envelope:

1. Measurement and Verification Method: The method for verification of savings associated with this FIM is based on **Option E**.
2. The pre-retrofit hours and gaps will be stipulated as in Exhibit D
3. Post-retrofit, the verification will include review of installed materials and locations to ensure they will meet and exceed the calculation shown in Exhibit D.
4. All other parameters are stipulated, and savings are calculated as summarized in Exhibit D.

EXHIBIT F

CONTRACTOR'S M&V RESPONSIBILITIES

5. No Post installation measurement will be performed, and the stipulated value will be used for all calculations throughout the Guarantee Period

Generator Heat Pump:

1. Measurement and Verification Method: The method for verification of savings associated with this FIM is based on **Option E**.
2. The pre-retrofit wattage and hours will be stipulated as in Exhibit D
3. Post-retrofit, the verification will include review of installed equipment and efficiency to ensure they will meet and exceed the calculation shown in Exhibit D.
4. All other parameters are stipulated, and savings are calculated as summarized in Exhibit D.
5. No Post installation measurement will be performed, and the stipulated value will be used for all calculations throughout the Guarantee Period

AHU Control Modifications:

1. Measurement and Verification Method: The method for verification of savings associated with this FIM is based on **Option A**.
2. What will be measured:
 - a. AHU Run Time
 - b. Delta T Across the Coil
3. How will measurements be made: Temperature measurements and run times will be captured and trended over time by the building control system.
4. How will the measurements be used to determine actual savings: The pre-and post-field measurements will be inserted in the original calculation spreadsheet to determine the actual savings.
5. How often will measurements be performed: Pre-retrofit power measurements will be based on Exhibit D calculations shall be used for the baseline energy use. After installation, the post-retrofit measurements will be taken continuously by the controls system to determine actual savings for the first year.
6. Stipulated values used: Flow rates are stipulated as presented in the calculation spreadsheets included in the savings calculation section of the contract.

RTU Replacement:

1. Measurement and Verification Method: The method for verification of savings associated with this FIM is based on **Option E**.
2. The pre-retrofit amps, heating and cooling efficiency, and hours will be stipulated as in Exhibit D
3. Post-retrofit, the verification will include review of installed equipment and efficiency to ensure they will meet and exceed the calculation shown in Exhibit D.
4. All other parameters are stipulated, and savings are calculated as summarized in Exhibit D.
5. No Post installation measurement will be performed, and the stipulated value will be used for all calculations throughout the Guarantee Period

Solar:

1. Measurement and Verification Method: The method for verification of savings associated with this FIM is based on **Option A**.
2. What will be measured: Power production from each sites solar PV stems and weather data.
3. Sample size to be measured: Measurements will be continuous from the solar control systems from Also Energy.
4. How will the measurements be used to determine actual savings: The field data (kWh) will be weather adjusted and inserted in the original calculation spreadsheet to determine the actual savings.

EXHIBIT F

CONTRACTOR'S M&V RESPONSIBILITIES

5. How often will measurements be performed: Pre-retrofit power measurements are zero production from solar. After installation, the post-retrofit power measurements will be collected at the end of the year to determine actual savings for the first year.

Chiller Replacement at RCCF:

1. Measurement and Verification Method: The method for verification of savings associated with this FIM is based on **Option E**.
2. The pre-retrofit efficiency and hours will be stipulated as in Exhibit D
3. Post-retrofit, the verification will include review of installed equipment and efficiency to ensure they will meet and exceed the calculation shown in Exhibit D.
4. All other parameters are stipulated, and savings are calculated as summarized in Exhibit D.
5. No Post installation measurement will be performed, and the stipulated value will be used for all calculations throughout the Guarantee Period

Operational Savings

1. Measurement and Verification Method: The method for verification of savings associated with this FIM is based on **Option E**.
2. The pre-retrofit spending will be stipulated as in Exhibit D
3. Post-retrofit, the verification will include review of installed materials and locations to ensure they will meet and exceed the calculation shown in Exhibit D.
4. All other parameters are stipulated, and savings are calculated as summarized in Exhibit D.
5. No Post installation measurement will be performed, and the stipulated value will be used for all calculations throughout the Guarantee Period

EXHIBIT G

MAINTENANCE RESPONSIBILITIES

MAINTENANCE RESPONSIBILITIES

Scope of Services:

The CONTRACTOR shall provide the services identified in the summary table included in EXHIBIT A.

The CLIENT hereby agrees to assume the following responsibilities as part of this Agreement:

1. Maintain and/or Replace Faulty Equipment
 - The CLIENT shall properly maintain all equipment that is being repaired, replaced or modified as a result of the work identified in Exhibit A, or that will have an impact on the CONTRACTOR's ability to meet the Performance Guarantee. When it is necessary to replace the equipment that affects the CONTRACTOR's ability to meet the Performance Guarantee, the CLIENT shall replace it with an equipment of at least equal energy and operational efficiencies.
 - Upon receiving a written notice from the CONTRACTOR describing any operational or maintenance deficiency, the CLIENT shall immediately make arrangements to remedy the deficiency. Once the deficiency is corrected, the CLIENT shall notify the CONTRACTOR to perform inspection on the remedial improvements.
2. Notification of Problems. The CLIENT shall promptly notify the CONTRACTOR of any system or building changes, which may impact the CONTRACTOR's ability to meet its obligation in Exhibit E.
3. Current Responsibilities. The CLIENT shall perform the following work before the Completion Date:
 - Be available for a project kick off meeting and project completion meeting
 - Be available for any on-site safety concerns as they may arise during project construction
 - Designate appropriate personnel for signing off on pre-and post-Measurement and Verification of FIM's
 - Designate appropriate personnel for signing off on completed training hours
 - CLIENT to make the CONTRACTOR aware of any specific CLIENT site conditions that will need to be adhered to during the construction phase of the project
4. Provide the CONTRACTOR copies of all Utilities (gas, Agri-fuels, oil, water, and electric bills) upon request.
5. Provide the CONTRACTOR with the following information:
 - Major schedule changes within 72 hours of occurrence
 - Major Facility Construction/Remodeling/Expansion changes or plans
 - Changes to HVAC equipment
 - Changes, additions, or deletions of major energy consuming equipment
 - Occupancy or use changes
6. Notify the CONTRACTOR equipment, controls, or strategy changes that might impact savings during the Measurement and Verification phase of the Project.

EXHIBIT G

MAINTENANCE RESPONSIBILITIES

7. Maintain standard facility and building operation to conserve energy, including but not limited to the following: Keep windows closed; Maintain thermostat set points and schedules per this agreement; Turn off lights in unoccupied rooms; Control HVAC equipment in the unoccupied mode when space is unoccupied; Keep vestibule doors closed to reduce infiltration.
8. Discuss with the CONTRACTOR before any changes with respect to utility deregulation or any proposed utility agreements, as it pertains to the facilities within this contract.
9. Ensure that Maintenance Personnel are properly trained throughout the term of this agreement.
10. Provide a security space on the job site for material storage, meeting room, and toilet facilities for the construction personnel.
11. Provide the installation and monthly cost of electronic access (internet or dedicated telephone line) used by the Direct Digital Control (DDC) system for on-line analysis, data transfer, troubleshooting, and programming, between the CONTRACTOR and the facilities.

EXHIBIT H

ADDITIONAL CONDITIONS

ADDITIONAL CONDITIONS

1.0 TEMPORARY LIGHT, POWER AND WATER

The COUNTY will furnish all AC electricity and water. However, the CONTRACTOR shall furnish and pay for any/all temporary conduit, wiring and piping, as may be required from the nearest available point of service and shall remove same upon completion of the Work at no cost to the OWNER. OWNER shall be responsible for costs of utility usages and demand for connections to the OWNER's systems.

2.0 SANITARY FACILITIES

The CONTRACTOR shall make arrangements with the COUNTY for the use of sanitary facilities and shall be responsible for the cleanliness and conditions of said facilities until completion of the project. The CONTRACTOR shall remove any worker creating a nuisance on the premises from the site.

3.0 Contractor's Energy Savings Guarantee

Guarantee Term: The term of CONTRACTOR's Guarantee shall be the Term of the Agreement and shall survive any earlier cancellation or termination of this Agreement. CONTRACTOR's guarantee will be terminated if the Technical Services Agreement – Performance Assurance Services are cancelled by the OWNER or if the time after Substantial Completion exceeds the payback indicated on the summary table total line in Exhibit A.

Total Guaranteed Savings: CONTRACTOR guarantees that the amount to be saved in energy and operation costs over the term of this Agreement shall be at least the "Total Guaranteed Savings" as set forth in Exhibit D which Total Guaranteed Savings are sufficient to meet or exceed the total cost of the energy conservation measures.

Annual Meetings: OWNER and CONTRACTOR shall meet at least once annually for the purpose of, reviewing utility loads, changes in utility rates, operating hours and maintenance issues of equipment installed under this Agreement, for the previous Guarantee Year. At each annual meeting, OWNER will provide CONTRACTOR with the applicable utility rates for the previous Guarantee Year. The Parties agree to hold the Annual Meeting within thirty (30) Working Days after the final month of each Guarantee Year. In the event of chronic or material equipment failure, OWNER and CONTRACTOR will meet within a reasonable time after a request by the OWNER to discuss a timely cure for the failure.

Guarantee Reconciliation: While within the guaranteed term, CONTRACTOR shall perform a guarantee reconciliation at the end of each Guarantee Year and submit a guarantee reconciliation report with updated Exhibits D to the OWNER Contact within forty-five (45) Working Days of each Guarantee Year anniversary, and at the Guarantee Term End Date. CONTRACTOR shall calculate the Total Actual Savings as set forth in Exhibit D for the immediately previous Guarantee Year. In the event that the Total Actual Savings realized by OWNER are less than the Guaranteed Savings, CONTRACTOR shall remit an amount equal to such deficiency to OWNER within forty-five (45) Working Days of the guaranteed reconciliation submittal.

Survival: This Section 11.0 survives the termination of the Agreement and terminates only upon presentation of the final Annual Report of the Technical Services Agreement by CONTRACTOR and final payment of any savings deficiencies if required. CONTRACTOR's guarantee will be terminated if the Technical Services Agreement is cancelled by the OWNER.

4.0 EPAAct

The Energy Policy Act of 2005 (EPAAct) created a Federal tax incentive under Internal Revenue Code §179D called the Energy Efficient Commercial Building Deduction. This incentive encourages efficient construction practices. While the tax incentive usually goes to building owners, public agencies cannot use it since they pay no income

EXHIBIT H

ADDITIONAL CONDITIONS

tax. A special rule allows public agencies to assign the incentive to the designer who assists in the creation of technical specifications for the energy efficient building features. If available, Owner agrees to assign this tax incentive to inBYLT, LLC.

Prevailing Wage Requirements (Davis Bacon)

For the construction of this project and for a period of 5 years beginning on the date this project is substantially complete, the alternation or repair of this project shall be paid wages at rates not less than the prevailing rates for construction, alteration, or repair of similar character in the locality in which this project is located and most recently determined by the Secretary of Labor, in accordance with subchapter IV of chapter 31 of title 40, United States Code. **Documentation of prevailing wages will be required with each pay request.**

Apprenticeship Requirements

Contractors or subcontractors that employ four or more individuals are required to employ at least one qualified apprentice. In accordance with the following:

Construction start in 2022	10% of labor hours must go to an apprentice
Construction start in 2023	12.5% of labor hours must go to an apprentice
Construction start in 2024 or later	15% of labor hours must go to an apprentice

Note: Subcontractors can be deemed as satisfying this requirement if they make a good faith effort to request qualified apprentices from a registered apprenticeship program and their request is denied or if the program fails to respond within five days of the request. [IRS Notice 2022-61](#) contains additional information about the “good faith effort” exception. **Documentation of this will be required in the closeout documents for the project.**

Recordkeeping requirements must be maintained and preserved including employment of laborers, mechanics, and apprentices, including the records of any lower tier subcontractors. Examples include each laborer or mechanic’s hourly rates, hours worked, deductions from wages, and actual wages paid, amount other records.

Domestic Content (Made in America)

Any steel, iron, or manufactured product which is a component of this project is produced in the United States (as determined under section 661 of title 49, Code of Federal Regulations).

Steel and Iron

Steel and Iron shall be applied in a manner consistent with section 661.5 of title 49, Code of Federal Regulations. This requires all steel and iron manufacturing processes must take place in the United States, except metallurgical processes involving refinement of steel additives.

The steel and iron requirements apply to all construction materials made primarily of steel or iron and used in infrastructure projects such as transit or maintenance facilities, rail lines, and bridges. These items include, but are not limited to, structural steel or iron, steel or iron beams and columns, running rail and contact rail. These requirements do not apply to steel or iron used as components or subcomponents of other manufactured products or rolling stock, or to bimetallic power rail incorporating steel or iron components.

Manufactured Products

EXHIBIT H

ADDITIONAL CONDITIONS

Manufactured products shall be deemed to have been produced in the United States if not less than the adjusted percentage (40%) of the total costs of all such manufactured products of the work are attributable to manufactured products (including components) which are mined, produced, or manufactured in the United States.

Documentation showing that this “Domestic Content” requirement must be provided with the project closeout documents.