

SUBMISSION GUIDE FOR ARCHITECTS

CONTENTS

TAB 2 – ARCHITECTURAL SUBMISSION

| | Page |
|---|------|
| CONTENTS | 2.1 |
| SCHEMATIC SUBMISSION REQUIREMENTS | |
| 2.01.A Schematic Submission Requirements | 2.2 |
| 2.01.B Schematic Design Requirements Checklist | 2.4 |
| 2.01.C Schematic Design Construction Cost Estimate | 2.8 |
| DESIGN DEVELOPMENT SUBMISSION REQUIREMENTS | |
| 2.02.A Design Development Submission Requirements | 2.10 |
| 2.02.B Design Development Requirements Checklist for General Occupancy | 2.17 |
| 2.02.C Design Development Requirements Checklist for Elderly Developments | 2.26 |
| 2.02.D Design Development Checklist for Green Building Criteria | 2.34 |
| 2.02.E Development Tabular Schedule | 2.37 |
| 2.02.F Development Security and Maintenance Requirements Checklist for Urban Locations | 2.38 |
| 2.02.G Mechanical Requirements Checklist | 2.40 |
| 2.02.H Electrical Requirements Checklist | 2.43 |
| 2.02.I Surveyor’s Report | 2.45 |
| 2.02.J Estimated Utility Costs | 2.51 |
| 2.02.K Design Development Construction Cost Estimate Form | 2.53 |
| CONTRACT DOCUMENT SUBMISSION REQUIREMENTS FOR FINAL REVIEW | |
| 2.03.A Contract Document Submission Requirements for Final Review | 2.57 |
| 2.03.B Final Construction Cost Breakdown | 2.59 |
| 2.03.C Specifications Format | 2.63 |
| 2.03.D Supplemental General Conditions | 2.64 |

SECTION 2.01.A
SCHEMATIC SUBMISSION REQUIREMENTS

2.01.A.1. SUBMISSION PROCESS

Some form of Schematic Design documents are typically included with the PHFA Application. Usually, these documents are insufficient to describe the development adequately. A Schematic Design Submission should be made to PHFA as soon as practical after an award of loan funds has been made. Preservation developments shall follow the requirements found in Tab 4 of this Guide. Contact the Technical Services Division Review Architect for approval of the scope of documentation acceptable to PHFA for submission. Based on the completeness of the architectural documents submitted with the Application, the Schematic Design Submission may be waived at the discretion of the PHFA Technical Services staff. PDF files are not an acceptable form of review documents. Hard copies must be submitted.

2.01.A.2. GENERAL REQUIREMENTS – The Schematic Submission must include the following in duplicate:

- A. Schematic Drawings** – Maximum drawing size shall be 30" x 42" and the minimum size shall be 24" x 36". All drawing sheets must be of the same size and bound together in the set.
- B. Outline Specifications** in the CSI format.
- C. Schematic Design Requirements Checklist.**
- D. Schematic Design Construction Cost Estimate.**

2.01.A.3. DRAWING REQUIREMENTS

A. Site Plans:

- 1. Minimum scale of 1" = 30'.
- 2. Indicate property lines with bearings and distances.
- 3. Indicate all building, sidewalks, paved areas and site features such as trash enclosures, recreation areas, and storm water facilities.
- 4. Existing and proposed grade elevation contours at one-foot intervals.
- 5. Ground floor elevations for all buildings.
- 6. Identify the locations of accessible and hearing/vision units for townhouse developments and accessible parking spaces.
- 7. Number all buildings for ease of reference.
- 8. Indicate site acreage.
- 9. Indicate location of utility tie-ins and proposed on-site layout.
- 10. Indicate building setbacks.

B. Floor Plans:

- 1. Building floor plans:
 - a. Scale: 1/8" = 1'-0".
 - b. Include all floors.
 - c. Indicate locations of accessible and hearing/vision units.

- d. Indicate gross square footage per floor.
 - e. Include overall dimensions.
2. Dwelling unit plans:
- a. Scale: $\frac{1}{4}'' = 1'-0''$.
 - b. Provide plans for all unit types and sizes, including accessible units.
 - c. Indicate furnishings.
 - d. Indicate clear floor area requirements in accessible, adaptable, and VisitAble units.
 - e. Indicate gross and net square footage for each unit plan.
 - f. Include overall dimensions and room sizes.

C. Elevations:

1. Include all sides and orientations.
2. Indicate all exterior finishes.

D. Typical Exterior Wall Section:

1. Scale: $\frac{3}{4}'' = 1'-0''$.
2. Show materials and method of construction from foundation to roof.
3. Indicate insulation levels with R-values.
4. If more than one type of construction is proposed, provide a wall section for each type.
5. Provide dimensions from footing to finish grade and finish floor to ceiling.

E. Mechanical and Electrical Plans:

1. If available, provide building plans showing schematic layout of mechanical and electrical systems.
2. If available, provide unit plans showing preliminary mechanical and electrical layouts.

F. Specifications:

1. Provide outline Specifications in CSI 16 Division format.
2. Include a brief description of all major materials, finishes, products, equipment and systems proposed.

SECTION 2.01.B
SCHEMATIC DESIGN REQUIREMENTS CHECKLIST

Development Name: _____ PHFA No.: _____

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

Design Architect (Print or type): _____

Design Architect (Signature): _____

Date: _____

Check the appropriate line if the development conforms to the requirement. Note N/A 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.

- Dwelling Unit Size Requirements** – The following matrix establishes 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. **Gross** square footage shall be measured from the outside face of exterior walls to the centerline of interior demising walls. Rehabilitation developments may vary from the maximums and minimums by 10%. Accessible units may vary from the maximums as required to provide an accessible route and accessibility maneuvering clearances.

| | <u>FLATS</u> | <u>MULTI-FLOOR UNITS</u> |
|-----------|---------------------|---------------------------------|
| ____ SRO | 90 to 200 | |
| ____ EFF | 400 to 600 | |
| ____ 1 BR | 550 to 850 | 650 to 950 |
| ____ 2 BR | 700 to 1,100 | 850 to 1,300 |
| ____ 3 BR | 950 to 1,350 | 1,000 to 1,550 |
| ____ 4 BR | 1,100 to 1,550 | 1,200 to 1,750 |
| ____ 5 BR | 1,300 to 1,750 | 1,400 to 2,000 |

- Minimum Room Size Requirements** - All bedrooms must have a demising wall with a door between it and other spaces within the dwelling unit, and 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.** Primary bedroom – 120 sq. ft. (least dimension 10'-0").
- ____ **B.** Second bedroom – 100 sq. ft. (least dimension 9'-0").
- ____ **C.** Additional bedrooms – 90 sq. ft. (least dimension 9'-0").

Living Room:

___ A. Living room – 150 sq. ft. (least dimension 11'-0").

Dining Room:

The dining area shall be in addition to the living room space and must be appropriately sized. An eat-in kitchen may be substituted for a dining room as long as the kitchen and dining area are appropriately sized. Both areas must be able to accommodate the following:

___ A. 1 BR Unit - Table with 2 chairs

___ B. 2 BR Unit - Table with 4 chairs

___ C. 3 BR Unit - Table with 6 chairs

___ D. 4 or more BR Unit - Table with 8 chairs

Other Unit Space:

___ A. Dwelling unit corridors and stairs – 36" minimum width.

___ 3. **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 within this *Guide*.

___ 4. **Community Room Space** – All developments, except for scattered sites and those with 11 units or less, should be designed with adequate community space to accommodate functions and services offered at the facility. Developments must provide a management office and a public restroom. Community rooms must be a single room sized to provide at least fifteen (15) sq. ft. per unit, for developments with 12 to 50 units. Community rooms in developments with more than 50 units shall be a minimum of 750 sq. ft. in size. 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. **VisitAbilitycm* Goal** – PHFA has adopted the goal of providing access to as many units as possible for the purpose of allowing persons with disabilities the ability to visit neighbors and friends. Refer to Section 1.09, VisitAbilitycm* Guidelines.

___ 6. **Bathrooms** – One and a half baths for three bedroom and two baths for four bedroom and larger units must be provided (one may be a shower).

___ 7. **Kitchens** – Refrigerators, ranges, and ovens must be provided in all units, except SROs with common cooking facilities. All units with two or more bedrooms must be equipped with 30" wide ranges (30" ranges are preferred for all units). Ranges less than 30" in width must not be located abutting partitions.

___ 8. **Closet Doors and Shelves** – All closets shall have doors that fully conceal the contents of the closet.

___ A. Adequate storage space must be provided: a minimum of 10 sq. ft. plus an additional 5 lineal feet of full height hanging space in each bedroom within the unit. General occupancy units must have an additional twelve (12) sq. ft. per unit minimum inside or outside the unit, in a basement, or other space for bikes, etc. Space for lockable tenant storage bins may be provided elsewhere on the development if sufficient storage space cannot be provided within the apartments.

9. **Laundry Facilities** - Single-unit, combination washer-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. Laundry facilities must be provided unless individual washers and dryers are provided in each unit. For developments consisting of numerous buildings or floors, several small facilities may be provided in lieu of one facility.
- ___ B. If central laundry facilities are provided, at least one washer and one dryer must be provided for every twelve (12) general occupancy units or every twenty (20) elderly units, with a minimum of two (2) washers and (2) dryers required for all developments.
- ___ C. A minimum of one front-loading washer and dryer must be provided in each common laundry facility and in accessible units with laundry facilities.
- ___ D. A built-in sorting counter, hanging rod or space for a table and portable hanger shall be provided, as well as space for chairs in all laundry facilities.
- ___ F. Washer and dryer areas located within a unit must be concealed unless located in a basement.
- ___ G. 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.

10. **Development Facilities and Maintenance:**

- ___ A. 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 (does not apply if all maintenance services and repairs are contracted out).

___ 11. **Natural Light and Ventilation** – Must be provided in all living rooms and bedrooms. Skylights will not be considered as meeting this requirement.

12. **Parking:**

- ___ A. The parking ratio must be in conformance with the local zoning ordinance unless a variance is obtained.
- ___ B. At a minimum, the total number of accessible parking spaces must meet the latest *Uniform Federal Accessibility Standards Table 4.1.1* and other accessibility requirements governing the development. In addition, if the total number of parking spaces is less than 20, at least two (2) spaces for persons in wheelchairs must be provided. Refer also to Section 1.02, Accessibility Requirements.

___ 13. **Indoor and/or Outdoor Recreational Facilities** – Where practical, provide for a total lot or other indoor or outdoor play area.

___ 14. **Outdoor Furnishings, Equipment, Landscape and Recreational Structure** – Benches, tables, chairs, play equipment and structures must be of durable and maintenance-free materials.

___ 15. **Waste Disposal** (Check applicable system used):

- _____ A. 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. Trash room(s).
 - _____ C. Trash compactor.
 - _____ D. Recycling provisions: The size, number and design of collection area(s) must conform to the requirements of the Local recycling ordinance.
 - _____ E. Dumpster(s): Outdoor collection areas must have concrete pads and be visually screened, (e.g., evergreen hedges or shrubs, masonry or pressure treated wood 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 10') must be provided in front of the collection area to prevent pavement damage by the garbage trucks for dumpster type collection.
- _____ 16. **Fire Extinguishers** – A minimum of one 5 pound, 2A-10B-C (minimum) rated fire extinguisher must be provided in each unit. Other fire extinguishers must be provided for the development as required by code. If mounted in closets, the contents of the closet shall not obscure the extinguisher. Therefore, coat closets are not usually an acceptable location.

SECTION 2.01.C
PENNSYLVANIA HOUSING FINANCE AGENCY
SCHEMATIC DESIGN CONSTRUCTION COST ESTIMATE

Development: _____ Applicant: _____
 PHFA No.: _____ Form Completed By: _____ Date: _____

| Div. No. | Description | Residential | Commercial | Total |
|---|--|-------------|------------|-------|
| 01 | General Requirements (6% of Div.'s 2 – 16 max.) | % | | |
| 02 | Building Demolition | \$ | | |
| | Selective Demolition | | | |
| | Site Work | | | |
| | Offsite Improvements | | | |
| | Subtotal | | | |
| 03 | Concrete | | | |
| 04 | Masonry | | | |
| 05 | Metal | | | |
| 06 | Carpentry | | | |
| 07 | Moisture Protection | | | |
| 08 | Doors and Windows | | | |
| 09 | Finishes | | | |
| 10 | Specialties | | | |
| 11 | Equipment | | | |
| 12 | Furnishings | | | |
| 13 | Special Construction | | | |
| 14 | Conveying Systems | | | |
| 15a | Plumbing | | | |
| 15b | Fire Protection | | | |
| 15c | Heating, Ventilating & Air Conditioning | | | |
| 16 | Electrical | | | |
| Subtotal Divisions 1 through 16 | | | | |
| Builder's Overhead (2% of Subtotal max.) | | % | | |
| Builder's Profit (6% of Subtotal max.) | | % | | |
| Bond Premium | | | | |
| Building Permit | | | | |
| Other (Explain) | | | | |
| TOTAL CONSTRUCTION COSTS | | | | |
| TOTAL RESIDENTIAL AND COMMERCIAL COSTS | | | | |

SCHEMATIC DESIGN CONSTRUCTION COST ESTIMATE (Cont'd)

DEVELOPMENT INFORMATION

Estimated Construction Period: _____ Months

Estimated Starting Date: _____

No. of Dwelling Units: _____

Gross Residential Sq. Ft.: _____

Gross Commercial Sq. Ft.: _____

Gross Building Sq. Ft.: _____

Wage Determination:

Open Shop: _____

Union Shop: _____

Davis Bacon: _____

Residential: _____

Commercial: _____

DUE TO THE LENGTH OF TIME IT TAKES TO PROCESS A DEVELOPMENT, IT IS CRUCIAL THAT THE CONSTRUCTION BUDGET IS PREPARED ALLOWING FOR INFLATION BETWEEN THE DATE THIS BUDGET IS SET AND THE DATE CONSTRUCTION IS TO BEGIN. ALLOWANCES ARE NOT PERMITTED.

SECTION 2.02.A
DESIGN DEVELOPMENT SUBMISSION REQUIREMENTS

2.02.A.1. GENERAL

After PHFA has reviewed the Schematic Submission, the Owner must direct the Design Architect to prepare the Design Development Drawings and Specifications. The same level of documentation is required to be submitted for design-bid-build, negotiated and design-build methods of development delivery. Contact the Technical Services Division Review Architect for approval of the scope of documentation acceptable to PHFA for submission. If insufficient documentation is submitted, PHFA Staff will notify the Sponsor indicating the deficiencies. A review will only be performed when sufficient documentation is received by PHFA. PDF files are not an acceptable form of review. Hard copies must be submitted. The Design Development Submission must include, but is not limited to, the following:

1. Two (2) sets of drawings. The level of completion must be sufficient (90% - 100% of contract drawings) for the Contractor to prepare the Construction Cost Estimate and for PHFA to conduct a cost review. The maximum drawing size shall be 30" X 42" and the minimum size shall be 24" x 36". All drawing sheets must be of the same size and bound together in the set.
2. Two (2) sets of bound specifications of an equal level of completion as the drawings. Please refer to the enclosed Specifications Procedures
3. One (1) copy of an ALTA Land Title Survey, Surveyor's Report and Legal Description. The survey must conform to the instructions listed on the back of the Surveyor's Report in this section. The survey must be signed and sealed by a Surveyor registered in the Commonwealth of Pennsylvania.
4. One (1) copy of the completed Construction Cost Estimate based on the Design Development drawings and specifications. (Allowances in the construction budget are not permitted. The Architect must clearly identify the scope of all work in the Contract Documents.)
5. Structural Engineer's Report by a registered Structural Engineer, if required (rehabilitation developments only).
6. Subsoil Investigation Report with design recommendations by a qualified Geotechnical Firm (for new construction and new additions).
7. One (1) completed copy of each of the following checklists included in this Guide:
 - a. 2.02.B Design Development Requirements Checklist for General Occupancy.
 - b. 2.02.C Design Development Requirements Checklist for Elderly Developments.
 - c. 2.02.D Design Development Requirements Checklist for Green Building Criteria.
 - d. 2.02.E Development Tabular Schedule (also include the same information on the cover sheet of the drawings).
 - e. 2.02.F Development Security and Maintenance Requirements Checklist for Urban Locations.
 - f. 2.02.G Mechanical Requirements Checklist.

- g. 2.02.H Electrical Requirements Checklist.
 - h. 2.02.I Estimated Utility Costs.8.
8. Proof of compliance with all certifications submitted as part of the loan application.
 9. Phase I Environmental Site Assessment.
 10. REScheck certification verifying compliance with Chapter 4, "Residential Energy Efficiency" of the current edition of the International Energy Conservation Code.
 11. Certification of the Home Energy Rating System (HERS) index based on a review of the drawings and specifications by a certified HERS rater.

2.02.A.2. DRAWING REQUIREMENTS – ARCHITECTURAL

A. Cover and Title Sheet - Must include the following:

1. Name of the proposed development.
2. Development address.
3. PHFA development number.
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 around the site.
8. Development Tabular Schedule.
9. Signature and date space for Owner, Contractor, Architect and PHFA.
10. Tabulation of or copy of the Design Architects Certifications for Threshold and Selection Criteria from the PHFA loan application.
11. Building Code Analysis

B. Site Plan – Include all information from the Schematic Submission with the following added:

1. The relationship of the development to adjacent storm water flow or drainage, and vice versa.
2. Existing and proposed grade elevation contours at one-foot intervals.
3. Ground floor finish elevations for all buildings and areas within buildings where a change in elevation occurs.
4. Spot elevations where necessary.
5. Passive and active recreational areas.
6. Landscape plan including details and plant schedule (common name, number and size for all materials).
7. Show the relationship of the site lighting and other site utilities to the overall site development. Coordinate with plumbing and electrical site utility drawings.

8. All site details, dimensions, paving sections, curb cut and road radii, trash enclosures, recreational areas, access ramps, etc.
 9. Accessible route details to accessible, adaptable, and VisitAble units.
 10. 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.
 11. Identify public streets and right-of-ways.
 12. See also Section 2.02.I, Surveyor's Report.
- C. Typical Floor Plans** – Include all information from the Schematic Drawings plus the following:
1. Basement and roof plans must be included where applicable.
 2. Unit plans drawn at $\frac{1}{4}'' = 1'-0''$ scale.
 3. Include all dimensions.
 4. All rooms and spaces must be identified.
 5. A “north” reference on all building floor plans.
- D. Schedules and Details** – Must include the following:
1. Room finish schedule.
 2. Door and window schedules, elevations, and jamb, sill and head details. Key to floor plans and building elevations.
 3. Typical details for clothes, storage and linen closets, including mounting heights and details for rods and shelves.
 4. Other as applicable.
- E. Elevations** – Must include:
1. Exterior elevations for each orientation clearly indicating:
 - a. All exterior finishes, openings and penetrations.
 - b. Relationship of finished floor to finished grade for ground floor basements.
 - c. Height of each story (floor-to-floor) parapet or roof.
 2. Interior elevations:
 - a. For all kitchens and bathrooms, including dimensions, materials and mounting heights.
 - b. All other required, (e.g., gang mailboxes, lobbies, etc.).
- F. Building Sections** – Must include the following as applicable to the building type:
1. Typical exterior walls (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.

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

2.02.A.3. DRAWING REQUIREMENTS – STRUCTURAL

A. Plans, Sections, Details and Notes – Must be included in a scope sufficient to construct the particular development. The scope will vary depending upon the type of development, (e.g., one and two-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 sizes of members.
3. Foundation design consistent with recommendations made in the subsoil investigation report.
4. Governing codes, regulations and standards.

2.02.A.4. DRAWING REQUIREMENTS – MECHANICAL

A. 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.

B. 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. Drawings must be checked for completeness, clearness, interference with structural features and other branches of the electrical or mechanical equipment, and coordinated with the architectural drawings.

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

2.02.A.5. DRAWING REQUIREMENTS – ELECTRICAL

A. General – The intent of this submission is to set forth Design Development 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 of 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.

B. 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, Design Development 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:
- | | |
|----------------------|-----------------------------|
| Outlets | Electrical equipment |
| Switches | Receptacles |
| Special systems | Lighting fixtures |
| Mechanical equipment | Panel boards |
| Smoke detectors | Hearing and vision fixtures |
5. Details (as required by individual development) must include:
- | | |
|---------------------|----------------------|
| Transformer pads | Site luminaries |
| Counterpoise | Emergency system |
| Grounding | Generator including: |
| Manholes | duct systems |
| Concrete structures | exhaust systems |
| | fuel systems |
6. Schedules (as required by individual development) must include:
- | | |
|-------------------------|------------------------------|
| Lighting fixtures | Transformers |
| Electrical equipment | Special apparatus |
| Panel boards | Mechanical equipment |
| Main distribution board | requiring electrical service |
| Heat transfer appliance | |
- Schedules must show (as applicable) symbols, abbreviations, interrupting capacity, etc.
7. One-line schematic (depending upon the scope of the development) must show:
- | | |
|--------------------|--------------------------|
| Service entrance | Security |
| Power distribution | Fire alarms |
| Grounding | TV system |
| Telephone | Heat and smoke detectors |
| Communications | |
8. Additional drawing data requirements:
- Conduit type and size to be specified.
- Conductor insulation, gauge, voltage, circular mill area and material to be specified.
- Voltage configuration to be complete at all pertinent locations of change.

9. Other requirements:

Catalog cuts or manufacturer's descriptive literature must be provided for all major equipment items.

The enclosed *Electrical Requirements Checklist* and the applicable portions of the *Estimated Utility Cost* must be completed and submitted to PHFA.

2.02.A.6 SPECIFICATIONS

- A. Specifications must be prepared in accordance with the CSI 16 Division, 3-part format. Masterspec version or similar templates may be used. Outline specifications template may not be used.

SECTION 2.02.B
DESIGN DEVELOPMENT REQUIREMENTS CHECKLIST
FOR GENERAL OCCUPANCY

Development Name: _____ PHFA No.: _____

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

Design Architect (Print or type): _____

Design Architect (Signature): _____

Date: _____

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

- Minimum Unit Sizes Requirements** – The following matrix establishes the minimum and maximum allowable net square footage area of 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 or spaces for heating and cooling equipment located outside the unit. Rehabilitation developments may vary from the maximums and minimums by 10%. Accessible units may vary from the maximums as required to provide an accessible route and accessibility maneuvering clearances.

| Unit Type | Flats | Multi-Floor Units |
|------------|----------------|-------------------|
| _____ SRO | 90 to 200 | |
| _____ EFF | 400 to 600 | |
| _____ 1 BR | 550 to 850 | 650 to 950 |
| _____ 2 BR | 700 to 1,100 | 850 to 1,300 |
| _____ 3 BR | 950 to 1,350 | 1,000 to 1,550 |
| _____ 4 BR | 1,100 to 1,550 | 1,200 to 1,750 |
| _____ 5 BR | 1,300 to 1,750 | 1,400 to 2,000 |

- Minimum Room Size Requirements** – Minimum room sizes do not include unusable alcove space at doors. Accessible rooms may require additional space in order to provide an accessible route and the necessary clearances.

(Waivers may be granted for room sizes in rehabilitation developments only, based on acceptable furnishability plans)

Bedrooms:

- _____ A. Primary or master bedroom – 120 sq. ft. (least dimension 10'-0").
- _____ B. Second bedroom – 100 sq. ft. (least dimension 9'-0").
- _____ C. Additional bedrooms – 90 sq. ft. (least dimension 9'-0").

Living Room:

- _____ A. Living room – 150 sq. ft. (least dimension 11'-0").

Dining Room:

The dining area shall be in addition to the living room space and must be appropriately sized. An eat-in kitchen may be substituted for a dining room as long as the kitchen and dining area are appropriately sized. Both areas must be able to accommodate the following:

- ___ **A.** 1 BR Unit - Table with 2 chairs
- ___ **B.** 2 BR Unit - Table with 4 chairs
- ___ **C.** 3 BR Unit - Table with 6 chairs
- ___ **D.** 4 or more BR Unit - Table with 8 chairs

Other Unit Space:

- ___ **A.** Dwelling unit corridors and stairs – 36” minimum width.

Ceiling Height:

- ___ **A.** Ceiling height must be 7'-6” minimum, except that 7'-0” ceiling height is allowable in bathrooms, storage rooms, mechanical rooms and closets. A maximum of 15% of any other room may have a ceiling height of 7'-0” to allow for soffits, bulkheads, beams, etc.

- ___ **3. Accessibility (Facilities, Apartments and Parking)** – All applicable Local, State and Federal regulations and PHFA requirements must be met. Refer to Section 1.02, Accessibility Requirements, for additional information.
- ___ **4. Community Space** – All developments, except for scattered sites and those with 11 units or less, should be designed with adequate community space to accommodate functions and services offered at the facility. Developments should also provide a public restroom. Community rooms should be a single room sized to provide at least fifteen (15) sq. ft. per unit, for developments with 12 to 50 units. Community rooms in developments with more than 50 units shall be a minimum of 750 sq. ft. in size.
- ___ **5. Management Office** – An on-site management office must be provided for all developments except those with 11 units or less or scattered site developments. Developments that are a continuation of a phased development with a total of more than 11 units must provide a management office in one of the phases.
- ___ **6. VisitAbilitycm* Goal** – 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 units as possible for the purpose of allowing persons with disabilities the ability to visit neighbors and friends. Please refer to our VisitAbilitycm* Guidelines, Section 1.09, included within this *Guide*.
- ___ **7. Air Conditioning** – The living areas and bedrooms of all dwelling units must be air conditioned. Window air conditioners will not be considered as meeting this criterion. In new construction and substantial rehabilitation developments, all common areas must also be air conditioned, except for stair towers, mechanical and storage areas.
- 8. Building Security:**
 - ___ **A.** 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. Entrance doors must be equipped with dead bolt lockset, a passage latch set and a door knocker with viewer.
 - ___ C. All dwelling units must be equipped with an identification number.
- ___ 9. **Below-Grade Units – The maximum distance from the floor level in any dwelling unit to the finish grade elevation outside the unit is 4'-6"**.
10. **Bathrooms:**
- ___ A. One and a half baths for three bedroom and two baths for four bedroom and larger units must be provided (one may be a shower).
 - ___ B. Bathroom floor finish must be ceramic tile or sheet vinyl. Vinyl composition tile (VCT) is not acceptable.
 - ___ C. Accessories – Vanity bases must be provided for all bathrooms and powder rooms. Removable fronts are suggested for handicapped adaptable units. All bathrooms must have a minimum of two 24" towel bars, a toilet paper holder, shower rod in tub/shower unit or shower unit, and a medicine cabinet with mirror. A light fixture must be located over the mirror.
 - ___ D. Solid blocking must be installed in all framed walls behind grab bars and all other wall-mounted appurtenances that will be subjected to loads.
11. **Kitchens:**
- ___ A. Ducted range hoods with fans and lights must be provided above all ranges.
 - ___ B. Kitchen cabinets must meet PHFA standards (Refer to PHFA Kitchen Cabinet Minimum Standards, Section 1.23). Cabinets in accessible units must have loop type hardware throughout.
 - ___ C. A minimum of one 15" wide drawer base must be provided in all kitchens.
 - ___ D. Refrigerators must be provided with all units except SROs with common cooking facilities. All refrigerators must be frost-free and must have two doors (separate doors for freezer and refrigerator compartments). Minimum sizes must be:

| | |
|-----------|---------------------|
| 1-Bedroom | <u>13.0</u> cu. ft. |
| 2-Bedroom | <u>15.0</u> cu. ft. |
| 3-Bedroom | 15.0 cu. ft. |
| 4-Bedroom | 17.0 cu. ft. |
 - ___ E. Ranges must be provided in all units and community room kitchens and kitchenettes, except SROs with common cooking facilities. All units with two or more bedrooms must be equipped with 30" wide ranges. Ranges less than 30" in width must not be located abutting partitions. A protective shield must be provided on the section of wall directly behind all ranges and beside ranges abutting partitions or cabinetry. 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.
 - ___ F. In general occupancy units with 2 or more bedrooms, double bowl sinks are required unless dishwashers are provided.

- ___ G. Where dishwashers are supplied, they must be 24" wide, full size, under-counter type.
- ___ H. 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.

12. Flooring - If sheet vinyl or VCT is used it must comply with sound ratings found in Section 2.02.B.29 Sound Insulation.

- ___ A. Carpet must meet the acceptance criterion of Federal Standard DOCF1-70 for flammability or Class II, 0.22 watts/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. Carpet must meet HUD UM-44D requirements. Parquet, hardwood, tile or equal quality flooring may be substituted where sound transmission is not a factor.
- ___ B. 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. Direct glued-down carpet must be used in units for persons with disabilities.
- ___ D. Provide carpeting in public corridors and lobbies with the exception of the entrance vestibules where a hard surface and a floor mat must be provided.
- ___ E. Carpeting is recommended throughout the apartments with the exception of utility closets, laundry areas, bathrooms, kitchens and entrance foyers where entry is directly from outside, (e.g., as in townhouses). Hard surface flooring may be substituted for carpet, with PHFA approval and documentation verifying that sound transmission ratings and impact isolation ratings have been met.
- ___ F. Sheet Vinyl must be full spread adhesive installation, using maximum width possible to avoid seams.
- ___ G. Vinyl Composition Tile (VCT) cannot be used in bathrooms or living rooms. It may be used in public spaces.

13. Furnishings:

- ___ A. All windows, sliding doors and patio doors within habitable spaces must be equipped with: curtain rod and vinyl shade, or mini-blinds.
- ___ B. Community areas must be furnished with drapery tracks, drapes and liners, blinds, shades, etc., as appropriate for the intended use of the space.
- ___ C. Drapery liners must be provided throughout the development where aesthetic and/or energy conservation requirements are paramount.

14. Signage:

- ___ A. A floor identification sign shall be provided outside the elevator doors on each floor.
- ___ B. 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 housing opportunity logo and the accessible housing logo.

- ___ C. Room identification signs must be provided for all community, management, maintenance and public spaces.
- ___ D. All permanent interior signage, including individual apartment identification, must comply with ADA, UFAS, and A NSI A117.1 requirements

15. Closets and Storage:

- ___ A. All closets must have doors that fully conceal the contents of the closet.
- ___ B. The height of closet doors must not exceed 6'-8" unless the specified door and installation has been reviewed and approved by PHFA.
- ___ C. 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. Pantry storage should be provided.
- ___ E. Linen storage must be provided.
- ___ F. An entry coat closet must be provided
- ___ G. Provide adequate storage space: all unit types (except SRO's) must have a minimum of 10 sq. ft. of storage space plus an additional 5 lineal feet of full height hanging space in each bedroom within a unit. Family units must have an additional, separate twelve (12) sq. ft. of storage space inside or outside of the unit in a basement or other space for bikes, tires, etc. SRO's must be provided with an adequate closet or wardrobe cabinet for clothes storage.
- ___ H. Space for lockable tenant storage bins may be provided elsewhere on the development if sufficient storage space cannot be provided within the apartments.

16. Laundry Facilities:

Combination washers and 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. 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. If central facilities are provided, at least one washer and one dryer must be provided for every twelve (12) general occupancy units with a minimum of two (2) washers and two (2) dryers required in each facility.
- ___ C. A minimum of one front-loading washer and dryer must be provided in each common laundry facility and in accessible units with laundry facilities.

- ___ D. 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 laundry facilities.
- ___ E. The equipment may be coin operated type leased from a concessionaire.
- ___ F. Washer and dryer areas located within a unit must be concealed unless located in a basement.
- ___ G. 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.

17. Development Facilities and Maintenance:

- ___ A. 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 (does not apply if all maintenance services and repairs are contracted out).

18. Natural Light and Ventilation:

- ___ A. 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. At least one window per room must be a ventilating type window with a full screen for the operable portion of the window.
- ___ C. Below grade units must have window sill heights at a maximum of 4'-6" above floor level.

19. Interior Painting:

- ___ A. A semi-gloss, egg shell or equivalent high quality washable latex paint should be specified for all kitchens, bathrooms and public restrooms throughout the unit for developments with children and for all public stairs, corridors and vestibules, unless a protective wall covering such as vinyl wall covering or paneling is provided.
- ___ B. Semi-gloss or high-gloss enamel must be specified for laundry, maintenance, storage and utility rooms in common areas.

20. Parking and Sidewalks:

- ___ A. The parking ratio must be in conformance with the Local zoning ordinance unless a variance is obtained.
- ___ B. 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. All driveways, streets and parking lots must be paved.
- ___ D. In municipalities without a zoning ordinance or parking regulations, a minimum of one (1) parking space per dwelling unit plus one (1) space per employee and two (2) guest spaces must be provided.

____ E. Pedestrian sidewalks must be cast-in-place concrete, minimum 4" thick over 4" minimum clean 2B stone base. Bituminous sidewalks are not permitted.

21. **Outdoor Recreational Facilities** - Should be considered if none exists in close proximity to the development site. List the play equipment planned for the development below:

A. _____

B. _____

C. _____

22. **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. Wood must be decay resistant species, pressure treated (labeled in accordance with the applicable AWPB Standard), vacuum and non-pressure treated (conforming to NWMA-IS-A and bearing the NWMA Seal of Approval) or a minimum of two (2) coats of high quality exterior grade sealer, stain or paint must be applied on all sides, edges and ends. The wood must be guaranteed for a minimum of one (1) year to be free of objectionable splinters, checks, shakes, warping, loose knots, decay and stains.

____ 2. Concrete must be precast reinforced concrete, sealed with a minimum of two (2) coats of acrylic sealer. If color is specified, it must be cast integrally.

____ 3. Metals must be anodized aluminum or galvanized steel.

____ 4. Fiberglass must be "super-strength" fiberglass. Lightweight fiberglass is not permitted.

____ B. All hardware must be corrosion and vandal-resistant, (e.g., hot dipped galvanized or high tensile, strength bolted connections requiring special wrenches for dismantling, galvanized nails for fencing and enclosures).

____ C. All railroad ties used for curbs, steps, wheelstops, retaining walls, etc., must be pressure treated CCA-C AWFA C2, C9 .40 pcf.

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

____ A. Hydro seed – Contractor shall be responsible for watering, feeding, and mowing until mature growth is established.

____ B. Sod – Contractor shall be responsible for watering and feeding for 3 months after installation.

24. **Waste Disposal** – (Check applicable systems used):

____ A. 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. Trash room(s) – All trash rooms must contain a hose bib and floor drain and have a durable water resistant floor finish.

- ___ C. Trash compactor.
- ___ D. Dumpster(s).
- ___ E. Recycling provisions - The size, number and design of collection area(s) must conform to the requirements of the Local recycling ordinance.
- ___ F. Outdoor collection – Dumpster(s): Outdoor collection areas must have concrete pads and be visually screened, (e.g., evergreen hedges or shrubs, masonry or pressure treated wood 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 10’) must be provided in front of the collection area to prevent pavement damage by the garbage trucks for dumpster type collection.

___ 25. **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. If mounted in closets, the contents of the closet shall not obscure the extinguisher. Therefore, coat closets are not usually an acceptable location.

___ 26. **Basements** – Must have 4” thick concrete floors with vapor barriers over 4” gravel base.

___ 27. **Termite Infestation** – Measures must be taken to protect the building from termite infestation. It is recommended that careful environmental considerations be taken in the selection of the method chosen to protect the building. PHFA’s Green Building Criteria does not allow the use of soil poisoning for termite treatment.

___ 28. **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 clearly on the party responsible for the work.

___ 29. **Sound Insulation:**

| <u>Location</u> | <u>IIC*</u> | <u>STC**</u> |
|-----------------|-------------|--------------|
| Partitions | N/A | 50(55)*** |
| Floor/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.).

___ 30. **Substrates** – Ceramic tile or EIFS (Dryvit) interior or exterior finishes shall only be installed over cementitious or masonry substrates. Moisture-resistant gypsum board is NOT allowed.

- _____ 31. **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.
- _____ 32. **Drainage Barrier** – A drainage barrier is required behind all siding and masonry veneer in wood framed construction.
- _____ 33. **Reroofing** – All reroofing applications must include the removal of the existing roofing system down to the roof deck.
- _____ 34. **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.

SECTION 2.02.C
DESIGN DEVELOPMENT REQUIREMENTS CHECKLIST
FOR ELDERLY DEVELOPMENTS

Development Name: _____ PHFA No.: _____

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

Design Architect (Print or type): _____

Design Architect (Signature): _____

Date: _____

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

1. **Minimum Unit Sizes Requirements** – The following matrix establishes the minimum and maximum allowable net square footage area of 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 or spaces for heating and cooling equipment located outside the unit. Rehabilitation developments may vary from the maximums and minimums by 10%. Accessible units may vary from the maximums as required to provide an accessible route and accessible clearances.

2. **Minimum Room Size Requirements** – Minimum room sizes do not include unusable alcove space at doors. Accessible rooms may require additional space in order to provide an accessible route and the necessary clearances.

(Waivers may be granted for room sizes in rehabilitation developments only, based on acceptable furnishability plans)

Bedrooms:

___ A. Primary or master bedroom – 120 sq. ft. (least dimension 10'-0").

___ B. Second bedroom – 100 sq. ft. (least dimension 9'-0").

Living Room:

___ A. Living room – 150 sq. ft. (least dimension 11'-0").

Dining Room:

The dining area shall be in addition to the living room space and must be appropriately sized to accommodate the following:

___ A. 1 BR Unit - Table with 2 chairs

___ B. 2 BR Unit - Table with 4 chairs

Other Unit Space:

___ A. Dwelling unit corridors and stairs – 36" minimum width.

Ceiling Height:

- ___ **A.** Ceiling height must be 7'-6" minimum, except that 7'-0" ceiling height is allowable in bathrooms, storage rooms, mechanical rooms and closets. A maximum of 15% of any other room may have a ceiling height of 7'-0" to allow for soffits, bulkheads, beams, etc.

3. Elderly Facilities Amenities:

- ___ **A.** Ties to supportive social services, (e.g., adult day care services, recreation and cultural activities).
- ___ **B.** Required physical and design accommodation features and amenities:

 - ___ 1. Handrails on one both sides of common area corridors
 - ___ 2. Community spaces with kitchens and storage.
 - ___ 3. Emergency call provisions with actuating devices in all bedrooms and bathrooms
- ___ **C.** Access to public transportation.

___ **4. Accessibility (Facilities, Apartments and Parking)** – All applicable Local, State and Federal regulations and PHFA requirements must be met. Refer to Section 1.02, Accessibility Requirements, Page 1.9, for additional information.

___ **5. Community Space** – All developments, except for scattered sites and those with 11 units or less, should be designed with adequate community space to accommodate functions and services offered at the facility. Developments should also provide a public restroom. Community rooms should be a single room sized to provide at least fifteen (15) sq. ft. per unit, for developments with 12 to 50 units. Community rooms in developments with more than 50 units shall be a minimum of 750 sq. ft. in size. A kitchen or kitchenette must be provided in, or adjacent to, the community room in elderly developments. The kitchen shall include a sink, full height refrigerator and 30" range.

___ **6. Management Office** – An on-site management office must be provided for all developments except those with 11 units or less or scattered site developments. Developments that are a continuation of a phased development with a total of more than 11 units must provide a management office in one of the phases.

___ **7. VisitAbility Goal** – 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 units as possible for the purpose of allowing persons with disabilities the ability to visit neighbors and friends. Please refer to our VisitAbility Guidelines, Section 1.09, included within this *Guide*.

___ **8. Air Conditioning** – The living areas and bedrooms of all dwelling units must be air conditioned. Window air conditioners will not be considered as meeting this criterion. In new construction and substantial rehabilitation developments, all common areas must also be air conditioned, except for stair towers, mechanical and storage areas.

9. Building Security:

- ___ **A.** 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. Entrance doors must be equipped with dead bolt lockset, a passage latch set and a door knocker with viewer.
 - ___ C. All dwelling units must be equipped with an identification number.
10. Below-Grade Units – The maximum distance from the floor level in any dwelling unit to the finish grade elevation outside the unit is 4'-6".
11. **Bathrooms:**
- ___ A. One and a half baths for three bedroom.
 - ___ B. Bathroom floor finish must be ceramic tile or sheet vinyl. VCT is not acceptable.
 - ___ C. Accessories – Vanity bases must be provided for all bathrooms and powder rooms. Removable fronts are suggested for handicapped adaptable units. All bathrooms must have a minimum of two 24" towel bars, a toilet paper holder, shower rod in tub/shower unit, and a medicine cabinet with mirror. A light fixture must be located over the mirror.
 - ___ D. Solid blocking must be installed in all framed walls behind grab bars and all other wall-mounted appurtenances that will be subjected to loads.
12. **Kitchens:**
- ___ A. Ducted range hoods with fans and lights must be provided above all ranges.
 - ___ B. Kitchen cabinets must meet PHFA standards (Refer to PHFA Kitchen Cabinet Minimum Standards, Section 1.23). Cabinets in accessible units must have loop type hardware throughout.
 - ___ C. A minimum of one 15" wide drawer base must be provided in all kitchens.
 - ___ D. Refrigerators must be provided with all units except SROs with common cooking facilities. All refrigerators must be frost-free and must have two doors (separate doors for freezer and refrigerator compartments). Minimum sizes must be:

| | |
|-----------|---------------------|
| 1-Bedroom | <u>13.0</u> cu. ft. |
| 2-Bedroom | <u>15.0</u> cu. ft. |
 - ___ E. Ranges must be provided in all units and community room kitchens and kitchenettes, except SROs with common cooking facilities. All units with two or more bedrooms must be equipped with 30" wide ranges. Ranges less than 30" in width must not be located abutting partitions. A protective shield must be provided on the section of wall directly behind all ranges and on any abutting partitions cabinetry. 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.
 - ___ F. In general occupancy units with 2 or more bedrooms, double bowl sinks are required unless dishwashers are provided.
 - ___ G. Where dishwashers are supplied, they must be 24" wide, full size, under-counter type.
 - ___ H. 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.

13. Flooring:

If sheet vinyl or VCT is used it must comply with sound ratings found in Section 2.02.C.27 Sound Insulation.

- ___ A. Carpet must meet the acceptance criterion of Federal Standard DOCF1-70 for flammability or Class II, 0.22 watts/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. Carpet must meet HUD UM-44D requirements. Parquet, hardwood, tile or equal quality flooring may be substituted where sound transmission is not a factor.
- ___ B. 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. Direct glued-down carpet must be used in units for persons with disabilities.
- ___ D. Provide carpeting in public corridors and lobbies with the exception of the entrance vestibules where a hard surface and a floor mat must be provided.
- ___ E. Provide carpeting throughout the apartments with the exception of utility closets, laundry areas, bathrooms, kitchens and entrance foyers where entry is directly from outside, (e.g., as in townhouses). Hard surface flooring may be substituted for carpet, with PHFA approval and documentation verifying that sound transmission ratings and impact isolation ratings have been met.
- ___ F. Sheet Vinyl – Must be full spread adhesive installation, using maximum width possible to avoid seams.
- ___ G. Vinyl Composition Tile – VCT cannot be used in bathrooms or living rooms. It may be used in public spaces.

14. Furnishings:

- ___ A. All windows, sliding doors and patio doors within habitable spaces must be equipped with: (1) curtain rod and vinyl shade, or (2) mini-blinds.
- ___ B. Community areas must be furnished with drapery tracks, drapes and liners, blinds, shades, etc., as appropriate for the intended use of the space.
- ___ C. Drapery liners must be provided throughout the development where aesthetic and/or energy conservation requirements are paramount.

15. Signage:

- ___ A. A floor identification sign must be provided on the wall opposite the elevator doors.
- ___ B. 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 housing opportunity logo and the accessible housing logo.

- ___ C. Room identification signs must be provided for all community, management, maintenance and public spaces.
- ___ D. All permanent interior signage, including individual apartment identification, must comply with ADA, UFAS, and A NSI A117.1 requirements.

16. Closets:

- ___ A. All closets must have doors that fully conceal the contents of the closet.
- ___ B. The height of closet doors must not exceed 6'-8" unless the specified door and installation has been reviewed and approved by PHFA.
- ___ C. 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. Pantry storage should be provided.
- ___ E. Linen storage must be provided.
- ___ F. An entry coat closet must be provided.
- ___ G. Provide adequate storage space: all unit types (except SRO's) must have a minimum of (10) sq. ft. plus an additional 5 lineal feet of full height hanging space in each bedroom within a unit. SRO's must be provided with an adequate closet or wardrobe cabinet for clothes storage.
- ___ H. Ceiling height must be 7'-0" minimum.
- ___ I. Space for lockable tenant storage bins may be provided elsewhere on the development if sufficient storage space cannot be provided within the apartments.

17. Laundry Facilities:

Single-unit combination washers and 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. 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. If central facilities are provided, at least one washer and one dryer must be provided for every twenty (20) elderly units, with a minimum of two (2) washers and two (2) dryers required in each facility for all developments.
- ___ C. A minimum of one front-loading washer and dryer must be provided in each common laundry facility and in accessible units with laundry facilities.
- ___ D. 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 laundry facilities.
- ___ E. The equipment may be coin operated type leased from a concessionaire.

- ___ F. Washer and dryer areas located within a unit must be concealed unless located in a basement.
- ___ G. Stackable washers and dryers may be used in units with 2 or less bedrooms.

18. Development Facilities and Maintenance:

- ___ A. 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 (does not apply if all maintenance services and repairs are contracted out).

19. Natural Light and Ventilation:

- ___ A. 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. At least one window per room must be a ventilating type window with a full screen for the operable portion of the window.
- ___ C. Below grade units must have window sill heights at a maximum of 4'-6" above floor level.

20. Interior Painting:

- ___ A. A semi-gloss, egg shell or equivalent high quality washable latex paint should be specified for all kitchens, bathrooms and public restrooms throughout the unit for developments with children and for all public stairs, corridors and vestibules, unless a protective wall covering such as vinyl wall covering or paneling is provided.
- ___ B. Semi-gloss or high-gloss enamel must be specified for laundry, maintenance, storage and utility rooms in common areas.

21. Parking and Sidewalks:

- ___ A. The parking ratio must be in conformance with the Local zoning ordinance unless a variance is obtained.
- ___ B. 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 should be provided at the same ratio,
- ___ C. All driveways, streets and parking lots must be paved.
- ___ D. In municipalities without a zoning ordinance or parking regulations, a minimum of one (1) parking space per dwelling unit plus one (1) space per employee and two (2) guest spaces must be provided.
- ___ E. Pedestrian sidewalks must be cast-in-place concrete, minimum 4" thick over 4" minimum clean 2B stone base. Bituminous sidewalks are not permitted.

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

- ___ A. Benches, tables, chairs, equipment and structures must be of the following materials or combinations thereof:

- ___ 1. Wood must be decay resistant species, pressure treated (labeled in accordance with the applicable AWPB Standard), vacuum and non-pressure treated

(conforming to NWMA-IS-A and bearing the NWMA Seal of Approval) or a minimum of two (2) coats of high quality exterior grade sealer, stain or paint must be applied on all sides, edges and ends. The wood must be guaranteed for a minimum of one (1) year to be free of objectionable splinters, checks, shakes, warping, loose knots, decay and stains.
 - ___ 2. Concrete must be precast reinforced concrete, sealed with a minimum of two (2) coats of acrylic sealer. If color is specified, it must be cast integrally.
 - ___ 3. Metals must be anodized aluminum or galvanized steel.
 - ___ 4. Fiberglass must be "super-strength" fiberglass. Lightweight fiberglass is not permitted.
- ___ B. All hardware must be corrosion and vandal-resistant, (e.g., hot dipped galvanized or high tensile, strength bolted connections requiring special wrenches for dismantling, galvanized nails for fencing and enclosures).
 - ___ C. All railroad ties used for curbs, steps, wheelstops, retaining walls, etc., must be pressure treated CCA-C AWFA C2, C9 .40 pcf.
- 23. Lawn Seeding - Loose seed should only be permitted to patch small utility excavation, etc. All other seeding shall be one of the following:**
- ___ A. Hydro seed – Contractor shall be responsible for watering, feeding, and mowing until mature growth is established.
 - ___ B. Sod – Contractor shall be responsible for watering and feeding for 3 months after installation.
- 24. Waste Disposal – (Check applicable systems used):**
- ___ A. 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. Trash room(s) – All trash rooms must contain a hose bib and floor drain and have a durable water resistant floor finish.
 - ___ C. Trash compactor.
 - ___ D. Dumpster(s).
 - ___ E. Recycling provisions - The size, number and design of collection area(s) must conform to the requirements of the Local recycling ordinance.
 - ___ F. Outdoor collection – Dumpster(s): Outdoor collection areas must have concrete pads and be visually screened, (e.g., evergreen hedges or shrubs, masonry or pressure treated wood 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 10') must be provided in front of the collection area to prevent pavement damage by the garbage trucks for dumpster type collection.

- _____ 25. **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. If mounted in closets, the contents of the closet shall not obscure the extinguisher. Therefore, coat closets are not usually an acceptable location.
- _____ 26. **Basements** – Must have 4” thick concrete floors with vapor barriers over 4” gravel base.
- _____ 27. **Termite Infestation** – Measures must be taken to protect the building from termite infestation. It is recommended that careful environmental considerations be taken in the selection of the method chosen to protect the building. PHFA’s Green Building Criteria does not allow the use of soil poisoning for termite treatment.
- _____ 26. **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 clearly on the party responsible for the work.

27. **Sound Insulation:**

| <u>Location</u> | <u>IIC*</u> | <u>STC**</u> |
|-----------------|-------------|--------------|
| Partitions | N/A | 50(55)*** |
| Floor/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.).

- _____ 28. **Substrates** – Ceramic tile or EIFS (Dryvit) interior or exterior finishes shall only be installed over cementitious or masonry substrates. Moisture-resistant gypsum board is NOT allowed.
- _____ 29. **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.
- _____ 30. **Drainage Barrier** – A drainage barrier is required behind all siding and masonry veneer in wood framed construction.
- _____ 31. **Reroofing** – All reroofing applications must include the removal of the existing roofing system down to the roof deck.
- _____ 32. **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.

SECTION 2.02.D
DESIGN DEVELOPMENT REQUIREMENTS CHECKLIST
FOR GREEN BUILDING CRITERIA

Development Name: _____ PHFA No.: _____

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

Design Architect (Print or type): _____

Design Architect (Signature): _____

Date: _____

Check the appropriate line if the development conforms to the requirement. Note N/A if it is not applicable. The Architect must submit a written request to PHFA for any waiver of the PHFA Development Requirements or 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. Water saving plumbing fixtures in compliance with the EPA WaterSense program shall be installed throughout the development with the following maximum flow rates: Showerheads: 2.0 gpm, Bathroom Faucets: 1.5 gpm, Toilets: 1.28 gpf. In addition, kitchen faucets shall be 2.0 gpm maximum. (For preservation developments, this applies to toilets, shower heads and faucet aerators.)
- _____ 2. Landscape plantings shall be drought-tolerant. Landscaping shall not require irrigation. (For existing buildings, this applies to new landscaping only)
- _____ 3. Provisions for a development-wide recycling program shall be provided.
- _____ 4. Photocells or timers shall be provided to control all site lighting.
- _____ 5. All paints, primers and clear finishes used shall be low volatile organic compound (VOC) type in accordance with Green Seal Standard GS-11 for interior paint, GC-03 for anti-corrosive paint, and South Coast Air Quality Management District (SCAQMD) Rule #1113 for clear wood finishes and stains. (At existing buildings, this applies to new paints, primers and clear finishes only)
- _____ 6. All caulking, sealants and adhesives shall be low VOC type in accordance with SCAQMD Rule #1168. (At existing buildings, this applies to new caulking, sealants and adhesives only)
- _____ 7. Composite woods used indoors shall be free of added urea formaldehyde or be encapsulated by a durable low VOC sealant that complies with SCAQMD Rule #1113. Cabinetry with KCMA Environmental Stewardship Program (ESP) certification shall be deemed to satisfy this requirement. (At existing buildings, this applies to new composite woods only)
- _____ 8. Carpets shall bear the Carpet and Rug Institute "Green Label" or must be

manufactured from at least 25% recycled materials. (In preservation developments, this applies only to carpet in need of replacement and future carpet replacement)

- _____ **9.** Bathroom fans shall be Energy Star® labeled and in accordance with ASHRAE 62.2. (In preservation developments, the installation of switch mounted timers will satisfy these criteria)

- _____ **10.** Bathroom and Kitchen fans and clothes dryers shall vent directly to the outdoors. (In preservation developments, existing recirculating type range hoods may remain in place)

- _____ **11.** Mechanical ventilation in accordance with ASHRAE 62.2 shall be provided.

- _____ **12.** Heating, ventilation and air-conditioning systems shall be engineered and properly sized for the space covered in accordance with ACCA Manuals J and N, as applicable. A mechanical engineer must certify to the design by sealing the construction documents. (In preservation developments, this applies to new equipment only)

- _____ **13.** No piping shall be located outside of the interior finish of the insulated building envelope. (Not applicable to existing piping in preservation developments)

- _____ **14.** All domestic water pipes except for PEX piping shall be insulated (Not applicable to concealed piping in preservation developments)

- _____ **15.** No mold-propagating materials shall be used in damp areas. Only moisture resistant materials shall be used in bathrooms and at tub-shower surrounds. (Not applicable to preservation developments)

- _____ **16.** Vapor barriers shall be provided for all interior slabs on grade. (Not applicable to existing buildings)

- _____ **17.** All below grade spaces shall be waterproofed and have foundation drainage. (Not applicable to existing buildings)

- _____ **18.** Passive radon mitigation systems shall be installed in areas designated as EPA Radon Zone 1 and 2. The lowest level containing dwelling units or community space must be tested for radon in all buildings prior to occupancy. Test results above the action level will require that an active radon mitigation system be installed that result in satisfactory test results.

- _____ **19.** Grading at perimeter of the building shall provide positive drainage away from the building. (Existing buildings must revise grading or install drainage systems where existing grading is problematic)

- _____ **20.** Units with garages shall have a carbon monoxide sensor controlled exhaust fan and the demising wall between the garage and living space shall be a continuous air barrier.

- _____ **21.** Termite shields or borate based wood treatment shall be provided with low VOC

caulking at all floor joints and penetrations to prevent insect infestation. Chemical soil treatment or bait stations shall not be used. (Not applicable to existing buildings)

- _____ **22.** Lead safe work practices shall be used in all properties built before 1978.

- _____ **23.** The Owner shall be provided with maintenance & operations manual and training including all materials, systems and equipment used in the construction, explaining the Green Building components and amenities, how they benefit the property, and how to properly maintain them.

- _____ **24.** A Green Building Guide and orientation shall be provided to the residents explaining the Green Building components and amenities and how they benefit from them

SECTION 2.02.E
DEVELOPMENT TABULAR SCHEDULE

(To be completed by the Architect)

Development Name: _____

PHFA No. _____ 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 _____ % of Gross Bldg. Area

8. Number of On-Site Parking Spaces: _____

9. Required Variances: _____

10. Applicable Accessibility Regulations:

Sec. 504 ___ UFAS ___ PA UCC ___ FHAA ___ ADA ___

| Unit Type | No. of Units | Accessible Units | | Adaptable Units | | Net Square Footage** |
|--------------------|--------------|------------------|----------------|-----------------|----------------|----------------------|
| | | Wheelchair | Hearing/Vision | Wheelchair | Hearing/Vision | |
| SRO | | | | | | |
| EFF | | | | | | |
| 1 BR | | | | | | |
| 2 BR | | | | | | |
| 3 BR | | | | | | |
| 4 BR | | | | | | |
| Total Units | | | | | | |

* Gross Building Area is all improved areas including commercial space measured from the outside of the exterior walls; do not include unimproved basements or abandoned, unused space.

** Net area 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.

SECTION 2.02.F
DEVELOPMENT SECURITY AND MAINTENANCE REQUIREMENTS
CHECKLIST FOR URBAN LOCATIONS

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

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

Design Architect (Print or type): _____

Design Architect (Signature): _____

Date: _____

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

- ___ 1. All developments with shared entrances (high, mid and low-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. Apartment entrance doors must be equipped with a passage latch-set, dead bolt lockset, knocker, viewer and an apartment identification number.
- ___ 3. 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. Place all meters so that they are protected from vandalism and can be read from outside the building.
- ___ 5. 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. Provide "Door Ajar" alarms or, where approved by code, electromagnetic release devices for secondary or fire exit doors.
- ___ 7. Where practicable, provide decorative code approved security grilles or screens for basement and first floor windows with sills less than 60 inches above exterior finished grade.
- ___ 8. Avoid through-wall penetrations, (e.g., removable AC units, exhaust grilles, etc.), unless small enough to prevent entry and placed a minimum of 60 inches above exterior finished grade.
- ___ 9. Masonry or equal exteriors are recommended. At a minimum, the first 8 feet above grade should be masonry or equivalent strength material with "Anti-Graffiti" coating.
- ___ 10. Minimize front and side yard setbacks facing public right-of-ways as much as possible and to the extent allowable by code and zoning.

- _____ **11.** 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 stepping stones in areas subject to foot traffic).

SECTION 2.02.G
MECHANICAL REQUIREMENTS CHECKLIST

(Must be submitted with Design Development Drawings and Specifications)

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

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

Design Professional (Print or type): _____

Design Professional (Signature): _____

Date: _____

A checkmark indicates that the development conforms to the requirement. Note N/A if the item 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. **Shower/Tub Combinations** – Every bathtub must be furnished with shower fittings. Showerheads must have a maximum 2.5 G.P.M. flow restrictor. Showers for the elderly and persons with disabilities 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. **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 P.V.C. split insulation jacket with cemented joints.

- _____ 3. **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)

- _____ 4. **Gas Furnaces** – All gas furnaces shall be Energy Star labeled.

- _____ 5. **Ventilation** -- Requirements of the International Building Code shall be followed for ventilation of the following areas:
 - _____ A. Elevator machine rooms.
 - _____ B. Trash rooms.
 - _____ C. Laundry rooms.
 - _____ D. Mechanical and electrical rooms.
 - _____ E. Corridors.

- _____ 6. **Air Conditioning Requirements (Mechanical Cooling):**

- _____ A. The living areas and bedrooms of all dwelling units must be air conditioned. Window air conditioners will not be considered as meeting this criterion.
- _____ B. In new construction and substantial rehabilitation developments, all common areas must also be air conditioned, except for stair towers, mechanical and storage areas.
- _____ 7. **Compressor Warranty** – A minimum five (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.
- _____ 8. **Chemical Feeders** – A one-shot type, two (2) quart minimum capacity chemical feeder must be installed on all developments utilizing central hot and/or chilled water piping systems.
- _____ 9. **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.
- _____ 10. **Clothes Dryers** – Exhaust ductwork must be rigid duct with accessible cleanouts to vacuum clean entire duct system.
- _____ 11. **Water Coolers** – If provided, water coolers must be dual height type, with standard and accessible height spouts.
- _____ 12. **Accessible Units** – Insulate or otherwise protect the hot, cold and drain piping exposed below the kitchen sink and bathroom lavatories.
- _____ 13. **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.
- _____ 14. **Pipe and Duct Locations** - All water piping and heating/cooling ductwork must be located within the conditioned space, (i.e., on the dwelling unit side of the air barrier on the interior of the exterior wall and roof/ceiling assemblies).
- _____ 16. **Water Heaters** – 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.

All water heaters must have a drip pan connected through a trap to a waste line.
- _____ 17. **Domestic Water Plumbing Systems Using PEX or Other Cross-linked Polyethylene Piping** - Shall be installed with manifolds in each individual dwelling unit. The manifolds shall be accessible by means of an access panel or door. All piping from the manifold block to each plumbing fixture shall be a single length of continuous polyethylene cross-linked pipe (no joints are allowed).
- _____ 18. **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.

- _____ 19. **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.
- _____ 20. **Electric Resistance Heat** – An HVAC system utilizing electric resistance heating as the primary heat source shall not be allowed in PHFA developments.
- _____ 21. **Exposed Plumbing - All plumbing lines must be concealed except in Mechanical Rooms and unfinished Basements only.**

SECTION 2.02.H
ELECTRICAL REQUIREMENTS CHECKLIST

(Must be submitted with Design Development Drawings and Specifications)

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

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

Design Professional (Print or type): _____

Design Professional (Signature): _____

Date: _____

A checkmark indicates that the development conforms to the requirement. Note N/A if the item 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. **Electrical Systems and E equipment** - Must be designed and constructed in accordance with the International Residential Code or NFPA 70 National Electrical Code as applies.

- ___ 2. **Site Lighting** – Lighting fixtures must be shatter-resistant and tamperproof. Lamps must be high efficiency design, low energy type, (e.g., high pressure sodium. Provide .5 fc minimum).

- ___ 3. **Utility Metering** – To discourage the waste of energy and to encourage conservation, PHFA suggests individual electric metering whenever possible. Electric bulk metering may be provided where the rate schedule justifies its use.

- ___ 4. **Smoke Detectors** – Must be furnished and installed in the following areas:
 - ___ A. 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 multi-story dwellings. Detectors must be 120-volt AC type with battery back-up. Detectors are required whether the dwelling units are sprinklered or not.

 - ___ B. Hearing/vision-impaired units must have strobe/horn type visual signaling devices wired to the unit 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. Public areas – In all public areas, sprinklered or not.

 - ___ D. Storage room – In all unsprinklered storage rooms; in all storage rooms in excess of 100 sq. ft., sprinklered or not.

 - ___ E. 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. Stair towers – At the top of each stair tower.
 - ___ G. Trash room – In the trash collecting room and at the top of the trash chute.
 - ___ H. Corridors – At the ends of each corridor leading into stair towers or dead-ended. Corridor coverage must not exceed 39 feet spacing between smoke detectors, or as required by the latest edition of the International Building Code or NFPA 72, The National Fire Alarm Code.
 - ___ I. Heat detectors – Developments located in the City of Philadelphia may have additional requirements. Check with the City Code Administrator for details.
-
- ___ 5. **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. **Electric Panel Boxes** – In accessible and adaptable units, tenant electrical panels shall be mounted with the top breaker within the accessible reach range.
 - ___ 7. **Accessibility Requirements** – The electrical design must include the necessary features discussed in Section 1.02.
 - ___ 8. **Telephone & TV Cable Service** – Every building and every unit shall be pre-wired for telephone and TV cable service.
 - ___ 9. **Electric Resistance Heat** – Electric resistance heating shall not be allowed as the primary heat source in PHFA developments.
 - ___ 10. **Carbon Monoxide Detectors** – A carbon monoxide detector must be installed in all Living Units with gas fired mechanical equipment and as required by Code.

SECTION 2.02.I
SURVEYOR'S REPORT

(Must be Filled Out and Signed with All Surveys)

To: _____ Date: _____

THIS IS TO CERTIFY, that on _____, 20____, I made an accurate Survey of the premises standing in the name of _____

Situated at _____,

_____, _____, _____,

(City)

(County)

(State)

Known as street numbers _____ and shown on the accompanying Survey entitled:

I made a careful inspection of said premises and of the buildings located thereon _____ at the time of making such Survey, and again on _____, 20____, and on _____ such latter inspection, I found said premises to be in the possession of

_____.

(Tenant of Owner)

I further certify as to the existence or non-existence of the following at the time of my last inspection:

1. Rights of way, old highways or abandoned roads, lanes or driveways, evidence of ingress or egress, 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 of family burying grounds located on said premises:

4. Telephone, telegraph or electric power poles, wires or lines 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):

6. Are there any indications of signs of occupancy or use of premises for residential purposes, building construction, alterations or repairs 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 or party walls and as to all easements of support of "Beam Rights." In case of County Property Report, specifically how boundary lines are evidenced, that is, whether by fences or otherwise):

8. Any change in street lines either completed or officially proposed?

A. Are there indications of recent street or sidewalk construction or repair?

9. If any zoning or other municipal regulations affect the use of the surveyed premises, do the improvements on the premises and the use of them comply with such?

10. If you have information as to any restrictive covenants on the property, do the improvements, use and occupancy comply with such? (If the premises are subject to restrictive covenants, obtain and attach a verbatim copy of them):

11. Indicate the accuracy of the closure of the metes and bounds of the Legal Description and the Survey:

Registered Surveyor No. and Signature: _____

NOTE 1: Answer each item if the property is not subject to any such of Items 1 to 5, inclusive; insert the word "None" following the item. If necessary, describe on separate sheet.

NOTE 2: In all cases where there are encroachments, support easements, party walls, etc., they should also be denoted upon the map of your survey.

TABLE A
OPTIONAL SURVEY RESPONSIBILITIES AND SPECIFICATIONS

NOTE: The items of Table A must be negotiated between the surveyor and client. It may be necessary for the surveyor to qualify or expand upon the description of these items (e.g., in reference to Item 6(b), there may be a need for an interpretation of a restriction). The surveyor cannot make a certification on the basis of an interpretation or opinion of another party. Notwithstanding Table A Items 5 and 11(b), if any engineering design survey is desired as part of an ALTA/ACSM Land Title Survey, such services should be negotiated under Table A, item 22.

The items checked below are required by PHFA to be included in the Survey.

1. X Monuments placed (or a reference monument or witness to the corner) at all major corners of the boundary of the property, unless already marked or referenced by an existing monument or witness.
2. X Address(es) if disclosed in Recorded Documents, or observed while conducting the survey.
3. X Flood zone designation (with proper annotation based on federal Flood Insurance Rate Maps or the state or local equivalent), by scaled map location and graphic plotting only.
4. X Gross land area (and other areas if specified by the client).
5. X Vertical relief with the source of information (e.g. ground survey or aerial map), contour interval, datum, and originating benchmark identified.
6. X (a) Current zoning classification, as provided by the insurer.
- X (b) Current zoning classification and building setback requirements, height and floor space area restrictions as set forth in that classification, as provided by the insurer. If none, so state.
7. X (a) Exterior dimensions of all buildings at ground level.
- (b) Square footage of:
 - X (1) exterior footprint of all buildings at ground level.
 - X (2) other areas to be defined by the client
- X (c) Measured height of all buildings above grade at a location specified by the client. If no location is specified, the point of measurement shall be shown.
8. X Substantial features observed in the process of conducting the survey (in addition to the improvements and features required under Section 5 above) such as parking lots, billboards, signs, swimming pools, landscaped areas, etc.
9. X Striping, number and type (e.g. handicapped, motorcycle, regular, etc.) of parking spaces in parking areas, lots and structures.
10. X (a) Determination of the relationship and location of certain division or party walls designated by the client with respect to adjoining properties (client to obtain necessary permissions).
- X (b) Determination of whether certain walls designated by the client are plumb (client to obtain necessary permissions).
11. Location of utilities (representative examples of which are shown below) existing on or serving the surveyed property as determined by:

- X (a) Observed evidence
- X (b) Observed evidence together with evidence from plans obtained from utility companies or provided by client, and markings by utility companies and other appropriate sources (with reference as to the source of information)
- Railroad tracks, spurs and sidings;
 - Manholes, catch basins, valve vaults or other surface indications of subterranean uses;
 - Wires and cables (including their function, if readily identifiable) crossing the surveyed property, and all poles on or within ten feet of the surveyed property. Without expressing a legal opinion as to the ownership or nature of the potential encroachment, the dimensions of all encroaching utility pole crossmembers or overhangs; and
 - Utility company installations on the surveyed property.

Note – With regard to Table A, item 11(b), source information from plans and marking swill be combined with observed evidence of utilities to develop a view of those underground utilities. However, lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. Where additional or more detailed information is required, the client is advised that excavation may be necessary.

12. X Governmental Agency survey-related requirements as specified by the client, such as for HUD surveys, and surveys for leases on Bureau of Land Management managed lands.
13. X Names of adjoining owners of platted lands according to current public records.
14. X Distance to the nearest intersecting street as specified by the client
15. X Rectified orthophotography, photogrammetric mapping, airborne/mobile laser scanning and other similar products, tools or technologies as the basis for the showing the location of certain features (excluding boundaries) where ground measurements are not otherwise necessary to locate those features to an appropriate and acceptable accuracy relative to a nearby boundary. The surveyor shall (a) discuss the ramifications of such methodologies (e.g. the potential precision and completeness of the data gathered thereby) with the insurer, lender and client prior to the performance of the survey and, (b) place a note on the face of the survey explaining the source, date, precision and other relevant qualifications of any such data.
16. X Observed evidence of current earth moving work, building construction or building additions.
17. X Proposed changes in street right of way lines, if information is available from the controlling jurisdiction. Observable evidence of recent street or sidewalk construction or repairs.
18. X Observed evidence of site use as a solid waste dump, sump or sanitary landfill.
19. X Location of wetland areas as delineated by appropriate authorities.
20. _____ (a) Located improvements within any offsite easements or servitudes benefitting the surveyed property that are disclosed in the Record Documents provided to the surveyor and that are observed in the process of conduction the survey (client to obtain necessary permissions).
- _____ (b) Monuments placed (or a reference monument or witness to the corner) at all major corners of any offsite easement or servitudes benefitting the surveyed property and disclosed in Record Documents provided to the surveyor (client to obtain necessary permissions).
21. _____ Professional Liability Insurance policy obtained by the surveyor in the minimum amount of \$_____ to be in effect throughout the contract term. Certificate of Insurance to be furnished upon request.

SURVEY INSTRUCTIONS AND CERTIFICATE

In addition to the certified map of the Survey, the Surveyor is required to fill out the report entitled *Section 2.02.G, Surveyor's Report*.

An ALTA survey, to be acceptable to *Pennsylvania Housing Finance Agency* for closing, must be prepared by a Registered Surveyor in 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 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 or the structural. He 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 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 of 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 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.”

SECTION 2.02.J
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 PHFA financed 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.
2. **Development Paid Utilities** – Utilities that are paid by the development by bulk metering and/or by house sub-metering of the utilities.

Description of the HVAC system selected:

Combination No. 1: _____

Combination No. 2: _____

Other or additional comments: _____

Fuel and Energy Types

| <u>(Dwelling Units Only)</u> | <u>Fuel Type</u> |
|------------------------------|------------------|
| Space Heating | _____ |
| Domestic Water Heating | _____ |
| Cooking | _____ |
| Air Conditioning | _____ |
| Lighting & Misc. Power | _____ |

Fuel Types: ER-Electric Resistance; HP-Heat Pump; FO-Fuel Oil; G-Gas

Utility Providers:

Electric Utility Co.: _____

Gas Utility Co.: _____

Oil Utility Co.: _____

Cost of Utility Used:

Electric Per KWH \$ _____; Gas Per MCF: _____; Fuel Oil Per Gallon \$ _____

Development Paid Costs:

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

Electric \$ _____; Gas \$ _____; Fuel Oil \$ _____

Domestic Water \$ _____; Sanitary Sewer \$ _____

Rehab 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

| <u>(Dwelling Units Only)</u> | <u>Fuel Type</u> | <u>Average Cost per Unit per Month</u> | | | |
|-------------------------------------|-------------------------|---|--------------------|--------------------|--------------------|
| | | <u>1 BR</u> | <u>2 BR</u> | <u>3 BR</u> | <u>4 BR</u> |
| Space Heating | _____ | _____ | _____ | _____ | _____ |
| Domestic Water Heating | _____ | _____ | _____ | _____ | _____ |
| Cooking | _____ | _____ | _____ | _____ | _____ |
| Air Conditioning | _____ | _____ | _____ | _____ | _____ |
| Lighting & Misc. Power | _____ | _____ | _____ | _____ | _____ |

Fuel Types: ER-Electric Resistance; HP-Heat Pump; FO-Fuel Oil; G-Gas

SECTION 2.02.K
DESIGN DEVELOPMENT CONSTRUCTION COST ESTIMATE FORM

Development Name: _____

Sponsor: _____

PHFA Number: _____ Contractor: _____

Date: _____ Form Completed by (print): _____

Note: Divisions 1 - 16 must not include Builders Overhead or Profit. Allowances are not permitted

| Div.# / Description | Residential | Commercial | Total |
|--|-------------|------------|-------|
| 1. General Requirements <i>Limited to 6% of the total of Divisions 2 - 16</i> | | | |
| Mobilization | | | |
| Security | | | |
| Temporary Facilities | | | |
| Supervision | | | |
| Equipment | | | |
| Other (explain) | | | |
| Division 1 Total | | | |

| | | | |
|-------------------------|--|--|--|
| 2. Site Work | | | |
| Building Demolition | | | |
| Selective Demolition | | | |
| Earthwork | | | |
| Site Utilities | | | |
| Site Improvements | | | |
| Storm Sewer | | | |
| Paving | | | |
| Walks and Curbs | | | |
| Landscaping | | | |
| Environmental Abatement | | | |
| Offsite Improvements | | | |
| Division 2 Total | | | |

| | | | |
|-------------------------|--|--|--|
| 3. Concrete | | | |
| Foundation | | | |
| Cast-in-Place | | | |
| Pre-Cast | | | |
| Division 3 Total | | | |

| | | | |
|-------------------------|--|--|--|
| 4. Masonry | | | |
| Block | | | |
| Brick Veneer | | | |
| Restoration/Cleaning | | | |
| Division 4 Total | | | |

| Div. # / Description | Residential | Commercial | Total |
|----------------------------------|-------------|------------|-------|
| 5. Metals | | | |
| Structural | | | |
| Ornamental | | | |
| Railings | | | |
| Division 5 Total | | | |
| 6. Carpentry | | | |
| Rough | | | |
| Finish | | | |
| Division 6 Total | | | |
| 7. Moisture Protection | | | |
| Roofing | | | |
| Exterior Finish | | | |
| Insulation | | | |
| Waterproofing | | | |
| Misc. (Gutters, Flashing, etc.) | | | |
| Division 7 Total | | | |
| 8. Windows and Doors | | | |
| Windows | | | |
| Storm Windows | | | |
| Exterior Doors | | | |
| Interior Doors | | | |
| Division 8 Total | | | |
| 9. Finishes | | | |
| Plaster Repair | | | |
| Drywall | | | |
| Tile Work | | | |
| Suspended Ceilings | | | |
| Flooring | | | |
| Painting and Decorating | | | |
| Division 9 Total | | | |
| 10. Specialties | | | |
| Mailboxes, Bath Accessories, etc | | | |
| Division 10 Total | | | |
| 11. Equipment | | | |
| Residential Appliances | | | |
| Division 11 Total | | | |
| 12. Furnishings | | | |
| Kitchen Cabinets | | | |
| Bath Cabinets | | | |
| Window Treatments | | | |
| Division 12 Total | | | |

| Div. # / Description | Residential | Commercial | Total |
|---|-------------|------------|-------|
| 13. Special Construction | | | |
| Trash Compactor | | | |
| Recreation Equipment | | | |
| Division 13 Total | | | |
| 14. Conveying Systems | | | |
| Division 14 Total | | | |
| 15A. Plumbing | | | |
| Building Sewage System | | | |
| Building Water System | | | |
| Gas | | | |
| Plumbing Fixtures | | | |
| Fire Protection | | | |
| Division 15A Total | | | |
| 15B. Heating, Ventilation, Air Conditioning | | | |
| Division 15B Total | | | |
| 16. Electrical | | | |
| Primary Service | | | |
| Distribution System | | | |
| Lighting | | | |
| Systems (Alarms, Intercom, etc) | | | |
| Division 16 Total | | | |
| Subtotal Divisions 1 – 16 | | | |
| Builder's Overhead - 2% <i>Limit</i> | | | |
| Builder's Profit - 6% <i>Limit</i> | | | |
| Bond Premium or LOC | | | |
| Building Permit | | | |
| Other (Explain) | | | |
| TOTAL COST | | | |
| TOTAL CONSTRUCTION COST (Residential & Commercial) | | | |

If the total construction cost differs from that reported in the Schematic Design Submission, submit an explanation. A cost must be provided for all applicable line items. Allowances are not permitted.

Design Development Construction Cost Estimate (Continued)

DEVELOPMENT INFORMATION

Number of Dwelling Units: _____

Gross Building Square Footage: _____

Net Commercial Square Footage: _____

Length of Construction: _____ Months

Estimated Starting Date: _____

Wage Determination:

_____ Open Shop

_____ Union Shop

_____ Davis Bacon

Date: _____

_____ Residential

_____ Commercial

_____ PA Prevailing Wage

Date: _____

NOTE: *Due to the length of time it takes to process a development, it is crucial that the construction budget is prepared allowing for inflation between the date this budget is set and the date construction is to begin. Allowances are not permitted.*

This cost estimate is based on the following documents:

Drawing Date: _____

Latest Revision Date: _____

Specifications Date: _____

Latest Revision Date: _____

Addendum # _____ Date: _____

Signature: _____

SECTION 2.03.A
CONTRACT DOCUMENT SUBMISSION
REQUIREMENTS FOR FINAL REVIEW

2.03.A.1. GENERAL

- A. After the Design Development Submission has been reviewed and approved by the Agency staff, the Developer must direct the Design Architect to prepare the Contract Drawings and Specifications. These drawings and specifications must be consistent with the approved preliminary drawings and specifications, including the project construction costs established during the preliminary phase. The same level of documentation is required to be submitted for design-bid-build, negotiated and design-build methods of development delivery. Preservation developments shall include the following documentation as applies to each development. Contact the Technical Services Division Review Architect for approval of the scope of documentation acceptable to the Agency for submission.
- B. During this phase, the Architect must notify the Developer and PHFA in writing of any significant changes to the Design Development Documents. Such notification must be made as soon as the extent of the changes is known and their effect on the construction cost is determined. No significant changes to the preliminary documents may be included in the Contract Documents unless prior approval is obtained from the Developer and PHFA.
- C. In order to be considered for a Loan Commitment, the Agency must receive complete Contract Documents two (2) months prior to the Board Meeting at which the Sponsor intends to receive Loan Commitment. PHFA Board Meetings are scheduled for the second Thursday of each month. We require this submission early in order for the Architect and Contractor to have adequate time to respond to our comments and to incorporate any of our concerns into the development. **Electronic copies of contract documents will not be accepted.**
 - 1. Two (2) complete sets of Contract Drawings must be submitted and must correspond with the specifications.
 - 2. Two (2) complete sets of specifications must be submitted and must correspond with the drawings.
 - 3. Final Cost Estimate.
 - 4. Owner/Architect Agreement with PHFA Addendum and all exhibits and attachments.
 - 5. Owner/Contractor Agreement with PHFA Addendum and all exhibits and attachments.

2.03.A.2. DRAWING REQUIREMENTS

- A. The drawings must be basically the same as submitted at the Design Development stage with all revisions and additions included to bring the drawings to a 100% level of completion for construction. Any changes made to the previously reviewed documents must be identified in writing.
- B. It is recommended that the same date appear on all drawing sheets for reference and identification purposes.

2.03.A.3. SPECIFICATION REQUIREMENTS

- A. The specifications must be basically the same as submitted at the Design Development stage with all revisions and additions included to bring the specifications to a 100% level of completion for construction. Any changes made to the previously reviewed documents must be identified in writing.
- B. All Addenda must be bound into the specifications, numbered and dated.
- C. It is recommended that the specifications be dated the same as the drawings.
- D. Any value engineering list issued must be included with submission.

2.03.A.4. OTHER REQUIREMENTS

- A. Proof of local site plan approvals (land development plan, zoning and subdivision).
- B. Proof of Part 2 Historic Approval (if applicable).
- C. Final Construction Cost Breakdown (see Section 2.03.B).

SECTION 2.03.B
FINAL CONSTRUCTION COST BREAKDOWN

Development Name: _____

Sponsor: _____

PHFA Number: _____ Contractor: _____

Date: _____ Form Completed by (print): _____

Note: Divisions 1 - 16 must not include Builders Overhead or Profit. Allowances are not permitted

| Div.# / Description | Residential | Commercial | Total |
|---------------------|-------------|------------|-------|
|---------------------|-------------|------------|-------|

| 1. General Requirements <i>Limited to 6% of the total of Divisions 2 - 16</i> | | | |
|--|--|--|--|
| Mobilization | | | |
| Security | | | |
| Temporary Facilities | | | |
| Supervision | | | |
| Equipment | | | |
| Other (explain) | | | |
| Division 1 Total | | | |

| 2. Site Work | | | |
|-------------------------|--|--|--|
| Building Demolition | | | |
| Selective Demolition | | | |
| Earthwork | | | |
| Site Utilities | | | |
| Site Improvements | | | |
| Storm Sewer | | | |
| Paving | | | |
| Walks and Curbs | | | |
| Landscaping | | | |
| Environmental Abatement | | | |
| Offsite Improvements | | | |
| Division 2 Total | | | |

| 3. Concrete | | | |
|-------------------------|--|--|--|
| Foundation | | | |
| Cast-in-Place | | | |
| Pre-Cast | | | |
| Division 3 Total | | | |

| 4. Masonry | | | |
|-------------------------|--|--|--|
| Block | | | |
| Brick Veneer | | | |
| Restoration/Cleaning | | | |
| Division 4 Total | | | |

| Div. # / Description | Residential | Commercial | Total |
|----------------------------------|-------------|------------|-------|
| 5. Metals | | | |
| Structural | | | |
| Ornamental | | | |
| Railings | | | |
| Division 5 Total | | | |
| 6. Carpentry | | | |
| Rough | | | |
| Finish | | | |
| Division 6 Total | | | |
| 7. Moisture Protection | | | |
| Roofing | | | |
| Exterior Finish | | | |
| Insulation | | | |
| Waterproofing | | | |
| Misc. (Gutters, Flashing, etc.) | | | |
| Division 7 Total | | | |
| 8. Windows and Doors | | | |
| Windows | | | |
| Storm Windows | | | |
| Exterior Doors | | | |
| Interior Doors | | | |
| Division 8 Total | | | |
| 9. Finishes | | | |
| Plaster Repair | | | |
| Drywall | | | |
| Tile Work | | | |
| Suspended Ceilings | | | |
| Flooring | | | |
| Painting and Decorating | | | |
| Division 9 Total | | | |
| 10. Specialties | | | |
| Mailboxes, Bath Accessories, etc | | | |
| Division 10 Total | | | |
| 11. Equipment | | | |
| Residential Appliances | | | |
| Division 11 Total | | | |
| 12. Furnishings | | | |
| Kitchen Cabinets | | | |
| Bath Cabinets | | | |
| Window Treatments | | | |
| Division 12 Total | | | |

| Div. # / Description | Residential | Commercial | Total |
|---|-------------|------------|-------|
| 13. Special Construction | | | |
| Trash Compactor | | | |
| Recreation Equipment | | | |
| Division 13 Total | | | |
| 14. Conveying Systems | | | |
| Division 14 Total | | | |
| 15A. Plumbing | | | |
| Building Sewage System | | | |
| Building Water System | | | |
| Gas | | | |
| Plumbing Fixtures | | | |
| Fire Protection | | | |
| Division 15A Total | | | |
| 15B. Heating, Ventilation, Air Conditioning | | | |
| Division 15B Total | | | |
| 16. Electrical | | | |
| Primary Service | | | |
| Distribution System | | | |
| Lighting | | | |
| Systems (Alarms, Intercom, etc) | | | |
| Division 16 Total | | | |
| Subtotal Divisions 1 – 16 | | | |
| Builder's Overhead - 2% Limit | | | |
| Builder's Profit - 6% Limit | | | |
| Bond Premium or LOC | | | |
| Building Permit | | | |
| Other (Explain) | | | |
| TOTAL COST | | | |
| TOTAL CONSTRUCTION COST (Residential & Commercial) | | | |

If the total construction cost differs from that reported in the Schematic Design Submission, submit an explanation. A cost must be provided for all applicable line items. Allowances are not permitted.

Final Construction Cost Breakdown (Continued)

DEVELOPMENT INFORMATION

Number of Dwelling Units: _____ Wage Determination:
Gross Building Square Footage: _____ _____ Open Shop
Net Commercial Square Footage: _____ _____ Union Shop
Length of Construction: _____ Months _____ Davis Bacon
Estimated Starting Date: _____ Date _____
_____ Residential
_____ Commercial
_____ PA Prevailing Wage
Date _____

Note: Due to the length of time it takes to process a development, it is crucial that the construction budget is prepared allowing for inflation between the date this budget is set and the date construction is to begin. Allowances are not permitted.

This cost breakdown is based on the following documents:

Drawing Date: _____ Latest Revision Date: _____
Specifications Date: _____ Latest Revision Date: _____
Addendum _____ Date: _____
_____ Date: _____ _____ Date: _____
_____ Date: _____ _____ Date: _____
_____ Date: _____ _____ Date: _____

Signature of Cost Breakdown Preparer: _____

Signatures (at Initial Closing)

| | | |
|-----------------|----------------------|-------|
| _____ | _____ | _____ |
| Owner Name | Owner Signature | Date |
| _____ | _____ | _____ |
| Contractor Name | Contractor Signature | Date |
| _____ | _____ | _____ |
| PHFA | PHFA Signature | Date |

SECTION 2.03.C
SPECIFICATIONS FORMAT

(Format of Materials to be Bound in Specifications)

1. **Cover or Title Page** – Include the following:
 - A. Name of development
 - B. Location
 - C. PHFA number
 - D. Date (same as on drawings)
 - E. Name, address and telephone number of:
 1. Architect
 2. Developer
 3. All Consulting Engineers

2. **Signature Page** – Print names of entities and provide space for signature and date for the following:
 - A. Architect
 - B. Owner
 - C. Contractor
 - D. PHFA

3. **Index**

4. **AIA Document A201**, 2007 Edition – General Conditions of the Contract for Construction

5. **PHFA Supplementary General Conditions**

6. **All Applicable Compliance Requirements** for developments with Federal or State funds used for construction including:
 - A. Non-Discrimination Clause.
 - B. Section 8 Affirmative Action Plan.
 - C. MBE/WBE/SERB Plan.
 - D. Labor Standards and Davis Bacon Wage Determination.

7. **Subsoil Investigation Report** (New construction and additions)

8. **Technical Specifications** – CSI 16 Division, 3-Part Format: Specify the manufacturer and model number or two “equal” manufacturers and model numbers, wherever possible.

SECTION 2.03.D
SUPPLEMENTAL GENERAL CONDITIONS
***Modifications to AIA Document A201 General Conditions of the Contract for
Construction, 2007 Edition***

These Supplementary General Conditions are to be considered an Addendum to the AIA Document A201 General Conditions of the Contract for Construction.

ARTICLE 1 – GENERAL PROVISIONS

1.1 Modifications to Paragraph 1.1 – Basic Definitions

1.1.9 Add: PHFA

PHFA is the Pennsylvania Housing Finance Agency, 211 North Front Street, Harrisburg, PA 17101

1.2 Additions to Paragraph 1.2 – Correlation, and Intent of the Contract Documents

1.2.4 Add: Clearances and Interference

It shall be understood that the Architect's drawings are diagrammatic. The Mechanical and Electrical Subcontractors shall coordinate with the Contractor in determining the routing of pipelines, ducts and conduits, and locating equipment. Any variations required for conformance to the intent of the diagrammatic drawings shall be made without additional cost. Where there are intersections involving various ducts, piping and equipment, particular consideration shall be given to clearances required for future maintenance and service. Where tight conditions or interference develop, the Contractor shall confer with the Subcontractors whose work is affected to reach an acceptable solution. The suggested solution shall be submitted to the Architect for review and approval. All Contractors are deemed to have taken into consideration that interference will occur and it shall be understood that extras for necessary variations will not be considered. The Contractor and all Subcontractors shall verify measurements at the site.

1.2.5 Add: Standard of Quality

The various materials and products contained in the specifications are given to establish a standard of quality and price. It is not intended that the Contractor be limited to one (1) product. Where proprietary names are used, whether or not followed by the words "or approved equal", other products of a reputable manufacturer may be substituted, provided they are of equal quality and will perform the same function. The prior approval for material and product substitutions is required by the Architect and PHFA.

ARTICLE 2 – OWNER

2.3 Modification to Paragraph 2.3 – Owner's Right to Stop the Work

2.3.1 Insert the words: "with PHFA's written approval" after the word "Owner" in the first sentence. In the last sentence, omit the words "except to the extent required by subparagraph 6.1.3."

2.4 Modifications to Paragraph 2.4 – Owner's Right to Carry Out the Work

2.4.1 Insert the words: "with PHFA's written approval" after the words "the Owner may" in the first sentence and after the word "Architect" in the third sentence.

Add the following at the end of subparagraph 2.4.1:

Default under this section constitutes default under the Contractor's Payment and Performance Bond or Letter of Credit and Owner shall have whatever rights provided thereunder.

ARTICLE 3 – CONTRACTOR

3.5 Addition to Paragraph 3.5 - Warranty

3.5.2 Add:

The Contractor shall furnish to the Architect for transmittal to the Owner and PHFA, written warranty against defective workmanship and materials for all Work included in the Contract Documents and all Work authorized by field or change orders as listed in the PHFA Warranty, Guarantee, and Manual Requirements, and all other warranties specified in the Contract Documents.

3.10 Modification to Paragraph 3.10 – Contractor's Construction Schedules

3.10.1 Delete in its entirety and substitute the following:

Within fifteen (15) days after award of the Construction Contract, the Contractor shall submit a construction schedule to the Architect in a form approved by PHFA. The schedule shall show the Work to be performed and the projected time of completion of each specified section of Work. The schedule shall be revised and resubmitted to the Architect at each Payout Meeting. The Architect shall provide two copies of the revised schedule to PHFA's Technical Services Representative at the development.

3.11 Modification to Paragraph 3.11 – Documents and Samples at the Site

3.11.2 Add: Photographs

The Contractor shall have six (6) views of the building(s) taken each month and six (6) views upon final completion. Photographs shall show the progress of the Work and shall be 8" x 10" prints. Two (2) copies of all prints shall be given to the Architect and two (2) copies of all prints shall be given to PHFA's Technical Services Representative. Interior and exterior views shall be included as appropriate to the type and stage of construction. This requirement may be waived for developments consisting of eleven (11) dwelling units or less.

3.12 Modifications and Additions to Paragraph 3.12 – Shop Drawings, Product Data and Samples

3.12.1 Add the following:

The Contractor shall submit a minimum of three (3) copies of all required shop and erection drawings and catalogue cuts to the Architect.

The Architect shall be allowed a minimum of ten (10) working days for review and approval.

3.12.2 Add the following:

The product data shall include operating, maintenance and installation manuals for all materials, equipment and appliances furnished on the Development. A list of names, addresses and telephone numbers of all Subcontractors, Manufacturers and Distributors shall also be submitted to the Architect.

3.12.11 Add: Samples and Color Chart

The Contractor shall obtain from appropriate Subcontractors and Material Suppliers, the manufacturer's color selections or physical samples for all materials requiring color selection for submission to the Architect. The Architect shall then prepare a

complete color chart to be kept in the construction field office for the duration of construction.

3.12.12 Add: As-Built Drawings (Permanent Record Drawings)

Throughout the progress of construction, the Contractor shall mark up a set of Record Drawings (prints) recording all changes that job conditions require, and which are not shown on the Contract Drawings. At the completion of the Development, the set of marked-up drawings shall be delivered to the Architect in good legible condition. Final payment shall not be made until completed Record Drawings are submitted to the Architect.

3.12.13 Add: Record (As-Built) Site Drawing

Upon the actual completion date the Contractor shall furnish to the Owner, the title insurer and PHFA a site drawing showing all improvements including buildings, site work, utility lines and mains, and easements on the site.

3.18 Modification to Paragraph 3.18 - Indemnification

3.18.1 In the first sentence, after the words “the Owner” insert “PHFA”.

ARTICLE 4 – ADMINISTRATION OF THE CONTRACT

4.2 Modifications and Addition to Paragraph 4.2 – Architect’s Administration of the Contract

4.2.2 In the first sentence after the word “Owner” insert the words “but not less than once every two weeks”.

At the end of subparagraph 4.2.2 add the following:

After each site visit the Architect shall promptly furnish reports to the Owner and PHFA detailing the progress, problems, omissions, substitutions, defects and deficiencies noted in the Work. The Architect shall periodically observe, as often as the nature of the Work requires, but not less than once every two weeks, the following items of Work: completion of excavation, erection of forms and reinforcing, pouring of concrete and setting openings, sleeves and inserts, installation of insulation, mechanical and electrical trades before their Work is covered, installation of utility service entries, machinery and equipment, and the testing of the machinery and equipment.

4.2.5 Delete the period and insert a comma at the end of the Paragraph and add:

Subject to the approval of PHFA and as prescribed under Article 2 of PHFA’s Addendum to the AIA Documents A101 and A201, 2007 Edition.

4.2.9 Delete subparagraph and substitute:

The Architect, PHFA’s Technical Services Representative, the Owner and the Contractor shall conduct inspections to determine the date or dates of Substantial Completion and the date of final completion. The Contractor shall compile and forward all warranties and related documents, including material quantity take-offs as required by the Contract Documents, to the Architect. Upon receipt of said documents, the Architect shall forward the warranties and related documents to the Owner and to PHFA for their records. The Architect shall issue a final Certificate of Payment upon compliance with all requirements of the Contract Documents.

4.2.15 Add: As-Built Drawings

Upon final completion of construction, the Architect shall provide two (2) sets of as-built prints, based on the Contractor's record drawings (3.12.13) indicating all changes made during construction.

ARTICLE 5 – SUBCONTRACTORS

5.2 Modifications for Paragraph 5.2 – Award of Subcontracts and Other Contracts for Portions of the Work

5.2.1 In the first sentence after the word "Owner" insert the words "and PHFA". In the second sentence after the word "Owner" insert a comma and the word "PHFA". In the third sentence after the word "Owner" insert a comma and the word "PHFA".

5.2.2 In the first sentence after the word "Owner", insert a comma and the word "PHFA".

5.2.3 In the first sentence, after the word "Owner" delete the word "or" and insert a comma, and after the word "Architect" add the words "or PHFA". After the first sentence delete the remainder of the paragraph.

5.2.4 In the first sentence, after the word "Owner", delete the word "or" insert a comma, and after the word "Architect" insert "or PHFA".

5.3 Modification to Paragraph 5.3 – Subcontractual Relations

5.3.1 In the first and second sentences, after the word "Owner", insert a comma and add the words "PHFA". In the third sentence, delete the words "Where appropriate".

ARTICLE 6 – DELETE ENTIRE ARTICLE

ARTICLE 7 – CHANGES IN THE WORK

7.1 Modification to Paragraph 7.1 – Changes

7.1.2 In the first sentence, after the word "Contractor" insert a comma and add the word "PHFA".

7.3 Modification to Paragraph 7.3

7.3.11 Add: All Change Orders increasing the contract sum shall be accompanied by a check from the Owner for the full amount of the increase. The check shall be payable to PHFA.

ARTICLE 8 – TIME

8.2 Addition to Paragraph 8.2 – Progress and Completion

8.2.4 Add:

Prior to commence of construction, Owner and/or Contractor must notify PHFA of the anticipated date of construction start. Upon start of construction, PHFA's Technical Services Representative will conduct periodic on-site development inspections to determining quality of Work in progress and schedule compliance.

8.3 Modification and Addition to Paragraph 8.3 – Delays and Extensions of Time

8.3.1 In the first sentence, after the words "causes that the Architect" add "and PHFA".

ARTICLE 9 – PAYMENTS AND COMPLETION

9.2 Modification to Paragraph 9.2 – Schedule of Values

9.2.1 In the first sentence, after the words “the Architect” add the words “or PHFA”.

9.3 Modification to Paragraph 9.3 – Applications for Payment

9.3.1 In the first sentence, after the word “Architect” insert the words “and PHFA”. In the second sentence, after the word “Owner”, insert a comma and add the word “PHFA”.

9.3.2 Modify subparagraph 9.3.2 to read:

Payment may be made for stored materials and equipment, if approved in advance by the Owner and PHFA, only if the materials and equipment are stored on site and are scheduled to become a part of the permanent structure within 30 days. Payment for the materials and equipment shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner and PHFA to establish the Owner’s title to such materials and equipment or otherwise protect the Owner’s and PHFA’s interest.

9.6 Modifications to Paragraph 9.6 – Progress Payment

9.6.1 Modify subparagraph 9.6.1 to read:

After the Architect has issued a Certificate for Payment and PHFA has reviewed and approved the Contractor’s request for payment, PHFA (on behalf of the Owner) shall make payment in the manner and within the time provided in the Contract Documents.

9.8 Modification to Paragraph 9.8 – Substantial Completion

9.8.3 In the first sentence 1, after the word “Architect” add the words “together with PHFA”.

9.9 Modifications to Paragraph 9.9 – Partial Occupancy or Use

9.9.1 In the first sentence, after the numbers “11.3.1.5” add a comma and the word “PHFA”.

9.9.2 In the first sentence, after the word “Owner” add a comma and the word “PHFA”.

9.10 Modifications to Paragraph 9.10 – Final Completion and Final Payment

9.10.1 On line 8, delete the period after the word “payable” and insert the following language: “subject to the approval of PHFA under Article 2 of PHFA’s Addendum to the AIA documents A101 and A 201, 1997 and 2007 Editions.”

9.10.2 In the first sentence, at two locations in item (5), after the word “Owner”, insert the words “or PHFA”. Delete the second sentence and replace with the following: “If a subcontractor refuses to furnish a release or waiver required by the Owner or PHFA, the Contractor shall furnish cash, a letter of credit, or bond satisfactory to the Owner and PHFA to indemnify the Owner and PHFA against such lien”.

9.10.3 At the end of the first sentence, after the word “accepted” add a comma and the following, “subject to the approval of PHFA under Article 2 of PHFA’s Addendum to the AIA documents A101 and A 201, 1997 and 2007 Edition.”

ARTICLE 11 – INSURANCE AND BONDS

11.1 Modification to Paragraph 11.1 – Contractor’s Liability Insurance

11.1.1 In the first sentence, after the word “located” add “subject to PHFA’s approval and in accordance with the limits of liability required by PHFA.”

11.1.3 At two locations in the first sentence, following the words “the Owner” add “and PHFA”.

11.3 Modifications to Paragraph 11.3 – Property Insurance

11.3.1 Delete entirely and insert the following:

The Owner shall purchase and maintain “all risk” property insurance upon the entire Work at the site excepting stored materials that are not the property of the Owner. This insurance shall be in the amount of the full insurable value of the Work and shall include the interests of the Owner and Contractor. The Contractor, Subcontractors, and Sub-subcontractors shall be responsible for insuring all stored materials not permanently incorporated into the Work for physical loss or damage to their full insurable value.

11.3.1.3 Delete entirely and replace with the following:

The General Contractor shall pay the Owner’s deductible costs for all losses caused by the General Contractor and claimed on the Owner’s “all risk” insurance for this development.

ARTICLE 12 – UNCOVERING AND CORRECTION OF WORK

12.1 Modifications to Paragraph 12.1 – Uncovering of Work

12.1.1 At two locations in the first sentence, after the word “Architect’s” insert the words “or PHFA’s”.

12.1.2 In the first sentence, after the word “Architect” insert the words “or PHFA”.

12.2 Modifications to Paragraph 12.2 – Correction of Work

12.2.1 Before or After Substantial Completion:

12.2.1.1 In the first sentence, after the word “Architect” insert the words “or PHFA”.

12.2.2 After Substantial Completion:

12.2.2.1 In the first, second, third and fourth sentences, after the word “Owner” insert the words “or PHFA”.

12.3 Modification to Paragraph 12.3 – Acceptance of Nonconforming Work

12.3.1 In the first sentence, after the words “the Owner may do so” insert “subject to the approval of PHFA”.

ARTICLE 13 – MISCELLANEOUS PROVISIONS

13.5 Modifications to Paragraph 13.5 – Tests and Inspections

13.5.1 In the second sentence, after the word “approvals” delete period and add “unless otherwise designated as the Owner’s responsibility”. At the end of the paragraph add “copies of all test results shall be furnished to the Owner, Architect, and PHFA. Tests are required for, but not limited to, soil bearing and concrete. All testing shall be in conformance with ASTM Specifications.”

13.5.7 Add: Testing Laboratory

All testing laboratories must be approved by the Architect. The name of the laboratory, together with a copy of the inspection report by the National Bureau of Standards, Washington, D.C., may be required at PHFA's discretion.

ARTICLE 14 – TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 **Modification to Paragraph 14.1 – Termination by the Contractor**

14.1.1 In the first sentence, after the first time the word “Contractor” appears, insert “upon seven (7) days written notice to the Owner, the Architect, and PHFA”.