REQUEST FOR PROPOSAL

HOUSING AUTHORITY OF THE CITY OF BAYONNE

A PHYSICAL NEEDS ASSESSMENT AND ENERGY AUDIT AT ALL BAYONNE HOUSING AUTHORITY PROJECTS AND BRIDGEVIEW MANOR BAYONNE, NEW JERSEY

Submitted by:

EG&R ENGINEERING PC
1249 S. River Road, Suite 111
Cranbury, NJ 08512
Tel: (609) 619-5256

Submitted to:

ATTENTION: JOHN T. MAHON, EXECUTIVE DIRECTOR

THE HOUSING AUTHORITY OF THE CITY OF BAYONNE
549 AVENUE A
BAYONNE, NJ 07002

MARCH 5, 2024

HOUSING AUTHORITY OF THE CITY OF BAYONNE

A PHYSICAL NEEDS ASSESSMENT AND ENERGY AUDIT AT ALL BAYONNE HOUSING AUTHORITY PROJECTS AND BRIDGEVIEW MANOR BAYONNE, NEW JERSEY

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EG&R ENGINEERING, PC

LETTER OF TRANSMITTAL

March 5, 2024

Attn: Mr. John Mahon & Mr. Evan Pacyna

Bayonne Housing Authority
549 Avenue A
Bayonne, New Jersey 07002

RE: Request for Proposal
A Physical Needs Assessment and Energy Audit at All Bayonne Housing Authority Projects and Bridgeview Manor, Bayonne, New Jersey

Dear Mr. Mahon & Mr. Pacyna:

I am the authorized representative of EG&R Engineering PC to submit the attached proposal and to make commitments on behalf of EG&R Engineering PC.

We are pleased to submit this proposal to provide architect-engineering services for the Physical Needs Assessments and Energy Audits for BHA's facilities. Having significant prior experience working on BHA's projects and similar projects with other organizations, we are uniquely qualified to perform the scope of work of this contract.

We look forward to working with your organization on this important project.

Respectfully,

B.V. Rao, Ph.D., PG., LSRP
Principal
EG&R Engineering PC.

Enclosures: Proposal Sections 2, 3, 4, and 5.

SECTION 2: EXPERIENCE

PHYSICAL NEEDS ASSESSMENT/A-E SERVICES, BRIDGEVIEW MANOR COMPLEX, BAYONNE HOUSING AUTHORITY (BHA), BAYONNE, NEW JERSEY

Contact: Bayonne Housing Authority, Mr. Patrick Bader, Maintenance Director, Tel: (201) 888-5256; e-mail: pbader@bayonneha.org

Period of Performance: 2016-2017

Physical Needs Assessment: Physical Needs Assessment of a total of 14 buildings and the associated grounds and facilities.

The Physical Needs Assessment was performed by EG&R's multi-disciplinary team for BHA's Bridgeview Manor complex consisting of a total of 14 buildings with 260 units and associated grounds including pavement, parking lots, play fields, and pathways. A representative sample of 46 units was randomly selected and evenly distributed throughout the property to normalize any trends. Inspections included all architectural, structural, mechanical (HVAC units/boiler rooms, etc.), and electrical components, and other amenities in the selected units. Each component inspected during the site walkthrough was rated to determine the estimated remaining life (ERL) or useful remaining life (RUL). Components needing upgrade/replacement were categorized into three groups in terms of priority. Mitigation measures were identified, and cost estimates were prepared using RS Mean Cost Estimation source books, our internal database, inquiries, and other sources and adjusted by a local area adjustment factor. A comprehensive report along with photo documentation was prepared for BHA.

A-E SERVICES, CONVERSION OF PRIMARY ELECTRICAL SERVICE TO FOUR SEPARATE SECONDARY SERVICES, BAYONNE HOUSING AUTHORITY (BHA), BAYONNE, NEW JERSEY

Contact: Bayonne Housing Authority, Mr. Patrick Bader, Maintenance Director, Tel: (201) 888-5256; e-mail: pbader@bayonneha.org

Period of Performance: 2019-2020

Electric Service Conversion: Because of the flooding caused during the Sandy storm in New Jersey, BHA decided to eliminate the existing switchgear in the building and the outside pad-mounted transformers. EG&R provided electrical design/engineering services to BHA for the conversion of the existing 4kV service to four separate 208 V-3 phase secondary service feeds from the pole-mounted transformers. EG&R has also assisted BHA in the design for the upgrade of the heating system in the Bridgeview Manor Complex to all electric heat, eliminating the need for the existing boilers which are prone to flooding. EG&R's design/engineering services included: 1) Detailed site survey of the electrical distribution system including determination of the ratings for all existing equipment; 2) Heat loss calculations in accordance with ASHRAE Standards for typical apartment units and common areas for sizing of electric unit heaters;

3)Performed electrical load study; 4) Designed underground trench system for new electric feeders from a new pole to electric service entrance in the building.

BAYONNE HOUSING AUTHORITY, AE SERVICES FOR STANDBY GENERATOR INSTALLATION

Contact: Bayonne Housing Authority, Mr. Patrick Bader, Maintenance Director, Tel: (201) 888-5256; e-mail: pbader@bayonneha.org

Period of Performance: 2017

EG&R Engineering PC was awarded the contract to provide Architect Engineering Services for the Installation of Standby Generators at the NJ 12-3 Centerville Gardens Housing Complex and 12-4 La Tourette Gardens Housing Complex for the Bayonne Housing Authority. The Generators are to provide backup power to the Community Rooms and Boiler Facilities for the two housing complexes located in Bayonne, NJ.

EG&R has provided Engineering and Design services to support the installation of the new Standby Generators. These services include the following services:

- Natural Gas Generator Technical Specification
- Electrical Subcontract Specifications
- Electrical Load Study
- Panel Schedules,
- General Arrangement and Interface drawings
- Preliminary Cost Estimates and Feasibility Study
- Construction Management

ASSET (BUILDINGS, ELECTRICAL, AND MECHANICAL ASSETS) SURVEYS IN CONNECTION WITH CLIMATIC RISK ASSESSMENTS, PORT AUTHORITY OF NEW YORK NEW JERSEY

Contact: Ms. Breanna Gribble; Tel: (646) 599-1134

EG&R has performed this project as a sub-consultant to STV Inc. The asset surveys were performed for various facilities including George Washington Bridge, Lincoln Tunnel, Holland Tunnel, and World Trade Center Buildings of Port Authority of New York New Jersey.

EG&R has performed field surveys, desktop reviews, condition assessments, and enterprise asset management database updates for electrical and mechanical assets associated with the George Washington Bridge, Lincoln Tunnel, Holland Tunnel, and World Trade Center Buildings (ongoing). Further, the scope included developing mitigation strategies including conceptual design to mitigate the risks for electrical assets/systems in these facilities from future climate risks. A total of over 1000 electrical and mechanical assets were surveyed, and their interdependencies were evaluated.

BUILDINGS EVALUATION REPORT (BER), UNITED STATES MERCHANT MARINE ACADEMY/USDOT, KINGS POINT, NY.

Dr. Rao of EG&R Engineering PC was part of the Assessment Team that conducted walk-through surveys of the forty-eight assets (academic facilities, administrative offices, dining, research, laboratories, library museum, residential, storage, industrial, recreation, athletic, training, and infrastructure components) throughout the USMMA facility in Kings Point, NY. A Building Evaluation Report (BER) was prepared based on the walkthrough inspection data (including useful life, upgrade requirements, deficiencies, operating efficiencies of the systems, etc.). This effort was required to support Repair and Alteration projects for the short-term and long-term operational continuity. The work was classified into five categories (Priority 1 (immediate attention) through Priority V (No immediate attention). Cost estimates were developed based on MS means data that was part of the BER application software (VFA facility software). The Assessment Team collaborated with multiple Federal Agencies including USDOT, USMMA, MARAD to produce Capital Planning. Asset Management and Facility Assessment Reports.

MULTI-DISCIPLINARY AE SERVICES, PTC-1 4th PROGRAM TEST FACILITY LOCKHEED MARTIN ROTARY & MISSION SYSTEMS 199 BORTAN LANDING ROAD, LOCKHEED MARTIN INC., MOORESTOWN, NJ.

Contact: Jeff Foster; Tel: (609) 352-9017

Period of Performance: 2021-2022

- Project Management – EG& R provided project management for this A-E project involving architectural, mechanical/plumbing, and electrical design.
- Power & Electrical Systems – The design efforts for Lockheed Martin's Test Facility included Load Flow, Voltage Drop, and Short Circuit Study; Breaker Coordination Study (480V Switchgear Breaker Settings w/ TCC curves); Arc Flash Hazard Analysis; Single Line Diagrams; Panel Schedules; Demo / Relocation Plans; Grounding Plans and Details; Power Plans; Lighting Plans and Details; Installation Specifications.
- Mechanical Design and Analysis – Equipment Sizing/Heating and Cooling Load Calculations; HVAC Equipment Selection/ Layout Drawings; Pipe Tie-In's; Piping Drawings / Plans (depicting routing); Specifications for Mechanical Equipment (CRAC units, etc.); Fire Protection Requirements; VFD Sizing Verification and Change Out; Installation Specifications; Cost estimates.
- Materials Selection and Specification – EG&R developed the specifications for architectural, mechanical, and electrical components to design Lockheed Martin's Test Facility (PTC-1).
- Computer-Aided Design – EG&R prepared all design drawings/construction drawings using AutoCAD's latest version.

- Inspection and Testing – EG&R conducted the testing of mechanical and electrical equipment.
- System Safety – Electrical distribution and mechanical systems were designed in compliance with the relevant and applicable safety codes.

LIST OF OTHER ORGANIZATIONS TO WHOM EG&R HAS PERFORMED SIMILAR SERVICES

- **NEW YORK POWER AUTHORITY**
- **COVANTA ENERGY (various locations throughout the United States**
- **METROPOLITAN TRANSPORTATION AUTHORITY(MYA)**
- **NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION (NYCDEP)**
- **SEVERAL LARGE AE FIRMS (as sub-consultant)**
- **SEVERAL LARGE CONTRACTING FIRMS**
- **UNITED STATES AIR FORCE (to be commenced)**

SECTION 3: STAFFING

A summary of the qualifications of EG&R Engineering's personnel who will be engaged in this project is listed in the following table.

Table 1: Professional Qualifications Summary

Name	**Title/Job Designation** **Project Role**	**Summary of Qualifications**
Vinaya (Vin) Bhagavathula	Principal Electrical Engineer **Principal Engineer**	Master's Degree Professional Engineer (PE) (OK, NJ, NY, PA, TN, FL, KY) Electrical Engineering 18+ Years of Experience
Rao Bhagavathula	Principal **Field Survey Lead/Principal**	Ph.D., Geology M. Tech., Engineering Professional Geologist/Environmental Engineer/Scientist NJDEP LSRP Licensed Asbestos Inspector 40 Years of experience
Namita Bhagavathula	Director **Project Management** **Energy Audits Lead**	**M.S; Energy Management** B.S., Electrical Engineering Construction Management Certified Project Management Professional (PMP) 15+ years of experience
Monica Arjani	Architect **Project Support Resource**	MS., Architecture Registered Architect 17 years experience
Geoff Weston	Quality Assurance Manager **Quality Assurance**	B.S Electrical Engineering 40+ years of experience
Debu Bhaumik	Lead Structural Engineer **Project Resource**	M.S Structural Engineering Registered Professional Engineer (PE) 35 Years of experience
Emad Bouless	Sr. Project Engineer/Mechanical Engineer	M.S., Mechanical Engineering Registered Professional Engineer (PE) 20 Years of experience

Keith Kuchenbrod	Project Engineer **Project Engineer/Data Analysis/Reports**	BS Electrical Engineering 1+ Years of experience
Lakshmi Lakshminarayanan	Project Engineer Electrical/Construction Inspections/Commissioning **Project Engineer/Data Analysis/Reports**	M.S., Electrical Engineering 4+ years of experience
Arun Joshi	Staff Engineer-2 **Data Analysis Support/ Report Preparation**	M.S., Electrical Engineering 2+ years experience
Nick Lenge	Staff Engineer-2 **Field Surveys and Data Analysis**	B.S Electrical Engineering 2+ years of experience
Nathaniel Racsok	Staff Engineer-2 **Field Surveys and Data Analysis**	B.S Electrical Engineering 2+ years' experience
Nakul Singh	Staff Engineer-1 **Field Surveys and Data Analysis**	M.S Computer Science B.S Electrical Engineering 1+ years' Experience
Connor Eggert	Staff Engineer-1 **Field Surveys and Data Analysis**	B.S., Electrical Engineering
Kenn Rapp	CAD Specialist **CAD Support**	Civil, Mechanical, Electrical CAD 15+ Yrs. Experience
Amy Prulello	CAD Operator/Designer **CAD Support**	Civil, Mechanical, Electrical CAD 10+ yrs. of experience

SECTION 4: EVALUATION CRITERIA (TECHNICAL FACTORS)

4.1. Experience

We have presented five project examples in Section 2.0 (Experience). These projects demonstrate our capabilities to perform the scope of work under this Request for Proposal (RFP).

EG&R Engineering PC is a multi-disciplinary engineering firm with capabilities in architectural, structural, mechanical, electrical, geotechnical, and environmental engineering. We are a New Jersey-registered professional engineering firm. **The firm is a certified Minority Business Enterprise (MBE) and a Small Business Enterprise (SBE) in the State of New Jersey.**

Our A-E capabilities are summarized below:

Architectural: EG&R architects have successfully performed architectural design for new buildings including residential and commercial, and renovations of historic and residential buildings, family housing, and infrastructure projects. As part of our architectural design services, our architects provided feasibility studies, conceptual design, space programming, interior design, renderings, cost estimation, and economic analysis. Our architects have experience in developing schematic and detailed design development plans indicating dimensions and specifications of the building systems including exterior elevations, interior floors, roofing, building sections, wall sections, doors, and windows.

Geotechnical: Our geotechnical engineering experience includes subsurface investigations for foundation design, design of support structures for deep foundations, design of earth support structures for excavation work, slope stability analysis and design of flood retaining structures, and engineering analysis and foundation design.

Structural Engineering: EG&R's lead structural engineer has performed renovation, rehabilitation and repair projects, as well as design of new structurally efficient building structures. They have used the latest software for analysis and design for all of the major construction materials used in building construction. Our structural engineers perform highly sophisticated, three-dimensional analyses of complete structures. The analyses evaluate lateral wind, seismic loading and gravity to meet particular code requirements. They have designed the lateral systems of structures to resist seismic loading and to maintain a shear wall-free interior space. They have provided innovative, practical solutions to address the entire building structure. Our structural engineers have the expertise to design a complete structural system while providing detailed plans and specifications for all components. Additionally, they have performed complete condition assessments and offered diagnostic methods to assist in design for renovations and repairs.

Mechanical Engineering: Our engineers possess strong technical skills in analyses and recommendations for a wide range of building systems including, but not limited to, energy conservation, retrofit, and value engineering/life cycle costing. Our staff has experience in providing a variety of mechanical services including (Heating Ventilation and Air Conditioning (HVAC), Building Automation Systems (BAS), plumbing design, fire protection, energy

analyses, thermal storage, heat recovery, process piping, feasibility studies, mechanical design, cost estimates, specifications, value engineering, and construction overview and administration. The proposed staff has experience in energy use budget calculations, computerized heating and cooling load calculations, and energy performance calculations, and designing direct digital automatic temperature control and energy monitoring control systems.

Electrical Engineering: EG&R electrical engineering staff has experience in the engineering and design of electrical power distribution, lighting, overhead and underground electrical distribution systems, substation design, fire alarm systems, and uninterrupted power systems. They have experience in the design of lighting and power distribution for a variety of facilities and structures. EG&R personnel have experience in the design of UPS, filtering and surge suppression equipment, normal and emergency power generation and distribution, as well as fire alarm systems, control systems, and miscellaneous signaling systems.

Environmental Engineering: EG&R personnel have experience in asbestos, lead paint, and radon surveys. Our personnel have Asbestos Hazard Emergency Response Act (AHERA) training and certification. Their experience includes Initial investigations to determine the distribution of pipe for plumbing, heating, ventilating, and air-conditioning (HVAC), and various mechanical systems; Bulk sampling; Ambient air sampling; Preparation of technical reports identifying the locations, estimated amounts, and type and content of asbestos; Preparation of plans and specifications for the removal of the identified ACM; and, Conducting monitoring, surveillance, air sampling and analysis during abatement procedures; Testing for lead-based paint using an x-ray spectrum analyzer programmed to work on various types of surfaces and approved by the EPA and Department of Housing and Urban Development; and, Preparation of technical reports, management plans and abatement documents.

4.2 Qualifications

The proposed staff qualifications are presented in Section 3 (Staffing). The role of everyone's role in this project is also indicated. EG&R has assigned Namita Bhagavathula as the Project Manager and Lead for the Energy Audits.

Namita Bhagavathula, PMP., Project Manager: Namita Bhagavathula has over 18 years of experience as an electrical engineer and project manager working at Con Edison and Public Service Electric & Gas (PSE&G). She's held roles in Project Management and Project Engineering. Namita has been involved in these efforts starting early in the project development phase, including project scope development, risk analysis, cost estimating, and continuing through detailed engineering, permitting, procurement, and construction. Since 2018 Namita has been serving as Project Manager and Lead Electrical Engineer for EG&R Engineering's engineering and design Projects for varied Utility and Government Clients.

Namita has a master's degree in Energy Management and a bachelor's degree in electrical engineering. Namita is a certified Project Management Professional. She has gained significant project management experience while employed with PSE&G and Con Edison, two very large power/utility companies, for over 16 years.

4.3 Approach/Work Plan

Approach to Physical Needs Assessment (PNA): EG&R will adhere to the PNA requirements listed under the scope of services (Section 2).

Our approach to PNA is summarized below.

Pre-Assessment Phase

- Gather Background Information (Pre-Assessment Phase): Collect existing documentation, including building plans, maintenance records, previous assessments, and any complaints or issues reported by tenants. This provides context for the assessment.
- Define Assessment Criteria (Pre-Assessment Phase): Establish clear criteria for evaluating physical needs, considering factors such as structural integrity, safety, accessibility, energy efficiency, compliance with building codes, and overall functionality.

Assessment Phase

- Site Visit and Visual Inspection: Conduct a thorough site visit to visually inspect all areas of the building, including exterior and interior spaces, common areas, mechanical systems, and individual units. Document any visible signs of wear, damage, or deterioration.
- Structural Assessment: Assess the structural integrity of the building, focusing on foundations, load-bearing walls, columns, beams, and roofing systems. Look for signs of cracking, settling, water damage, or other structural issues.
- Mechanical and Electrical Systems Evaluation: Evaluate the condition and performance of HVAC systems, plumbing, electrical wiring, elevators (if applicable), fire suppression systems, and other mechanical components.
- Accessibility Audit: Ensure that the building meets accessibility requirements for people with disabilities, including wheelchair access, handrails, ramps, and accessible parking spaces. Identify any barriers or obstacles that need to be addressed.
- Safety and Security Review: Review safety features such as fire exits, smoke detectors, emergency lighting, security cameras, locks, and entry/access control systems. Identify any security vulnerabilities or safety hazards.
- Environmental Assessment: We will visually observe the presence of mold/mildew issues, lead paint, and asbestos.
- Cost Estimation: Estimate the cost of addressing identified physical needs, including repairs, maintenance, upgrades, and renovations. We will prioritize needs based on urgency, budget constraints, and potential impact on residents. We will employ at least five categories as per the RFP. EG&R will use RS Means cost data sources and other available sources.
- Stakeholder Consultation: Engage with residents, community members, and other stakeholders to gather feedback, address concerns, and ensure that their needs are considered in the assessment process.

Post-Assessment Phase

- Report and Recommendations: Compile all findings into a comprehensive report detailing the physical needs assessment, including prioritized recommendations for repairs, improvements, and maintenance.

Surveying Methodology

Fulcrum will be used for data collection for both PNA and Energy Audit. EG&R employees have used this data collection software for an NJNJ Port Authority project. Fulcrum is a cloud-based robust digital platform to collect, share, and analyze data in real-time. Its features include Custom form Creation,

Data types (Text, images, and more), Real-Time Data Collection, Data Synchronization (across various devices and platforms), Data Analysis and Report Generation, and Integration Capabilities with other software. Fulcrum captures images, GPS coordinates, and other crucial data in real time. It has built-in geolocation features to capture the precise location of asset data location points. Fulcrum integrates with ESRI for enhanced GIS capabilities. It is built to operate on iOS devices (digital tablets/smartphones). Digital tablets/smart phones will be used by the field personnel. Fulcrum functions offline and enables field personnel to collect data in remote areas with unstable internet connectivity. Fulcrum incorporates multiple photographs, videos, or audio recordings to document the condition of assets. Field asset photographs can be stamped with date and location coordinates.

Data Validation and Quality Control: Sets mandatory fields and conditional logic to guide users through forms to ensure data consistency and accuracy.

Fulcrum imports spreadsheets, scans QR codes to optimize the field data collection process, is mobile friendly (data collected using digital tablets/smartphone), captures multiple photographs for each asset with location, and exports completed datasets in CSV and Excel format.

Approach to Level 2 Energy Audit: Our approach to a Level 2 Energy Audit is as follows:

1. Pre-Audit Preparation:
    - Understand BHA's energy goals, priorities, and constraints.
    - Gather historical energy consumption data, utility bills, and facility drawings/blueprints.
    - Assemble an audit team
2. Site Visit and Data Collection:
    - Conduct a thorough walkthrough of the facility to understand its operations, systems, and equipment. We can partially accomplish this as part of surveys for PNA.
    - Collect detailed data on energy-consuming systems such as HVAC, lighting, motors, process equipment, and building envelope.
    - Interview facility staff to gain insights into operational schedules, maintenance practices, and occupant behavior.
3. Energy Analysis:
    - Analyze energy consumption patterns to identify areas of high energy usage and potential inefficiencies.

- Benchmark energy performance against industry standards or similar facilities.
- Utilize energy modeling software to simulate energy use under different scenarios and identify potential energy-saving opportunities.

4. Technical Assessments:
   - Evaluate the performance of major energy-consuming systems (e.g., HVAC, lighting, motors) based on the available information.
   - Identify opportunities for equipment upgrades, retrofits, or replacements to improve energy efficiency.
5. Energy Conservation Measures (ECMs) Identification:
   - Develop a comprehensive list of ECMs tailored to the specific needs and constraints of the facility.
   - Prioritize ECMs based on their potential energy savings, implementation costs, and payback periods.
   - Consider both low-cost/no-cost measures (e.g., behavioral changes, operational improvements) and capital-intensive measures (e.g., equipment upgrades, building retrofits).
6. Preliminary Cost-Benefit Analysis:
   - Estimate the implementation costs for each ECM, including equipment purchase, installation, and potential downtime.
   - Calculate the energy savings and financial benefits associated with implementing each ECM over its expected lifespan.
   - Conduct a simple payback analysis to evaluate the return on investment (ROI) and prioritize ECMs with the shortest payback periods.
7. Report Preparation:
   - Compile the findings, recommendations, and supporting data into a comprehensive audit report.
   - Include detailed descriptions of identified ECMs, their estimated energy savings, implementation costs, and payback periods.
   - Provide clear and actionable recommendations along with supporting calculations, diagrams, and technical specifications.
   - Present the audit report to the BHA, explaining the findings, recommendations, and potential benefits clearly and concisely.

Schedule: We envision that the PNA and the EA under the scope of work can be completed within 120 days (from the date of NTP) and a draft report can be submitted to BHA for review. We anticipate the review comments from BHA within one month (30 days). EG&R will make revisions as per BHA's comments and submit the Final Version of the Report within 30 days after the receipt of comments from BHA.

4.4 Pricing

The pricing sheets are provided in Section 5 of this proposal. As per the RFP, we have provided pricing separately for the PNA, the EA, and pricing for the PNA and EA for Bridgeview Manor and Total Costs for providing the scope of work services.

Appendix 2: Cost Proposal

The contractor shall propose a firm fixed fee for all work performed under this RFP. The fee will be broken down to reflect the fee for the PNA, Energy Audit, the PNA and Energy Audit for Bridgeview Manor and total fee as reflected herein. The fee breakdown shall be inclusive of all costs, including but not limited to labor, material, supplies, and other costs. The fee shall be broken down by the component parts as follows:

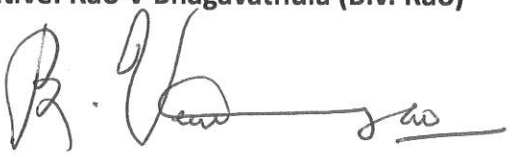
PART A

PNA.	**Total Cost. $120,463.58**
Energy Audit.	**Total Cost. $62,849.04**
Bridgeview Manor	
PNA	**Total Cost $24,092.72**
Energy Audit	**Total Cost $10,474.84**
Grand Total.	**Total Cost.$217,880.18**

Firm/Company Name: EG&R Engineering PC

Firm's Authorized Representative: Rao V Bhagavathula (B.V. Rao)

Representative Signature:



PART B – PNA Cost Proposal (EG&R ENGINEERING PC)

A. Labor. Provide a breakdown for each position and for all positions combined.

Position	Hourly Rate	Estimated Hours	Total
Staff Engineer-1	$36.00	540	$19,440
Staff Engineer-2	$38.50	540	$20,790
CAD Specialist	$28.00	100	$ 2,800
Project Engineer	$51.00	108	$5.508
Project Manager	$75.00	100	$7,500
Principal Engineer	$95.00	40	$3,800
		Total	**$59,838**

B. Direct Costs. Direct costs are costs that can be identified specifically with a project and therefore are charged to that project.

Cost Element		Total4,000
Materials	Lumpsum	$ 500.00
Travel	30 days/Mileage+tolls ($ $100/d)	$3,000.00
Misc. Expenses.		$ 500.00
Total Direct Costs.		$4,000.00

C. Indirect Costs, if applicable. Indirect costs are costs incurred for common or joint objectives and therefore cannot be readily and specifically identified with a particular direct project or activity.

Cost Element	Total: $16,156.26
Labor. 12% of Labor	**Total** $7,180.56
Non-labor. 15% of Labor	**Total:** $8,975.70
Total Indirect Costs.	

D. Subtotal. Subtotal of all labor, direct and indirect costs.

Subtotal	$79,994.26

E. General, Administrative and Overhead. State the percentage and total costs.

General	Total $53,854.20
Administrative 20% of Labor	**Total:** $5,983.80
Overhead 80% of Labor	**Total:** $47,870.40
Total	**Total: $53,854.20**

F. Profit. State the percentage and total cost.

Percentage 8%	Total $10,707.88

G. Total PNA Cost Proposed.	**Total $144,556.30**

(ONE HUNDRED FORTY-FOUR THOUSAND FIVE HUNDRED FIFTY-SIX DOLLARS AND THIRTY CENTS)

PART C – Energy Audit Cost Proposal (EG&R Engineering PC)

A. Labor. Provide a breakdown for each position and for all positions combined.

Position	Hourly Rate	Estimated Hours	Total
Staff Engineer-1	$36.00	216	$7,776.00
Staff Engineer-2	$38.50	216	$8,316.00
Staff Engineer-1	$32.00	108	$3,456.00
Project Engineer	$51.00	56	$2,856.00
Project Manager	$75.00	56	$4,200.00
Principal Engineer	$95.00	28	$2,660.00

Total $29,264.00

B. Direct Costs. Direct costs are costs that can be identified specifically with a project and therefore are charged to that project.

Cost Element			**Total**	**$3,000.00**
Materials	Lumpsum	$ 500.00		
Travel.		$2,000.00		
Misc. Expenses.		$ 500.00		
Total Direct Costs.		**Total $3,000.00**		

C. Indirect Costs, if applicable. Indirect costs are costs incurred for common or joint objectives and therefore cannot be readily and specifically identified with a particular direct project or activity.

Cost Element	**Total**	**$7,901.28**
Labor. 12% of direct labor	**Total** $3,511.68	
Non-labor. 15% of direct labor	**Total** $4,389.60	
Total Indirect Costs.		

D. Subtotal. Subtotal of all labor, direct and indirect costs.

Subtotal	**$37,165.28**

E. General, Administrative and Overhead. State the percentage and total costs.

General	**Total**	**$30,727.20**
Administrative 20% of direct labor	**Total** $5,852.80	
Overhead 85% of direct labor	**Total:** $24,874.40	
Total	**Total $30,727.20**	

F. Profit. State the percentage and total cost.8%

Percentage 8%	**Total**	**$5,431.40**

G. Total Energy Audit Cost Proposed.

Total	**$73,323.88**

SEVENTY-THREE THOUSAND THREE HUNDRED TWENTY-THREE DOLLARS AND EIGHTY EIGHT CENTS