

Integrated Physical Needs Assessment (IPNA) Standard

for New York City and State Low/Moderate Income Multifamily Buildings

Adopted by:

- NYS Housing and Community Renewal (HCR)
- NYC Department of Housing Preservation and Development (HPD)
- NYC Housing Development (HDC)

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INTRODUCTION

The emergence of concerns about climate change and the associated need to reduce carbon emissions has given a new and significant urgency to energy efficiency work in buildings. A trend has developed to merge Physical Needs Assessments (PNAs) with energy audits, sometimes referred to as a Green PNA, or GPNA.

PNAs have long been used to assess deficiencies in buildings to recommend improvements to remediate these deficiencies, estimate the cost of such work, and recommend timing for various elements of the work depending on their urgency.

In parallel, energy audits have been developed in recent decades to identify deficiencies in energy systems as well as opportunities to remediate these deficiencies and reduce energy use and costs. In many ways, energy audits are similar to PNAs, although they add the metrics of energy use, projected energy cost and use savings, and are limited to energy systems (and frequently water, as well).

The potential benefits of a merged report include reducing duplication of effort; reaching economies of scale in planning capital improvements and energy efficiency work simultaneously; and leveraging and coordinating various financing sources. Traditional PNAs offer many benefits that are not typical of energy audits, including the ability to prioritize tasks, undertake long-term planning, and reduce construction costs by timing energy improvements with the end of the useful life of energy systems. Likewise, energy audits offer benefits to traditional PNAs, including the ability to leverage cost savings to help pay for the work and the potential to increase the amount of financing available through underwriting to efficiency savings.

However, while GPNAs are useful in identifying the physical and energy deficiencies in buildings, they are typically not comprehensive enough to identify housing-based health issues that have immediate impacts to residents' health and comfort. This new **Integrated Physical Needs Assessment (IPNA)** takes the GPNA a step further to not only merge a traditional PNA with an energy audit, but to also more intentionally identify housing-based health issues that can be addressed during rehabilitation or through operations and maintenance. Incorporating a health lens into the IPNA will make it easier for building owners to make health-promoting improvements in broader rehabilitation projects, such as measures to improve ventilation; the use of low- or no-VOC materials; and the adoption of Integrated Pest Management practices and "green cleaning" regimes.

While there are many benefits to merging energy audits and health assessments with PNA's, there are also complications and questions. What qualifications are required for the work? Can one consultant do both? How can an energy audit report, health assessment and PNA report be effectively integrated? What standards should be used?

This document seeks to address the complications and questions of integrating energy with traditional capital needs assessments, and includes resources and tools to assess opportunities to create healthier living environments.

GOALS AND OBJECTIVES

Long-Term Goal

Ensure every owner of an affordable multifamily building in New York City and State who accesses federal, state, or municipal financing for rehabilitation work incorporates cost-effective energy efficiency, water conservation, and health-related improvements into their capital planning process to enhance the health, safety, and comfort of residents, reduce maintenance and operating expenses, and reduce energy use and greenhouse gas emissions.

Short-Term Goals

Ensure every owner of an affordable multifamily building in New York City and State who accesses federal, state, or municipal financing for rehabilitation work uses a standardized process for evaluating potential energy efficiency, water conservation, and health-related improvements as part of their capital planning process; ensure that the IPNA evaluation is accepted by all efficiency program administrators and lenders as a valid means of identifying measures and estimating savings; and ensure that the IPNA can be used to comply with New York City and State energy audit regulations.

DEFINITIONS

Physical Needs Assessment (PNA) – An evaluation of a building’s physical conditions, including identification of deficiencies, recommended improvements (scope of work), and associated construction costs for those improvements. Also called a *property condition assessment (PCA)*, *capital needs assessment (CNA)*, *condition survey*, or *project capital needs assessment (PCNA)*.

Integrated Physical Needs Assessment (IPNA) – A physical needs assessment that includes energy, water, and health assessments, including identification of deficiencies, recommended improvements (scope of work), and associated construction costs for those improvements.

Energy Assessment – An evaluation of a building’s energy and water consumption patterns, including identification of deficiencies, recommended improvements (scope of work), and associated construction costs for those improvements. An energy assessment also includes projected annual energy use and cost savings for each improvement and billing analysis. Also called an *energy audit*.

Efficiency Assessor – A firm or individual qualified to perform the energy/water assessment portion of an IPNA; also called an *energy auditor*.

Needs Assessor – A firm or individual qualified to perform the physical needs assessment portion of an IPNA.

Scope of Work – A written description of recommended capital, energy and health improvements needed in a building(s) in the critical and short term.

Construction cost – the cost to implement a building improvement, including both material and labor costs and related soft costs such as design and permitting. Also called *capital cost*, *first cost*, or *installed cost*.

QUALIFICATIONS

Needs Assessor

At least one member of the Needs Assessor team shall be a registered architect (RA) or professional engineer (PE) and have a minimum of three years of relevant work experience. At a minimum, this professional shall review and approve the Needs Assessment portion of the report. Additionally, for assessments that take place in New York City, at least one member of the Needs Assessor team shall have taken, or plan to take within 6 months of becoming a pre-qualified provider, the DoHMH Healthy Buildings Trainings for HPD-financed projects. The DoHMH Healthy Buildings Training Certificate is valid for three (3) years and at least one of the on-site team members must have the Certificate.

Background: This is consistent with the requirements of the HPD/HDC GPNA, which requires the professional designation. The HUD C.N.A. refers to the ASTM standard, which recommends a professional designation in architecture or engineering, although it is not mandatory. The 3 years is a requirement we added to be consistent with the Efficiency Assessor. The “review and approve” is from the ASTM standard.

Efficiency Assessor

At least one member of the Efficiency Assessor team shall have one of the following certifications, as well as a minimum of three years of relevant work experience. At a minimum, this professional shall review and approve the Energy Assessment portion of the report.

- AEE Certified Energy Manager (CEM)
- AEE Certified Energy Auditor (CEA)
- AEE Certified Measurement and Verification Professional (CMFP)
- BPI Multifamily Building Analyst (MFBA)
- ASHRAE High-Performance Building Design Professional (HPBDP)
- ASHRAE Building Energy Assessment Professional (BEAP)
- RESNET HERS

Background: HPD/HDC’s GPNA, NYSERDA, ASHRAE Level II, and the HUD C.N.A. all have a mix of these certifications. The HUD C.N.A. allows almost all of them (with the exception of CMFP and BEAP, both of which are references in ASHRAE Level II). The 3 years is from the HUD C.N.A. and seems like a good requirement. The “review and approve” was added to be consistent with the Needs Assessment, and it also seems consistent with NYSERDA which requires that the certified professional “conducted or supervised” the applicable work. The only standard included here that is not among those listed as an option for NYC LL87 is AEE’s CMFP.

INTEGRATION

We recognize that an IPNA will typically be performed by two different professionals, a Needs Assessor and an Efficiency Assessor. The IPNA is intended to support these separate efforts by clearly defining the responsibilities of each. However, it is important that the final IPNA present an integrated whole, and avoid duplication of effort. To do this, the following steps should be taken:

- a. The Needs Assessor and Efficiency Assessor are encouraged to conduct the site visit together, on the same date, to share observations.
- b. Final review and release by one firm, which holds ultimate responsibility for the report.
- c. An executive summary that presents the results of both the energy audit and the needs assessment in one table.
- d. The building description is integrated in one section, although different pieces are assigned to the Needs Assessor and to the Efficiency Assessor.

IPNA REQUIREMENTS

The IPNA is to be performed with adherence to generally-accepted industry standards for property condition assessments and energy audits, as well as the following standards:

- **Needs Assessments** should broadly follow ASTM E2018-15 *Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process*
- **Energy Assessments** should broadly follow the *American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE) Procedures for Commercial Building Energy Audits (2011 or most recent version, if published)* Level 2 and the IPNA Guidelines. If ASTM E2018-15 or ASHRAE Level 2 conflicts with the IPNA Guidelines, the IPNA Guidelines should be followed. If ASTM E2018-15 and ASHRAE Level2 requirements conflict, ASHRAE Level 2 should be followed.

***Note:** We are not exempting buildings smaller than 50,000 SF from this requirement. This is because we are not proposing to require a comprehensive model (which we interpret as an hourly model, like eQuest or TREAT), so do not need to exempt small buildings from this requirement. We are proposing to require interactive calculations, since this is required for NYSERDA, ASHRAE Level II, etc., and is also required in order to see if a building meets the minimum 30% overall energy-savings goal. We believe interactive calculations are not hard, do not add significantly to energy audit effort or cost, can be done with spreadsheets, and that it will simplify the overall approach if we do not exclude buildings.*

- **Healthy Home Assessments** should broadly follow the health inspection guidance in the IPNA.

The following capital needs shall be considered when preparing the IPNA:

1. **Critical Needs:** Health and safety deficiencies; open Building Code or Environmental Control Board (ECB) violations; Housing Maintenance Code (HMC) violations in Hazard Categories ‘B’ and ‘C’; and any Lead-Based Paint conditions that require immediate remediation, in order to meet City, State, or Federal requirements.
2. **Short Term Needs:** An estimate of entire or component system replacement items, and significant deferred and other maintenance items that will need to be addressed within 12 months, including cost effective measures that will reduce energy and water consumption and create healthier living environments.
3. **Long-Term Needs:** An estimate of entire or component system replacement items beyond the first year that are required to maintain the development’s physical integrity and reduce energy and water consumption over the next 15 years.

The report shall identify physical deficiencies, repair/replacement needs, and energy/water inefficiencies, pest activity, moisture and ventilation issues, and any other applicable health hazards determined on the basis of:

1. Visual Survey from basement to roof, including, but not limited to, the following:
 - Site and public elements
 - Structural frame and building envelope
 - Insulation and roof/wall cavities
 - Mechanical, electrical, and plumbing systems and utilities
 - Life safety/fire protection equipment

- Interior elements
2. Review of Pertinent Documentation, including, but not limited to:
 - Violations issued by City and State agencies
 - Certificate of Occupancy
 - Architectural drawings
 - Maintenance logs
 - Maintenance logs and O&M plans
 - Pest control contracts or policies
 - Certificates of training for building maintenance staff
 3. Review of Energy and Water Consumption Data as provided in 24 months of consecutive energy and water billing statements, and work with building owner and/or staff to set up automated benchmarking using the approved HDC/HPD benchmarking provider list. If a building is already benchmarked, relevant data should be included in the IPNA.
 4. Diagnostic Testing and Systems Inspection, including, but not limited to:
 - Carbon monoxide (in all areas with combustion equipment, including appliances and heating equipment; for heating equipment, testing shall include in flues and in the mechanical room; for forced air equipment, testing shall include in the supply air)
 - • Natural gas leaks
 - • Moisture testing (relative humidity), in areas of concern, such as where there is visible mold
 - • Boiler efficiency testing.
 - • Indoor air temperature. Measure a representative set of indoor temperatures, for example including upper floors and lower floors. Also record thermostat setpoints and schedules (if programmable).
 - • For buildings with ventilation systems that operate 24/7 AND in buildings that are high energy users (site EUI over 150 kBtu/SF/year), ventilation airflow, ventilation fan power, and duct leakage shall be measured. In other buildings, results can be estimated.

Single Building Projects

This survey must include the inspection of at least 3 units or 10% of the total project's dwelling units, whichever is greater. The 10% calculation should be rounded up, so for example, 10% of a building with 34 units is 3.4, which is rounded up to 4 units required for inspection. The consultant should identify units to include in this sample that contain varying characteristics and conditions that will affect the report, including location (ground floor, top floor, basement, exposed edge and corner units) as well as type, size (number of bedrooms), and history of rehabilitation. For example, in a 22-unit building with all one-bedroom units, some of which are in the basement, the number of units to be inspected is 3 (top floor, bottom floor, and basement). But if the same building was previously renovated in two distinct phases, and also has a 2-bedroom unit, a total of 5 units should be inspected: top floor, bottom floor, basement, 2-bedroom unit, and an additional fifth unit representing the new phase of renovation (presuming the other four units belong to the original phase of construction).

Multiple Building Projects

For HDC projects: For developments with multiple buildings, all buildings must be surveyed and reported; survey must include the inspection of 10% of total project's dwelling units.

For HPD projects only, clusters of buildings that are similar in design, construction, age and history of rehabilitation may use an alternate survey method, but must be approved by agency program staff prior to the date of the inspection to confirm whether it is suitable for the project. If approved, this survey must

include the inspection of a minimum of 20% of the representative buildings, with representative units surveyed in each building.

For HPD to consider whether this alternate survey method is suitable, provide the following information in a table:

1. Building address
2. Block /Lot
3. Year Built
4. Number of stories
5. Date of Last Renovation
6. Items replaced in last renovation
7. Indicate whether:
 - a. Buildings are adjoined
 - b. Buildings share a system (i.e. boiler or roof)

Examples of multiple building projects are provided in Appendix B.

THE IPNA TEMPLATE

****Firms must use the IPNA template****

Identification

Identify the project, including the name, description of the property, and the property location. List for whom the report was prepared; the consultant, principal of the consultant, and consultant personnel that performed the site visit and produced the IPNA; other entities and individuals that were present during the site visit; and the date of the site visit.

Objective

Describe the objective of the IPNA. Boilerplate objectives are provided. The consultant can edit as appropriate.

Procedures and Limitations

Outline the procedures used in producing the IPNA, as well as any limitations. Boilerplate procedures and limitations are provided. The consultant can edit as appropriate.

Executive Summary

Provide a table of improvements, their estimated construction costs, annual energy cost savings if applicable, and level of urgency (critical, short term < 12 months, long term 12 months to 15 years), and denote those with potential health benefits. This executive summary table is an important part of presenting the IPNA in an integrated form.

Background: This simple integrated table is the bottom-line information sought by lenders and grant-making agencies.

Describe the scope of the project; summarize the existing conditions of the property; provide an overview of the maintenance of the property, including existing staff, maintenance and/or janitorial contracts, any maintenance issues, and an analysis of the maintenance processes, procedures, and strategies; outline the existing accessibility and identify any outstanding accessibility issues; provide a summary of any open violations.

Physical Needs Assessment/ Inspection

Describe the property's exterior and interior physical condition and needs (Critical, Short Term, and Long Term). The report should identify, in detail, any deficient or deteriorated items that represent an immediate

threat to health and safety. Additionally, the report should describe all other significant defects, deficiencies, items of deferred maintenance, and material building code violations (individual and collectively, physical deficiencies) that limit the physical health and integrity of the buildings, restrict the expected useful life of major components or systems, and that directly or indirectly affect the energy efficiency and water use of the building and building systems.

The inspection report shall contain the following sections:

1. **Site Improvements:** Sidewalk, curbs, yard/courtyard concrete, area/yard drains, ramps, stoop and stairs, areaway/sidewalk grates, landscaping, wrought iron fences/gates, fences, debris, exterior stairs, trash enclosures, and open space/playgrounds.
2. **Building Envelope:** Foundations, superstructures, fire escapes, roof structures and roofing, bulkheads, exterior walls: masonry, parapets, cornices, windows, weather sealing, insulation, exterior structures, skylights, exterior doors and door sweeps.
3. **Interior Common Area and Public Halls:** Floors, walls, ceilings, lighting, windows, stairs, doors, dumbwaiters, compactor chute and hopper doors, mailboxes, electrical, and janitorial closets.
4. **Apartments:** Including but not limited to finishes, walls, ceilings, floors, appliances, entry and interior doors, presence of door sweeps, installation of cabinets in such a manner as to prevent pests, windows, shelves, cabinets and countertops, vanities, plumbing and electrical, circuit breaker and fuse box panels, outlets, GFIs, light fixtures, apartment intercom stations, carbon monoxide and smoke detectors, radiators, convectors, baseboards, air diffusers, foyers, bedrooms, living/dining room, bathrooms, kitchens, and entry ways.
5. **Building Systems:** Including but not limited to heating generation, heating distribution, central cooling system, domestic hot water, electrical, elevator, trash compactor, intercom, security system, plumbing, gas piping and meters, domestic water piping, waste piping, stand pipe sprinklers, and other systems.
6. **Special Considerations:**
 - a. *Environmental Issues:* Toxic materials, such as petroleum storage, PCBs, Asbestos Containing Materials (including but not limited to plaster and gypsum board, floor tile, pipe and duct insulation, etc.), lead-based paint, and mold
 - b. *Hazardous Operations:* Explosive or flammable operations and/or storage
 - c. *Accessibility Issues:* Whether the project meets all the requirements for persons with disabilities, as where maximum possible, based on the laws in effect at the time the building was constructed and subsequent renovations
 - d. *Historic Preservation Issues:* Any special requirement related to Historic Preservation if a Federal, State, and/or City listed site
 - e. *Special Flood Hazard Areas:* Identification of Flood Zone as shown on Flood Insurance Rate Map (FIRM) for New York City dated September 5, 2007, and the Post Hurricane Sandy Preliminary Data Map dated December 5, 2013
 - f. *Pests:* Pest resistant materials in vulnerable areas such as kitchens, bathrooms, subareas, and trash storage areas
 - g. *Mold resistant materials*

To encourage integration and to avoid a duplication of effort, the Needs Assessor should conduct all aspects of this inspection other than the energy-related components, which should be conducted by the

Efficiency Assessor: Heating, cooling, ventilation, insulation, infiltration, windows, lighting, appliances, hot and cold water systems and fixtures.

Energy and Water Audit

The energy audit should broadly follow the American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE) Procedures for Commercial Building Energy Audits (2011 or most recent version, if published) Level 2, as well as these IPNA Guidelines.

An analysis of the building's pre-retrofit performance shall be completed using 24 months of utility data, initial inspection data and diagnostic data collected during the on-site visits. The analysis should estimate annual energy and water consumption and the cost savings of potential improvements. Current operating schedules verified on site are to be used for energy and water cost savings estimates.

The energy and water audit shall consist of the following components:

1. **Building description** (inspection of energy and water systems). The focus of this component is the building's current condition.
2. **Energy and water use.** The focus of this component is both the preliminary analysis (current energy and water use) and the projected energy and water use after improvements are made. The purpose of the projected use estimates is to show potential overall energy savings and to provide post-retrofit operating costs that can be used in financial pro-formas. Document billing data for twenty-four (24) months of consecutive energy and water utility bills, provide an energy utility use breakdown, and calculate the Energy Use Intensity (EUI) kBtu/sf/year.

Other Energy Assessment Requirements

Billing analysis shall include current energy costs, so that projected energy costs can be calculated from projected energy cost savings.

Efficiency Assessors are urged to include both low-cost/no-cost improvements and larger energy improvements. Energy assessments shall have a goal to identify 30% energy savings. Efficiency Assessors are urged to go beyond 30% savings to identify deeper energy savings in order to meet long-term city and state carbon emissions goals. Buildings with an existing site energy utilization index (EUI) below 50 kBtu/SF/year are exempt from the 30% energy savings goal.

Hourly energy models are not required, but interactive energy calculations are required.

In addition to energy, water conservation options shall also be evaluated. At a minimum, evaluate shower heads, bathroom and shower faucets, and toilets to meet the EPA WaterSense standard. Inspect for evidence of leaks, such as in boiler rooms, below kitchen and bath sinks, and in toilets. Inspect bathtub faucets to see if water flows out of the bath faucet when the shower is on.

Building Operation and Maintenance Practices

1. **Pest Management Inspection:** Document existing strategies, practices, and outcomes, and onsite inspection results. Detail observed pest activity and identify current structural, sanitation/housekeeping or operations deficiencies conducive to pest activity and make recommendations to remediate. Detail pest management practices that do not conform to IPM best practices as outlined in the NYC DOHMH IPM Toolkit (e.g. un-containerized rodent bait, regularly scheduled pesticide applications, use of pesticides considered hazardous)

2. **Maintenance and Janitorial Process Inspection:** Document existing practices, products, and outcomes, including efficient systems management and use of green cleaning products and other aspects of practices impacting health.
3. **Other relevant operation and maintenance practices.**

Scope and Preliminary Cost Estimates

Identify scope items that will address the capital needs to correct the detailed physical deficiencies and/or lower energy or water consumption of the building. The section should include the estimated costs and quantities of property's physical needs including entire or component system replacement items, repair and maintenance measures, health items, energy efficiency and water conservation (EEWC) only items, and EEWC incremental items. Include all labor costs in the price estimates of scope items, and separately include costs for permitting, demolition, lead and asbestos abatement, and other relevant costs associated with the scope of work. Below are definitions of Capital Items, EEWC Incremental Items, EEWC-Only Items and Health Items:

Capital Items are scope items that address the physical needs of the property such as entire or component system replacements, and significant deferred and other maintenance items that are not included solely for EEWC reasons. Examples of entire or component system replacement items are roofs, boilers, windows and masonry.

EEWC Incremental Items are measures that in addition to providing entire or component system replacement also provide energy efficiency benefits. Examples of EEWC incremental items are caulking around windows (when the window is not being replaced) and roof insulation when the roof is recommended to be replaced.

EEWC-Only Items are the energy and water efficiency scope items that are not associated with items requiring entire or component system replacement. These measures are recommended solely for their contribution towards reducing a property's energy and water usage. Recommendations for all types of EEWC items along with relevant payback periods and projected energy cost savings should be provided, including measures that have the potential to yield deeper savings not limited to on-site renewables. However, Efficiency Assessors should not rely solely on renewables, such as solar PV or thermal, to reach energy savings goals, and priority should be given to durable cost-effective energy and water conservation strategies. Some examples of EEWC-Only items include solar panels, boiler controls, low-flow fixtures, pipe insulation and efficient lightbulbs.

EEWC scope items should include information on projected savings from implementing the recommended EEWC measure (both in dollars and in units of energy or water), describe how the savings estimates were derived (i.e. utility rates used, etc.) including any risks that might prevent measure from achieving the estimated savings, compare the total projected savings to existing energy use/cost, and provide the simple payback and Savings-to-Investment Ratio (SIR) for each measure.

Health Items are the scope items to improve the indoor air quality and other health-related characteristics of a building. In addition to identifying health items to include in the scope of work for a project, each capital and EEWC item should include an assessment (Y/N) of whether it is associated with a potential health benefit. The Healthy Rehab Interventions tab provides guidance on the intersection between health outcomes and targeted interventions. Examples of health items include sealing gaps in and around cabinets, under sink basins, and utility and plumbing openings.

Replacement Cost Schedule

Analyze and project the anticipated capital needs of the property, estimated useful life of building components, the cost per unit, quantities and an estimate of annual replacement expenditures for a fifteen

(15) year period. The costs outlined in the replacement schedule should be total costs for each scope item, accounting for inflation and inclusive of all incremental costs of EEWC measures.

Operation and Maintenance Measures

Include recommendations for measures that can be addressed through improved maintenance and operations, including janitorial methodologies and products, maintenance best practices, and integrated pest management. Recommendations should address building maintenance, trash management, pest exclusion strategies, resident and staff training, selected applications and use of pesticides, ongoing monitoring for pest activity, and measures to address mold. Recommendations should also identify opportunities to integrate pest proofing improvements into future building rehab projects. The [Two Shades of Green: Green and Healthy Property Management Guide](#) shall be used as guidance, as should the O&M tab in the IPNA.

Quality Assurance and Verification

Include a written Quality Assurance and Verification plan specific to the subject property. The plan shall include requirements for inspections, documentation, and performance test-outs.

Assessment of Potential Health-Focused Improvements

The IPNA encourages assessors to consider how physical and capital upgrades could improve occupant health. It contains several tools to help assessors make this determination as they complete the IPNA and develop a Scope and Preliminary estimates, noting the potential of each upgrade to improve occupant health. The relevant health tabs in the spreadsheet are described below.

- **Inspection and Structural Tab** contains two boxes that call out potential health-related concerns, in categories that align with the headings in the “Healthy Rehab Interventions” tab. Inspectors are expected to summarize potential health issues that could be addressed in an upgrade.
- **Scope and Preliminary Cost Estimates Tab** includes a column to allow the assessor to indicate if each item could potentially benefit tenant health outcomes. Inspectors can use the “Healthy Rehab Interventions” tab as guidance to understand the potential health outcomes of various capital interventions when making this determination.
- **Operations and Maintenance Tab** identifies property management practices that can improve occupant health; this information may be useful to share with owners.
- **Healthy Rehab Interventions Tab** identifies building renovation work that can improve occupant health. This information is intended to help assessors in determining if a proposed capital upgrade has the potential to improve occupant health, as requested in the “Scope and Preliminary Estimates” summary tab.
- **Health Questionnaire Tab** identifies building areas to investigate during the building walk through to better understand potential health opportunities. It is presented as guidance to help inform assessor activities and inspections.

NOTE: Other than the “Scope and Preliminary Estimates” Tab, none of the other health-related tabs are required to be filled out by the inspector. They are included to help assessors in considering the potential health concerns and providing useful information to owners and HPD.

OTHER

Shelf life: An IPNA can be used up to two (2) years from its release date.

REFERENCES

Green Physical Needs Assessment and Technical Assistance Service Provider. 2015 Request for Qualifications for Professional Consultant. NY City Housing Development Corporation. February 26, 2015.

Multifamily Accelerated Processing (MAP) Guide. R 1.1. U.S. HUD. January 29, 2016. (Reference guide for the HUD C.N.A. e-tool.)

Procedures for Commercial Building Energy Audits, Second Edition. ASHRAE. 2011.

Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process. Standard E 2018-15. ASTM International. 2015.

APPENDIX A CERTIFICATION REQUIREMENTS (FOR REFERENCE ONLY)

	AEE CEM	AEE CEA	AEE CMVP	BPI MFBA	RES- NET HERS	ASHRAE HPBDP	ASHRAE BEAP	RA	PE	NYSE RDA Flex Tech	ASTM E 2018- 08 Appendix	Work Experience (years)	Notes
Energy Assessor													
HPD/HDC GPNA	x			x									
NYSERDA	x	x		x									"Conducted or supervised"
HUD CNA etool	x	x		x	x	x		x	x			3	
ASHRAE Level II	x	x	x			x	x						Non-mandatory
													Must either be supervised by licensed design professional, or registered with DOB and hold one of the certifications; FlexTech only allowed under design professional.
NYC LL87	x	x		x		x	x	See note.		x			
Freddie Mac Multifamily Green Advantage	x			x									
Needs Assessor													
													RA/PE - "At least one member of the team"
HPD/HDC GPNA								x	x				
HUD CNA etool											x		
													No specific requirement. Earlier in the standard (not in the Appendix) it says "general, well rounded knowledge of pertinent building systems and components"
ASTM Field Observer													
ASTM Report Reviewer								x	x				Non-mandatory

APPENDIX B

EXAMPLE MULTIPLE-BUILDING PROJECTS (FOR REFERENCE ONLY)

Example 1: Identical Buildings

A complex has four 10-story buildings, all identical in design, and built at the same time in the 1960's.

For HDC Projects: All four buildings to be inspected.

For HPD Projects: A minimum of 20% of the buildings to be inspected. So, in this case, one building needs to be inspected.

Example 2: Similar Buildings, but One Different in Age

A complex has eight 5-story buildings, all somewhat similar in design, built in the 1960's, and one more similar building but that was built 15 years later in the late 1970's.

For HDC Projects: All eight buildings to be inspected.

For HPD Projects: A minimum of 20% (two buildings) of the original eight buildings, as well as the building that was built 15 years later, due to its difference in age. So, a total of three buildings must be inspected.

Example 3: Many Buildings, Rehabbed at the Same Time Age

A complex has 20 buildings, all two-story, with a variety of units: Ten buildings have 4 units, four buildings have 6 units, four buildings have 8 units, and two buildings have 10 units. Designs are similar, but layouts are different. The basic heating system design is the same: Hot water boilers with baseboard distribution. All were built in the 1950's, but over a period of about six years. All units were gut-rehabbed in 2003: New interior finishes, new appliances, new heating, new roofs, new windows, and more.

For HDC Projects: All buildings to be inspected.

For HPD Projects: Because the gut rehab was so extensive, and happened at one time, HPD will require inspecting 20% of the buildings, or five buildings. The consultant can choose the five buildings, but it makes sense to have a mix of 4-unit, 6-unit, 8-unit, and 10-unit buildings.

Example 4: "Scattered Sites"

A developer has 45 buildings, all different, scattered around town.

For HDC, HPD and HCR Projects: Because all buildings are different, all buildings need to be inspected (45 total).