

SUBMISSION GUIDE FOR ARCHITECTS

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SECTION 2 – ARCHITECTURAL SUBMISSION REQUIREMENTS

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For Specifications Format - See Section 2.01, page 57

For PHFA Addendums – See Section 5 (addendums must be attached to the respective contracts)

For Closing Requirements - See Section 6

For the Architects Certification – See Section 6.03

For the Architects Certification of Compliance with Design Requirements for Accessible Housing – See Section 6.04

For Development Construction Cost Estimate and Loan Closing Construction Cost Breakdown, see Construction Cost Estimates.zip on the Technical Services page of PHFA's website.

Phase I Environmental Site Assessment must be submitted via the PHFA Secure Portal link on the Technical Services page of PHFA's website.

2.01 DEVELOPMENT SUBMISSION REQUIREMENTS

SUBMISSION PROCESS

At least 90 days prior to the construction closing, all developments shall submit the requirements found in Section 2.02 for review by the Technical Services Division of PHFA. The level of completion must be sufficient (**100%**). Hard copies of all documents shall be submitted as indicated in Section 2.01, except for the Phase I Environmental Site Assessment, which must be submitted in PDF format *via the PHFA secure portal*. Drawings shall be to scale and a minimum size of 24" x 36" and a maximum of 30" x 42". Submission of the required documents within this timeframe does **NOT** guarantee a review will be completed in 90 days. If PHFA's review of the submitted documents finds conditions that are not in compliance with these requirements, written comments will be forwarded to the Owner identifying the deficiencies. Revised documents addressing these comments, along with a written response, on the Architect's letterhead, to the comments must be submitted to PHFA. All drawings and specifications must be bound. Separate responses must be submitted to the Architectural plan reviewer and the MEP plan reviewer.

DRAWING REQUIREMENTS – ARCHITECTURAL

Cover and Title Sheet –

1. Name of the proposed development.
2. Development address.
3. All PHFA development numbers must be included.
4. Developer's name and/or entity.
5. Design Architect's name.
6. Date of submission.
7. A location map encompassing an area of ½ mile radius of the site.
8. Development Tabular Schedule.
9. Signature and date space for the Owner, Architect and Contractor. (PennHOMEs and Agency 1st Mortgage).
10. Design Architects Certifications for Threshold and Selection Criteria from the PHFA loan application.
11. Building code analysis.
12. Provide a table which lists all unit, common area rooms/spaces and commercial/condo spaces, along with the associated gross and net square footage of each.

Site Plan –

1. Minimum scale of 1" = 30'.
2. Indicate property lines with bearings and distances.
3. Indicate building setbacks.
4. Number all buildings for ease of reference.
5. Identify public streets and rights-of-way.
6. Existing and proposed grade elevation contours at one-foot intervals.
7. Ground floor finish elevations for all buildings and areas within buildings where a change in elevation occurs.
8. Spot elevations where necessary.
9. Positive drainage away from all buildings. Surface water runoff must be accounted for in such a way as to not permit sheet flow across designated walking routes.
10. All site details, dimensions, paving sections, curb cut and road radii, trash enclosures, recreational areas, access pumps, etc.
11. Identify the locations of accessible, VisitAble and hearing/vision impaired units for townhouse developments and accessible parking spaces.
12. Accessible route details to accessible, adaptable, and VisitAble units. Include slope percentage on sidewalks.
13. Indicate site acreage.
14. Indicate location of utility tie-ins and proposed on site layout.

15. The relationship of the development to adjacent storm water flow or drainage and vice versa.
16. Landscape plan including details and plant schedule (common name, number, and size for all materials).
17. Show the relationship of the site lighting and other site utilities to the overall site development. Coordinate with plumbing and electrical utility drawings.
18. See the Surveyor's Report, Section 2.12, for additional requirements.

Typical Building Floor Plans –

1. Building Floor Plans (All Floors, Basement and Roof plans) drawn at 1/8" = 1'-0"
2. Include all dimensions.
3. Indicate locations of accessible, VisitAble and hearing/vision impaired units.
4. Indicate gross square footage per floor.
5. All rooms and spaces must be identified.
6. A "North" reference on all building floor plans.
7. Key doors and windows.

Typical Dwelling Unit Plans-

1. Unit plans for all unit types and sizes, including accessible units drawn at ¼" = 1'-0".
2. Provide furniture layouts.
3. Indicate clear floor area requirements in accessible, adaptable, and VisitAble units.
4. Indicate gross and net square footage for each unit plan.
5. Include overall dimensions, room sizes and closet dimensions.
6. Key doors and windows.

Schedules and Details –

1. Room finish schedule.
2. Door and window schedules, elevations, jamb, sill, and head details. Key to floor plans and building elevations.
3. Typical details for clothes, storage, pantry, and linen closets, including mounting heights and details for rods and shelves.
4. Other as applicable.

Elevations –

1. Exterior elevations drawn at 1/8" for each orientation clearly indicating:
 - A. All exterior finishes, openings, and penetrations.
 - B. Relationship of finished floor to finished grade for units partially below grade.
 - C. Height of each story (floor to floor) parapet or roof.
 - D. Key doors and windows.
2. Interior elevations drawn at a minimum of ¼" = 1'0"
 - A. For all kitchens and bathrooms, include dimensions, materials, and mounting heights.
 - B. All other required (e.g. gang mailboxes, lobbies, etc.).

Building Sections –as applicable to the building type:

1. Typical exterior wall sections (including roof and foundation).
2. Transverse building section(s).
3. Longitudinal section(s) through the entire building for mid- and high-rise buildings.
4. Typical stairs (public and private).
5. Elevator shaft.
6. Trash chute.
7. All typical interior walls, partitions, and chases.
8. Indicate insulation levels with R-values.
9. Indicate STC/IIC ratings.

Building Details – Must be included as necessary for the construction of the building(s).

DRAWING REQUIREMENTS – STRUCTURAL

Plans, Sections, Details and Notes – Must be included in a scope sufficient to construct the development. The scope will vary depending upon the type of development (e.g. 1 and 2-story wood frame townhouses to steel and concrete high rises). At a minimum, the following must be included:

1. Design loads.
2. Framing systems and size of members.
3. Foundation design consistent with recommendations made in the subsoil investigation report.
4. Governing codes, regulations, and standards.

DRAWING REQUIREMENTS – MECHANICAL

General – The intent of this submission is to set forth Design Development for mechanical work in sufficient detail to:

1. Clearly define the concept and elements of the mechanical systems proposed for the development.
2. Provide proper coordination with architectural, structural, and electrical specifications.
3. Allow for technical review of adequacy, economy, and compliance of proposed design with applicable regulations and codes.
4. Identify specific items of material and equipment contained in specifications for electrical work prepared in accordance with instructions noted above.

Mechanical Plans:

1. The orientation of mechanical drawings must follow the same pattern as established on the architectural drawings. Titles of rooms corresponding to titles on the architectural drawings must be noted on the mechanical plans.
2. In general, Design Development drawings must include site plans, floor plans, schematic and riser diagrams, necessary equipment schedules and pertinent details.
3. Site plans must show the routing of all underground services, site drainage, manholes, catch basins and connections to existing systems, meter locations, etc. Crossovers which are possible points of conflict with work to be done by other trades or under different contracts must be shown with inverts given and clearances worked out. Details of connections to utility company lines, building entrances and manholes must be shown.
4. Provide plumbing riser diagram.
5. Floor plans must show each typical area indicating location and space requirements for equipment, fixtures, piping, air ducts, grilles, diffusers, and any other pieces of equipment. Care should be taken in working out hung ceiling depth, equipment rooms and shafts with adequate clearances provided (e.g. 7'-8" clear height for public corridors).
6. Routing of major ductwork and piping may be shown as single line. Schematic and/or riser diagrams must show all major pieces of equipment, piping, ductwork, etc. with capacities and sizes listed for each. A schedule of all pertinent data for each piece of equipment proposed must be provided.
7. Provide a water heater detail.

Other Requirements – The enclosed *Mechanical Requirements Checklist* and applicable portions of the *Estimated Utility Costs* must be completed and submitted to PHFA.

DRAWING REQUIREMENTS – ELECTRICAL

General – The intent of this submittal is to set forth Development Submission for electrical work in sufficient detail to:

1. Clearly define the concept and elements of the electrical systems proposed for the development.

2. Provide proper coordination with architectural, structural, and mechanical drawings and specifications.
3. Allow for technical review of adequacy, economy, and compliance if proposed design with applicable regulations and codes.
4. Identify specific items of material and equipment contained in the specifications for electrical work prepared in accordance with instructions noted above.

Electrical Plans:

1. The orientation of electrical drawings must follow the same pattern as established on the architectural drawings. Titles of rooms corresponding to titles on the Architectural drawings must be noted on the Electrical plans.
2. In general, Development Submission electrical drawings must include site plan, floor plans, details, schedules, riser diagram and a one-line schematic, all as outlined below.
3. Site plans must show:
 - A. Utilities – proposed and existing.
 - B. Topography – proposed and existing.
 - C. Site lighting and circuitry.
 - D. Fuel system location.
 - E. Meter locations.
 - F. Building outline.
 - G. Location of temporary services, if applicable.
 - H. Pertinent dimensions.
4. Floor plans must show each typical area in indicating the location and electrical circuitry to:
 - A. Outlets, Switches, Special systems, Mechanical equipment, Smoke detectors, Electrical equipment, Receptacles, Lighting fixtures, Panel boards, Hearing and Vision fixtures.
5. Details (as required by individual development) must include:
 - A. Transformer, Counterpoise, Grounding, Site luminaries, Emergency system, Manholes and Concrete structures.
 - B. Generator including: Duct systems, Exhaust systems and Fuel systems.
6. Schedules (as required by individual development) must include:
 - A. Lighting fixtures, Electrical equipment, Panel boards, Heat transfer appliance, Transformers, Special apparatus, and Mechanical equipment (requiring electrical service).
7. One-line schematic (depending upon the scope of the development) must show:
 - A. Service entrance, Power distribution, Grounding, Telephone, Communications, Security, Fire alarms, TV system, Heat and Smoke detectors.
8. Additional drawing data requirements:
 - A. Conduit type and size to be specified.
 - B. Conductor insulation, gauge, voltage, circular mill area and material to be specified.
 - C. Voltage configuration to be complete at all pertinent locations of change.
9. Other requirements:
 - A. Catalog cuts or manufacturer’s descriptive literature must be provided for all major equipment items.
 - B. The enclosed *Electrical Requirements Checklist* and the applicable portions of the *Estimated Utility Cost* must be completed and submitted to PHFA.

SPECIFICATIONS

1. Specifications must be prepared in accordance with the CSI 50-Division MasterFormat 2004 Edition. Masterspec version or similar templates may be used. Outline specifications template may not be used.

Cover or Title Page – Include the following:

1. Name of development.
2. Location.

3. PHFA Number.
4. Date (same as on the drawings).
5. Name, address, and telephone number of:
 - A. Architect.
 - B. Owner.
 - C. Contractor.
 - D. All Consulting Engineers.

Signature Page – Print names of entities and provide space for signature and date for the following:

1. Architect.
2. Owner.
3. Contractor.

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AIA Document A201, 2017 Edition – General Conditions of the Contract for Construction and the PHFA Addendum to the AIA A101 and A201 (see Section 5).

PHFA Supplemental General Conditions – (see Section 5).

All Applicable Compliance Requirements for developments with Federal or State funds used for construction including:

1. Non-Discrimination Clause.
2. Section 8 Affirmative Action Plan.
3. MBE/WBE/SERB Plan.
4. Labor Standards and Davis Bacon Wage Determination.

Subsoil Investigation Report (New Construction and additions-PennHOMEs & Agency 1st Mortgage).

1. Test Borings must be provided at the following locations:
 - A. Beneath major building footing components of ALL buildings, in the area of the highest design load. If multiple buildings are proposed, borings must be provided for each building.
 - B. Major trenching of MAIN subsurface utilities.
 - C. Each parking area (min. 2 borings).
2. An overlay map of the boring locations in relationship to the proposed building footprint(s), parking area(s) and utilities is required. If the building, parking or utility design changes after final approval, the borings must be modified /rebored to accommodate the new design.
3. Additional borings may be requested/required based upon the findings of initial borings.

Technical Specifications – CSI 50 Division MasterFormat 2004 edition. Specify the manufacturer and model number or (2) “equal” manufacturers and model numbers, wherever possible.

Checklists - The Selection and Threshold Criteria Checklists along with the appropriate green building checklist, if selected in the application, must be included in the specifications or on the drawings. All Checklists must be signed and dated by the Professional responsible for its preparation.

2.02 DEVELOPMENT SUBMISSION CHECKLIST

Development Name: _____ **PHFA No.:** _____

The undersigned certifies that all items have been provided with the required submission.

Design Architect (Print or type): _____

Design Architect (Signature): _____

Date: _____

If insufficient documentation is submitted, PHFA Staff will notify the *Lending Analyst* indicating the deficiencies. A review will only commence once all documentation is received by PHFA. PDF files submitted through the secure portal are not an acceptable form of drawing review *at this stage*. Hard copies must be submitted. When submitting the below information, ensure items 4 - 5, 7 - 9, 11 - 12 & 14 – 16 are submitted in loose form. The Development Submission must include the following:

For all Developments:

- 1. (2) Sets of bound drawings.
- 2. (2) Sets of bound specifications.
- 3. (2) Copies of the Development Requirements Checklist (Section 2.04-New Construction/ Substantial Rehab OR Section 3.02-Preservation).
- 4. (1) Copy of the Development Tabular Schedule (Also include on the drawings).
- 5. (2) Copies of the Proof of compliance with all certifications submitted as part of the loan application (Selection Criteria and Threshold Criteria – Also include on the drawings).
- 6. (1) Copy of the full Phase I Environmental Site Assessment and Supplemental Environmental Reports (i.e. Phase II, Asbestos, LBP, lead in water, radon testing and etc.) via the Secure Portal. www.phfa.org/mhp/technicalservices.com.
- 7. (1) Copy of the REScheck/COMcheck certification.
- 8. (1) Copy of the preliminary Home Energy Rating System (HERS) report by a certified HERS rater and proof of project registration/prebuild certification.
- 9. (2) Copies of the applicable National Green Building Checklist, as certified to in the application.
- 10. (1) Copy of the ALTA Land Title Survey, HUD Surveyor's Report and Legal Description (not required for Tax Credit Only Developments)
- 11. (2) Copies of the completed Development Submission Construction Cost Estimate. Allowances in the construction budget are not permitted.
- 12. (1) Copy of the Development Security and Maintenance Requirements Checklist for Urban Locations.
- 13. (1) Copy of the Mechanical Requirements Checklist.
- 14. (1) Copy of the Electrical Requirements Checklist.
- 15. (1) Copy of the Estimated Utility Costs.

For all Developments receiving PennHOMES/Agency 1st Mortgage:

- 16. (1) Copy of the Structural Engineer's Report by a registered Structural Engineer, if required (rehabilitation developments only).
- 17. (1) Copy of the Subsoil Investigation Report with design recommendations by a qualified Geotechnical Firm (for new construction and new additions - include in the Specification Manual).

2.03 DEVELOPMENT TABULAR SCHEDULE

Development Name: _____ PHFA No.: _____

Design Architect (Signature): _____ Date: _____

1. Number of Buildings: _____
2. Building Height (Stories): _____
3. Building Code: IBC IRC Construction Type: _____
4. Structural System: _____
5. Exterior Finish: _____
6. Gross Building Area*: _____
7. Gross Commercial Area (SF): _____ Percentage of Gross Building Area: _____
8. Number of On-Site Parking Spaces: _____
9. Required Variances: _____
10. Applicable Accessibility Regulations:
 Section 504 UFAS PAUCC FHAA ADA

Unit/Room Type	No. of Units	Accessible Units Type A		Adaptable Units Type B		Visitable Units	Net SF**	Gross SF*
		ADA	H/V	ADA	H/V			
SRO								
EFF								
1 BR								
2 BR								
3 BR								
4 BR								
Community Room								
Circulation (hallways, stairs & etc.)								
Other								
Total								

*Gross Building Area (SF) is all improved areas including commercial space measured from the outside of the exterior wall. Mechanical Rooms, Electrical Rooms, Storage Rooms, and similar spaces that are conditioned to the same degree as a living space and are finished should be calculated at 100%. Basements, Garages, and similar spaces that may be finished (or unfinished), but not conditioned to the same degree as a living space, must be calculated at 50% of the actual size. The upper portion(s) of multistory spaces shall be excluded from the square foot calculation. Include only the lowest floor area. Porches, patios, and balconies shall not be included in the gross building area.

** Net Area (SF) is measured from the interior face of the unit separation and/or exterior walls. Show the average if there is more than one size in each type.

**2.04 DEVELOPMENT SUBMISSION REQUIREMENTS CHECKLIST
(New Construction and Substantial Rehabilitation-ALL FUNDING TYPES)**

Development Name: _____ PHFA No.: _____

The undersigned certifies that all items have been provided in the drawings and/or the specifications.

Design Architect (Print or type): _____

Design Architect (Signature): _____

Date: _____

Check the appropriate box if the development conforms to the requirement. Check **A** if it is applicable or **NA** if it is not applicable. The Architect must submit a written request to PHFA for any waiver of the PHFA Design Requirements or for any items that are neither checked nor indicated as not applicable.

1. Minimum Unit Size Requirements

The following matrix established the minimum and maximum allowable **net** square footage area for units funded by PHFA. **Net** square footage shall be measured from the inside face of the exterior walls to the inside face of interior demising walls. The net area does not include unfinished outdoor storage space, spaces for heating and cooling equipment located outside the unit, garages, or porches, patios, and balconies. Rehabilitation developments may vary from the minimums and maximums by 10% if acceptable furnishing plans are provided. Accessible units may vary from the maximums as required to provide an accessible route and accessibility maneuvering clearances. An Efficiency Dwelling Unit is defined as having a single habitable room without demising walls/doors separating the Living, Dining, Kitchen and Sleeping areas. Refer to Section 1 for additional requirements and Section 1 "Definitions" for SRO and Efficiency Unit designations.

		<u>Flats</u>		<u>Multi-Floor Units</u>
A <input type="checkbox"/>	NA <input type="checkbox"/>	SRO	90 to 200	
A <input type="checkbox"/>	NA <input type="checkbox"/>	EFF	400 to 600	
A <input type="checkbox"/>	NA <input type="checkbox"/>	1 BR	550 to 850	650 to 950
A <input type="checkbox"/>	NA <input type="checkbox"/>	2 BR	700 to 1,100	850 to 1,300
A <input type="checkbox"/>	NA <input type="checkbox"/>	3 BR	950 to 1,350	1,000 to 1,550
A <input type="checkbox"/>	NA <input type="checkbox"/>	4 BR	1,100 to 1,550	1,200 to 1,750
A <input type="checkbox"/>	NA <input type="checkbox"/>	5 BR	1,300 to 1,750	1,400 to 2,000

2. Minimum Room Size Requirements

All bedrooms must have a demising wall with a door between it and other spaces within the dwelling unit, there must be a closet and an operable window to provide natural light and ventilation. Minimum room sizes do not include unusable alcove space at doors. Accessible rooms may require additional space. (Waivers may be granted for room sizes in rehabilitation developments only, based on acceptable furnishability plans).

Bedrooms:

- A NA Primary bedroom – 120 SF (least dimension 10'-0") - *shall accommodate a queen bed, dresser and (2) nightstands.*
- A NA Additional bedroom(s) – 90 SF (least dimension 9'-0") - *shall accommodate a single bed, dresser and (1) nightstand.*

Living Room:

The living room area must be sufficient to provide adequate space based on the number of persons who will reside in the Unit. Units with more bedrooms, and thus more people, should have larger living areas to accommodate furnishings that will serve the number of residents in that unit. In open plan configurations, living room furniture must be a minimum of 5' from any kitchen cabinets/appliances.

- NA** Living Room (least dimension in any direction 11'-0"). *This space cannot impede on kitchen, hallway or any other areas and shall accommodate a sofa, chair, side table and television stand. In 3 Bedroom and larger General Occupancy Units, an additional side chair and side table shall be accommodated.*

Dining Area:

The dining area must be in addition to the living room area and must be appropriately sized, based on the number of residents who will live in that unit. In open plan configurations and eat-in kitchens, dining furniture must be a minimum of 40" from any furniture in the living room, kitchen cabinets/appliances and all walls. Island/bar seating is not permitted as the only dining area in General Occupancy developments with 2 or more bedrooms. All dining areas should accommodate the following minimum sizes:

- NA** EFF/1 BR Units – *36" x 36" square or 42" round* Table w/ 2 chairs.
 NA 2 BR Units – *42" x 42" square or 48" round* Table w/4 chairs.
 NA 3 BR Units – *30" x 60" rectangular or 60" round* Table w/6 chairs.
 NA 4 or more BR Units – *36" x 80" rectangular* Table w/8 chairs

Efficiency Unit - Living Room/Sleeping Combination:

- NA** Living/Sleeping – 200 SF min. (least dimension 11'-0").

Other Unit Space:

- NA** Dwelling unit corridors and stairs – 36" min. width.
3. **NA** **Accessibility (Facilities, Apartments and Parking)** – All applicable Local, State and Federal regulations and PHFA requirements must be met. Please refer to Section 1.02, Accessibility Requirements, included in this Guide.
4. **NA** **Community Room Space** – All developments, except scattered sites, should be designed with adequate community space to accommodate functions and services offered at the facility. Developments should provide a public restroom. Community rooms must be a single room sized to provide at least 15 SF per unit, for developments with up to 50 units. Community rooms in developments with more than 50 units shall be a minimum of 750 SF in size. Community rooms should not include unusable alcove space as part of the minimum requirement. A kitchen or kitchenette must be provided in or adjacent to the community room in Elderly developments and shall not be included in the required square footage. The kitchen shall include a sink, full height refrigerator and 30" range.
5. **NA** **Management Office** – An onsite management office must be provided for all developments, except scattered site developments. Applications which are a continuation of a phased development that do not include a management office in the current Application will be required to provide evidence of a management office in one of the prior phases.
6. **NA** **VisitAbilitycm*** – In new construction and new additions, all units are expected to be visitable, unless a waiver was granted during the loan application review. In rehabilitation developments, PHFA has adopted the goal of providing visitability to as many as possible for the purpose of allowing persons with disabilities the ability to visit neighbors and friends. Please refer to our VisitAbilitycm Guidelines, Section 1.08.
7. **NA** **Air Conditioning** – Refer to Section 2.06 Mechanical Requirements Checklist
8. **Building Security:**
A. **NA** All developments with shared entrances must be equipped with an intercom/security system or equivalent to control access to the building. The system shall not rely on a connection to the telephone service.

- B. A NA All dwelling unit entrance doors must be equipped with dead bolt lockset, a passage latch set and a door knocker or doorbell with viewer.
- A NA All dwelling units must be equipped with an identification number.
9. A NA **Below-Grade Units** – The maximum distance a floor level in any dwelling unit may be below finish grade elevation outside the unit is 4'-0". Finish grade must slope away from the building. Area wells/window wells are permitted in Rehabilitation Developments with PHFA approval.
- 10. Bathrooms:**
- A. A NA 1 ½ baths must be provided for 3-bedroom units and 2 bathrooms must be provided for 4 or more-bedroom units (one may include a shower).
- B. A NA Vanity bases must be provided for all bathrooms. Vanity bases are recommended in powder rooms unless an additional storage cabinet or closet is provided. Removable fronts are suggested for handicapped adaptable units.
- C. A NA All bathrooms must have a minimum of (2) 24" towel bars, a toilet paper holder, a shower rod in the tub/shower unit or shower unit, a medicine cabinet with a mirror and a light fixture located over the mirror. Towel bars in bathrooms must be able to accommodate full size towels (27"). Towel bars placed one above the other should be mounted no less than 28" AFF and no higher than 56" AFF. A 24" double towel bar is acceptable if the space does not allow for (2) – 24" towel bars to be installed. Powder rooms must have a minimum of (1) 12" towel bar or towel ring, toilet paper holder and a mirror with a light fixture located over the mirror.

Note: Tub reglazing will not be permitted.

- 11. Kitchens** - *Kitchens should be designed to serve the number of residents in the unit. For example, kitchens in units with three bedrooms shall provide more base cabinets and counter space than kitchens in a one-bedroom unit.*
- A. A NA Ranges must be provided in all units, except SROs with common cooking facilities, and in community room kitchens and kitchenettes in Elderly (55+/62+) developments. All units must be equipped with 30" ranges (self-cleaning type required in common areas and all dwelling units). Ranges must not be located abutting partitions. A protective shield must be provided on the section of wall directly behind all ranges. The protection must extend from the top of the range to the underside of the hood or cabinet above for the width of the range or more. Protective shields must be high pressure plastic laminate, enameled steel, or stainless steel.
- B. A NA Ducted range hoods with fans and lights must be provided above all ranges (Recirculating range hoods are allowed in buildings if an intake grille is located near the range).
- C. A NA Consideration should be given to the installation of electronic high temperature limiting devices on the stovetop elements of electric ranges, or the installation of powder-based stovetop fire suppression canisters above electric or gas ranges.
- D. A NA Kitchen cabinets must meet PHFA standards (refer to PHFA Kitchen Cabinet Minimum Standards, Section 1.25). Cabinets in accessible units must have loop type hardware throughout.
- E. A NA A minimum of (1) 15" wide drawer base must be provided in all kitchens.
- F. A NA *Ranges shall not abut a wall or other appliance. A minimum of 12" of base cabinet/counter space must be provided between the range and wall or range and other appliance.*
- G. A NA Refrigerators must be provided with all units except SROs with common cooking facilities. All refrigerators must be frost-free and must have 2 doors (separate doors

for freezers and refrigerator compartments). **Minimum sizes: Eff-10.0 cu. ft., 1 BR – 13.0 cu. ft., 2 BR – 15 cu. Ft., 3 BR – 15.0 c. ft. and 4BR – 17.0 cu. ft.**

- H. A NA In General Occupancy units with 2 or more bedrooms, double sinks are required unless dishwashers are provided.
- I. A NA *A minimum of 12" of base cabinet/counter space must be provided between the sink and wall or sink and another appliance.*
- J. A NA Where dishwashers are supplied *in General Occupancy units*, they must be 24" wide, full size, under counter type.

Note: No open shelving or cabinets will be permitted.

12. Flooring: Where carpet, sheet vinyl, VCT or laminate flooring is used, the floor/ceiling assembly must comply with sound rating requirements found in this Section.

- A. A NA Carpet must meet the acceptance criterion of Federal Standard DOCF1-70 for flammability or Class II, 0.22watts/cm² per the International Building Code, whichever is greater. Carpeting in units must be a minimum of 24 oz. goods and in public spaces, a minimum of 28 oz. goods. Parquet, hardwood, tile, or equal quality flooring may be substituted where sound transmission is not a factor.
- B. A NA Where provided, carpet padding must be a minimum of Class 2, 8.5 lb./cu. ft. (32 oz./sq. yd.) density goods meeting HUD UM-72 requirements.
- C. A NA Where carpet is provided in accessible Units, direct glued down carpet must be used.
- D. A NA Carpeting is recommended throughout the apartments with the exception of utility closets, laundry areas, bathrooms, kitchens, and entrance foyers where entry is directly from the outside (e.g. as in townhouses). Hard surface flooring may be substituted for carpet if documentation, which verifies that sound transmission ratings and impact isolation ratings will be met, is provided.
- E. A NA Sheet vinyl must be full spread adhesive installation, using maximum width possible to avoid seams.
- F. A NA Bathroom floor finish must be ceramic tile or sheet vinyl. Vinyl composition tile (VCT) is not acceptable.
- G. A NA Luxury Vinyl Tile (LVT) is permitted in bathrooms, only if the manufacturer's documentation specifically indicates the product is permitted in bathrooms and is provided in the specifications.

13. Furnishings:

- A. A NA All windows, half-lite (minimum) entrance doors, sliding glass door and patio doors within habitable spaces must be equipped with blocking for a curtain rod and horizontal blinds, vertical blinds, or other opaque blinds. (High quality commercial grade roller shades are permitted at large expanses of glass).
- B. A NA Community spaces must be furnished with blocking for a curtain rod and horizontal blinds, vertical blinds, or other opaque blinds. (High quality commercial grade roller shades are permitted at large expanses of glass).

14. Signage:

- A. A NA A building or development identification sign must be provided in a highly visible location (may be freestanding or attached to the building). The sign must contain the development name, development phone number, TTY number, the equal opportunity logo, and the accessible housing logo.
- B. A NA All dwelling units with exterior entrances shall have street address/unit number identification, 3" minimum in height.
- C. A NA All permanent interior signage, including individual apartment identification, must comply with ADA, UFAS and ANSI A117.1-2009 (or edition currently adopted by PA UCC) requirements.

- D. **NA** A floor identification sign shall be provided outside the elevator doors on each floor.
- E. **NA** Room identification signs must be provided for all community, management, maintenance, and public spaces.

- 15. Closets and Storage:** The space (SF) created by closets deeper than 24" but less than 48" will not count towards the required minimum square feet if the closet has full height hanging space or shelves.
- A. **NA** All closets must have doors that fully conceal the contents of the closet.
 - B. **NA** Closet door widths shall be sized to offer maximum access to the closet interior. The closet interior shall not extend more than 12" on each side of the door opening.
 - C. **NA** All closet shelves and rods 4'-0" or longer must be provided with center supports. Closets in accessible units must have shelves and rods mounted within the accessible reach range in accordance with the ADA Guidelines.
 - D. **NA** Pantry storage must be provided and must be concealed (2 lineal feet minimum x 18" minimum depth closet or an 18" minimum width pantry cabinet is acceptable).
 - E. **NA** Linen storage must be provided and must be concealed (2 lineal feet minimum x 18" minimum depth closet, separate from a bedroom or coat closet or an 18" minimum width linen cabinet is acceptable).
 - F. **NA** An entry closet must be provided (2 lineal feet minimum x 24" minimum depth).
 - G. **NA** All units must have a minimum of 3' lineal of miscellaneous storage space.*
 - H. **NA** A minimum of 5 lineal feet of full height hanging space must be provided in each primary bedroom within a unit.
 - J. **NA** A minimum of 3' lineal feet of full height hanging space must be provided in each additional bedroom within a unit.
 - K. **NA** General occupancy (family) units with 2 or more bedrooms must have an additional, separate 9 SF of storage space inside or outside of the unit in a basement or *permanent exterior storage closet. Outdoor resin, or similar material, storage units are not permitted.*
 - L. **NA** SRO's must provide adequate closet or wardrobe cabinet for clothes storage.

Note: Stackable type storage, located in common storage facilities, is not permitted in Elderly (55+ or 62+) developments.

* Calculation of storage space shall be floor area only and not calculated by individual shelves or shelf/rod.

- 16. Blocking:** Provide concealed 1½" thick wood blocking at the following locations:
- A. **NA** All wall mounted accessories (curtains, blinds, towel bars, toilet accessories).
 - B. **NA** Grab bars – Blocking for installed or future grab bars shall be continuous behind the bar location. Where small grab bars are installed for Visitability or Fair Housing Act conformance, the blocking shall be sized to accommodate the grab bars required by ANSI A117.1-2009 (or edition currently adopted by PA UCC).
- 17. Laundry Facilities:** Single unit, combination washers/dryers are not acceptable in any unit. Stackable washers and dryers will not be allowed in accessible units. In developments with shared facilities, the laundry shall be located in a separate room and not be shared with a Community Room or other common area.
- A. **NA** Central laundry facilities must be provided unless individual washers and dryers are provided in each unit. For developments consisting of numerous buildings, several small facilities may be provided in lieu of one facility.

- B. A NA If central facilities are provided, at least one washer and one dryer must be provided for every 12 units in general occupancy developments or every 20 units in elderly developments, with a minimum of 2 washers and 2 dryers required in each facility.
- C. A NA A minimum of 1 front loading washer and dryer must be provided in each common laundry facility and in accessible units with laundry facilities.
- D. A NA If central facilities are provided in developments that will convert to homeownership, washer and dryer hookups must be provided within the dwelling Unit.
- E. A NA Washer and dryer areas located within a unit must be concealed unless located in a basement.
- F. A NA Stackable washers and dryers may be used in units with 2 or less bedrooms. Large capacity side by side washers and dryers must be provided in units with 3 or more bedrooms.
- G. A NA A built in sorting counter, hanging rod or space for a table and portable hanger must be provided as well as space for chairs in all common laundry facilities.
- H. A NA The equipment may be coin operated type leased from a concessionaire. *Energy Star rated equipment is required, when available.*

18. Development Facilities and Maintenance:

- A. A NA A minimum of 120 SF of maintenance space for storage of building and ground maintenance equipment, tools and supplies, and a workshop must be provided. Note that where hazardous materials such as gasoline are stored, special precautions must be taken.

19. Natural Light and Ventilation:

- A. A NA Must be provided in all living rooms and bedrooms. Skylights are not acceptable as the only source of light and ventilation in a room.
- B. A NA At least one window per room must be ventilating type window with a full screen for the operable portion of the window.
- C. A NA Below grade units must have windowsill heights at a maximum of 4'-6" above floor level. Grade level cannot be higher than 4'-0" above floor level. Area wells/window wells are permitted only in Rehab Developments with PHFA approval.

20. Interior Finishes:

- A. A NA A semi-gloss, eggshell or equivalent high quality washable latex paint must be specified for all kitchens and bathrooms in dwelling units and all restrooms, stairs, corridors, and vestibules in public or common areas, unless a protective wall covering is provided.
- B. A NA Semi-gloss or high-gloss enamel must be specified for laundry, maintenance, storage, and utility rooms in common areas.
- C. A NA A level 4 minimum drywall finish must be installed.

21. Parking and Sidewalks:

- A. A NA The parking ratio must be in conformance with the local zoning ordinance unless a variance is obtained.
- B. A NA A minimum of 5% of the total number of parking spaces must meet the latest accessibility standards. If parking spaces are provided for each unit, accessible spaces must be provided for each accessible unit. If parking spaces are provided at a ratio of less than one space per unit, accessible spaces at a minimum shall be provided at the same ratio.
- C. A NA A minimum of 1 accessible parking space must be provided for visitors and must be able to accommodate a van.

- D. A NA A minimum of (1) accessible parking space must be provided near the Community Building/Management Office and must be able to accommodate a van.
- E. A NA All driveways, streets and parking lots must be paved.
- F. A NA In municipalities without a zoning ordinance or parking regulations, a minimum of 1 parking space per dwelling unit plus 1 space per employee and 2 accessible guest spaces must be provided.
- G. A NA Pedestrian sidewalks must be cast in place concrete, minimum 4" thick over 4" minimum clean 2B stone base. Bituminous sidewalks are not permitted.
- H. A NA Accessible parking spaces and sidewalks that are part of the accessible route shall have their slope noted in percent.

22. Outdoor Recreational Facilities: Should be considered if none exists in close proximity to the development site. List the recreation equipment planned for the development below:

- A. _____
- B. _____
- C. _____

23. Materials for Outdoor Furnishings, Equipment and Recreational Structures:

- A. Benches, tables, chairs and play equipment and structures must be of the following materials or combinations thereof:
 - 1. A NA Wood must be decay resistant species, pressure treated (labeled in accordance with the applicable AWPB Standard), vacuum and non-pressured treated (conforming to NWMA-IS-A and bearing the NWMA Seal of Approval) or a minimum of 2 coats of high quality exterior grade sealer, stain or paint must be applied on all sides, edges and be free of objectionable splinters, checks, shakes, warping, loose knots, decay, and stains.
 - 2. A NA Concrete must be precast reinforced concrete, sealed with a minimum of 2 coats of acrylic sealer. If color is specified, it must be cast integrally.
 - 3. A NA Metals must be anodized aluminum or galvanized steel.
 - 4. A NA Fiberglass must be "super strength" fiberglass. Lightweight fiberglass is not permitted.

24. Lawn Seeding: Loose seed shall only be permitted to patch small utility excavation, etc. All other seeding shall be one of the following:

- A. A NA Hydro seed – Contractor shall be responsible for watering, feeding, and mowing until mature growth is established.
- B. A NA Sod – Contractor shall be responsible for watering and feeding for 3 months after installation.

25. Waste Disposal: (Check applicable systems)

- A. A NA Garbage disposals are recommended where wet garbage presents sanitation problems. Disposals are required in mid- or high-rise buildings if trash chutes and compactors are not provided.
- B. A NA Trash room(s) – All trash rooms must contain a hose bib and floor drain and have a durable water-resistant floor finish.
- C. A NA Trash compactor.
- D. A NA Dumpster(s). Outdoor collection areas must have concrete pads and be visually screened, (e.g. evergreen hedges or shrubs, masonry, pressure treated wood or vinyl fence enclosures). The type of collection service must be determined in advance of design in order to establish the correct size and number of areas and the required service vehicle access and clearance. A minimum 6" thick, reinforced structural concrete pad (approximately 10' x width of dumpster enclosure) must be provided

in front of the collection area to prevent pavement damage by the garbage trucks for dumpster type collection.

- E. **A** **NA** Outdoor trash collection areas, with multiple resident unit trash containers, must have concrete pads, be visually screened (masonry, pressure treated wood or vinyl fence enclosures) from public view and have concrete sidewalk access from the collection area to each dwelling unit and/or public collection area (street).
- F. **A** **NA** Recycling provisions – The size, number and design of collection area(s) must conform to the requirements of the Local recycling ordinance.
26. **A** **NA** **Fire Extinguishers** – Provide a minimum of one 5-pound, 2A-10B-C rated fire extinguisher in all units with a range or cook top. Other fire extinguishers must be provided for the development as required by code. Fire extinguishers cannot be mounted under the sink in accessible units or under the sink in the community room kitchen. If mounted in a closet, it must be located so that the closet contents cannot obstruct the view of or access to the extinguisher.
27. **A** **NA** **Basements** – Must have 4” concrete floors with vapor barriers over 4” clean stone base.
28. **A** **NA** **Termite Infestation** – Measures must be taken to protect the building from termite infestation. Termite shields or borate-based wood treatment shall be provided with low VOC caulking at all floor joints and penetrations to prevent insect infestation. Borate treatment shall be applied to all wood framing and sheathing to a height of 24” above the “at grade” floor level. Chemical soil treatment or bait stations shall not be used. (Not applicable to existing buildings).
29. **A** **NA** **Environmental Remediation Requirements** – The Architect must indicate in the Contract Documents any environmental remediation work to be performed on the site. This must be shown as part of the Scope of work described in the Contract Documents. This is required to identify that remediation work needs to be done, so the proper officials will be made aware of the need to certify the work was properly performed. In the case where the environmental remediation work is not part of the Scope of Work, it must be clearly noted in order to place the responsibility on the party responsible for the work.
30. **Sound Transmission:**
- | | <u>Location</u> | <u>IIC*</u> | <u>STC**</u> |
|---|------------------|-------------|--------------|
| <input type="checkbox"/> A <input type="checkbox"/> NA <input type="checkbox"/> | Partitions | NA | 50(55)*** |
| <input type="checkbox"/> A <input type="checkbox"/> NA <input type="checkbox"/> | Flooring/Ceiling | 50(55)*** | 50(55)*** |
- * **Impact Isolation Class** for floor/ceiling assemblies separating living units from other living units and from public spaces and service areas with moderate noise levels.
- ** **Sound Transmission Class** for partitions separating living units from other living units and from public spaces and service areas with moderate noise levels.
- *** **(55)** represents the IIC and STC Class for separations between living units and high noise areas (e.g. mechanical, emergency generator and trash compactor rooms, elevator, trash chases and chutes, laundry, and maintenance areas, etc.).
31. **A** **NA** **Substrates** – Ceramic tile or EIFS (Dryvit) interior or exterior finished shall only be installed over cementitious or masonry substrates. Moisture-resistant gypsum board is NOT allowed.
32. **A** **NA** **Ice Dam Protection** – A self-adhesive membrane underlayment shall be installed at all roof eaves and valleys. At eaves, membrane shall extend up roof for a horizontal distance of 24” from interior face of outside wall.

34. A NA **Reroofing** – All reroofing applications must include the removal of the existing roofing system down to the roof deck.
35. **Elderly (55+/62+) Facilities Amenities:** Required physical and design accommodation features and amenities:
- A. A NA Handrails on both sides of common area corridors. Handrail ends must return to the wall.
- B. A NA *In 1 Bedroom and 2 Bedroom Elderly Units, an 18" wide dishwasher is permitted.*
- C. A NA *In lieu of tub/shower combination units, low profile threshold showers shall be provided in a minimum of 25% of all ANSI A117.1-2009 Type "B" Dwelling Units, Showers are encouraged in 100% of units, to allow for aging in place.*

Note: Under cabinet lighting should be considered in all Unit kitchens in Elderly developments.

36. **PHFA Supplemental Accessibility Requirements:**

1. **Common Areas Designed for Mobility Impairments**

- A. A NA A full width kick plate must be provided on both sides of all exterior doors, all accessible unit entrance doors and all common area doors that permit tenant access.
- B. A NA Wall corner guards (textured vinyl 1-1/2" x 1-1/2" minimum) must be provided at all outside wall corners in all common areas.
- C. A NA Ranges in common Kitchens or Kitchenettes must be self-cleaning type.
- D. A NA All developments must be designed with a minimum of 5% accessible units and an additional minimum of 2% hearing/vision impaired units.

2. **Accessible Dwelling Units** - All accessible units shall conform to the requirements for ICC/ANSI A117.1-2009 (or edition currently adopted by PA UCC) "Type A Units". For developments with federal funding and subject to the Uniform Federal Accessibility Standards (UFAS), note that HUD allows conformance with the 2010 ADA in lieu of UFAS, with a few limitations. In addition, the following PHFA provisions are required:

- A. A NA A full width kick plate must be provided on both sides of all accessible Unit entrance doors, interior doors that permit passage and on one side of all other doors.
- B. A NA Wall corner guards (textured, vinyl 1½" x 1½" minimum) must be provided at all outside wall corners within accessible units.
- C. A NA Grab bars must be installed at all required locations.
- D. A NA A minimum of 50% of the accessible units shall include a bathroom with an accessible shower (not applicable to dwelling units in general occupancy developments with only one bathing fixture). The remaining accessible units shall have an accessible tub/shower. Accessible showers shall have a curb height of ½". The shower shall include a built-in folding seat, shower controls and an adjustable height hand-held shower head within reach of the seat and a collapsible dam at the shower entrance. All bathrooms with ½" curbed showers shall have a floor drain provided in the bathroom floor outside of the shower. Trench drains will not be permitted. A removable seat shall be provided in all accessible tub/showers. **Elderly developments are encouraged to provide accessible showers in 100% of the Units.**
- E. A NA Shower heads and mirrors in accessible units shall be mounted to permit use by those with mobility impairments and those without.
- F. A NA Due to the requirement for knee space beneath the sink and work counter in accessible kitchens and the lavatory in accessible baths and the minimal

- F. A NA Due to the requirement for knee space beneath the sink and work counter in accessible kitchens and the lavatory in accessible baths and the minimal accessibility of wall cabinets, pantry and linen cabinets or closets must be provided in accessible units.
- G. A NA Removable kitchen and bath base cabinets may be installed at the areas requiring knee space. These cabinets must be removable without disconnection of any plumbing lines. The walls, floor and sides of adjacent cabinets must be finished, and wall base installed during the initial construction.
- H. A NA Refrigerators should be located to allow doors to open 180°.
- I. A NA Ranges must be self-cleaning type.
- J. A NA A 30" work surface with knee space (or removable cabinet) beneath must be provided beside the oven in all accessible kitchens.
- K. A NA Knee and leg protection must be provided at all exposed plumbing beneath accessible kitchen sinks and lavatories, even if removable cabinets are installed.
- L. A NA An accessible route must be provided to all spaces and elements in an accessible unit, in accordance with ANSI A117.1-2009 (or edition currently adopted by PA UCC), Section 1003.3. Accessible bedrooms must have a minimum 30" access aisle on both sides and at the foot of the bed. The primary bedroom must accommodate a queen size bed. All other bedrooms must accommodate a twin bed.
- M. A NA At the exterior entrance to an accessible, adaptable, or VISIBLE unit, minimum 30" overhang or porch roof is required to protect the entrance door from rain and snow.
- N. A NA The accessible dwelling units must be distributed throughout the building(s) and site in a sufficient range of sizes and amenities to allow a choice of living arrangements for persons with disabilities, generally comparable to that of other persons.
- P. A NA *All Accessible dwelling Units must include audible and visual signaling devices for hearing/vision impaired. Refer to Section 2.07 Electrical Requirements Checklist.*

37. A NA **Broadband Infrastructure** – Refer to Tab 8 Threshold Criteria and as amended by Tab 8 Selection Criteria.

38. Energy Efficiency:

- A. A NA All roof trusses with insulation located along the bottom chord shall be "energy" or "raised heel" trusses which allow for full depth (uncompressed) insulation to extend to the exterior face of the insulation.
- B. A NA Interior wall insulation at all below grade walls shall be foil-faced rigid foam insulation board rated for an exposed installation (in storage or mechanical rooms), or rigid foam insulation board covered with a code approved material (in all finished areas). All joints in the insulation board shall be air sealed. Fiberglass or cellulose insulation will not be allowed.
- C. A NA Rim joists that are not insulated on the exterior shall be air sealed and insulated with unfaced rigid foam insulation with edges sealed with closed cell spray foam insulation or entirely with closed cell spray foam insulation.
- D. A NA The foundation insulation at all slab-on-grade construction shall begin at the top of the slab and extend the code required depth below grade. The top of the insulation

may be beveled at 45-degree angle per the International Energy Conservation Code.

39. Radon-Refer to Section 1.21

A **NA** Sub-slab depressurization system.

A **NA** Common house (non-tenant) power source in close proximity to vents for installation of fans, if required.

A **NA** An Indicator, signifying the fan is in operation, must be visible in a common area.

40. **A **NA** The Architect has reviewed the Design Architect's Certifications for Threshold and Selection Criteria submitted in the loan application and hereby confirms that he/she has incorporated all certified amenities into the Contract Documents and that the checklists have been included on the drawings.**

2.05 DEVELOPMENT SECURITY AND MAINTENANCE REQUIREMENTS

CHECKLIST FOR URBAN LOCATIONS

Development Name: _____ PHFA No.: _____

The undersigned certifies that all items have been provided in the drawings and/or the specifications.

Design Architect (Print or type): _____

Design Architect (Signature): _____

Date: _____

Check the appropriate box if the development conforms to the requirement. Check A if it is applicable or NA if it is not applicable. A waiver request must be submitted for any items that are neither checked nor indicated as not applicable.

1. **A** **NA** All developments with shared entrances (low, mid, and high rise and garden apartments) must be equipped with an apartment intercom system or equivalent security system at the main entrance(s) used by tenants and the public on a regular basis. The intercom system must not rely on a connection to the telephone service. Hearing and vision impaired units must have facilities for residents to identify and allow visitors to enter the building without having to leave their units.
2. **A** **NA** All dwelling unit entrance doors must be equipped with a passage latch set, dead bolt lockset, knocker, viewer, and an apartment/unit identification number.
3. **A** **NA** As much as possible, the building(s) must be oriented on the site so that all parts of the site can be observed from the building(s) and from the surrounding streets. Avoid blind corners and courtyards unless they can be secured.
4. **A** **NA** Place all meters so that they are protected from vandalism and can be read from outside the building.
5. **A** **NA** For family type developments, fence in recreational and landscaped areas with decorative security fencing with factory applied color finish of appropriate height to prevent trespassing and vandalism. Cyclone or equal fencing with a factory applied color finish of appropriate height may be used at selective secondary areas only with PHFA approval.
6. **A** **NA** Provide "Door Ajar" alarms or, where approved by code, electromagnetic release devices for secondary or fire exit doors.
7. **A** **NA** Where practicable, provide decorative code approved security grilles or screens for basement and first floor windows with sills less than 60" above exterior finished grade.
8. **A** **NA** Avoid through wall penetrations, (e.g., removable AC units, exhaust grilles, etc.), unless small enough to prevent entry and placed a minimum of 60" above exterior finished grade.
9. **A** **NA** Masonry or equal exteriors are recommended. At a minimum, the first 8' above grade should be masonry or equivalent strength material with "Anti-Graffiti" coating.
10. **A** **NA** Minimize front and side yard setbacks facing public rights-of-way as much as possible and to the extent allowable by code and zoning.
11. **A** **NA** Provide hard surfaces for all areas where landscaping is unlikely to survive, (e.g., brick or other decorative paving for building setbacks and walks or steppingstones in areas subject to foot traffic).

2.06 MECHANICAL REQUIREMENTS CHECKLIST

Development Name: _____ PHFA No.: _____

The undersigned certifies that all items have been provided in the drawings and/or the specifications.

Design Architect (Print or type): _____

Design Architect/*Engineer* (Signature): _____

Date: _____

Check the appropriate box if the development conforms to the requirement. Check **A** if it is applicable or **NA** if it is not applicable. A waiver request must be submitted for any items that are neither checked nor indicated as not applicable.

The Design Development requirements for Preservation Developments will be reviewed on an individual development basis, but the below listed requirements will apply to the greatest extent possible.

Contract Documents must be complete and enforceable by the Architect/Engineer and the Agency's Field Representative.

1. **A** **NA** **Shower/Tub Combinations** – Every bathtub must be furnished with shower fittings. All tubs and showers must have an anti-scald valve. Baths with accessible showers must include a drain in the bathroom floor in addition to the shower. Single piece tub/shower units must not be installed directly to studs on exterior walls but must be installed over taped gypsum wallboard to eliminate air infiltration.
2. **A** **NA** **Water Usage** – Plumbing fixtures in dwelling units and common areas shall meet the following water usage rates or as amended by the selection of any Green Building Program or any Energy Efficiency Program:

Toilets – 1.28 gpf
Urinals – 0.5 gpf
Showerheads – 2.0 gpm
Kitchen faucets – 2.0 gpm
Lavatory faucets – 1.5 gpm
3. **A** **NA** **Exposed Piping and Conduit** – Exposed refrigerant, power, and control wiring from building to the remote condensing unit must be protected. Piping must be bundled and covered with PVC split insulation jacket with cemented joints.
4. **A** **NA** **Kitchen Exhaust** – Must be provided with a combination fan and light range hood and must be controlled by a separate switch and be ducted to the exterior (recirculating type range hoods may remain in preservation developments and may be used in developments utilizing an ERV or HRV system with an exhaust grille in the kitchen).
5. **A** **NA** **Gas Furnaces** – All gas furnaces shall be Energy Star labeled.
6. **Ventilation** – Requirements of the International Building Code shall be followed for ventilation of the following areas:
 - A. **A** **NA** Elevator machine rooms.
 - B. **A** **NA** Trash rooms.
 - C. **A** **NA** Laundry rooms.
 - D. **A** **NA** Mechanical and Electrical rooms.
 - E. **A** **NA** Corridors.

7. Air Conditioning Requirements (Mechanical Cooling):

- A. NA The living areas and bedrooms of all dwelling units in new construction, substantial rehabilitation and Preservation developments must be air conditioned. Window air conditioners will not be considered as meeting this criterion, except in Preservation developments (unless Code does not permit this arrangement).
- B. NA In new construction, substantial rehabilitation and Preservation developments, all common areas must be air conditioned, except for stair towers, mechanical and storage areas.
8. NA **Compressor Warranty** – A minimum 5-year compressor and refrigeration circuit warranty is required on all developments for all refrigeration (mechanical cooling) units. This includes through-the-wall equipment, split systems, and central systems.
9. NA **Chemical Feeders** – A one shot type, 2-quart minimum capacity chemical feeder must be installed on all developments utilizing central hot and/or chilled water piping systems.
10. NA **Utility Metering** – To discourage the waste of energy and to encourage conservation, PHFA suggests individual gas metering whenever possible. Gas bulk metering may be provided if the rate schedule justifies its use. Water metering may be bulk and/or individual metering as required by the Local utility company.
11. NA **Clothes Dryers** – Exhaust ductwork must be rigid duct with accessible cleanouts to vacuum clean entire duct system.
12. NA **Water Coolers** – If provided, water coolers must be dual height type with standard and accessible height spouts.
13. NA **Accessible Units** – Insulate or otherwise protect the hot, cold and drain piping exposed below the kitchen sink and bathroom lavatories.
14. NA **Sprinkler System** – All group R-2 buildings and townhouses must be provided with an automatic fire suppression system throughout all buildings and structures in accordance with the PA UCC and the International Building Code as applies. All sprinkler/water rooms must be heated.
15. **A** **NA** ***Fire Protection Plans*** – *Wet pipes are not permitted in unconditioned spaces. Plans must be provided showing the approximate locations of sprinkler heads and must specify the system type (wet or dry) on each floor.*
16. NA **Pipe and Duct Locations** – All water piping and heating/cooling ductwork must be located within the conditioned space, (i.e., on dwelling unit side of the air barrier on the interior of the exterior wall and roof/ceiling assemblies).
17. NA **Water Heaters** – All water heaters must have a drip pan connected through a trap to a waste line. Minimum capacity water heaters must be provided as follows:
- 3 BR units and above – 50 gal.
 - 2 BR units – 40 gal.
 - 1 BR units – 30 gal.
 - Efficiency units – 30 gal.
 - Elderly units – 30 gal.
18. NA **Central Domestic Hot Water Systems** – All central hot water piping systems shall include a pumped return to prevent bio-hazard growth.
19. NA **Domestic Water Plumbing Systems Using PEX or Other Cross-linked Polyethylene Piping** – Shall be installed with manifolds in each individual dwelling unit *in a wall or in a closet for ease of access*. The manifolds shall be accessible by means of an access panel or door.

each plumbing fixture shall be a single length of continuous polyethylene cross-linked pipe (no joints are allowed).

20. A NA **Pipe Insulation** – All hot and cold-water piping, except for cold water PEX piping, shall be insulated.
- Insulation on hot or cold PEX piping is not required within an apartment unit, unless it is required to obtain certifications under the various Green Building or Energy Programs. Provide additional PEX insulation if required by local code.
 - PEX piping only (Unitized tank water heater systems): Insulate hot water lines from the water heater, including valving, to the manifolds. The insulation will stop at the manifold.
 - PEX piping only (Central systems): Insulate from the apartment shut-off valve, including the valve and/or to the manifold, whichever occurs last in the stream, and any re-circulating piping and/or check-valve.
21. **Grilles, Registers and Diffusers, Single Point Exhaust Fans**
- A. A NA **Return Register** – In multi-level units, a return grille is required on each level, as prescribed in the 2006/2009 IRC through ACCA Manual D. This shall also apply to all PHFA multi-level units constructed under the IBC. The return air duct may be a plenum type as permitted by code and all applicable fire codes must be satisfied.
- B. A NA All wall or ceiling mounted Grilles, Registers, and Diffusers must be secured to separate metal frame / flange or other hard blocking and NOT solely to the gypsum wall board, or similar finish material. A detail will be shown on the drawings for this installation. Inclusive will be all necessary air sealing of the frame /flange to the outlet duct.
- C. A NA Single point exhaust fans, e.g., bathroom fans or similar, [housings] will be secured to the building structure and not to the wallboard or similar finish material. Fan exhaust grilles will fit flush to the finish surface without the use of non-manufacturer supplied gaskets or sealants.
22. **Air Conditioning Requirements (Mechanical Cooling):**
- A. A NA **Sealing** – All duct joints and seams shall be sealed with mastic or similar product as listed in SMACNA Manual N.
- B. A NA **Hangers** – Duct hangars shall not include fasteners that penetrate the duct.
- C. A NA **Equipment Servicing** – In mechanical rooms or closets containing multiple pieces of equipment, it must be possible to service and replace each piece of equipment without removing any other equipment.
- D. A NA **Electric Resistance Heat** – An HVAC system utilizing electric resistance heating as the primary heat source shall not be allowed in PHFA developments.
- E. A NA **Exposed Plumbing** – All plumbing lines must be concealed except in mechanical rooms and unfinished basements only.
- F. A NA **Shut-off Valves** – Shut-off valves must be installed at the main water line(s) where they enter the unit and on each line at all plumbing fixtures, including the water heater.
- G. A NA If central facilities are provided in developments that will convert to homeownership, washer and dryer hookups must be provided within the dwelling Unit.

Note: Abandoned equipment in existing buildings will not be permitted and must be removed from the Site.

Note: All utilities must be individually metered in units designated for conversion to homeownership.

2.07 ELECTRICAL REQUIREMENTS CHECKLIST

Development Name: _____ PHFA No.: _____

The undersigned certifies that all items have been provided in the drawings and/or the specifications.

Design Architect (Print or type): _____

Design Architect/*Engineer* (Signature): _____

Date: _____

Check the appropriate box if the development conforms to the requirement. Check **A** if it is applicable or **NA** if it is not applicable. A waiver request must be submitted for any items that are neither checked nor indicated as not applicable.

The Design Development requirements for Preservation Developments will be reviewed on an individual development basis, but the below listed requirements will apply to the greatest extent possible.

1. **A** **NA** **Electrical Systems and Equipment** – Must be designed and constructed in accordance with the International Residential Code or NFPA 70 National Electrical Code as applies.
2. **Site Lighting**
 - A. **A** **NA** Lighting fixtures must be shatter resistant and tamperproof. Lamps must be high efficiency design, low energy type (e.g. L.E.D. or other low energy source. Provide .5 fc minimum).
 - B. **A** **NA** Provide for day/night on-off control via timers and/or photo-control. Local luminaire control is acceptable.
 - C. **A** **NA** Site lighting and its ancillary install requirements must be inclusive in the within the closing development cost.
3. **A** **NA** **Utility Metering** – To discourage the waste of energy and to encourage conservation, PHFA suggests individual electrical metering whenever possible. Electric bulk metering may be provided if the rate schedule justifies its use.
4. **Smoke Detectors** – Must be furnished and installed in the following areas:
 - A. **A** **NA** In the areas adjacent to the sleeping area, one in each bedroom and a minimum of one detector on each floor including the basement in multistory dwellings. Detectors must be 120-volt AC type with battery backup. Detectors are required whether the dwelling units are sprinklered or not.
 - B. **A** **NA** Hearing/vision impaired units must have strobe/horn type visual signaling devices wired to the unit's smoke detectors and the building fire alarm system (if provided) and must be visible in all rooms of the dwelling unit including the bathroom(s).
 - C. **A** **NA** **Public areas** – In all public areas sprinklered or not.
 - D. **A** **NA** **Storage room(s)** – In all unsprinklered storage rooms; in all storage rooms in excess of 100 SF, sprinklered or not.
 - E. **A** **NA** **Mechanical and electrical rooms** – All mechanical and electrical rooms must have a smoke or heat detector, sprinklered or not. Mechanical closets in individual units are not required to have detectors unless required by code.
 - F. **A** **NA** **Stair towers** – At the top of each stair tower.
 - G. **A** **NA** **Trash room** – In the trash collecting room and at the top of the trash chute.

- H. A NA **Corridors** – At the ends of each corridor leading into stair towers or dead ended. Corridor coverage shall comply with the latest edition of the International Building Code or NFPA 72, The National Fire Alarm Code.
- I. A NA **Heat Detectors** – Developments located in the City of Philadelphia may have additional requirements. Check with the City Code Administrator for details.
5. A NA **Elevators** – Where an elevator is provided, PHFA recommends but does not require, that at least one be connected to an auxiliary/emergency generator power system.
6. A NA **Electrical Panel Boxes** – In accessible and adaptable units, tenant electrical panels shall be mounted with the top breaker within the accessible reach range.
7. A NA **Accessibility Requirements** – The electrical design must include the necessary features discussed in Section 1.02.
8. A NA **Telephone & TV Cable Service** – Every building and every unit shall be pre-wired for telephone and TV cable service.
9. A NA **Electric Resistance Heat** – Electrical resistance heating shall not be allowed as the primary heat source in PHFA developments.
10. A NA **Carbon Monoxide Detectors** – A carbon monoxide detector or central detector/alarm system must be installed in all dwelling units and multifamily buildings with fossil fuel fired equipment as required by the PA Uniform Construction Code, the National Electric Code, The Pennsylvania Carbon Monoxide Alarm Standards Act of 2013 and the City of Philadelphia Carbon Monoxide Alarm Law of 2008.
11. A NA **Broadband Infrastructure** – Refer to Tab 8 Threshold Criteria and as amended by TAB 8 Selection Criteria.
12. A NA **Hearing and Vision Impaired Dwelling Units**
 All Accessible dwelling Units must include audible and visual signaling devices for hearing/vision impaired.
 All designated Hearing/Vision Impaired dwelling Units must be accessible by persons with a hearing or vision impairment. These units shall not be equipped for persons with mobility impairments, but must include the following at a minimum:
- Strobic visual signal wired to the dwelling unit smoke detectors, visible in all rooms of the dwelling unit including the bathroom.
 - Strobic visual signal wired to the central fire alarm system (if one is required by code), visible in all rooms of the dwelling unit including the bathroom. This signal must be distinguishable from that in paragraph “A” above.
 - A doorbell at the dwelling exterior or corridor entrance door with a visual signaling device.
 - TTY capable telephone to be provided by tenant.
 - In buildings with a common entrance, a means for a hearing-impaired individual to identify visitors without leaving his/her dwelling unit.
13. **Radon-Refer to Section 1.21**
- A NA Common house (non-tenant) power source in close proximity to vents for installation of fans (if required).
- A NA An Indicator, signifying the fan is in operation, must be visible in a common area.

Note: All utilities must be individually metered in units designated for conversion to homeownership.

2.08 HUD SURVEYOR'S REPORT

HUD Survey Instructions and Surveyor's Report

U.S. Department of Housing
and Urban Development
Office of Housing

OMB Approval No. 2502-0598
(Exp. 9/30/2021)

Public Reporting Burden for this collection of information is estimated to average 0.5 hour per response, including the time for reviewing instructions, searching existing data sources, gathering, and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Reports Management Officer, Office of Information Policies and Systems, U.S. Department of Housing and Urban Development, Washington, DC 20410-3600 and to the Office of Management and Budget, Paperwork Reduction Project (2502-0468), Washington, DC 20503. Do not send this completed form to either of the above addresses.

Warning: Federal law provides that anyone who knowingly or willfully submits (or causes to submit) a document containing any false, fictitious, misleading, or fraudulent statement/certification or entry may be criminally prosecuted and may incur civil administrative liability. Penalties upon conviction can include a fine and imprisonment, as provided pursuant to applicable law, which includes, but is not limited to, 18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802, 24 C.F.R. Parts 25, 28 and 30, and 2 C.F.R. Parts 180 and 2424.

Standards of Performance: for all surveys contracted for or updated after February 23, 2021: In every instance the survey and survey plat(s) and/or map(s) must be made in accordance with the requirements for an "ALTA/NSPS Land Title Survey" and in compliance with the:

- A. 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adapted by the American Land Title Association and the National Society of Professional Surveyors.
- Table A, Optional Survey Responsibilities and Specifications, thereof, items 1, 2, 3, 4, 6a, 6b, 7a, 8, 9, 10, 11a, 11b, 12, 13, 16, 17, and 18.
- B. And the following requirements as applicable:
1. **Wetland Delineation Involved:** Optional Item 20 of Table A must be amended as follows: "If there has been a field delineation of wetlands conducted by a qualified specialist hired by the client, the surveyor must locate any delineation markers observed in the process of conducting the fieldwork and show them on the face of the plat or map. If no markers were observed, the surveyor must so state."
 2. **Site Grading Involved:** Comply with table A, item 5. Contours may not exceed 1-foot vertical intervals, except that 2-foot and 5-foot vertical intervals may be used where the mean site gradient exceeds 5 percent and 10 percent respectively. Where curbs and/or gutters exist, show top of curb and flow line elevations.
 3. **Plot Plan Design/Redesign Involved:** Comply with Table A, Item 6.
 0. **Condominium/Air-rights Involved:** The surveyor must provide a survey made in accordance with any Property Jurisdiction requirements or, in the absence of such requirements, professionally recognized standards.
 1. **Flood Hazard Involved:** Where any portion of the site is subject to flood hazard, show the 100-year return frequency flood hazard elevation and flood zone for all projects plus the 500 year return frequency flood hazard elevation and flood zone for Section 811 housing program. For existing projects show the site elevation at the building entrances, lowest habitable finished floor, and basement for each primary building, and the vehicular parking area that serves each primary building. Take return frequency flood hazard elevations from the applicable Federal Flood Insurance Rate Map. Where such is not available, take the elevations from available state or local equivalent data, or when not available, work in conjunction with owner's engineer.
 2. **Blanket Easement Involved:** Show on the map/plat the location of any facility that is located within or traverses the property under provisions of a blanket easement.

Additional Owner Requirements: The following requirements are not intended to void any other part of this instruction.

Certification: The survey map/plat must bear the ALTA/NSPS Certification:

"To (name of insured, if known), (name of lender, if known), (name of title insurer, if known), Department of Housing and Urban Development ("HUD"), (names of others as negotiated with the client):

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS and includes Items _____ of Table A thereof. The fieldwork was completed on _____ [date].

HUD Surveyor's Report

Date of Plat or Map: _____ (Surveyor's signature, printed name and seal with Registration/License Number)"

Surveyor's Report Instructions: A current Surveyor's Report (not more than 120 days old) must be included with the survey map(s)/plat(s) submitted to HUD for: project design review, construction contract document sets, as required during construction, upon project completion; and with the map(s)/plat(s) used at initial and final closing. Identify pertinent observed and otherwise known conditions on the Surveyor's Report.

HUD Surveyor's Report

The included survey plat and/or map is to be used in a multifamily housing loan transaction submitted to HUD.

- Its uses will include:**
- Land title recordation (all cases).
 - Site grading plan preparation (item 1 above).
 - Plot plan design/redesign (item 2 above).

- Special Project Features:**
- Condominium/Air-rights, and/or
 - Other: (e.g. accessibility features) _____

Owner's Representative/Contact:

Name & Phone No:

Address:

I certify that, on [Insert date of survey] _____, I made a survey of the premises standing in the name of [Insert name of owner at time of survey] _____ situated in [Insert city, county, state] _____ known as street numbers _____ and shown on the accompanying survey plat and/or map entitled _____; and made a careful inspection of said premises and of the building(s) located thereon.

I certify that on [Insert date of last site inspection or N/A] _____, I again made a careful inspection of said premises and of the building(s) located thereon, and found said premises to be standing in the name of:

In my professional opinion, the following information reflects the conditions observed on the date of the last site inspection, or disclosed in the process of researching title to the premises, and I further certify that such conditions(s) are shown on the survey map/plat dated: [Insert date of latest revision] _____.

For Items 1 through 10, please provide a detailed answer or state "none," if inapplicable.

1. Rights of way, old highways or abandoned roads, lanes or driveways, drains, sewer or water pipes over and across said premises:

2. Springs, streams, rivers, ponds or lakes located, bordering on or running through said premises:

3. Cemeteries or family burying grounds located on said premises:

4. Electricity, or electromagnetic/communications signal, towers, antenna, lines, or line supports located on, overhanging or crossing said premises:

5. Disputed boundaries or encroachments. (If the buildings, projections or cornices thereof or signs affixed thereto, fences or other indications of occupancy encroach upon adjoining properties or the like encroach upon surveyed premises, specify all such):

HUD Surveyor's Report

6. Earth moving work, building construction, or building additions within recent months:

7. Building or possession lines. (In case of city or town property specify definitely as to whether or not walls are independent walls or party walls and as to all easements of support or "Beam Rights." In case of country property report specifically how boundary lines are evidenced, that is, whether by fences or otherwise):

8. Recent street or sidewalk construction and/or any change in street lines either completed or proposed by and available from the controlling jurisdiction:

9. Flood hazard:

10. Site used as a solid waste dump, sump, or sanitary landfill:

Further, I hereby certify to HUD, (Borrower), (Sponsor), (Lender), (Title Insurance Underwriter), (Other), and to their successors and assigns, that:

I made an on the ground survey per record description of the land shown on the Survey No. _____,

last revised [*Insert date*] _____ ("*Survey*"), located in [*Insert city or town, county, township, etc.*], and that it was made in accordance with this HUD Survey Instructions and Surveyor's Report, and the requirements for an ALTA/NSPS Land Title Survey, as defined in the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys.

To the best of my knowledge, belief and information, except as shown on the Survey, there are no encroachments across any property lines, title lines and lines of actual possession are the same, and the premises are [*Insert not subject to a OR subject to a*] 100/500 year return frequency flood hazard, and such condition is shown on the Federal Flood Insurance Rate Map, Community Panel No. _____ [*Insert "none," if inapplicable*].

Surveyor's Name:	License Number:	Seal	Date:
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2.10 SURVEY INSTRUCTIONS AND CERTIFICATE

In addition to the certified map of the Survey, the Surveyor is required to fill out the report entitled Section 2.08, HUD Surveyor's Report.

An ALTA survey, to be acceptable to *Pennsylvania Housing Finance Agency* for closing, must be prepared by a Registered Surveyor in the U.S. Standard of Measurements and must be a "Transit" survey showing current conditions and not a "Compass" survey. Preference will always be given to surveys showing bearings referred to true North, but all surveys which show bearings must designate the meridian referred to whether true, magnetic, or arbitrary; and if true meridian is not used, approximate deflection must be noted on the plat. Plat must show arrow pointing North and give scale of distances.

1. **Boundaries** – The survey must indicate the boundary lines by course and dimension and their physical character whether fence wall, water course, highway, etc. and if no physical evidence of boundaries exists, such fact must be noted. All curved boundaries must be described by curve radius, arc length, chord length, chord bearing and central angle. All stakes or other monumentation must be shown. Any material variations from the record lines by fences, walls, or structures, whether on the property surveyed or adjoining, must be shown with the extent of such variations. If any of the boundaries or lines of record coincide with lot or property lines on any filed map, or area adopted from previous surveys, whether by the same Surveyors or otherwise, such facts should be shown on the plat. The Surveyor is required to check the descriptions of adjoining properties when furnished to him/her and to show the extent of any variations between the boundaries as stated therein and those of the property surveyed.
2. **Easements, Rights of Ways, Cemeteries, etc.**- The Surveyor must indicate any easements, public utilities, water courses, drains, sewers, roads, paths, or trails crossing the property, the closing or changing of which might affect the rights of others, whether legal or assumed, or result in damage to the property of the owner. He/she must also show any existing cemetery or burying grounds on surveyed or adjacent property.
3. **Streets and Alleys** – Names of streets and alleys must be shown with the DISTANCE from the nearest corner to the BEGINNING POINT of property surveyed. Width of street and sidewalk in front or at sides of premises shall be shown with width of alley in rear or side of premises. Curbs and pavements must be shown.
4. **Party Walls** – The nature, character, location, and width of all walls on or near boundary lines must be shown. Show all projections beyond face of wall and indicate the portion of wall on the property and any portions on adjoining property and whether subject to beam rights. The thickness of walls throughout entire length must be shown. If building on premises uses any wall adjoining premises, this condition must also be shown and explained. The same requirements apply where conditions are reversed.
5. **Adjoining Owners and Lot Numbers, Encroachments** – Indicate on survey the names of adjoining structures on all sides of the property surveyed, lot and block numbers of the property surveyed and of adjoining lots must be shown. Encroachments of buildings and of structural appurtenances, such as fire escapes, bay windows, etc., by or on adjoining property, or on abutting streets, must be indicated with the extent of such encroachments.
6. **Building and Lot Lines** – All buildings on property must be shown with dimensions and relation to lot and building lines. If conditions in chain of title or zoning ordinances require buildings to be set back specified distances from street or property line, the required setback line must be shown, and the survey must show MEASURED DISTANCES from said building to said line.

7. **Area Contiguity** – Show area of the property in square feet and acres. If survey comprises several parcels, show interior lines and facts sufficient to insure contiguity. Furnish a consolidated description. All strips or gores must be shown with dimensions.
8. **Certificates** – All maps must show City or Town and County where premises is located with such other notations as will accurately locate and identify property surveyed. The certificate thereon must be dated as of date survey was made, signed by Surveyor and must be to the effect that the survey was actually made on the ground as per record description and is correct; that there are no encroachments either way across property lines except as shown.
9. **Closure Report** – Submit a report in the form of a letter indicating the accuracy of the metes and bounds of the legal description and the survey. If accuracy does not meet industry standards, indicate remedial action required. Assure that all metes and bounds are listed in the proper direction.

The certificate should be addressed to wit: “To all parties interested in title to premises surveyed”.

2.11 ESTIMATED UTILITY COSTS

Development Name: _____ **PHFA No.:** _____

Prepared By: _____ **Date:** _____

PHFA has developed the following standard Estimated Utility Costs Form for submission by the Architect with assistance from their Mechanical Engineer on all developments. The information on this form is required by the Owner and PHFA to complete the underwriting for the development. Utility costs are necessary to ascertain the financial feasibility of the development. There are major consequences affecting the maximum rent allowed to be charged to the tenants based on the utility costs estimated and reported in this document. Care should be taken in preparing this information.

There are two types of utility costs and payments for each development.

- 1. **Tenant Paid Utilities** – Utilities that are paid by the tenant or occupant by individual metering of the utilities. Payment of Water/sewer must be the responsibility of the Owner. The tenant cannot be billed for these utilities.
- 2. **Development Paid Utilities** – Utilities that are paid by the development by bulk metering and/or by house sub-metering of the utilities and must include water/sewer.

Description of HVAC system:

Fuel and Energy Types (dwelling units only)

Fuel Types: HP – Heat Pump; FO – Fuel Oil; G – Gas; EL - Electric

Space Heating _____

Domestic Water Heating _____

Cooking _____

Air Conditioning _____

Lighting & Misc. Power _____

Utility Providers:

Electric: _____

Gas: _____

Water: _____

Sewer: _____

Oil: _____

Cost of Utility Used:

Electric per KWH - _____ Gas per MCF - _____ Fuel Oil per Gallon - _____

Development Paid Costs - Provide documentation to substantiate cost calculations. Include tariffs used and price to compare.

Development Paid Costs per Year (includes site lighting, elevators, public space, HVAC and electric).

Electric: _____ Gas: _____ Domestic Water: _____

Sanitary Sewer: _____ Fuel Oil: _____

Rehabilitation Construction – Please list the Building Thermal Envelope Upgrades proposed for this development including “R” factors:

Wall Insulation: _____

Ceiling Insulation: _____

Window Replacement Type: _____

Storm Windows: _____

Others: _____

List Tenant Paid Utility Allowance per Unit Type & Source of TPUA

Fuel and Energy Types (dwelling units only)

Fuel Types: HP – Heat Pump; FO – Fuel Oil; G – Gas; EL - Electric

	<u>Fuel Type</u>	<u>Average Cost per Unit per Month</u>				
		SRO/EFF	1 BR	2BR	3BR	4 BR
Space Heating	_____	_____	_____	_____	_____	_____
Domestic Water Heating	_____	_____	_____	_____	_____	_____
Cooking	_____	_____	_____	_____	_____	_____
Air Conditioning	_____	_____	_____	_____	_____	_____
Lighting & Misc. Power	_____	_____	_____	_____	_____	_____

Provide documentation to substantiate cost calculations. Include tariffs used and price to compare.