



**BUREAU
VERITAS**

HOUSING AUTHORITY OF THE CITY OF BAYONNE

REQUEST FOR PROPOSAL FOR A PHYSICAL NEEDS ASSESSMENT
AND ENERGY AUDIT AT ALL BAYONNE HOUSING AUTHORITY
PROJECTS AND BRIDGEVIEW MANOR

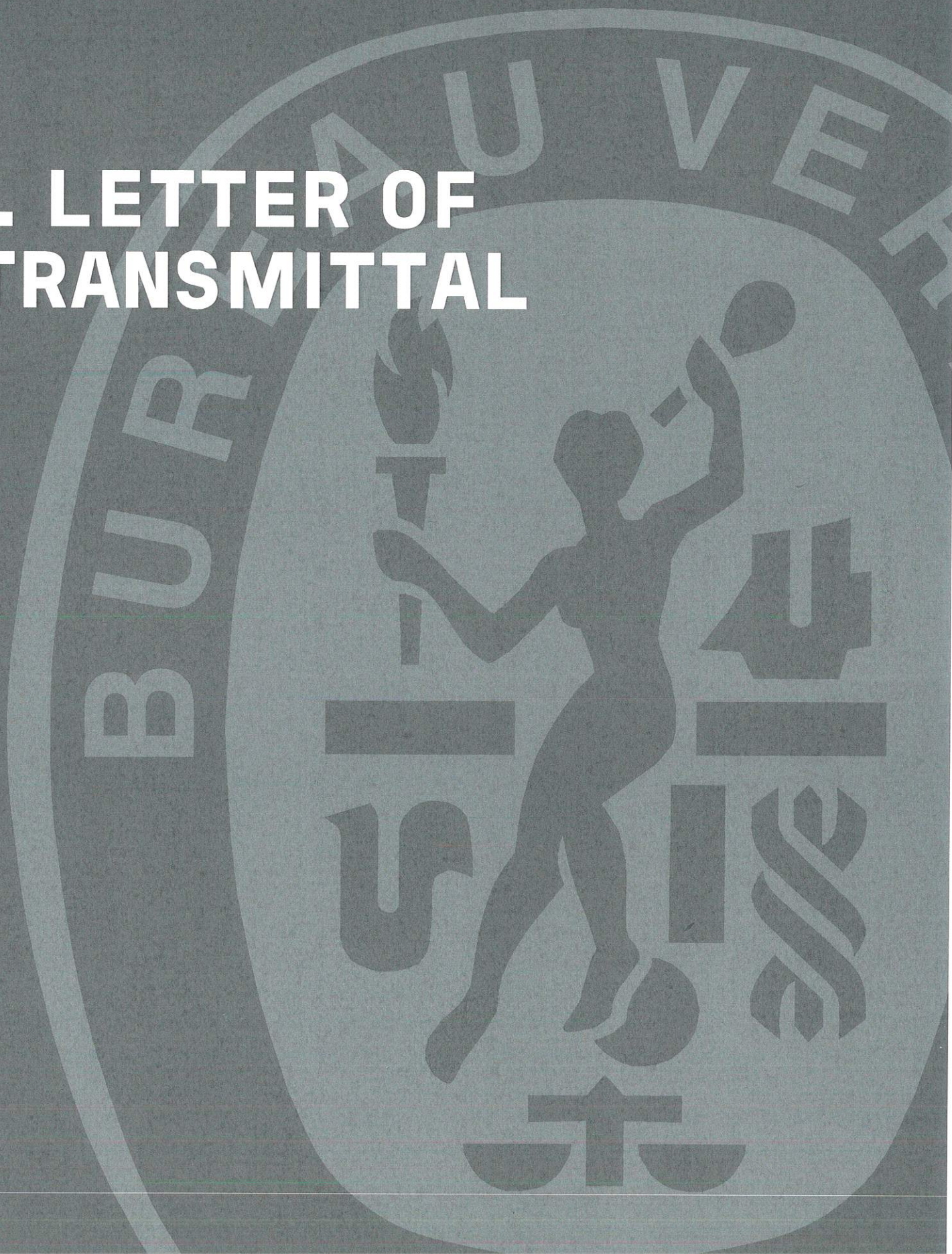
March 1, 2024

BUREAU VERITAS | CHEYENNE IRBY

109 N CENTER DRIVE, NORTH BRUNSWICK TOWNSHIP, NJ 08902

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1. LETTER OF TRANSMITTAL



1. LETTER OF TRANSMITTAL

March 1, 2024

Housing Authority of the City of Bayonne
Attn: John T. Mahon, Executive Director
549 Avenue A
Bayonne, NJ 07002



**BUREAU
VERITAS**

RE: Proposal for Physical Needs Assessment and Energy Audit

Dear Mr. Mahon,

Bureau Veritas Technical Assessments, LLC (Bureau Veritas or BVTa) is pleased to provide the Housing Authority of the City of Bayonne (Authority) with the enclosed proposal in response to the RFP for Physical Needs Assessment and Energy Audit services at all Bayonne Housing Authority Projects and Bridgeview Manor. Bureau Veritas understands the requirements of the RFP and is well qualified to perform the services.

Highly Qualified Team | We are an architecture and engineering firm focused on lifecycle and capital planning studies. Our division employs 800 staff members nationwide, including licensed Professional Engineers, Registered Architects, and Certified Energy Managers.

Proven Experience | BVTa has extensive experience performing Energy Audits, Physical Needs Assessments, HUD Compliant Technical Inspections, and Environmental Surveys. We have completed similar projects for Housing Authorities throughout the US. We are licensed in the State of New Jersey and are familiar with state and local codes and regulations. We have worked successfully with the following clients on several projects:

- Newark Housing Authority, NJ
- Housing Auth. of the Town of Phillipsburg, NJ
- Schenectady Housing Authority, NY
- New Brunswick Housing Authority, NJ
- Orange Housing Authority, NJ
- McKean County Housing Authority, PA
- Philadelphia Housing Authority, PA
- Housing Authority of the County of Butler, PA
- Chester Housing Authority, PA
- Lancaster City Housing Authority, PA
- York City Housing Authority, PA
- Housing Authority of the City of Pittsburgh, PA
- Lucas Metro Housing Authority, OH
- Anne Arundel Housing Authority, MD
- Montgomery Housing Authority, MD
- Baltimore Housing Authority, MD

Bureau Veritas is committed to providing quality services, and consistently demonstrating our corporate commitment to quality, continual improvement, and client satisfaction. Bureau Veritas is not debarred, suspended, or otherwise prohibited from professional practice by any federal, state, or local agency.

The following pages detail our history, similar project experience, our key personnel and team, and our approach to your unique project. Bureau Veritas is committed to working with the Housing Authority of the City of Bayonne to provide the highest possible quality of service. We appreciate the opportunity to present our qualifications for this project and look forward to working with the Authority. I am available at 410.533.6988 or via email at cheyenne.irby@bureauveritas.com to further discuss our qualifications.

Sincerely,

Cheyenne Irby
Vice President, Asset Management

BUREAU VERITAS | CHEYENNE IRBY
109 N CENTER DRIVE, NORTH BRUNSWICK TOWNSHIP, NJ 08902
P 800.733.0660 | CHEYENNE.IRBY@BUREAUVERITAS.COM

FIRM PROFILE

Profile

Bureau Veritas is a professional services consulting firm providing comprehensive architectural, engineering, energy, and environmental solutions. Our team includes over 800 building professionals nationwide, including Registered Architects, Professional Engineers, Certified Energy Managers, Project Managers, Environmental Professionals, Building Systems Consultants, and Code Compliance Experts.

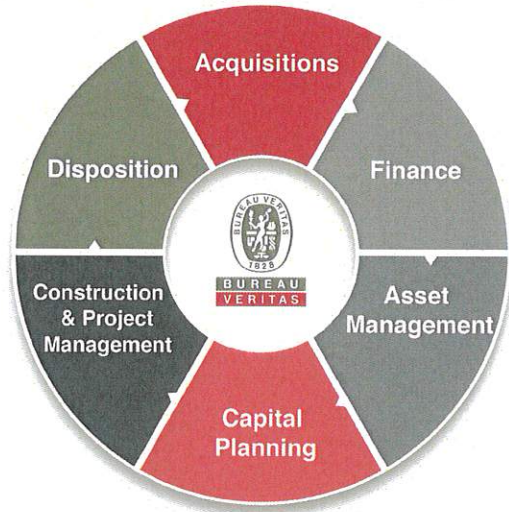
Annually, Bureau Veritas conducts thousands of assessments for Multifamily, Commercial, Industrial, Government, and Educational clients. Having successfully completed billions of square feet of building assessments, we have developed a proven and efficient methodology for the performance of field assessments and data collection.

Bureau Veritas' recommendations are based on knowledge of property conditions, life-cycle analysis, regulations, and client objectives. Bureau Veritas' subject matter expertise and understanding of buildings, parks, and property sites forms the foundation on which we team with clients to create and implement facility and portfolio management solutions.

ASSET MANAGEMENT SERVICES

- Physical Needs Assessments
- Facility Condition Assessments
- Capital Planning Reports
- Accessibility Compliance
- Equipment and Asset Inventory
- Barcoding, QR Coding, and Tagging
- CMMS Consulting
- Preventive Maintenance Plans
- Space Analysis Studies
- Energy Audits and Modeling
- Commissioning (Cx and Rx)
- Construction Monitoring
- Project Management
- Plan and Document Review

What We Do



Company Information

Name of Company:	Bureau Veritas Technical Assessments LLC
Year Founded:	1828
Headquarters Address:	6021 University Boulevard, Suite 200 Ellicott City, MD 21043
Local Office:	109 N Center Drive North Brunswick, NJ 08902
Primary Contact:	Cheyenne Irby Associate Vice President
Telephone:	(410) 533-6988
Email:	cheyenne.irby@bureauveritas.com
Website:	bvna.com

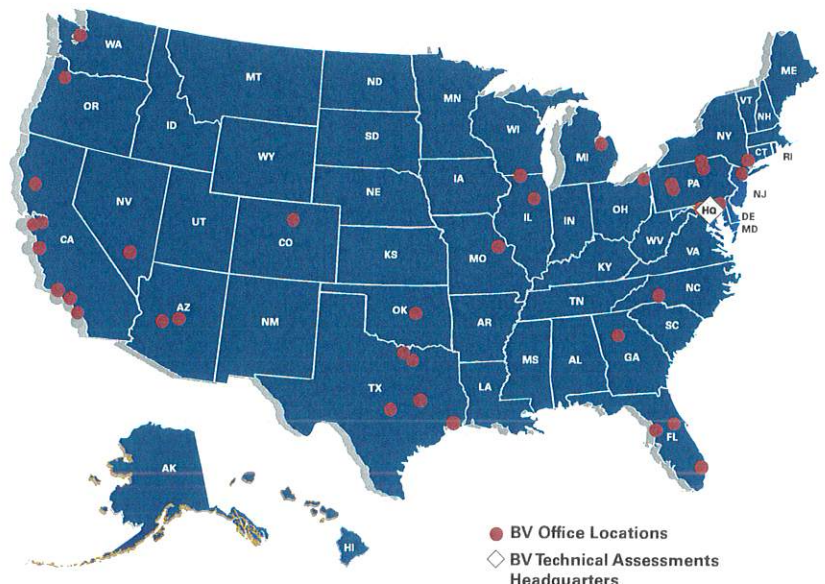
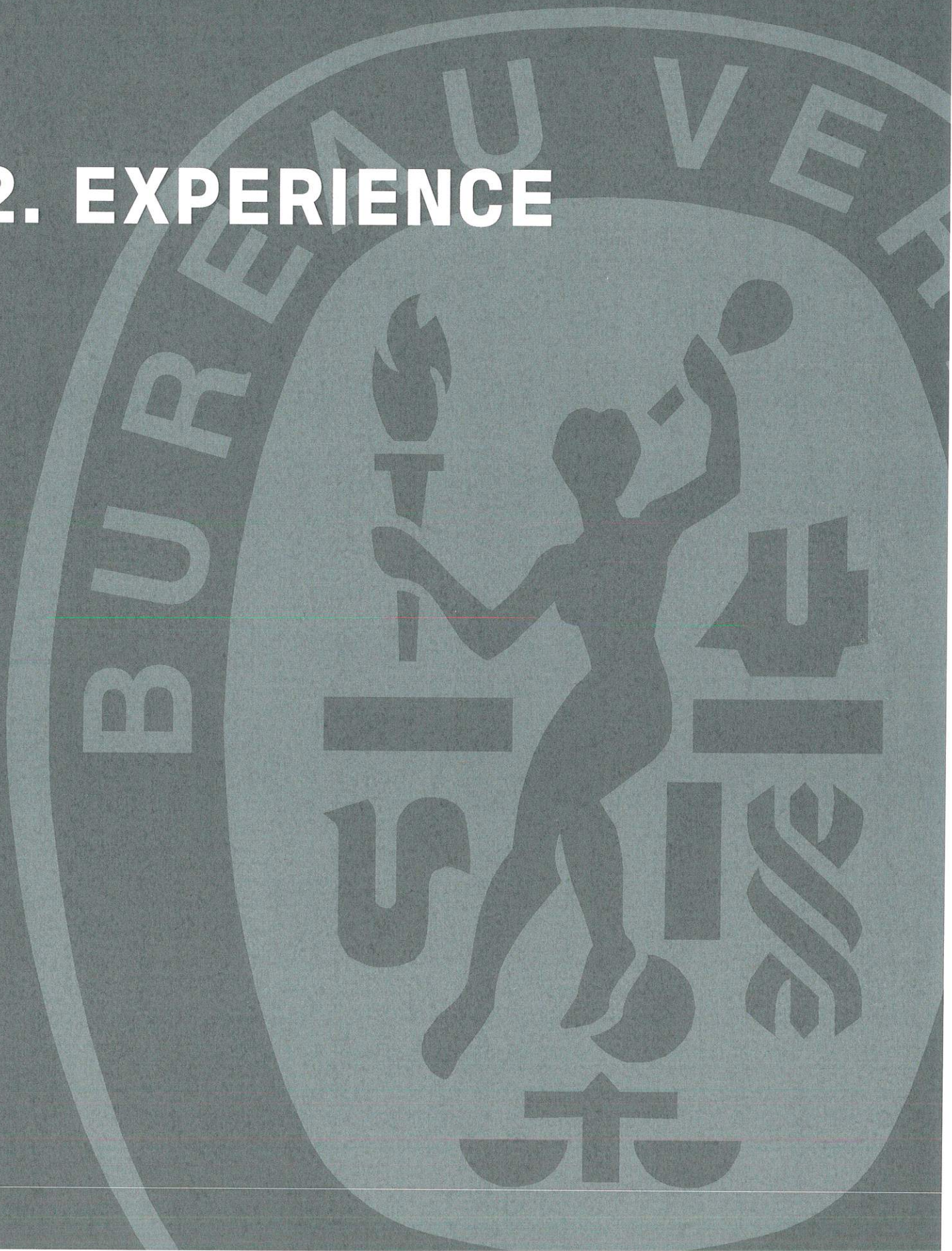


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2. EXPERIENCE



2. EXPERIENCE

The Bureau Veritas Team has extensive experience with RAD and HUD projects, specifically with respect to performing Physical Needs Assessments and Energy Audits, as well as preparation of remediation plans and cost estimates to bring housing units and building components into compliance. The following chart highlights projects including RAD PCA, GPNA, PNA, Energy Audit, Utility Allowance, and Environmental Site Assessment services BVTa has completed for Housing Authorities over the last five years.

HOUSING AUTHORITY CLIENT	STATE	SERVICES	COMPLETED
York City Housing Authority	PA	RAD PCA, PNA	Ongoing
Housing Authority of the County of Cumberland	PA	Green PCA	Ongoing
McKeesport Housing Authority	PA	RAD PCA, PNA	Ongoing
New York City Housing Authority	NY	RAD PCA, eTool	Ongoing
Rochester Housing Authority	NY	RAD Phase I	Ongoing
Housing Authority of the City of Waterbury	CT	RAD PCA	Ongoing
Chicago Housing Authority	IL	RAD PCA	Ongoing
Revere Housing Authority	MA	RAD PCA	2023
Federation Housing	PA	PNA	2023
Housing Authority of the City of Hazleton	PA	Environmental Audit	2023
Philadelphia Housing	PA	Energy Audit	2023
Philadelphia Housing Authority	PA	PNA	2022
Cincinnati Metropolitan Housing Authority	OH	PNA	2022
Housing Authority of Montour County	PA	Energy Audit	2022
Syracuse Housing Authority	NY	PNA Update	2022
Cuyahoga Metropolitan Housing Authority	OH	HUD RAD PCA	2022
Lucas Metropolitan Housing Authority	OH	Demo/Dispo Section 18	2021
Minneapolis Public Housing Authority	MN	RAD PCA	2021
Dayton Metropolitan Housing Authority	OH	RAD PCA, GPNA, eTool	2020
Butler Metropolitan Housing Authority	OH	RAD PCA, Demo/Dispo Sect. 18	2020
Cincinnati Metropolitan Housing Authority	OH	RAD PCA & GPNA	2020
McKean County Housing Authority	PA	RAD PCA	2020
Columbia County Housing Authority	PA	Demo/Dispo Section 18	2020
Housing Authority of the City of Meadville	PA	Energy Audit	2020
Reading Housing Authority	PA	Green PCA	2020
DC Housing Authority	DC	RAD PCA	2020
Housing Authority of the City of Hartford	CT	RAD PCA	2020
Housing Authority of the City of New Haven	CT	Preventive Maint. Schedule	2020
Schenectady Municipal Housing Authority	NY	Energy Audit	2020
Housing Authority of Fall River	MA	PNA	2020
Rhode Island Housing	RI	PNA	2020
Lewiston Housing Authority	ME	RAD PCA	2020
Saginaw Housing Commission	MI	RAD PCA	2020
Housing Authority of the Township of North Bergen	NJ	Green PCA	2019
New Brunswick Housing Authority	NJ	Energy Audit	2019
Housing Authority of the City of Asbury Park	NJ	PNA, Demo/Dispo Section 18	2019
Housing Authority of the Town of Phillipsburg	NJ	RAD PCA, Demo/Dispo Sect. 18	2019



**BUREAU
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PROJECT PROFILE

NEW YORK CITY HOUSING AUTHORITY

RAD PHYSICAL CONDITION ASSESSMENT

Starting in 2018, Bureau Veritas Technical Assessments LLC (BVTA) began completing Rental Assistance Demonstration (RAD) Physical Condition Assessments for New York City Housing Authority (NYCHA). Our team conducted physical condition assessments of at least 25% of the apartment units, all common areas, and all major building systems and components. Developments totaling approximately 15,000 housing units were assessed.

Upon completion of the assessments, BVTA provided a single consolidated report for each property, detailing the findings and recommendations of each RAD PCA component, including a PCA Report Comparing Traditional and Green Requirements, an Energy Audit, and a Utility Consumption Baseline. Each report identified Critical Repairs, Rehabilitation Specifications, and Long Term Physical Needs which BVTA recommended to the Housing Authority using a non-luxury standard adequate for the rental market intended as the original approval of project-based assistance.

We populated the eTool for the most recent RAD PCAs, for NYCHA to submit to HUD. We also completed other Physical Needs Assessments and Section 18 Obsolescence services on NYCHA developments.

BVTA completed Physical Needs Assessments and RAD PCAs on additional multifamily and single family properties in 2020, 2021, 2022 and 2023 totaling over 8,340 housing units. These projects are part of NYCHA's Permanent Affordability Commitment Together (PACT) initiative to modernize its public housing developments.



LOCATION

New York, NY

SERVICE

RAD Physical Condition Assessment
Physical Needs Assessment
Section 18 Obsolescence

SIZE

15,000+ Units

FACILITY TYPE

Multi-Family Residential

COMPLETION

2018-Ongoing

REFERENCE

Matthew Shurtleff
NYCHA
90 Church Street, 11th Floor
New York, NY 10007
+1 (646) 907-2243
matthew.shurtleff@nycha.nyc.gov

Lovaeta Amoako
NYCHA
90 Church Street, 11th Floor
New York, NY 10007
(212) 306-6031
lovaeta.amoako@nycha.nyc.gov



**BUREAU
VERITAS**

PROJECT PROFILE

HOUSING AUTHORITY OF THE CITY OF ELIZABETH

GREEN PHYSICAL NEEDS ASSESSMENT, ENERGY AUDIT

The Housing Authority of the City of Elizabeth selected Bureau Veritas Technical Assessments LLC (BVTA) in 2016 and 2017 to perform Physical Needs Assessments and Energy Audits for 1,203 of their units spread over 9 properties.

BVTA's team performed comprehensive field audits of all the Housing Authority's sites, including common areas and apartment spaces, community spaces, administrative and management offices, storage spaces, mechanical rooms and metering rooms. All HVAC systems, apartment appliances, laundry systems and energy metering systems were reviewed and evaluated for identification of energy savings opportunities and Energy Star alternatives. BVTA then evaluated the effectiveness of the HUD PNA tool by facilitating an accurate and efficient inspection, noting deficiencies and providing recommended improvements addressing specific evaluation criteria.

BVTA's final energy audit reports included a building/facility overview and an analysis of existing conditions for each building, dividing their findings into major work categories, providing detailed information to identify and prioritize the listings of the properties' immediate and non-critical repair needs.

BVTA consolidated all data from the assessment into an Asset Management Database called AssetCALC. The Database complied with HUD's asset management requirement as replacement for the PNA Webtool.

Additionally, during a separate engagement we completed a RAD Physical Condition Assessment at Marina Village for HUD's RAD Conversion.

LOCATION

Elizabeth, NJ

SERVICE

Green Physical Needs Assessment
Energy Audit
Environmental Phase I
RAD Physical Condition Assessment

SIZE

1,203 Units
9 AMPs

FACILITY TYPE

Multi-Family Residential
Senior Living

REFERENCE

Mike Medeiros
Housing Authority of the City of Elizabeth
688 Maple Ave
Elizabeth, NJ 07102
(908) 965-2400 x116
mmedeiros@hacenj.com



**BUREAU
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PROJECT PROFILE

UNION CITY HOUSING AUTHORITY

PHYSICAL NEEDS ASSESSMENT, ENERGY AUDIT

In 2021, Bureau Veritas Technical Assessments LLC (BVTA) completed a HUD Rental Assistance Demonstration (RAD) Physical Condition Assessment for the Housing Authority of Union City New Jersey. Our team conducted inspections of 4 properties collectively containing 456 total units. The asset management properties mainly consists of High and Mid-rise towers. The assessment included a 25% unit inspection.

Upon completion of the assessment, BVTA provided a single consolidated report for each property detailing the findings and recommendations of each RAD PCA component:

PCA Report Comparing Traditional and Green Requirements including the identification of:

- Critical Needs
- Repair/Rehab Items
- Long Term Physical Needs/Reserve Items
- Environmental Concerns
- Energy Audit, including current energy, water and sewerage usage and costs
- Utility Consumption Baseline

The report identified Critical Repairs, Rehabilitation Specifications, and Long Term Physical Needs which BVTA recommended to the Housing Authority using a non-luxury standard adequate for the rental market intended as the original approval of project-based assistance. The physical needs identified for this project were intended to reflect those necessary for the property to retain its original market position as an affordable project in a decent, safe, and sanitary condition.

Additionally, BV completed HUD compliant Environmental Phase I assessments of the properties as well as conducted Radon, Asbestos, and Lead Containing Material Surveys to accompany the Housing Authority's RAD submission.

LOCATION

Union City, NJ

SERVICE

Physical Needs Assessment
Energy Audit
Environmental Phase I
RAD Physical Condition Assessment
Radon Testing
Asbestos Survey
Lead Containing Material Survey

SIZE

456 Units
4 AMPs

FACILITY TYPE

Housing

REFERENCE

Jorge Rodriguez
Union City Housing Authority 3911
Kennedy Blvd
Union City, NJ 07087
(201) 864-1515
jrodriguez@ucpha.com



**BUREAU
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PROJECT PROFILE

HOUSING AUTHORITY OF BALTIMORE CITY

GPNA, ENERGY AUDIT, RAD PCA, SECTION 18 DEMO/DISPO

Bureau Veritas Technical Assessments LLC (BVTA) completed comprehensive Physical Needs Assessment and Energy Audits of more than 10,000 housing units for the Housing Authority of Baltimore City (HABC). HABC is the fifth largest public housing authority in the United States, serving over 20,000 residents. HABC's portfolio includes 28 family developments, 17 mixed population buildings, 2 senior buildings and scattered sites throughout the City.

BVTA updated HABC's 2005 Physical Needs Assessment of its affordable housing inventory and offered policy and program recommendations that contribute to the development of a long-term 20-Year Strategy to provide attractive and marketable housing that meets all applicable codes and contemporary standards of modest comfort and livability.

In addition to the Physical Needs Assessment, BVTA was awarded a competitive contract by HABC in 2011 to perform Energy Audits of the portfolio. BVTA assisted HABC in identifying Energy Conservation Measures (ECM) throughout its portfolio in an effort to reduce HABC's approximately \$27 million in annual utility costs.

HABC has completed a number of RAD PCAs. In all cases, the RAD PCAs are being coordinated by developers. Over the past five years, BVTA has completed RAD PCAs for HABC thru various partners.

BVTA has also completed detailed assessment of over 700 scattered sites under AMP 200, 201, 202 and 203 as part of the agency-wide viability study to identify the units to be marked for obsolescence, and the neighborhoods in which HABC wants to invest.

In 2019, BVTA completed Green Physical Needs Assessments (GPNA) for developments totaling 415 units. We were again contracted in 2020 by HABC to perform GPNAs for over 40 developments and scattered sites containing 7,408 housing units—work which is projected to be completed in 2021.

LOCATION

Baltimore, MD

SERVICE

Physical Needs Assessment
Capital Needs Assessment
Energy Audit
Section 504 Compliance
RAD Physical Condition Assessment

SIZE

40+ Sites
10,000 Units

FACILITY TYPE

Multi-Family Housing

REFERENCE

Michael Wodka
Housing Authority of
Baltimore City
417 E. Fayette Street, Ste. 401
Baltimore, MD 21202
(410) 396-3261
michael.wodka@habc.org



**BUREAU
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PROJECT PROFILE

NEWARK HOUSING AUTHORITY

PHYSICAL NEEDS ASSESSMENT, ENERGY AUDIT

The Newark Housing Authority (NHA) selected Bureau Veritas Technical Assessments LLC (BVTA) to perform Physical Needs Assessments for more than half of its portfolio. The assessments were completed by BVTA in an expedited 3-month timeframe, meant to meet timing required for tax credit submission.

BVTA's team performed comprehensive field audits of all Newark Housing Authority sites, including common areas and apartment spaces, community spaces, administrative and management offices, storage spaces, mechanical rooms and metering rooms. All HVAC systems, apartment appliances, laundry systems and energy metering systems were reviewed and evaluated for identification of energy savings opportunities and Energy Star alternatives. BVTA then evaluated the effectiveness of the new HUD PNA tool by facilitating an accurate and efficient inspection, noting deficiencies and providing recommended improvements addressing specific evaluation criteria.

BVTA's final energy audit reports included a building/facility overview and an analysis of existing conditions for each building, dividing their findings into major work categories, providing detailed information to identify and prioritize the listings of the properties' immediate and non-critical repair needs.

BVTA consolidated the reports on properties reviewed by BVTA with those completed by a third-party into a single HUD Tool that could be uploaded to HUD. At the end of the engagement, BVTA successfully loaded the completed GPNA to HUD.

We are currently working with HUD mortgage lenders who are working the properties through the HUD 221 program.

Additionally, in 2020, we completed a Facility Condition Assessment on a newly constructed rec center for NHA. In 2021, we provided Physical Needs Assessment for Demo/Dispo for the West Side Village development. In 2022, we completed Physical Needs Assessments for 6 developments totaling over 400 units.

LOCATION

Newark, NJ

SERVICE

Physical Needs Assessment
Energy Audit

SIZE

6,000+ Units

FACILITY TYPE

Multi-Family Residential

REFERENCE

Janet Abrahams
Newark Housing Authority
500 Broad Street
Newark, NJ 07102
(973) 273-6600
jabrahams@newarkha.org



**BUREAU
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PROJECT PROFILE

PHILADELPHIA HOUSING AUTHORITY

RAD PHYSICAL CONDITION ASSESSMENT & ENERGY AUDIT

Starting in 2016, Bureau Veritas Technical Assessments LLC (BVTA) began completing Rental Assistance Demonstration (RAD) Physical Condition Assessments for Philadelphia Housing Authority (PHA). Our team conducted physical condition assessments of at least 25% of the apartment units, all common areas, and all major building systems and components. PHA identified 5 AMP sites consisting of over 300 units to be considered for RAD conversion.

Upon completion of the assessments, BVTA provided a single consolidated report for each property, detailing the findings and recommendations of each RAD PCA component, including a PCA Report Comparing Traditional and Green Requirements, an Energy Audit, and a Utility Consumption Baseline. Each report identified Critical Repairs, Rehabilitation Specifications, and Long Term Physical Needs which BVTA recommended to the Housing Authority using a non-luxury standard adequate for the rental market intended as the original approval of project-based assistance.

We populated the eTool for the most recent RAD PCAs, for RAD to submit to HUD.

BVTA completed RAD PCAs on additional properties in 2018, 2019, & 2020; totaling 400 units spread over 5 other AMP sites.

We also completed other Physical Needs Assessments and Section 18 Obsolescence services on PHA developments that did not meet RAD requirements.

In 2022, BVTA was awarded a contract to conduct PNA and Energy Audits on PHA's entire portfolio of housing units. Currently, we are assessing over 12,500 units spread over 76 AMP sites. The evaluation is not only accessing housing units but PHA's support facilities as well. These include maintenance facilities, administrative offices, community/senior center's, and common area facilities. This project is on-budget and on-time to be completed in 2023.

LOCATION

Philadelphia, PA

SERVICE

RAD Physical Condition Assessment
Physical Needs Assessment Section 18 Obsolescence
Energy Audit

SIZE

12,500 Units

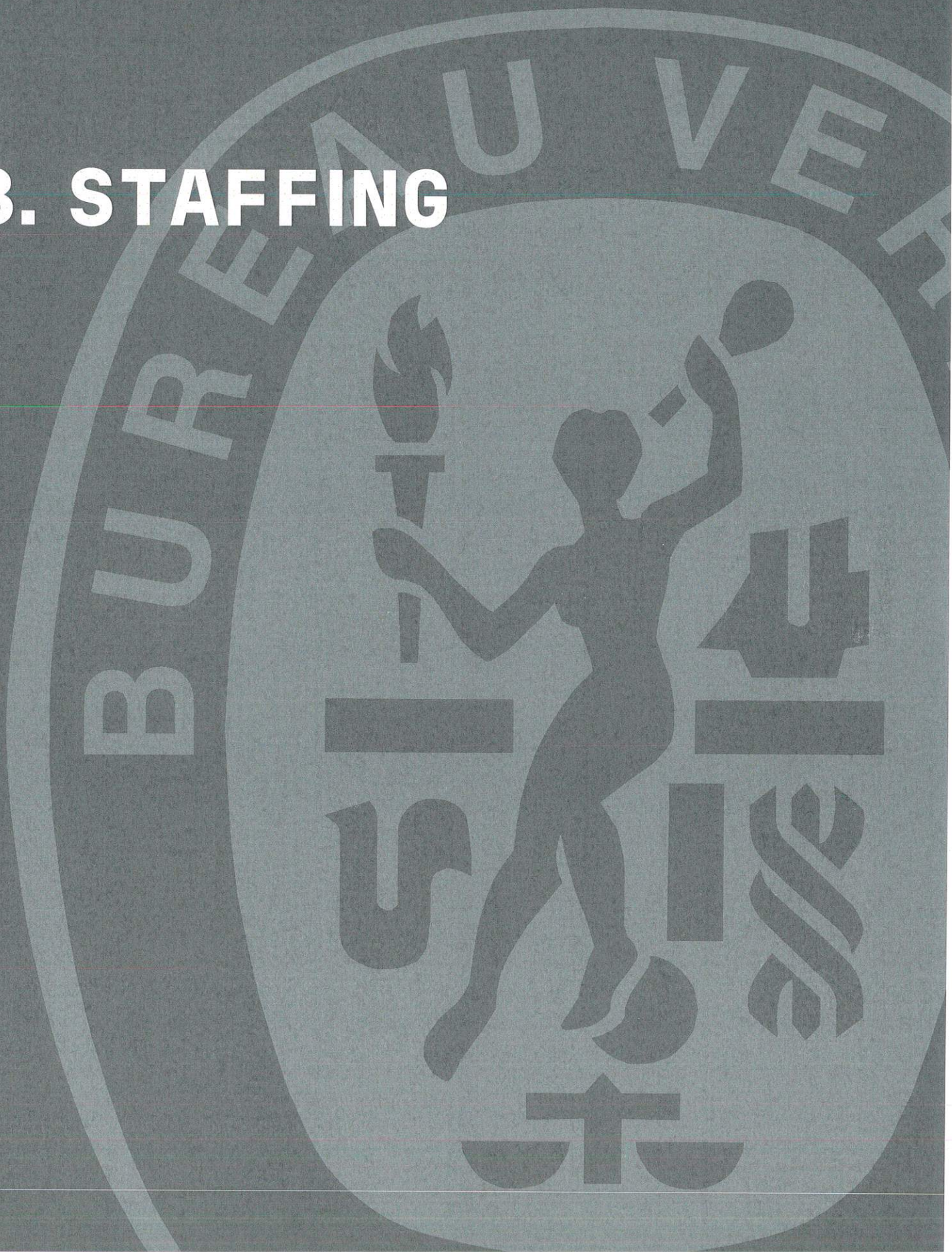
FACILITY TYPE

Multi-Family Housing Age Restricted
Scattered Sites Maintenance
Facilities Administrative Offices
Community Centers

REFERENCE

Jack Keshishian, PE
VP of Maintenance
Philadelphia Housing Authority
2013 Ridge Avenue
Philadelphia, PA 19121
P: 215-684-0428
E: hagop.keshishian@pha.phila.gov

3. STAFFING



3. STAFFING

BVTA's Team includes Professional Engineers, Registered Architects, and Certified Energy Managers with an average of over 30 years of relevant experience. These professionals develop and write the assessment report, coordinate logistics and document collection for each assessment. BVTA also has an internal information technology group that supports the development of field data collection programs and client database applications.

Cheyenne Irby | Project Executive

Mr. Irby will oversee all contractual aspects of the project and be available to meet with the Authority for the duration of the project on an as-needed basis. He will have primary responsibility for defining the scope of engagement, and will meet regularly with Bureau Veritas' Program Manager and Assessment Team to assure that the Authority's needs are being met, and that the project is adequately staffed, running smoothly, and on schedule.

Andrew Hupp | Program Manager

Mr. Hupp will be the primary point of contact for the Authority throughout the duration of the project. He will work with the Assessment Team and the Authority to assure project success. Mr. Hupp will be responsible for the assessment team's overall performance, delivery of the project, and will work with Authority staff to develop the implementation plan based on the results.

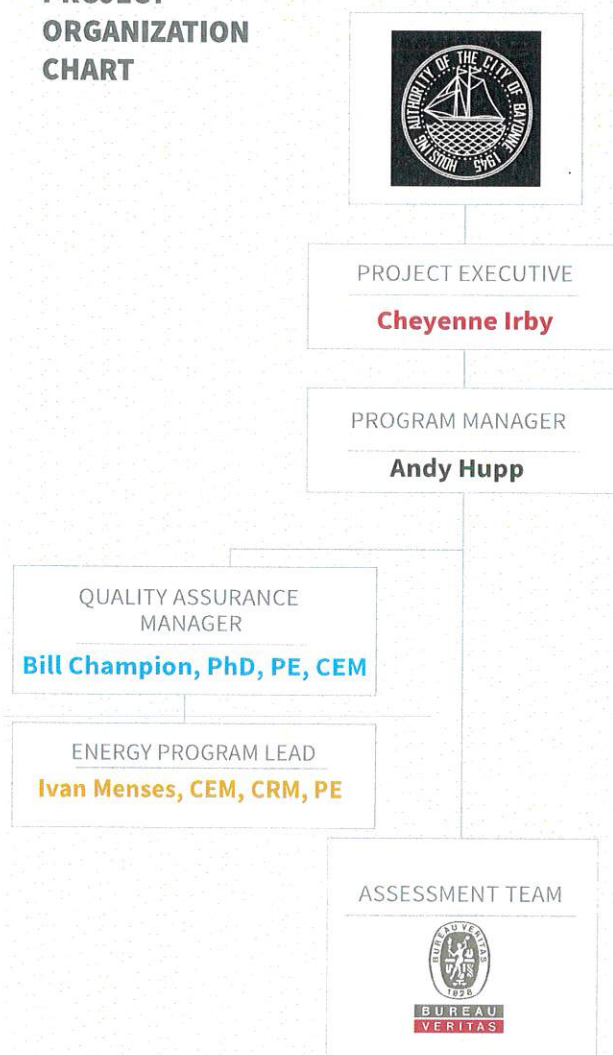
Bill Champion | Quality Assurance Manager

Dr. Champion will oversee the project, assuring technical, process, and content quality. He will have direct management responsibility for all technical personnel, which will allow for quick and effective implementation of quality assurance measures both at inception and throughout the duration of the project.

Ivan Meneses, CEM, CRM, PE | Energy Program Lead

Mr. Meneses will oversee the energy portion of the project. He will have direct management responsibility for all technical personnel relate to the energy audit, which will allow for quick and effective implementation of quality assurance measures both at inception and throughout the duration of the project.

PROJECT ORGANIZATION CHART



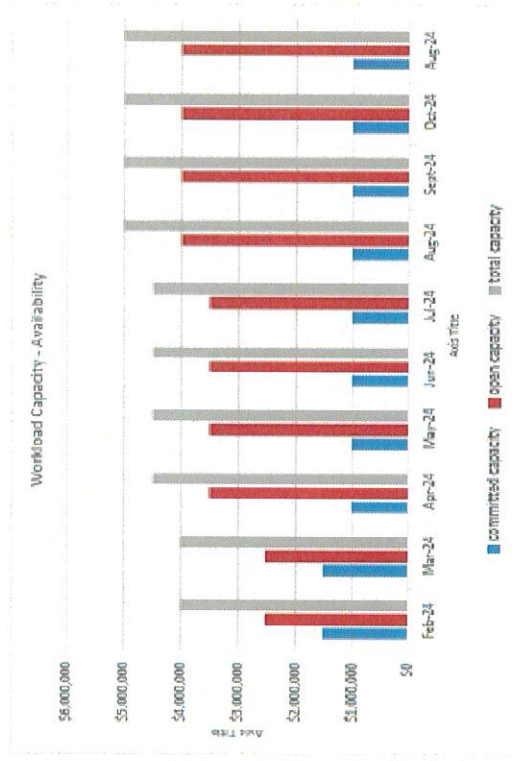
Assessment Team

The Assessment Team is comprised of professional engineers, architects, certified energy managers having direct experience in conducting Physical Needs Assessments & Energy Audits. They will observe and describe building systems and components, identify physical deficiencies, and formulate recommendations to remedy the deficiencies and evaluate energy conservation measures.

AVAILABILITY AND CAPACITY

Bureau Veritas has maintained itself as a viable, professional assessment services corporation. BVTA is fully staffed to manage any size project load, including simultaneous multiple site projects. Our field staff can provide a commitment of time suitable to the needs of the proposed Authority program. The proposed project would be a significant one for BVTA, and we have the in-house resources to fully staff this project without program disruption or cost impact.

Bureau Veritas has 800 staff and a dedicated Asset Management team. The regional team usually has approximately three to five concurrent assessment projects engaged that range from 400,000 SF to 1,000,000 SF. For example, currently we have three School Districts, one University, and three Municipal projects concurrently in progress. BVTA has a very scalable staff and can provide resources from one team to over ten teams on a project. Currently, Bureau Veritas is conducting PNA assessments for New York City Housing Authority. We intend to leverage the team from that project to gain efficiency on Bayonne Housing's program.



Project Personnel

Key Personnel	Project Role	Years of Experience	Certification /Registration	Availability to Project	Public Housing Experience	ENERGY Experience
Cheyenne Irby	Project Executive	14		20%	✓	✓
Andy Hupp	Program Manager	25		80%	✓	✓
Bill Champion	QA/QC	30+	PhD, PE, CEM	30%	✓	✓
Ivan Meneses	Assessment Team	25	PE, CEM, CRM	100%	✓	✓
Noah Strafford	Assessment Team	5		100%	✓	✓
David Harrell	Assessment Team	12	PE, CEM	100%	✓	✓
Mary Endsley	Assessment Team	23	RA	100%	✓	✓



CHEYENNE IRBY

PROJECT EXECUTIVE

Mr. Irby is a trained Architect with experience in the public housing, K-12, higher education, government, and retail industries, as well as facilities with specialty programming. He has experience with consulting and implementing facility services such as operational management, capital planning, feasibility studies, facility management, and asset management. As Project Executive, he is responsible for overseeing all contractual aspects of the project. He will have primary responsibility for defining the scope of engagement, and will meet regularly with BVT's Program Manager and Assessment Team to assure that the client's needs are being met, and that the project is adequately staffed, running smoothly, and on schedule.

PROJECT EXPERIENCE:

Housing Authority of the City of Elizabeth, NJ
Energy Audit

Lancaster Housing Authority, PA
RAD Physical Condition Assessment

Cumberland County Housing Authority, PA
Energy Audit, Physical Needs Assessment

Anne Arundel County Housing, MD
Energy Audit

Baltimore City Housing Authority, MD
Energy Audit, Physical Needs Assessment

City of Annapolis Housing Authority, MD
Energy Audit

Portsmouth Housing Authority, VA
Physical Needs Assessment, Energy Audit

Butler Metro Housing Authority, OH
Energy Audit, RAD Physical Condition Assessment

Cuyahoga Metro Housing Authority, OH
Energy Audit, Physical Needs Assessment

Detroit Housing Commission, MI
Energy Audit, Physical Needs Assessment

Flint Housing Commission, MI
Energy Audit, Physical Condition Assessment

Gallatin Housing Authority, TN
Energy Audit, RAD Physical Condition Assessment

YEARS OF EXPERIENCE: 14



Education

Master of Business, University of Maryland
MS, Real Estate Development & Architecture, University of Maryland
BS, Architecture, University of Maryland

ANDREW HUPP

PROGRAM MANAGER

Mr. Hupp has been the Program Manager for Government, Private Sector, Healthcare, and Educational clients. He supervises teams of architects, engineers, and facility professionals in conducting facility condition assessments, physical needs assessments and energy audits. As Program Manager, he is responsible for delivering results, and is the main point of contact for the Client throughout the project.

PROJECT EXPERIENCE:

Housing Authority of Keansburg, NJ

Physical Needs Assessment & Energy Audit

Lancaster Housing Authority, PA

RAD Physical Condition Assessment

Pittsburgh Housing Authority, PA

Physical Needs Assessment

Philadelphia Housing Authority, PA

Green Physical Needs Assessment, Energy Audit

Allegheny County Housing Authority, PA

Physical Needs Assessment

Anne Arundel County Housing, MD

Energy Audit

Baltimore City Housing Authority, MD

Energy Audit, Physical Needs Assessment

Butler Metropolitan Housing Authority, OH

RAD Physical Condition Assessment

Cuyahoga Housing Authority, OH

Physical Needs Assessment & Energy Audit

Cincinnati Metro. Housing Authority, OH

RAD PCA / Green Physical Needs Assessment & Energy Audit

Cuyahoga Housing Authority, OH

Physical Needs Assessment & Energy Audit

Dayton Metro. Housing Authority, OH

Physical Needs Assessment & Energy Audit

Rockford Housing Authority, IL

Physical Needs Assessment & Energy Audit

Cook County Housing Authority, IL

RAD Physical Condition Assessment

YEARS OF EXPERIENCE: 25



Education

Bachelor of Science, Architectural Engineering, University of Cincinnati



BILL CHAMPION, PhD, PE, CEM

QUALITY ASSURANCE MANAGER

Dr. Champion is a Professional Mechanical Engineer and certified Energy Manager with over 30 years of experience in the government, retail, industrial, higher education, and K-12 Education sectors. As Quality Assurance Manager, he is responsible for technical review of deliverables. He has extensive experience with projects of similar scope for public housing clients.

PROJECT EXPERIENCE:

Morristown Housing Authority, NJ

Energy Audit, Physical Needs Assessment

Lancaster Housing Authority, PA

RAD Physical Condition Assessment

Pittsburgh Housing Authority, PA

Energy Audit, Physical Needs Assessment

Harrisburg Housing Authority, PA

Energy Audit, Physical Needs Assessment

Corry & Erie Housing Authorities, PA

Energy Audit, Physical Needs Assessment

Housing Authority of Baltimore City, MD

Energy Audit

Montgomery County, MD

Energy Audit, Facility Condition Assessment

Frederick Community College, MD

Facility Condition Assessment, Energy Audit

Cuyahoga Metropolitan Housing Authority, OH

Energy Audit, Physical Needs Assessment

Lucas Metropolitan Housing Authority, OH

Energy Audit, Physical Needs Assessment

Youngstown Metropolitan Housing Authority, OH

Energy Audit, Physical Needs Assessment

Rockford Housing Authority, IL

Energy Audit, Physical Needs Assessment

Detroit Housing Commission, MI

Energy Audit, Physical Needs Assessment

YEARS OF EXPERIENCE: 30+



Education

PhD, Civil Engineering, University of Maryland

MBA, University of Rochester

MS, Mechanical Engineering, State University of NY

BS, Mechanical Engineering, State University of NY

License & Certification

Professional Engineer | MD #40120; NY #08786;

DC #PE906172

Certified Energy Manager | 16649



IVAN MENESES, CEM, CRM, PE

ASSESSMENT TEAM- ENERGY LEAD

Mr. Meneses is a certified Energy Manager with 25 years of experience in the government, retail, industrial, higher education, and K-12 Education industries. As Energy Manager, Mr. Meneses supervises teams of architects and engineers conducting energy audits. He is responsible for delivering results of the energy audit, and he is the main point of contact for the energy related items throughout the project.

PROJECT EXPERIENCE

Overbrook School for the Blind, PA
Facility Condition Assessment

Philadelphia Housing Authority, PA
Energy Audit

Felician Services, Philadelphia, PA
Energy Audit, Capital Needs Assessment,
Phase I

Consolidated School District of New Britain, CT
Facility Condition Assessment, Space Needs
Analysis, Energy Audit

CPS Lab, Littleton, MA
Energy Audit

Districts 2, 3,4, VT
Energy Audit

Vermont Agency of Education, VT
Facility Condition Assessment & Energy Audit

Advanced Auto Parts, Roanoke, VA
Energy Audit

Adidas, Spartanburg, SC
Energy Audit & Facility Condition Assessment

Community Health Systems, IN
Energy Audit

Target Corporation, TX
Energy Audit

Colorado Academy, CO
Facility Condition Assessment & Inventory

Safran, US, Mexico
Energy Audit

YWCA, Bellevue, WA
Property Needs Assessment

YEARS OF EXPERIENCE: 25



Education

BS, Mechanical Engineering, Polytechnic University of PR
MS, Building Construction, Georgia Institute of Technology



**BUREAU
VERITAS**

NOAH STRAFFORD ASSESSMENT TEAM

PROJECT EXPERIENCE:

Newark Housing Authority, NJ
Capital Needs Assessment

Schenectady Municipal Housing Authority, NY
Energy Audit

New Bedford Housing Authority, MA
Green Physical Needs Assessment

Baltimore Housing Authority, MD
GPNA and Energy Audits

Dayton Metropolitan Housing Authority, OH
Green Physical Needs Assessments and RAD

YEARS OF EXPERIENCE: 5



Education

BS, Mechanical Engineering, University of North Carolina
at Charlotte



**BUREAU
VERITAS**

DAVID HARRELL, PE, CEM

PROJECT EXPERIENCE:

Shamokin Housing Authority, PA
Energy Audit

Rhode Island Housing, RI
Physical Needs Assessment & Energy Audit

Housing Authority of Baltimore City, MD
Energy Audit, Physical Needs Assessment

Richmond Housing Auth., VA
Energy Audit, Physical Needs Assessment

Norfolk Redevelopment & Housing Auth., VA
Energy Audit, RAD Physical Needs Assessment

YEARS OF EXPERIENCE: 12



Education

MS, Transportation Technology and Policy, University of California, Davis



BUREAU
VERITAS

MARY ENDSLEY, RA ASSESSMENT TEAM

PROJECT EXPERIENCE:

Lucas Metropolitan Housing Authority, OH
Energy Audit, Physical Needs Assessment

Brookline Housing Authority, MA
Energy Audit, Physical Needs Assessment

New York City Housing Authority, NY
Energy Audit, Physical Needs Assessment

Hudson Housing Authority, NY
Energy Audit, RAD Physical Condition
Assessment

Kentucky Housing Authority, KY
Energy Audit, Physical Needs Assessment

YEARS OF EXPERIENCE: 23



Education

Bachelor of Architecture, NY Institute of Technology

License

Registered Architect | NY | 029419-1

PROJECT APPROACH

Annually, BVTA has assessed thousands of properties for municipalities similar to the Authority. We have developed a proven and efficient methodology for our assessments and data collection, considering knowledge of property conditions, federal and state regulations, local codes, and client objectives, while conducting services and making recommendations.

BVTA employs a talented group of over 800 licensed and credentialed professionals that regularly provide Physical Needs Assessments, RAD PCAs, Section 18 Demo/Dispo Projects, Environmental Reviews, Energy Audits, Benchmarking Studies, Utility Allowances, Facility Condition Assessments, Building Engineering Reports, Construction Monitoring, Green Physical Needs Assessments, Capital Needs consulting, Capital Improvement Planning, and ADA Compliance & Transition Plans for affordable housing, public housing agencies, and state and local government clients throughout the United States.

Project Understanding

BVTA understands the Authority is looking for a consultant to provide consulting services for Combined Physical Needs Assessments (PNA) and Energy Audits at all sites distinguished in the Scope of Services. Our assessment will include the determination of the expected useful life of all major building systems/ components and the potential life-cycle replacement of all major building systems/ components during a 20 year term. We will describe the condition of each housing development, physical deficiencies, local building compliance, and ADA compliance.

Additionally an ASHRA II Energy Audit will be conducted that complies with Energy Code 24 CFR Part 965 as well as the standards outlined in the HUD Energy Conservation for Housing Workbook.

BVTA understands that the RFP requires the PNA & Energy Assessment Data to be entered into the HUD PNA tool. HUD no longer requires this and no longer supports or accepts projects in the PNA tool. In its place, BVTA will be delivering a database that has the ability to generate and export the HUD required XML file. An asset management database has been deemed sufficient as a delivery method from HUD related to the Combined PNA and Energy Audit Requirements.

Relevant Codes and Regulations

BVTA has proven relevant experience with the codes and regulations applicable to the Authority's project. All of our experience working with Housing Agency clients includes an analysis of compliance with ADA, Fair Housing, and Section

504 compliance for accessibility. In addition, our experience has also yielded an understanding of HUD standards and requirements.

Overall, our history of successful performance demonstrates a competency in the following code and regulatory areas:

- Local Building Codes (State Building Code, State Sanitary Code, Elevator Code)
- ADA/504 Compliance
- Fair Housing
- HUD Housing Quality Standards
- BOCA (Certified Inspectors on staff)
- NFPA
- AHERA
- USEPA Standards
- OSHA Codes and Regulations
- ASHRAE Standards related to Indoor Air Quality and Design of HVAC System

Coordination with the Authority

BVTA will schedule a kick-off meeting with the Authority upon award of the contract. At this time, we will schedule on-site assessments. Apart from on-site escorts, we request up to one hour per week of the Authority Staff's time during the contractual period to participate in weekly conference calls, progress meetings, and review reports. Should additional time from the Authority Staff be deemed necessary, we will provide the request in writing, explaining reasoning for the additional time requested.

Prior to the field assessments, those individuals most familiar with the property will be interviewed. We will inquire about building operations as well as a review of current building system concerns and capital improvements recently completed. Field data necessary for assessment reporting will be collected at that time.

Each development will receive a consolidated assessment report in draft form reflecting life-cycle replacements and deficiencies observed through the assessment. The consolidated draft format will provide the Authority with the ability to review BVTA's recommended improvements integrated into the Replacement Reserves Schedule. Once the Authority has had an opportunity to review and comment, reports will be finalized.

BVTA requests the following from the Authority in order to complete the assessments:

- Inspection Reports (sewer, boiler, chiller, etc)

- Building Systems Maintenance Records
- REAC Report (most recent, if applicable)
- Owner Elected Repair list (if available)
- Zoning Reports
- Original Building Plans (can be viewed on-site)
- Capital Expenditure Schedules (prior or planned)
- Fire Protection/Life Safety Plans
- Rehabilitation budget & scope (draft or final)
- Certificates of Occupancy/Facility License
- Prior Assessments (CNA, PNA, PCA, etc.)
- Site Plan/Floor Plans
- Current Rent Roll/Room List
- Accessibility Transition Plans/Self Evaluations

BVTA will schedule on-site assessments with the Authority. We will require access to 100% of common area spaces and at least 20% access to units of each type (efficiency, 1BR, 2BR etc.) as well 40% of the scattered sites. Apart from on-site, we may request up to one hour per week of the Authority Staff's time and attention during the contractual period to participate in weekly conference calls and review reports.

Should additional time from the Authority Staff be deemed necessary, BVTA will provide the request in writing, explaining reasoning for the additional time requested.

Technical Approach

The services described below, detail our approach and methodology associated with the assessments at each Authority development. Prior to each field assessment, those individuals most familiar with the property will be interviewed. As part of the interview, BVTA will inquire about building operations as well as a review of current building system concerns and capital improvements recently completed. Field data necessary for assessment reporting will be collected at the same time. Each development will receive a consolidated assessment report in draft form reflecting life-cycle replacements and deficiencies observed through the assessment. The consolidated draft format will provide the Authority with the ability to review BVTA's recommended accessibility improvements integrated into the Replacement Reserves Schedule. Once the Authority has had an opportunity to review and comment, reports will be finalized.

BVTA will work with the Authority to determine the preliminary schedule of visiting the properties. Based on the preliminary schedule, BVTA's Scheduling Department will coordinate with individual Property Managers to determine a suitable time to complete the assessments. Once a date and

time has been determined, BVTA will complete a schedule outlining the dates of the on-site reconnaissance, assigned write, assigned report review, and anticipated delivery of draft report.

At project implementation, BVTA will conduct a kick-off meeting with the Executive Director and/or Key Staff to introduce team members and present key activities to be conducted. The agenda will include the following:

- Review of the work plan and schedule for the entire contract with key milestones.
- Confirmation of the final scope of work.
- Availability, condition, and location of existing drawings and documentation.
- Collection of all base data on each building.
- Identification of those familiar with the property, such as building engineers, to collect pertinent data for integration into the assessment.
- Review of available construction and maintenance documents, such as as-built drawings and specifications and maintenance logs.
- Review of the findings of any other existing engineering analyses, such as accessibility reports, air quality issues, environmental, and life safety.

Our approach to the program will be an extension of the Authority's missions and goals for this project. The Authority will have a single point of contact in BVTA's Program Manager, Andrew Hupp, throughout the duration of the project.

Based on observations and information obtained from property maintenance staff, Authority managers, or other personnel familiar with building operations, BVTA will:

- Visit the property to observe the general condition of the structure and site improvements, interview on-site personnel about the property, and review available documents to become generally familiar with the building systems and level of maintenance.
- Identify those components observed that exhibit deferred maintenance issues and provide estimates based on observed conditions, available maintenance history, and industry-standard useful life estimates. BVTA will prioritize each deficiency.

During the term of the project, BVTA will conduct routine Progress Meetings to maintain open communication for the Project Team and the Authority. Each meeting will conclude with task assignments, schedules, and goals to be met. BVTA will provide the Authority with a weekly written status report that tracks and monitors the progress of the assessments against the schedule submitted.

METHODOLOGY

All analyses will be based on visual observations and as-built documents including, but not limited to, building plans, maintenance service records, equipment lists, inspection reports, and any previously completed engineering reports or surveys.

The assessment will consist of the following items:

- Update of a general assessment of the physical needs and costs for improvements of each affordable housing project, high rise, community, administrative, child care, and maintenance buildings and grounds as specified in HUD Guidebook 7485.3G or similar process, Public Housing Modernization Standards Handbook 7485.2 and 24 CFR 968.315(e)(2).
- Walk-through inspection of each development to ascertain the condition of the property; and immediate critical and non-critical needs, and expected repair, replacement, and major maintenance needs, and total estimated cost to complete such items. Minimum inspection access will be as follows: 10% of all individual residential units of each type and bedroom size, 10% of scattered sites, and 100% of common areas.
- 20-year capital plan based upon the PNAs.
- General statement based upon staff interviews and visual assessments, and the availability and need for any community services such as laundry facilities, playgrounds, day care, and community meeting space.
- Identification of work necessary to return vacant units to occupied status.
- Identification of work necessary to comply with Federal, State, and local requirements and codes.
- Cost reasonableness analysis of projects planned for future modernization as prescribed in regulations; the contractor will also develop strategies to deal with problems affecting viability.
- Ranking of work items in a recommended priority for action.

The assessment will include, but is not limited to the following items:

Site / Storm Drainage Systems

- Topography: Observation of general topography and note of unusual or problematic features or conditions observed or reported.
- Ingress and Egress: Identification of major means of access and egress at the subject property. Note of locations of the major means of access and egress, and unusual or restraining conditions observed or reported.
- Paving, Curbing, and Parking: Identification of material types of paving and curbing systems at the subject

property; and observation of general conditions and note of physical deficiencies identified or unusual items or conditions observed.

- Flatwork: Identification of material flatwork at the subject property (sidewalks, plazas, patios); and observation of general conditions and note of physical deficiencies identified or unusual items or conditions observed or reported.
- Landscaping and Appurtenances: Identification of material landscaping features, material types of landscaping (fences, retaining walls), and site appurtenances (irrigation systems, fountains, lighting, signage, ponds); and observation of general conditions and note of physical deficiencies identified or unusual conditions observed or reported.
- Utilities: Identification of the type and provider of material utilities provided to the property (water, storm drainage, electricity, natural gas); and observation of general conditions and note of physical deficiencies observed or material problems or system inadequacies reported.

Structural Frame And Building Envelope

- Identification of material elements of the structural frame and building envelope, including the foundation system, floor framing system, roof framing system, facade or curtain wall system, glazing system, exterior sealant, exterior balconies, doors, and stairways.
- Observation of general conditions and note of physical deficiencies identified or unusual items or conditions. Observations may be subject to grade, accessible balconies, and rooftop vantage points.
- Visual inspection of observable areas for cracking and moisture infiltration as well as areas of apparent foundation settlement and displacement.
- In the event more information or exploratory testing is required, in order to provide remedial measures, the report may include recommendation for investigative testing such as soil borings, excavation of test pits, and sampling of backfill materials or engagement of a Geotechnical Engineer or Structural Engineer with specific expertise in the field of the determined failure. Recommendations of this nature will include a determination of appropriate scope and a general estimate of cost for budgetary purposes.

Roofing (Non-Invasive Visual)

- Identification of material roof systems (roof type, reported age, slope, drainage) and unusual roofing conditions or rooftop equipment.
- Observation of general conditions of the roof system (membranes, attachment methods, flashings, counter flashings, pitch pans, gravel stops, parapets, miscellaneous appurtenances, insulation).
- Observation of evidence of material repairs, ponding, or evidence of material roof leaks, noting whether a roof warranty is in effect and physical deficiencies identified

or unusual items reported.

- Identification of material rooftop equipment or accessories (antennas, lightning protection, HVAC equipment, solar equipment), including any material problems reported.

BVTA understands that the Client will provide OSHA compliant ladders or scaffolding (depending on roof type) so that the Project Manager may safely access roof areas. If requested, BVTA can provide a quote for ladder access as needed. Observations will be limited to readily accessible areas.

Plumbing / Sanitary Drainage Systems

- Identification of material plumbing systems at the property (domestic water supply, domestic hot water production, sanitary sewer, or special or unusual plumbing systems (water features, grease traps, fuel systems, gas systems)).
- Identification of type and condition of restroom fixtures and other miscellaneous plumbing equipment.
- Observation of general conditions and note of physical deficiencies identified or unusual items or conditions observed, including any reported material system inadequacies.

Heating

- Identification of material heat generating systems at the subject property.
- Observation of general conditions, identification of the reported age of the equipment, note of past material component replacements/upgrades, note of apparent level of maintenance, and identification of whether a maintenance contract is in place. If heating equipment is not operational at the time of the walk-through survey, an opinion provided as to the condition to the extent reasonably possible.
- Observation of general conditions and note of physical deficiencies identified or unusual items or conditions reported, including reported material system inadequacies or operating deficiencies.
- Identification and observation of special or unusual heating systems or equipment present (fireplaces, solar heat) and note of reported material problems or inadequacies.

Air-Conditioning And Ventilation

- Identification of the material air-conditioning and ventilation systems at the subject property including material equipment such as cooling towers, chillers (type of refrigerant used), package units, split systems, air handlers, and thermal storage equipment.
- Identification of material distribution systems (supply and return, make-up air, exhaust) at the subject property. Note reported tenant-owned equipment/systems not included in this review.

- Observation of general conditions, identification of reported age of equipment, note of past material component upgrades/replacements and apparent level of maintenance, and identification of whether a maintenance contract is in place (contractor name). If air conditioning and ventilation systems are not operational at the time of the walk-through survey, provide an opinion of the condition to the extent reasonably possible.
- Observation of general conditions and note of physical deficiencies identified or unusual items or conditions observed, including any material reported system inadequacies or operating deficiencies.
- Identification and observation of special or unusual air-conditioning and ventilation systems or equipment (ice skating rinks, cold storage systems, special computer cooling equipment) and note of material reported problems or system inadequacies.

Electrical

- Identification of electrical services provided and distribution systems at the property, including material switchgear disconnects, circuit breakers, transformers, meters, and other such equipment or systems.
- Observation of general electrical items (distribution panels, type of wiring, lighting, lightning protection).
- Observation of general conditions and note of physical deficiencies identified or unusual items or conditions observed. Also, note of the presence of any special or unusual electrical equipment, systems, or devices at the subject property, and reported material problems or system inadequacies.

Life Safety/Fire Protection/Security Systems

- Identification of material life safety/fire protection systems at the subject property (sprinklers and stand pipes (wet or dry), fire hydrants, fire alarm systems, water storage, smoke detectors, fire extinguishers, emergency lighting, stairwell pressurization, smoke evacuation).
- Observation of general conditions and note of material physical deficiencies identified or unusual items or conditions observed or reported including any reported system inadequacies.
- Observation of security systems at the subject property for working order, and identification of conditions where security is possibly inadequate.

Interior Elements/FF&E (Where Applicable)

- Identification of common areas, offices, special use areas, and building standard finishes (flooring, ceiling, walls).
- General inspection of the finishes and remaining useful life (RUL) at the building level.
- Identification of building amenities, specialties, or special features.

- Identification of interior FFE items (trash disposal systems).
- Observation of general conditions and note of physical deficiencies identified or unusual items or conditions observed or reported.

Accessibility Compliance

- Completion of a visual Accessibility Survey in conformance with Section 504 Accessibility Standards and the Uniform Federal Accessibility Standards (UFAS), FHA Accessibility Guidelines, and where applicable, the 2010 ADA Accessibility Guidelines.
- Assistance for the Authority in identifying the appropriate number of apartment units required to meet UFAS guidelines, with consideration for geographic distribution, unit type, current occupancy, and resident waiting lists.
- Individual cost tables and photographs to document deficient conditions at each property.

Mold

- Limited assessment of accessible areas of the buildings for the presence of mold, conditions conducive to mold growth, and/or evidence of moisture.
- Interviews with Project personnel regarding the presence of any known or suspected mold, elevated relative humidity, water intrusion, or mildew-like odors. Potentially affected areas will be photographed.

Elevators

- Assessment of all vertical transportation equipment to include elevator cabs, elevator equipment, and controls. Evaluation will be based on visual observation and life cycle and useful life.
- Inspection of cables inside elevator shafts will not be part of the assessment.

Code Compliance

- Inquiries of Municipal Officials regarding the existence of pending unresolved building, zoning, or fire code violations on file to determine the current zoning category, flood plain zone, and seismic zone.
- Evaluation of conditions and systems to changes to codes, energy requirements, and Green environmental building standards.

IDENTIFICATION AND PRIORITIZATION

Based upon our observations, research, and judgment combined with consulting commonly accepted empirical expected useful life (EUL) tables, BVTa will render an opinion as to when a system or component will most likely necessitate replacement. Accurate historical replacement records provided by the Property Manager are typically the

best source for this data. Exposure to weather elements, initial system quality and installation, extent of use, and quality and amount of preventive maintenance exercised are all factors that impact the effective age of a system or component. As a result, a system or component may have an effective age that is greater or less than its actual age. The RUL of a component or system equals the EUL less its effective age.

In addition to determining the EUL and the RUL for each major prime system and building component, BVTa will categorize each cited deficiency within one of the following five priorities:

Priority 1: Critical Repair (Life Safety) Items in this category require immediate action and include corrective measures to:

- Return a building component to normal operation;
- Stop accelerated deterioration;
- Replace items that have reached or exceeded their useful service life;
- Correct a cited safety hazard; and
- Defer significant cost to HAP.

Priority 2: Non-Critical Repair (12-Month Repair) Items in this category require action in the next 12 months and include corrective measures to:

- Return a building component to normal operation;
- Stop rapid deterioration;
- Correct potential life safety issues and/or code hazards; Conduct frequent servicing.

Priority 3: Near Term Repair (Years 1-10) Items in this category require appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.

Priority 4: Long or Extended Term Repair (Years 10 and Beyond) Items in this category represent a sensible improvement to the existing conditions. These are not required for the most basic function of the facility; however, Priority 4 projects will improve overall usability and/or reduce long-term maintenance costs.

Priority 5: Grandfathered Items in this category represent code compliance issues that are not code violations, but when significant renovations are planned, code upgrades will be required. These buildings met the code when they were designed but, due to code changes and updates, no longer meet the current code.

Each report will include a Physical Needs Analysis including an estimated cost for each system or component repair or replacement anticipated during the evaluation term. The report narrative will discuss options for repair of the deficiency, and the Physical Needs Analysis will be presented as a cost table that includes a summary of the description of each component, age and estimated RUL, anticipated year of repair or replacement, quantity, and unit and total cost for the repair of each line item. A consolidated Physical Needs Analysis will be presented that includes all anticipated capital needs for all buildings.

BVTA will provide a written analysis in a checklist format by property. Each report will be generally organized by building system and include a narrative description of all building systems and components. Each report will include color digital photos of all major systems and components and include photos of all deficiencies identified. In addition to the narrative description of each building component and system, each report will include a discussion of current and anticipated repairs and deficiencies, and a discussion of any applicable options for repair or maintenance of building components. These deficiencies will be summarized in a Physical Needs Analysis Table included throughout each report.

Priority 1 and 2 deficiencies will report on the specific area the deficiency was observed, area noted for correction, and type of work required to bring the building system or component to good condition.

The Physical Needs Analysis will include tables sorted by building system and ranked by priority for repair. The format of the tables will allow for the customization of reporting by building, system, or priority for repair, and a year-by-year analysis of capital needs.

BVTA will provide draft reports electronically via an Adobe Acrobat PDF. We will deliver the required number of bound hard copy final reports and CDs with complete reports on each. All electronic copies of the report will include all text, deficiency tables, digital photos, supporting documentation, and report appendices.

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AssetCALC™ - Assessment Software and Database Deliverable

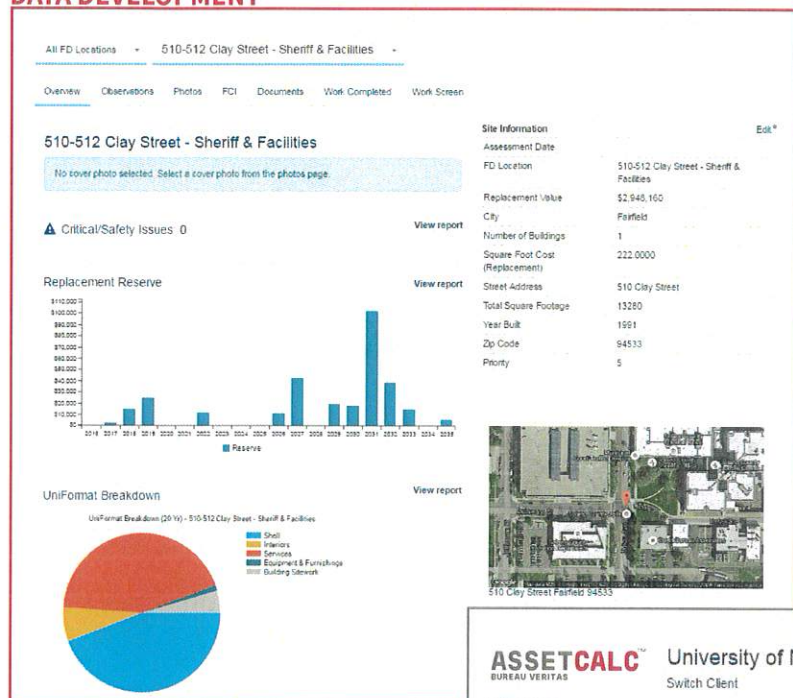
Bureau Veritas proposes utilizing AssetCALC™ as its platform for all data collected on this project. AssetCALC™ is a cloud platform developed, licensed, maintained, and supported solely by Bureau Veritas for our clients.

AssetCALC™ is a web-based SQL database platform that enables users to:

- query, edit, and analyze their facility condition data
- plan immediate and short-term repairs
- budget capital expenditures throughout the lifecycle of a building or an entire portfolio

The system unites Bureau Veritas' experienced field data collection methods with advanced planning and reporting tools, construction cost libraries, location mapping (GIS) features, digital photo management, and document storage.

DATA DEVELOPMENT




ASSETCALC™ University of New Mexico FY 2017
BUREAU VERITAS Switch Client

Overview Observations Photos FCI Documents Work Completed Work Screen Inventory

Observation Details - Obs #36672

Description	B2032 - Entrance door replacement to meet ADA guidelines
Component	
Attributes	
Action	
Master Cost Id	1910
Category	Exterior Enclosure / Exterior Doors / Solid Exterior Doors
Location	Main DeVargas south entry door
Condition	Fair
Report Section	3.3
Comments	Install remote-controlled door (or other appropriate building entry accommodation) for resident(s) at main northeast entrance door.
EMG Comments	
Capacity Description	
Flagged for Review	No
GPS	
Created	svogt on 4/17/2010 @ 4:40 PM
Last Modified	manderson on 10/27/2010 @ 3:52 PM



AssetCALC™ includes a configurable facility hierarchy and asset data architecture - this will include all of your assets grouped based on site location, asset group, and function.

Data can be exported to an Excel, XML, or an ODBC database format compatible for upload into your CMMS, EAM, or work-order systems.

FEATURES INCLUDE:

- Facility Condition Assessment access:
 - Component/system descriptions
 - Locations
 - Conditions and EUL/RUL
 - Repair and replace recommendations
 - Digital photos
 - Search and Sorting Functionality
- Prioritization of maintenance projects
- UniFormat II Cost Database
- Project Budgets and Capital Plans
- Unlimited concurrent user licensing
- Secure IT platform and back-ups
- Client is the owner of data collected and residing in the database
- Online User Training and Documentation

REPORTING

AssetCALC™ includes more than a dozen standard options for data summaries and reports:

- Facility Condition Index (FCI) Reports
- Rank and Prioritize Capital Improvement Projects
- Deferred Maintenance Backlog
- Facility Queries (by building, priority, system, or dollar deficiency amount)
- Capital Budget Planning
- Year-by-Year Capital Needs Analysis
- 5, 10, or 20-Year Replacement Reserve Reports
- Custom 3rd party form automation available

ID	Asset Name	Description	Latitude	Longitude
1	16593 Building 110	The curb ramp does not meet the slope requirements.	40.736683	-73.420229
2	16594 Building 110	The curb ramp does not meet the slope requirements.	40.736356	-73.420097
3	16595 Building 110	The curb ramp does not meet the slope requirements.	40.736388	-73.419795
4	16596 Building 110	The curb ramp does not have a level landing.	40.736398	-73.419804
5	16597 Building 110	The curb ramp does not meet the slope requirements.	40.736754	

Observation Details - Obs #54684

Description: D2023 - Water Heater, Gas, Residential, 30 to 50 GAL, Replace

Component: Water Heater, Gas, Residential, 30 to 50 GAL, Replace

Master Cost Id: 20596

Category: Plumbing / Domestic Water Distribution / Domestic Water Supply Equipment

Location: Rental townhouses

Condition: Fair

Report Section: 8.4

Comments: The water heaters appear to be in good condition. Based on their estimated Remaining Useful Life (RUL), some of the water heaters will require replacement over the assessment period.

EM2 Comments: Quantity does not include privately owned dwellings in the complex.

Capacity Description: No

Flagged for Review: No

GPS: Created: gismason on 6/25/2012 8:28:07 PM; Last Modified: gismason on 2/13/2019 11:46:02 AM

Cost Estimate	Replacement Cycle
Quantity: 114.00 EA	Replacement Years: 2019, 2026, 2038

Replace Diesel Generator 650 to 750 kW

General Services Building

Open details page

Quantity: 1 EA

Condition: Good

Total Estimated Cost: \$ 267,336

Next Action Required: 2033

Total Markup: \$ 36,763.00

Uniformat Code: D5062

Uniformat Code Level 1 Description: D - Services

Location Description: Exterior elevation

Unit Cost: \$ 250,553.35

Total Markup: \$ 36,763.00

Sub-Total: \$ 286,553

Year Observed: 2009

Age: 12

Lifespan: 25

Remaining Life: 13

Master Cost ID: 1782

AssetCALC ID: 17198

The generator is in good condition and is reportedly tested on a weekly basis. The generator will require routine maintenance over the assessment period.

ENERGY AUDIT APPROACH

PROJECT UNDERSTANDING

Bureau Veritas understands that, should we be awarded Authority's project, we would be responsible for performing a Level II Energy Audit. BVTA has designed this energy audit to be consistent with the Authority's mission and goals and is compliant with local and national energy codes and standards, standards and requirements of HUD, Federal Register 24 CFR Part 965, Subpart C Energy Audits and Energy Conservation Measures and NOFA Section VI.B.2.f.(4)(b)(ii)(H), US Department of Energy, and ASHRAE and USEPA standards.

PROJECT APPROACH

Under this program, BVTA will do the following:

KICK-OFF CALL

BVTA proposes to start this project with a Kick-off Meeting between Mr. Meneses, Mr. Champion, and the Authority's project manager. The agenda will include the following:

- Interviews with building maintenance and operations staff to review plans and past upgrades.
- Collection of all relevant data including, but not limited to, facility plans, as-built drawings, historical utility information/bills, equipment submittals, and modernization plans.
- Review of the work plan and schedule for the entire contract with key milestones.
- Confirmation of the final scope of work.

In addition, BVTA will gather information on building operations and review current maintenance and operations procedures, notable deficiencies, and modernization.

During the term of the project, BVTA will conduct regular Progress Meetings to maintain open communication for the project team and the Authority. In these meetings, BVTA will lead with an agenda that includes a focus on work plan, schedule, and project needs. This will permit the opportunity to proactively address challenges encountered, so that course adjustments may be made.

HUD – ENERGY AND WATER BENCHMARKING

BVTA will analyze the tenant and common area utility data for the development, which will then be entered into the HUD benchmarking tool and to get a score for the whole development. The process will be completed in the following manner:

- Obtain and review the previous two years (or as available) of utility bills including electricity, natural gas, fuel oils, and water;

- Establish base year consumption and review base year costs and utility rates;
- Enter utility data into HUD energy and water benchmarking system, and obtain a benchmark score for each development compared to other HUD public housing authority sites; and
- Analyze the benchmark scores and establish performance targets for each development.

The benchmarking tools will compare the subject property to a large, national database of data for similar multi-family properties. The database normalizes factors such as weather (general regional weather patterns), occupancy, conditioned area, and other building-specific characteristics. Seasonal trends are evaluated and a calculated peer-comparative HUD benchmark score is obtained by evaluating actual building consumption versus national average.

ENERGY AUDIT – SITE VISIT

The site visit will begin with an interview of the Property Manager(s) and maintenance manager(s) with knowledge of the property, notably building systems and components, to provide a general overview of the facilities and level of preventive maintenance exercised as well as identify opportunities for energy cost savings.

Following the interview, BVTA will conduct detailed energy audits of the development. The energy audit consists of an on-site engineering assessment with data gathering for 100% of common areas and a representative sample (at least 20%) of all apartment unit types, and 40% of Scattered Sites. The audit will focus on building envelope, mechanical systems/HVAC, domestic hot water, lighting, appliances, and water fixtures to determine current conditions and itemize energy/water consuming equipment (boilers, furnaces, air-conditioning equipment). The energy audit will also include reviewing piping for leaks and insulation levels; lighting systems both exterior and interior; domestic hot water system, piping, and insulation levels; condition and efficiency of unit appliances (refrigerators, ranges, kitchen appliances); and efficiency of equipment.

SITE VISIT APPROACH

- A detailed field audit of the sites, including common areas and apartments (20% total access with a minimum of 10% of each type of apartment in each development), community spaces, administrative/management offices, storage spaces, mechanical rooms, and metering rooms.

- Review of all maintenance records, as-built drawings, modernization plans, and energy conservation programs in place.
- Inspection of building envelope; evaluation of condition of insulation levels; evaluation window system; evaluation of building air leakage/infiltration.
- Recommendations to improve building weather sealing and reduce heat loss through properly insulating attics and crawl spaces, storm windows/new Energy Star windows, and weather sealing around doors and penetrations.
- Evaluation of current condition and efficiency of major HVAC equipment and controls, boilers, furnaces, air conditioning equipment, pumps, motors.
- Identifying common area and apartment lighting systems and estimated hours of operation, type of control; and recommendations for energy efficiency lighting and controls.
- Review of type and efficiency of apartment appliances (refrigerators, ranges, kitchen appliances, laundry systems, central laundry systems, incinerators); and evaluation of condition and efficiency and recommendations for improvement.
- Evaluation of domestic hot water system, hot water piping and insulation, water temperature, circulation pump efficiency, and controls.
- Tenant interviews in terms of equipment use and hours of operation to properly determine energy consumption.

ENGINEERING ANALYSIS & REPORT FORMAT

BVTA will prepare draft energy reports and review them with the Authority. This includes on-site survey/energy audit and engineering analysis of building systems, building simulations using in-house developed spreadsheet method, and analysis of savings with estimated installed costs and paybacks.

BVTA will perform a comprehensive analysis of the building systems, and make recommendations on all identified Energy Conservation Measures (ECMs) with detailed cost estimates and cost savings. We will perform a savings to investment ratio (SIR) analysis in addition to the simple payback method, based on Present value (Pv) of the recommended improvement, and rank all projects based on both simple payback as well as SIR. A life cycle cost (LCC) analysis will also be performed in addition to the payback analysis.

BVTA will perform building simulations using in-house developed spreadsheet method that take into consideration the manufacturer rated efficiency, equipment age, existing maintenance practices, local heating/cooling degree-days and building envelope composition to compute the potential energy savings from the proposed Energy Conservation Measures (ECMs). The generated savings are further discounted to account for interactivity among multiple measures and projects' net resulting energy savings by taking into consideration the building orientation, dynamic heat gains and losses, weather, and architectural effects.

BVTA will analyze opportunities for energy conservation for each development including, but not limited to:

- Envelope upgrade and weather sealing, additional insulation, and minimization of heat loss.
- Improvements to the energy performance of windows and doors through storm windows/doors, window shading films, or replacement with high performance alternatives, if necessary.
- Retrofits to old lighting with energy efficient light fixtures and controls.
- Upgrades to older appliances with new Energy Star appliances.
- Implementation of smart strips to control electronics and entertainment devices.
- Upgrades to old furnaces and air-conditioners with high efficiency furnaces and high SEER air-conditioners.

Examples of field tools used to perform Energy Audits



- Improvements to pipe or duct insulation and reducing leaks, as necessary.
- Implementation of programmable or smart thermostats to avoid unnecessary heating.
- Identification of water conservation opportunities (low-flow aerators for kitchen and bathroom sinks, low-flow showerheads, and toilets).
- Identification of alternate sources of energy (conversion of electric to natural gas based on cost feasibility).

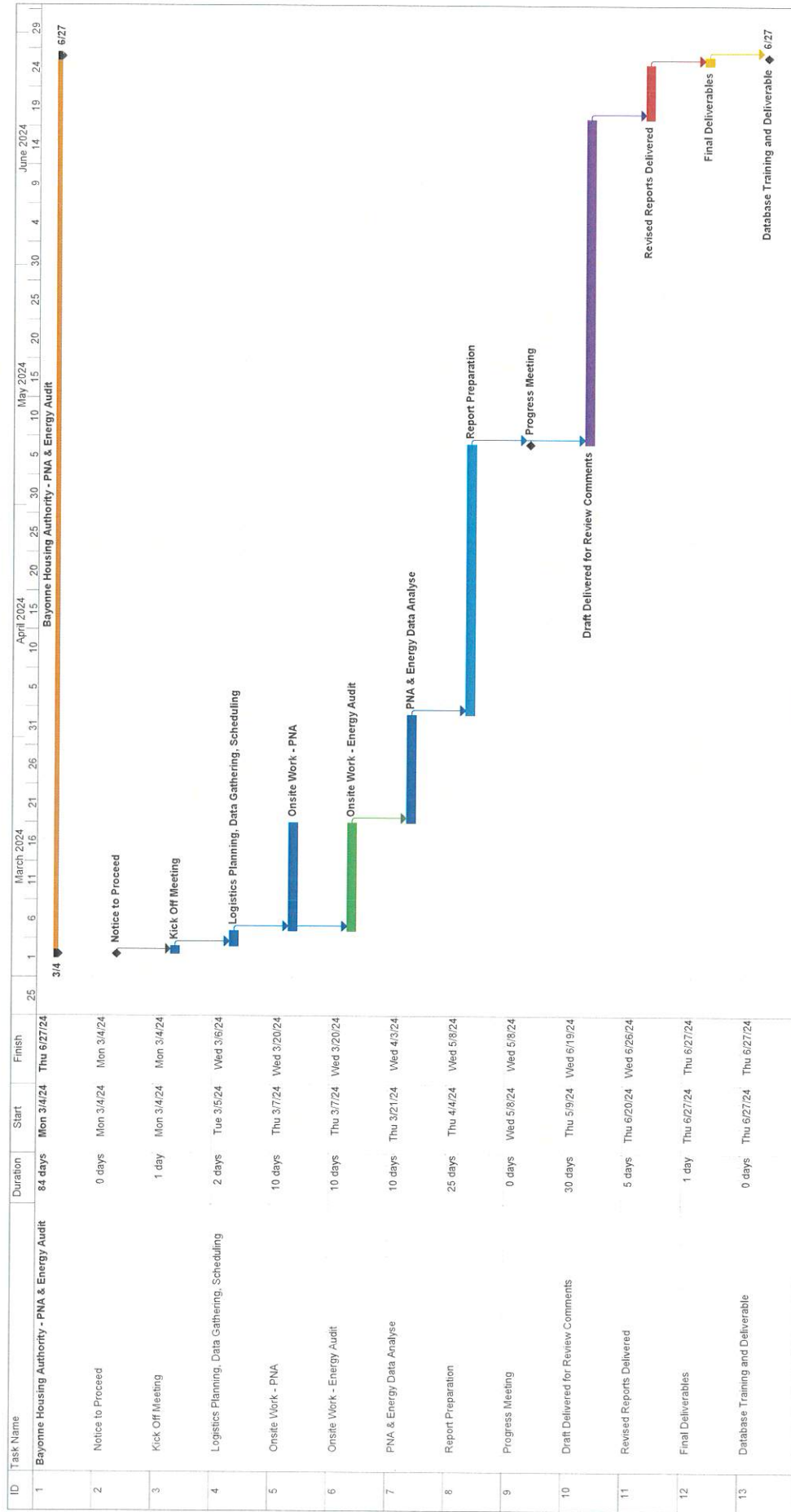
BVTA's industry standard energy audit report will incorporate the reporting requirements of HUD Guidelines. The following list is a brief outline of BVTA's final energy audit report:

- Table of Contents and Certification
- Executive Summary
- Analysis of Baseline Energy and Costs: Analysis of electricity usage, monthly heating fuel energy consumption, and monthly water consumption for the entire development
- ECM Summary: All identified energy optimization and conservation opportunities for each building/ facility. ECMs will be designed on a system-wide approach, with applicable interactive affects among the systems, for lighting, energy distribution, HVAC and EMSs. For EMSs, BVTA will identify opportunities to integrate all major HVAC system components, temperature controls, lighting into the building management system for centralized control, and setbacks. As per the requirements of proposed HUD rule, the proposed ECM's will be categorized in three broad groups based on the payback period.
 - 0-5 year payback
 - 5-10 year payback
 - 10 year and greater
- In addition to categorizing based on the payback, each ECM will be classified as 'Core' or 'Advance' ECM as per the HUD guidance in 24 CFR Part 965.

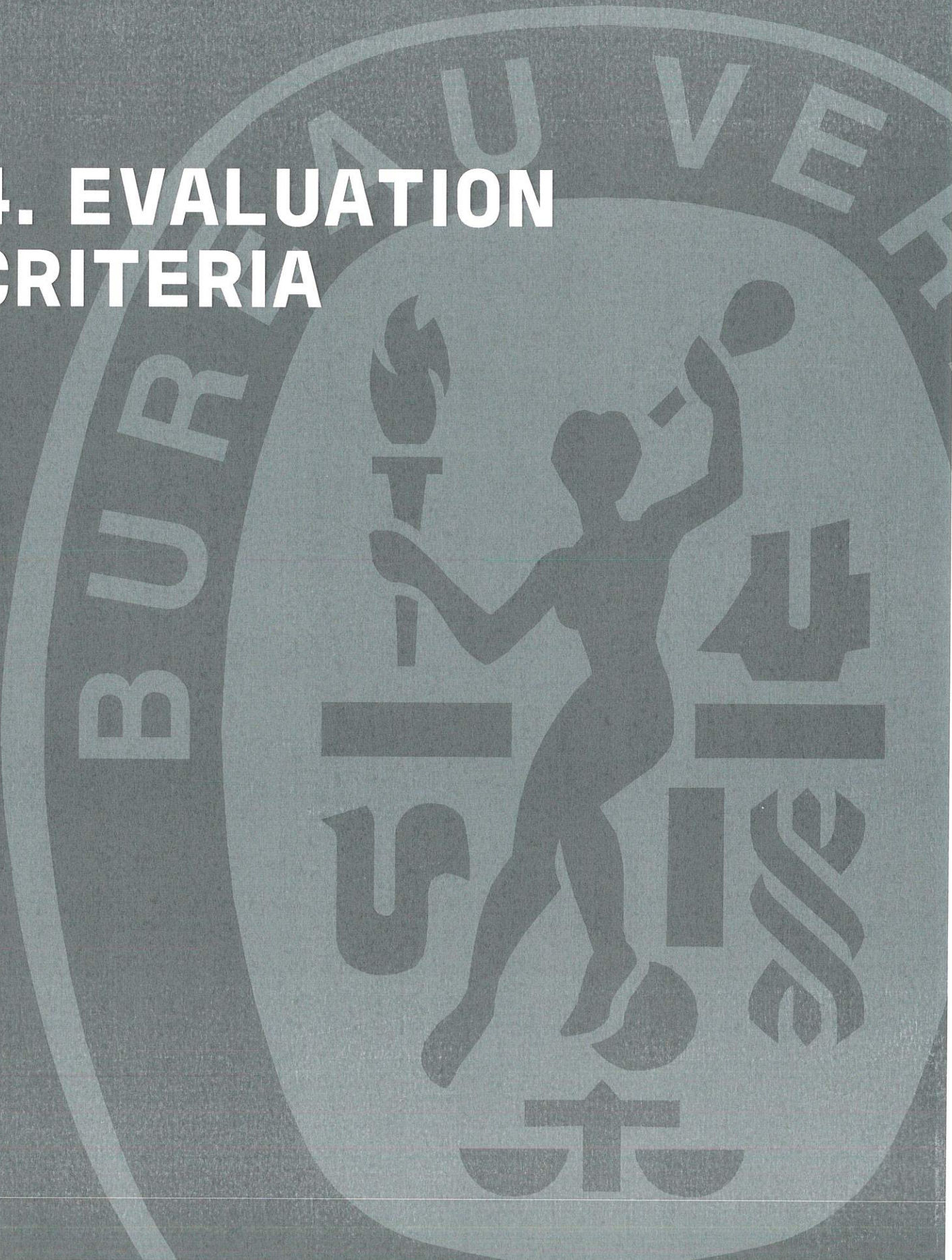
- Facility Overview and Existing Conditions: Overview of the facility, HVAC, and lighting systems, and construction information, maintenance practices. A photolog will be included as an appendix.
- Detailed Technical Analysis: Analysis of building envelope, HVAC, lighting, energy management and control systems (EMS), air and heat distribution systems, their operation, and utility costs.
- Energy Conservation Analysis: Analysis of all evaluated systems mentioned above providing technical solutions with projected installed cost and savings estimates resulting from each improvement recommended; and prioritization of projects with most attractive payback potential.
- Recommended Measures: A detailed installed cost with breakdown of engineering and design, equipment and material costs, annual maintenance costs and estimate of energy savings in therms of natural gas, kWh of electricity.
- Maintenance and Operations Plan (with preventative maintenance): A plan for recommended improvements, new systems installed, and/or existing retrofits to assure continued efficient operation and reliability of such systems.
- Supporting Documentation: Documentation for the ECMs with back-up engineering calculations, installed cost estimates, source of cost estimates, calculation of saving measures, and engineering methodology followed and description of the energy conservation measure.
- Appendix: Photographic record, site map, mechanical inventory, appliance inventory, back-up calculations and ECM descriptions, Pre-survey questionnaire.

SCHEDULE

BVTA has the required resources to perform the project in a timely manner. The proposed schedule below is open to discussion between the Authority and BVTA.



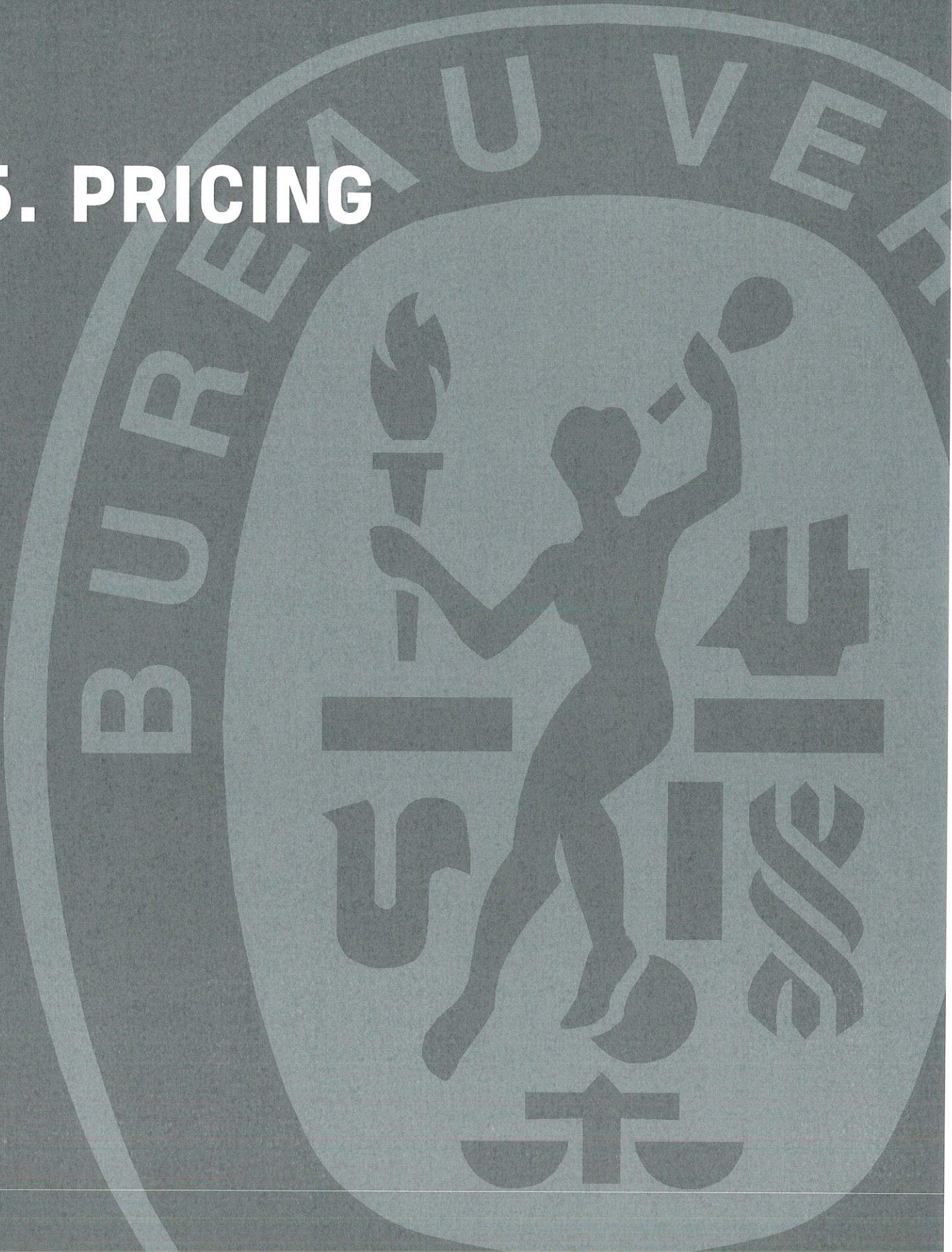
4. EVALUATION CRITERIA



4. EVALUATION CRITERIA

Evaluation Factor	Experience	Meets or Exceeds	Location in Proposal
Experience with similar PNA and Energy Audit inspections and reports	The BVTA Team has extensive experience with HUD projects, specifically with respect to performing Green Physical Condition Assessments, PNAs, and environmental studies. We have assessed over 100,000 units within the past 36 months, and preparation of remediation plans and cost estimates to bring housing units and building components into compliance.	✓	Throughout Proposal
Qualifications of firm/staff	BVTA is proposing a team of experienced assessors including a team largely comprised of personnel averaging more than 30 years experience having recently completed similar projects. The proposed team has worked together on many other multi-family PNA and Energy Audit projects.	✓	Throughout Proposal
Approach/Work Plan	We included a detailed approach and work plan for each of the Scopes of Work identified in the RFP. BVTA prides itself on meeting our schedules and providing timely results.	✓	Begins on Page 21
Pricing	BVTA has invested extensive time in technology and our process surrounding HUD compliant assessments, enabling us to be highly efficient and consistent. BVTA's pricing structure is based upon the principle of payment for quality and value. We are committed to your project and providing a quality deliverable as defined by the Housing Authority.	✓	Begins on page 36

5. PRICING



5. PRICING- COST PROPOSAL, PART A

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

<u>PNA.</u>	<u>Total Cost.</u>	\$43,330.00
<u>Energy Audit.</u>	<u>Total Cost.</u>	\$19,400.00
<u>Bridgeview Manor</u>		
<u>PNA</u>	<u>Total Cost</u>	\$3,500.00
<u>Energy Audit</u>	<u>Total Cost</u>	\$2,900.00
<u>Grand Total.</u>	<u>Total Cost.</u>	\$69,130.00

Firm/Company Name: Bureau Veritas Technical Assessments LLC

Firm's Authorized Representative: Cheyenne Irby, Associate Vice President

Signature: 

PART B-PNA COST PROPOSAL

PART B – PNA Cost Proposal

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

A. Labor			
Position	Hourly Rate	Estimated Hours	Total
Project Executive	\$ 190	8	\$ 1,520
Program Manager	\$ 140	40	\$ 5,600
Field Assessor - Architect / Engineer	\$ 120	200	\$ 24,000
Technical Reviewer	\$ 115	20	\$ 2,300
QA/QC	\$ 135	20	\$ 2,700
Administrative	\$ 80	10	\$ 800
Total			\$ 36,920

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

Materials. **\$130.00**

Travel. **\$1,900.00**

Misc. Expenses. **\$50.00**

Total Direct Costs.

Total \$2,080.00

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 \$36,920.00

Labor.

Total \$2,080.00

Non-labor.

Total \$39,000.00

Total Indirect Costs.

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

Subtotal \$39,000.00

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

General

Total \$26,080.00

Administrative

Total \$7,120.00

Overhead

Total \$5,800.00

Total

Total \$39,000.00

F. Profit. State the percentage and total cost.

Percentage 10%

Total \$4,330.00

G. Total PNA Cost Proposed.

Total \$43,330.00

PART C- ENERGY AUDIT COST PROPOSAL

PART C – Energy Audit Cost Proposal

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

A. Labor			
Position	Hourly Rate	Estimated	Total
Project Executive	\$ 190	4	\$ 760
Program Manager	\$ 140	20	\$ 2,800
Field Assessor - Architect / Engineer	\$ 120	80	\$ 9,600
Technical Reviewer	\$ 115	8	\$ 920
QA/QC	\$ 135	8	\$ 1,080
Administrative	\$ 80	8	\$ 640
Total			\$15,800

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

Materials. **\$130.00**

Travel. **\$1,480.00**

Misc. Expenses. **\$50.00**

Total Direct Costs.

Total **\$1,660.00**

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 **\$15,800.00**

Labor.

Total **\$1,660.00**

Non-labor.

Total **\$17,460.00**

Total Indirect Costs.

D. Subtotal. Subtotal of all labor, direct and indirect costs. **\$17,460.00**

Subtotal

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

General

Total **\$11,260.00**

Administrative

Total **\$3,560.00**

Overhead

Total **\$2,640.00**

Total

Total **\$17,460.00**

F. Profit. State the percentage and total cost.

Percentage **10%**

Total **\$1,940.00**

G. Total Energy Audit Cost Proposed.

Total **\$19,400.00**