



# DESIGN & ARCHITECTURAL STANDARDS

Office of Multifamily Housing  
Effective January 1, 2024



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## A. INTRODUCTION AND SCOPE

The following Design and Architectural Standards (DAS) apply to all Ohio Housing Finance Agency (OHFA) rental affordable housing projects. The DAS represents the minimum requirements necessary to receive OHFA funding. The DAS may be increased or modified by a programmatic requirement or an incentive; applicants should consult the relevant program guidelines for further information.

The intent of the DAS is to:

- Ensure consistency in the design approval process;
- Promote the use of durable materials that reduce long-term maintenance costs;
- Create a healthy living environment for residents of all backgrounds and abilities;
- Provide options for meeting requirements that can be tailored to location and population being served;
- Enhance energy efficiency to reduce costs to the project and residents; and
- Appropriately balance high-quality materials with cost containment principles.

OHFA values the creation and preservation of safe, healthy, and decent affordable housing for low- and moderate-income Ohioans and requires development partners to uphold this overarching value as well. The DAS serves as a critical guide in achieving this mission.

All contacts for a proposed project should be consistent throughout the Affordable Housing Funding Application (AHFA), Design and Construction Features Form (DCF), submitted architectural drawings, and any other OHFA forms at the time of submission. OHFA must be notified if there are changes to the contacts after submission.

### Applicability

*The DAS for which the project was approved for funding under must be used from application throughout compliance.*

### Funding Programs

The DAS applies to all new construction, rehabilitation, and adaptive reuse developments seeking funding through any of the programs administered by the OHFA Office of Multifamily Housing.

### Exceptions

All program participants must conform to these requirements unless waived by OHFA in writing. OHFA will accept requests for an exception to specific requirements as noted throughout the document and as summarized in Section O. Exception Requests. Additionally, OHFA will evaluate certain aspects of the DAS that may require a modification in order to meet the unique site, design or use of the development. In this event, OHFA will consider any modification requests on a case-by-case basis.

All requests for exceptions must be submitted using the [OHFA Exception Request form](#), must include reasonable justification for the exception, and must be submitted to OHFA on or before the date indicated in the respective program calendar. The OHFA staff architect will review requests and make a recommendation to the management team to accept, deny, or modify the exception. A final determination will be made by OHFA by the date indicated in the program calendars. All exceptions granted are based on the unique circumstances of the project and the QAP, DAS, and guidelines for the funding year, and will not be transferred to other projects.

In the event that Code compliance creates a conflict with the OHFA DAS requirement, the Developer must notify OHFA of the conflict between the Code, the DAS, and other funding sources (e.g. HUD, USDA-RD, SHPO).

### Notice & Disclaimer

All requirements are exclusive of federal, state, and local law or regulation that may further dictate design requirements. If there is a conflict between the requirements of applicable codes and/or the DAS, the most stringent requirement will prevail. During the construction process, owners/developers and/or architects will be asked to certify compliance with applicable regulations.

Nothing in the DAS must be construed to waive, override, modify, or extinguish any legal or regulatory responsibility, including those governing accessibility issues. OHFA will not certify project adherence to building code or other legal or design requirements. OHFA must not, by the execution or performance of any architectural review function, assume liability or otherwise become responsible for any owner, developer, architect, construction contractor or other person's obligation; applicants and funding recipients are explicitly advised to seek independent legal advice regarding non-OHFA design and construction requirements particularly as they relate to accessibility.

## Penalties

Violations of the requirements set forth in the DAS, failure to honor commitments made in the application process, or other instances of noncompliance with OHFA requirements may result in any or all of the sanctions as outlined in the [applicable OHFA program guidelines](#).

## B. DEFINITIONS

Unless otherwise noted, all definitions must be the same as the building code applicable to the construction type.

**Adaptive Reuse**: See Construction Types.

**Assemblies**: A portion of a building system, piece of equipment, or building element.

**Circulation Space**: The path inside a building for access to living units, storage areas, common areas, ingress and egress areas, and other spaces designed for resident use.

- Examples: Hallways, stairways, and areas that lead to other rooms

**Common Space**: A room or space outside the residential living unit designed for resident use that does not impose a usage fee or participation in an activity for free enjoyment of the space.

- Examples:
  - Circulation space - hallways, elevators, lobby, etc.
  - Community space - meeting rooms, community rooms, multipurpose rooms, fitness center, etc.
  - Property management space - management offices

**Dedicated Program Space**: A room or space outside the residential living unit designed exclusively for tenant use that has a fixed, program-driven purpose. These spaces are not considered part of Common Space.

- Examples: Counseling space, wellness and health clinic areas, day care centers

**Design and Construction Features Form (DCF)**: The form submitted with the application that states all of the design-related features that will be included in the project. Compliance throughout the rest of the project period is checked against this information. The DCF can be found on [OHFA's Guidelines, Applications, and Forms webpage](#).

**Expected Useful Life (EUL)**: The average amount of time in years that an item, assembly, component, or system is estimated to function without material repair when installed new and assuming routine maintenance is practiced. This is also used as the standard for new material durability/acceptability in rehabs, adaptive reuse, and new construction. A new material must conform to the applicable and acceptable use as defined in the EUL table.

**Major Building Systems (MBS)**: Is a building system that that is integral to the improvements of project. (i.e. roof structures, wall or floor structures, foundations and plumbing, central heating and air conditioning, or electrical systems).

The system must be significant to the building and its use, normally expected to last the useful life of the building, and not cosmetic. OHFA considers the "major systems" in HOME and NHTF Property Standards equivalent to OHFA's MBS. See the Minimum Rehabilitation Requirements section for details.

**Net Rentable Area**: The sum of the unit area, balcony area, garage (if included with the unit) and tenant storage area.

**New Construction**: See Construction Types.

**Physical Capital Needs Assessment (PCNA)**: An inspection and resulting plan for a property that provides detail on the property's current overall physical condition and identifies immediate physical needs, significant deferred maintenance, and an opinion of costs to remedy physical deficiencies. EUL values are used in a Capital Needs Assessment when assessing the current condition. Remaining useful life (RUL) is used to evaluate existing materials in meeting OHFA required durability.

**Rehabilitation**: See Construction Types and additional details are in Section I: Minimum Rehabilitation Requirements.

**Remaining Useful Life (RUL)**: Subjective estimate based upon observations, or average estimates of similar items, assemblies, components, or systems, or a combination thereof, of the number of remaining years that an item, assembly, component, or system is estimated to be able to function in accordance with its intended purpose before warranting replacement. Such period of time is affected by the initial quality of an



item, assembly, component, or system, the quality of the initial installation, the quality and amount of preventive maintenance exercised, climatic conditions, and extent of use.

**Safe Harbor:** An objective and recognized standard, guideline, or code that, if followed without deviation, ensures compliance with specific requirements. For purposes of the DAS, the term safe harbor is used in the context of the standards used for compliance with design and construction requirements of the Fair Housing Act and the standards used for compliance with Section 504.

**Scope of Work Form (SoW):** The form submitted with the application is used to define all major building materials and systems for new construction, rehabilitation, and adaptive reuse. The SoW can be found on [OHFA's Guidelines, Applications, and Forms webpage](#).

**Support Space:** A room or space outside the residential living unit that is not intended for resident use.

- Examples: Mechanical areas, janitor closets, security offices, fire control stations, supply, and mechanical storage areas

## Construction Types

The following construction types relate solely to the application of these Guidelines and shall not be used to define project requirements or scopes outside of the criteria defined in these Guidelines.

- **New Construction:** Ground-up construction of a new building or buildings. Includes site preparation for, and construction of, entirely new structures whether or not the site was previously occupied.
- **Moderate Rehabilitation A\*:** A renovation where the dwelling unit demising walls, most interior walls and MEP infrastructure remain, and the new scope of work is built within the existing dwelling unit compartment. This type of rehabilitation often includes replacement of furniture, fixtures, and equipment (FF&E) and roofing. It may include window replacement, siding replacement, and additional roofing scopes.
- **Moderate Rehabilitation B\*:** A renovation where the dwelling unit demising walls and most of the interior walls remain. This type of rehabilitation includes many of the scoping items of Moderate Rehabilitation A, but also includes replacement of mechanical, electrical and plumbing (MEP) infrastructure and equipment, either in part or in full.
- **Substantial Rehabilitation\*:** A renovation where the majority of the interior walls, finishes, systems and MEP infrastructure are demolished, and a new scope of work is constructed within the existing building shell. These projects are also sometimes referred to as "gut" rehabs.
- **Adaptive Reuse\*:** A substantial renovation that occurs in a building or space that undergoes a change of use to residential occupancy, as defined by the applicable building code.

\* Additional details are in Section I: Minimum Rehabilitation Requirements.

## OHFA Square Footage Calculation

Developments must use the following standards for measuring square footage:

- **Multifamily buildings**
  - Building Owners and Managers Association (BOMA) - Multi-Unit Residential Standard, Gross Method (ANSI/BOMA Z65.4)
- **Single-family, 1, 2, or 3-family dwelling, or townhome buildings**
  - BOMA - Gross Areas Standard (ANSI/BOMA Z65.3)

The area calculations for either of the above must include 100% of the building in which the project is contained regardless of whether that space is leased or condominiumized to another entity, and includes:

- All buildings, including those with Building Identification Numbers (BINs)
- Free-standing community buildings
- Maintenance buildings and sheds
- Picnic shelters/gazebos
- Garages
- Carports

- Porches
- Commercial space
- Market rate unit space
- Manager unit space
- Common space
- Dedicated Program Space
- Tenant storage

The calculation should not include:

- Trash enclosures
- Concrete patios without roofs
- Sidewalks

All square footage must be calculated and certified in the AHFA or Gap Financing Application (GFA) and the DCF by the Architect of Record.

## C. CODE COMPLIANCE

All developments must conform to the below requirements:

- **Buildings with four or more units:**
  - [Ohio Administrative Code 4101:1 Board of Building Standards: Ohio Building Code \(OBC\)](#), including any and all referenced codes.
- **Buildings with three or fewer units:**
  - [Ohio Administrative Code 4101:8 Board of Building Standards: Residential Code of Ohio \(RCO\)](#), including any and all referenced codes.

All developments must also conform to the requirements set forth in the following, as applicable:

- [Ohio Department of Development Residential Rehabilitation Standards](#)
- Local codes, zoning codes, and fire codes as required by the jurisdiction or funding source.
- If receiving funding from the **HOME Investment Partnerships Program**, developments must meet all requirements as outlined in [24 CFR §92.251 - Property Standards](#).
- If receiving funding from the **National Housing Trust Fund**, developments must meet all requirements as outlined in [24 CFR §93.301 - Property Standards](#).
- If receiving funding from the **Community Development Block Grant - Disaster Recovery program**, developments must meet all requirements as outlined in [83 FR 5844](#).

## D. LEAD-BASED PAINT HAZARD REDUCTION

OHFA is committed to the reduction of lead-based paint hazards in housing throughout Ohio. Deteriorating lead-based paint and its resulting lead dust are the most common causes of elevated blood lead levels in children in Ohio. Because of Ohio's aging housing stock, many residents are susceptible to lead hazards. Over 25% of housing units in Ohio were built before 1950, when the first laws banning lead-based paint were enacted. Over two-thirds of housing units in Ohio were built in 1979 or earlier, pre-dating the federal ban on lead in house paint.

### Applicability

The requirements in this section apply to all properties seeking OHFA funding for rehabilitation of a pre-1978 structure. Review of lead-based paint is required as a non-scope consideration in the Phase I.

Certain properties may be exempt and are able to seek an exception to this requirement:

- Properties found not to have lead-based paint during earlier testing that meet the requirements of prior evaluations.

- Properties where all lead-based paint has been identified and removed using approved methods.
- Properties in an area where state and local governments banned lead-based paint prior to January 1, 1978.

Additionally, certain federal and state funding sources already require developments utilizing their funding to adhere to program-specific requirements for the reduction of lead-based paint hazards. Developments subject to these program-specific requirements should continue to follow the applicable guidance related to lead-based paint.

## Requirements

Developments must comply with the requirements outlined in the [HUD Lead Safe Housing Rule \(24 CFR 35\)](#), specifically subparts A, B, J, and R as well as any other subparts applicable to the project. In general, this means projects must:

- Conduct an evaluation of lead-based paint hazards (i.e., a risk assessment, paint inspection, or a combination of the two).
  - For properties in good condition, a lead hazard screen risk assessment may be performed first to determine whether a full risk assessment is necessary.
- Control identified lead hazards per Ohio Department of Health and HUD hazard reduction requirements.
- Pass clearance testing of work area prior to re-occupancy.
- Inform occupants of evaluation and hazard control activities and results and provide the HUD/EPA Lead Hazard information disclosure pamphlet.

Develop a lead hazard control plan for the property which includes an ongoing lead-safe maintenance program. Additionally, developments must meet all other local, state, and federal requirements related to lead-based paint as may apply including those related to disclosure, professional qualifications, lead-safe work practices, etc.




## Additional Resources

- [HUD Lead Safe Housing Rule \(24 CFR 35\)](#)
- [HUD Guidelines for the Evaluation and Control of Lead-based Paint in Housing](#)
- [HUD/EPA Lead Disclosure Rule](#)
- [EPA's Lead Renovation, Repair and Painting Rule \(RRP\) Rule](#)
- [OAC Chapter 3701-32: Lead Hazard Abatement](#)
- [ORC 5302.30: Property disclosure form required for all residential real property transfers](#)
- [ODOD's Residential Rehab Standards \(RRS\): Chapter 7 - The Elimination of Lead-Based Paint Hazards and Appendix 7-A Lead-Based Paint Requirements and Guidance](#)

## E. RADON REDUCTION AND PREVENTION

Radon is a cancer-causing, radioactive gas. It comes from the natural breakdown of naturally occurring uranium, thorium, or radium in rock, soil, and water. Radon can get into the air in buildings by traveling through the ground and through seams, joints, utility penetrations, and cracks in building foundations and slabs. Eventually, it decays into radioactive particles that can become trapped in the lungs when inhaled. As these particles decay, they release radiation that can damage lung tissue and lead to lung cancer.

The U.S. Environmental Protection Agency (EPA) has divided states and counties into [three radon risk zones](#).

-  Zone 1: Counties with predicted average indoor radon screening levels greater than 4 pCi/L
-  Zone 2: Counties with predicted average indoor radon screening levels from 2 to 4 pCi/L
-  Zone 3: Counties with predicted average indoor radon screening levels less than 2 pCi/L

Elevated levels of radon can be found in any of the three zones, but buildings in Zone 1 are at particularly high risk for having elevated levels, and the need for addressing radon in those locations is of greatest importance. As seen on the map, all of Ohio falls into either Zone 1 or Zone 2.

The EPA has developed an action level for radon of 4 picocuries per liter of air (pCi/L). A picocurie is a measure of radioactivity. If a building's indoor radon concentration is at or above 4 pCi/L, mitigation is recommended. If the concentration is between 2-4 pCi/L, mitigation should be considered.



## Applicability

The requirements in this section apply to all OHFA-funded developments, including both new construction and rehabilitation/adaptive reuse. Review of radon is required as a non-scope consideration in the Phase I.

Additionally, certain federal and state funding sources already require developments utilizing their funding to adhere to program-specific requirements for radon testing and mitigation (for example, any development subject to HUD's environmental review regulations at 24 CFR Part 50 and Part 58). Developments subject to these program-specific requirements should continue to follow the applicable guidance related to radon.

Radon testing, mitigation, and laboratory work for developments to be funded with OHFA resources must be performed by individuals who meet the certification and licensure requirements as outlined in OAC 3701-69.

## Requirements

Developments must incorporate radon-resistant construction techniques into their project. Radon-resistant construction techniques include:

- a gas permeable layer such as gravel beneath the lowest building floor slab,
- a vapor retarding layer on top of the permeable layer,
- a vertical vent pipe from the permeable layer through the roof to vent outside,
- sealing and caulking of all cracks, joints and penetrations in the slab or basement, and
- installation of a junction box in the attic or highest interior space for use with an in-line vent fan if one is required for future active removal of radon.

Once construction/renovation is complete, but prior to occupancy, radon testing must be conducted in accordance with the current ANSI/AARST testing standards for the applicable structure. This includes testing in 100% of all ground-contact dwelling units and non-residential ground-contact rooms, as well as 10% of the upper floor dwelling units (with at least one unit tested on each floor) to determine the need for installation of exhaust fans (i.e. "active" removal).

If any sample result from the post-construction sampling meets or exceeds 4.0 pCi/L of radon, exhaust fans must be installed to convert the passive radon removal systems to active removal systems. Any area with test results above the action level must be retested after installation of fans until satisfactory results are obtained.

### Rehabilitation Project Exception Requests

Rehabilitation Projects may request an exception to the requirement for a radon mitigation system based on pre-construction testing results below 4.0pCi/L.

If the highest result of testing conducted before construction is between 2 and 4 pCi/L, it is recommended that a passive system is installed in all impacted areas.

Radon levels fluctuate from day to day and across the year. The age of building, construction type, changes to HVAC equipment including fresh air exchanges, and other changes to air infiltration all impact radon levels. As a building becomes more airtight the level of radon is more likely to increase.

Regardless of any exception granted, radon testing after construction but before occupancy is required. If any result from the post-construction testing is at above the threshold (4.0 pCi/L) a passive radon system must be installed in the impacted area, and any area with test results above the action level must be retested after installation and the radon system adjusted (including conversion to an active system) until satisfactory results are obtained. Radon testing, mitigation, and laboratory work for developments to be funded with OHFA resources must be performed by individuals who meet the certification and licensure requirements as outlined in OAC 3701-69.

## Testing

### Professional Qualifications

[Ohio Administrative Code, Chapter 3701-69](#) sets forth all requirements for qualification as a radon tester, mitigation specialist, or mitigation contractor, as well as standards of conduct for each type of qualified professional. Radon testing, mitigation, and laboratory work for

developments to be funded with OHFA resources must be performed by individuals who meet the certification and licensure requirements as outlined in OAC 3701-69.

## Testing Protocols

Radon testing must be performed according to **OAC 3701-69-07**, *Standards of conduct for radon testers*, as well as current testing protocols for the applicable building type. The most current testing standard for the applicable building type, as of the date the testing occurs, should be followed.

Current testing protocols and standards can be found on the [EPA's Current Radon Standards of Practice webpage](#).

## Additional Resources

EPA provides the following helpful resources for radon-resistant construction:

- [Radon-Resistant Construction Basics and Techniques](#)
- [Builder and Contractor Resources for Radon-Resistant New Construction \(RRNC\)](#)
- [Radon Standards of Practice](#)

Radon information for Ohio:

- [Ohio - EPA Map of Radon Zones](#)
- [Ohio Department of Health - About Radon](#)
- [Geometric Mean Radon Concentrations by Zip Codes](#)

## F. ADAPTABILITY & ACCESSIBILITY

Developments may be subject to one or more of the below laws, depending on the date of construction, type of space, funding sources utilized, and other project-specific information. The burden of compliance rests with the project team. In the application, during the construction process, and at project closeout owners/developers and/or architects will be required to certify compliance with applicable regulations.

When more than one law and accessibility standard applies, requirements must be reviewed and implemented to allow for greater accessibility.

Additionally, all projects must to comply with the accessibility requirements as outlined in the [Ohio Building Code, Chapter 4101:1-11](#), which includes the use of [ANSI/ICC A117.1-2017](#) for the design and construction of accessible units.

### Fair Housing Amendments Act of 1988 (FHA)

- Applicable to all new multi-family housing consisting of four or more dwelling units per building built for first occupancy after March 13, 1991.
- Applicant must state in the DCF which safe harbor will be used to demonstrate compliance with the Act's design and construction requirements. The safe harbor for 504 is determined separately.

### Section 504 of the Rehabilitation Act of 1973 (Section 504)

- Applicable to recipients of federal financial assistance.
- Section 504 applies to the entire project which includes all sites, all buildings, all residential units, all common areas, all site features and **must have a single Section 504 safe harbor designated.**

### 504 Unit Types

- *Mobility Unit:* Is fully accessible for persons with mobility disabilities. These units must meet requirements as defined in Section 504.
- *Sensory Units:* Units that are accessible for persons with hearing or visual disabilities. Required features include audio/visual notification systems for entry, physical peephole at any entry to the unit, and audio/visual fire alarms. These units must meet requirements as defined in Section 504 and Architectural Barriers Act (ABA) Standards (2015).

- *Semi-Ambulatory Units: Used only when it is technically infeasible to meet Mobility Unit requirements.* Semi-ambulatory units serve mainly for people with crutches, canes & walkers. This semi-ambulatory unit must be designated as Section 504 modifiable per reasonable accommodation/ modification. These units must meet requirements in ABA Standards.

Design Elements for a semi-ambulatory unit typically include the following: elevators and stair lifts are not required, must have stairs and handrails with extensions per the project 504 accessibility safe harbor, must have stair nosings per the project 504 accessibility safe harbor, must have blocking for grab bars per the project 504 accessibility safe harbor, must have a fully accessible path and entry to the greatest extent possible, must have a designated parking spot that meets van accessible requirements, recommended- step in shower vs tub, and recommended- if parking is limited, it may preclude the use of a designated HC parking space.

## OHFA Accessibility Design Requirements

- OHFA requires that all developments receiving OHFA funding meet the accessibility design requirements of Section 504. Submission must include:
  - **The DCF, AHFA, and the submitted architectural drawings must have the same number of accessible units identified for mobility and sensory and the single section 504 safe harbor must match.**
  - Applicants must state in the DCF which standard will be used to demonstrate compliance with the requirements of Section 504 (Uniform Federal Accessibility Standards, 2010 ADA Standards, or an equivalent standard as defined in HUD's Deeming Notice) and **a single Section 504 safe harbor** (Uniform Federal Accessibility Standards, ADA-2010 Standards, or substantially equivalent or greater access to and usability of the building as defined in HUD's Deeming Notice including ANSI/ICC A117.1-2009/2017 and current required in Ohio).
- Providing twice the number of that is federally mandated under Section 504 as accessible for persons with mobility disabilities. To calculate the number of 504-mobility units needed to meet this threshold standard, first multiply the total number of units by 5%, round up to the nearest whole unit, and multiply the result by two;
  - For example, if a development has 65 units, 8 units (5% rounded up x 2) must be 504 mobility units.
  - Semi-ambulatory units may be used to meet the requirements by exception. When fully accessible 504 mobility unit or distribution is not achievable, the project will be required to have Semi-ambulatory unit(s) that will be made accessible to the greatest extent possible.
- Providing a separate 2% (rounded up) of the dwelling units, or at least one unit, whichever is greater, as accessible for persons with hearing or visual disabilities;
  - Audio/visual notification systems are required in all habitable spaces (e.g. living rooms, bedrooms, and bathrooms)
- Design criteria includes but is not limited to:
  - Providing accessible units in a variety of unit configurations and distributed throughout the development and buildings.
    - When units are on multiple floors, distribution includes units on multiple floors. The distribution neither precludes nor requires an accessible unit on all floors.
  - Ensuring accessible units have comparable features to non-accessible units, such as storage within kitchen and bathrooms.
  - Providing accessible site features and common areas including but not limited to dumpsters, outdoor grills, parking, play areas, and community shelters.
    - An accessible route to the dumpster is not required if the building includes an interior trash chute or trash room for residents, and residents are therefore not required to take their trash to a dumpster outside of the building.
  - Optional features for sensory units: Sensory impaired thermostats within a unit, tactile surfaces to aid with visual impairment, task lighting for low visual acuity, high contrast floor, countertop and edge banding to aid those with visual acuity limitations.

## G. UNIVERSAL DESIGN

As defined by the Center for Universal Design, Universal Design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. OHFA recognizes the need to create housing that includes Universal Design features while maintaining aesthetics and affordability.

**Certain elements of Universal Design are required in all OHFA-funded HTC developments.** A list of mandatory and optional Universal Design features can be found in Appendix A. Program guidelines identify the amount of mandatory or additional universal design features incentivized or required. Applicants will designate which feature of Universal Design will be incorporated into the development in the DCF. The architect will also be required to clearly identify the location of each feature in the architectural drawings. Before issuance of Form 8609 or HDAP closeout, the applicant will be required to provide documentation to OHFA evidencing the required number of units meet the Universal Design commitment made in the application.

OHFA will accept proposed Universal Design features beyond the provided list that are relevant and necessary to the applicant's development. The applicant will be required to clearly describe the additional feature(s) and provide justification for the necessity of its inclusion. The evaluation, acceptance, and classification of universal design proposals is the sole discretion of OHFA.

Universal Design is a supplement to required accessibility codes and building codes and not a safe harbor for other required accessibility codes such as Section 504 or the Fair Housing Act.

## H. SUSTAINABILITY

In addition to meeting all energy efficiency requirements as stated in the Ohio Building Code or Residential Code, all OHFA rental developments must obtain one of the below energy efficiency or green building certifications. All developments must obtain one of the listed green building certifications.

Evidence of final certification from a Home Energy Rating System (HERS) rater and the applicable green building rating system is required upon construction completion. At OHFA's discretion, exceptions may be granted for an otherwise qualified and licensed professional to verify compliance with the DAS in projects unable to retain a HERS rater in their area.

### Third Party Certifications

Developments must utilize the most current version of the below certifications. The current version is the version applicable at the time of project application to the certifying body.

- Enterprise Green Communities Certification or EGC Plus Certification
- Leadership in Energy & Environmental Design (LEED) Residential - Silver Level Certification or higher
- ICC/ASHRAE 700 National Green Building Standard (NGBS) - Silver Level Certification or higher
  - With Energy Star Homes or Energy Star MFNC compliance verified by a HERS rater

#### By Exception Only:

Exception requests for the certification must clearly articulate why the selected certification is equivalent or better to the certifications above.

- An equivalent ANSI-approved rating system
- Passive House Initiative - Passive House Certification
- PHIUS - Passive House Certification
- WELL Certification (requires recertification)
- Fitwel Certification (requires recertification)
- Energy Star NextGen Certified Homes & Apartments
- Zero Energy Ready Homes (ZERH)
- Living Building Challenge (LBC) Zero Carbon Certification

## HERS Rater

Use of a HERS rater is required for all projects, and certification by a HERS rater for the following:

- The development meets or exceeds the higher of either the certification selected or the Ohio Energy Code using the current ASHRAE 90.1 (e.g. 2019)
- For Rehab: The post-construction blower door test demonstrates 150% improvement over the pre-rehabilitation test, up to 12 ACH.

HERS Rater must be engaged at the application or preliminary phase through construction completion.

## I. MINIMUM REHABILITATION REQUIREMENTS

Any rehabilitation projects seeking HTC (competitive or non-competitive), must meet the requirements identified in this section and any additional criteria that may be included in program guidelines. OHFA will utilize the Physical Capital Needs Assessment (PCNA), scope of work, DCF, and AHFA submitted by the applicant to verify the project meets these minimal requirements.

1. Significantly address major building systems
  - a. Moderate Rehab A requires 1 major building system
  - b. Moderate Rehab B and Substantial Rehab requires 2 major building systems
  - c. Total replacement is not required but the greater part (at least 50%) must be replaced.
    - Structural: Concrete, Masonry, Metals
    - Thermal and Moisture Protection
    - Conveying Equipment (elevators)
    - Fire Suppression
    - Plumbing
    - Heating, Ventilating, and Air Conditioning (HVAC)
    - Electrical, Communications, Electronic Safety and Security
    - Earthwork, Exterior Improvements
    - Utilities
  - d. Interior finishes and casework cannot be used to meet the two or more major building systems requirement and are assumed to be included in all OHFA funded rehabilitation projects.
2. All building systems/assemblies in need of replacement and/or repair as identified in the PCNA (based on RUL of less than 50%) be included in the scope of work, regardless of if these elements are used to meet the threshold standard.
  - a. Any additional items identified by the architect that were not identified as needing replaced in the PCNA. The PCNA is considered a minimum for what should be included in the scope of work of the rehab.
3. Applicants must clearly identify the following in their application submission:
  - a. The systems/assemblies needing replacement,
  - b. Construction Type being completed based on definitions for rehabilitation and adaptive reuse,
    - i. Rehabilitation level selected is to facilitate a baseline understanding of magnitude of renovation.
  - c. The EUL/RUL of the identified assemblies included in the scope of work,
    - i. New materials must be at 100% RUL and all existing materials at 50% RUL or greater. Items identified as not meeting 50% of the EUL or items not showing significant need for replacement may be rejected by OHFA as part of the scope of work.
  - d. The page numbers of the PCNA & SoW that notes each identified major building system and assemblies as needing replacement (this is separate from the EUL/RUL)

OHFA may require the applicant to adjust the scope of work if the proposed scope of work does not meet these minimum requirements or address all the items identified in the PCNA. The PCNA must conform to OHFA's standards.

## Expectations at Project Completion:

All rehabilitation projects must be complete in scope such that materials and finishes appear clean and consistent. Mismatched, patchwork, or unwashed materials and finishes will not be accepted at completion of any rehabilitation. All deficiencies observed in the PCNA must be addressed. Materials such as carpet, vinyl composite tile (VCT) thickness, vinyl siding, building systems, and mechanical systems may not be patched or repaired if they do not meet the OHFA DAS for the year in which the project was funded. Exterior concrete, stairs, play equipment, shelters, and outbuildings shall be in good condition upon completion without damage, rust, or rot and must have a painted or weather cover meeting OHFA DAS.

Any exception to this standard must be in writing from OHFA prior to LIHTC equity closing or Housing Development Assistance Program (HDAP) closing, whichever occurs first. The project scope of work, budget and underwrite may need to be revised to meet the above intent.

## J. PHYSICAL CAPITAL NEEDS ASSESSMENT STANDARDS

### Purpose

A Physical Capital Needs Assessment (PCNA) represents a third-party qualified professional's opinion of a property's current overall physical condition and identifies significant deferred maintenance, existing deficiencies, and material building code violations that affect the property's use and its structural and mechanical integrity.

### Qualifications

PCNAs must be prepared by an individual who has experience in the preparation of PCNAs and possesses a professional qualification/license in architecture or engineering. If the individual does not have a professional qualification/license in architecture or engineering, they must have at least 5 years of experience preparing PCNAs.

The third-party qualified professional preparing the PCNA must not be connected in any way to the project, including serving as the design architect, project architect of record, general contractor, property manager or sponsor. OHFA may grant an exception for small projects and adaptive reuse projects.

### Definitions

OHFA will use the following definitions per ASTM E2018-15 or current standard.

- **Physical deficiency:** a conspicuous defect or deferred maintenance of a subject property's material systems, assemblies, components, or equipment as observed during completion of the PCNA. This definition specifically excludes deficiencies that may be remedied with routine maintenance, miscellaneous minor repairs, normal operating maintenance, etc., and excludes de minimis conditions that generally do not present material physical deficiencies of the subject property.
- **Deferred maintenance:** physical deficiencies that could have been remedied with routine maintenance, normal operating maintenance, etc., excluding de minimis conditions that generally do not present a material physical deficiency to the subject property.
- **Good condition:** in working condition and does not require immediate or short-term repairs above an agreed threshold.
- **Fair condition:** in working condition but may require immediate or short-term repairs above an agreed threshold.
- **Poor condition:** not in working condition or requires immediate or short-term repairs substantially above an agreed threshold.
- **Immediate costs:** opinions of costs that require immediate action as a result of any of the following: (1) material existing or potentially unsafe conditions, (2) material building or fire code violations, or (3) physical deficiencies that if left uncorrected would be expected to result in or contribute to critical element or system failure within one year or will result most probably in a significant escalation of its remedial cost.
- **Short-term costs:** opinions of costs to remedy physical deficiencies, such as deferred maintenance, which may not warrant immediate attention, but require repairs or replacements that should be undertaken on a priority basis in addition to routine preventive maintenance.



## Scope

OHFA requires a PCNA for all projects involving rehabilitation, including adaptive reuse projects. The PCNA must conform to ASTM E2018-15 or current standards and must reflect the current condition of the building. OHFA may require the third-party qualified professional to update any report that is greater than one year old at the time of submission. PCNAs produced for USDA or RAD projects may be used with OHFA approval of an Exception Request prior to submission.

The PCNA must identify any repair items that represent an immediate threat to health and safety, and all other significant defects, deficiencies, items of deferred maintenance, and material building code violations that would limit the expected useful life of building systems or assemblies. The PCNA must identify electrical and mechanical systems in detail with the manufacture, mechanical efficiencies, and/or component types (reference Section L. 2.3.3. Electrical systems for list of common obsolete panels).

The PCNA must include a completed [PCNA Table of Contents template](#) (including page numbers) and all items specified in Appendix B: PCNA Table of Contents.

## Process

The professional shall conduct a site visit and physical inspection of interior and exterior of units and structures, including:

- 25% of all dwelling units (if less than 50 total units)
- 20% of all dwelling units (if 50 to 99 total units)
- 15% of all dwelling units (if 100 total units or more)
- All accessible units
- All common facilities
- All site improvements
- All building exteriors

The units sampled must be comprehensive of all unit and building types. The site visit(s) and PCNA must be within six months of the applicable application deadline requiring a PCNA. The PCNA provider may attest that the PCNA remains valid or provide a letter of amendment up to 1 year after issuance.

The PCNA professional must interview available on site property management and maintenance personnel and inquire about past repairs/improvements, pending repairs and existing or chronic physical deficiencies.

## Guidance

The following are additional requirements.

- The PCNA should be a point-in-time observation of existing conditions at that time.
- The PCNA should not address or be catered to competitive scoring items.
- For Adaptive Reuse/Historic projects, the PCNA should make a point-in-time observation of all aspects of the building but give substantial details on structure, façade, and items to remain.
- When the age of an assembly is unknown, it should be stated as such. However, the condition must still be evaluated even if the age is an estimate or unknown.
- The EUL/RUL of an item does not equate to need. Need is the second half of evaluation for replacement that must be documented.
- Existing accessibility items should only be addressed in the PCNA if the owner requests it and the PCNA provider is adequately qualified to provide such an evaluation.
- The PCNA should not address any green building standards or certifications that the project may plan to seek.
- When evaluating a system or assembly, the following questions must be clearly answered in the PCNA:
  - What is the current condition?
  - Does it need to be replaced?
  - How much of the system needs to be replaced (as a percentage)?
- Building systems and their assemblies should be documented through photographs specifically highlighting areas of concern.
- Indicate when relying on information from the owner ("the owner reports the new windows were installed in....").

## K. SITE AND EXTERIOR

The below requirements apply to all projects. However, rehabilitation and adaptive reuse projects may request exceptions.

These requirements are specific to OHFA. They are in addition to all other applicable local and state codes, including those governing accessibility.

### 1. Durable Materials – Exterior

- 1.1. For all projects, the elements in this section are required to be constructed with the following:
  - 1.1.1. Materials that have a 30-year Expected Useful Life (EUL) or longer, as defined by the OHFA EUL table found in Appendix C;
  - 1.1.2. Materials that have a 30-year warranty or industry standard warranty for the material; or
  - 1.1.3. Any of the below pre-approved materials.
- 1.2. Materials that do not fall into any of the above categories must be approved by the OHFA architect.
- 1.3. Rehab Durability
  - 1.3.1. All new materials must meet the requirements in 1.1.
  - 1.3.2. Materials with a RUL of 50% or more or items in which the RUL of 50% as defined by the EUL table, may be replaced with OHFA's approval through the Exception Request process.
  - 1.3.3. Any material designated as existing to remain must meet the requirements of 1.1.1 and 1.1.3 and the DAS.
  - 1.3.4. Specific materials designated as historic by the State Historic Preservation Office of Ohio (SHPO) as addressed in writing by SHPO are exempt from individual requirements. The letter must be provided at application and include each item specifically addressed to meet this exemption.
- 1.4. If a conflict exists between any of the required durable materials and a green certification requirement, the highest durability standard that is compatible with certification must prevail.
- 1.5. Pre-Approved Materials
  - 1.5.1. Exterior Walls
    - 1.5.1.1. Wood stud
    - 1.5.1.2. Brick or block
    - 1.5.1.3. Manufactured stone
    - 1.5.1.4. Metal stud framing
  - 1.5.2. Exterior Veneers
    - 1.5.2.1. Vinyl siding 0.042-0.055
    - 1.5.2.2. Portland cement stucco (EIFS prohibited)
    - 1.5.2.3. Fiber cement board
    - 1.5.2.4. Brick
    - 1.5.2.5. Thin stone (stucco stone)
    - 1.5.2.6. Thin brick (Thin brick must be mud set and may not have a metal grid system. Thin brick systems must have a 40 year+ warranty that matches OHFA EUL for brick veneer.)
    - 1.5.2.7. Laminated metal panels
  - 1.5.3. Roofing
    - 1.5.3.1. Preformed metal
    - 1.5.3.2. 30-year asphalt shingles
    - 1.5.3.3. 20-year membrane roof (EPDM, PVC, TPO)
  - 1.5.4. Insulation
    - 1.5.4.1. Must meet current ASHRAE 90.1 Standard (e.g. 2019)
  - 1.5.5. Windows & Exterior Doors
    - 1.5.5.1. New and replacement windows and exterior doors must be wind rated for 90mph or DP-20 minimum and meet at minimum Version 6 (V6) Energy Star rating for zone 5.

1.5.5.1.1. Window manufacturer must provide a letter identifying number of windows provided to the project complying with Energy Star V6 and windows U-value, infiltration and wind speed rating per V6

1.5.5.1.2. HERS rater must certify those windows were installed on the project.

1.5.5.2. Exterior doors must be insulated core

## 2. Community Integration

- 2.1. Developments should coordinate with or complement the local architecture and promote resident integration with the broader neighborhood.
- 2.2. Design should promote community safety to the greatest extent practicable.
- 2.3. All developments are encouraged to contain or be located in close proximity to play space, walking paths, or other recreational features and amenities appropriate to the population being served.
  - 2.3.1. Building massing and pedestrian pathways should enhance connections to nearby parks, plazas, and open spaces.
- 2.4. Street networks and sidewalks that are internal to the development site should connect to municipal or surrounding streets and sidewalks wherever feasible.

## 3. Holes & Penetrations

- 3.1. Seal all holes and penetrations connected to interior
  - 3.1.1. Weepholes should not be sealed and should include corrugated vents or rope wicks
- 3.2. UV stable materials for sealing any holes or penetrations

## 4. Gutters and Downspouts

- 4.1. All downspouts must be piped (sched. 40 PVC to minimum of 12" above grade) to an appropriate location, and when piped is not feasible, empty onto concrete splash blocks with a positive slope away from the building,
- 4.2. If local code dictates an alternative design, then that must be followed.

## 5. Main Entry

- 5.1. All main entries must have a roof or awning over the entry area.
  - 5.1.1. Where the front of the building is not the main entry, the entry functioning as the main entry must meet the requirements of this section (5. Main Entry)
- 5.2. All covered entries must be a minimum of 30" depth, 48" width, 10' max above the entry level.
- 5.3. Accessible covered entries must be a minimum of 67" depth and 67" width clear floor space.
- 5.4. For single families homes must be a minimum of 67" depth and 96" width clear floor space.
- 5.5. Specific materials designated as historic by State Historic Preservation Office of Ohio (SHPO) as addressed in writing by SHPO are exempt from individual requirements. The letter must be provided at application and include each item specifically addressed to meet this exemption.

## 6. Site Design & Landscaping

- 6.1. Provide landscaping that enhances the building(s), including native plants, berms, decorative fencing, special lighting, and signage.
- 6.2. Community facilities should be located for convenience to dwelling units.
- 6.3. Building entrances should provide shelter from sun, wind, and precipitation.
- 6.4. Should include interesting and enjoyable views from dwellings, indoor common areas, and outdoor sitting areas.
- 6.5. Plantings should be selected to minimize water usage. Consider xeriscaping or naturally occurring landscaping plants and materials.
- 6.6. Shade trees are encouraged wherever possible, especially to shade seating areas and building(s).
- 6.7. Existing trees should be maintained, where possible.
- 6.8. Project landscaping will not use species identified by the Ohio Department of Agriculture or Ohio Department of Natural Resources as invasive in Ohio.
  - 6.8.1. During construction, measures will be implemented to remove invasive species and prevent their re-establishment.

- 6.9. If the soil is disturbed during construction, areas with plantings, turf, or lawn must have at least 3" of well-screened topsoil.
- 6.10. Provide lighting levels meeting Illuminating Engineering Society recommendations. Locate lighting to thoroughly illuminate pedestrian walkways from parking spaces and public sidewalks to building entrances. Distribute lighting to ensure safety and minimize security concerns.
- 6.11. Provide screening for all exterior mechanical equipment, meters, dumpsters, etc. that part of resident or visitor experience of the site (e.g. along pathways and viewable)
  - 6.11.1. Screening should consider the viewing by residents and visitors to the property, as well as views/experience of using the site features and amenities.
  - 6.11.2. Screening selected should fit the space and with the design (e.g. fencing or landscaping).

## 7. Parking & Pathways

- 7.1. Paved areas should be high quality, durable, easily maintained, stable, and have a non-slip texture.
  - 7.1.1. Paved areas must be free of damage and appropriately repaired.
- 7.2. All sidewalks along the accessible route must be a minimum of 5-feet in width.
- 7.3. For existing properties, worn (i.e. from use) or dirt pathways must be repaired, removed or addressed with permanent pathways. Repair and removal can include plantings, lawn, or other landscaping.
- 7.4. Where parking is provided, areas must be paved and graded for proper drainage.

## 8. Dumpsters

- 8.1. Refuse collection stations must be screened with permanent enclosures.
- 8.2. Paved areas adjacent to the collection stations must be designed to provide adequate bearing for heavy garbage trucks.
- 8.3. A protected accessible path must be included meeting turning radius requirements of Section 504. Dumpsters must have a side-slide door.

## 9. Outdoor Recreational Features

- 9.1. All recreational features provided must include an accessible path complying with Section 504 with turning radius and wheelchair parking space with a companion bench at the end. The wheelchair parking space cannot block the pedestrian path.
- 9.2. If provided, play areas for younger children must not be in isolated areas and must be located to maximize safety.
- 9.3. If provided, bicycle storage facilities shall be secure and easily accessed to encourage transportation and recreational use by bicycle. Sheltered bicycle storage facilities are recommended.
- 9.4. Open space should be useful and accommodating,
  - 9.4.1. Sitting areas and walkways should be arranged to facilitate conversation, casual interaction, social contact, etc.
  - 9.4.2. When applicable, clear separation between public and private space should be provided (e.g. defined edge with landscaping or fencing)
- 9.5. For single family dwellings, yard space must be maximized for outdoor activities/play areas. Sidewalks or other walkways must be located at the edge of the yard space to the extent feasible.

## 10. Stormwater Management

- 10.1. Stormwater management areas provided with recognized design measures to ensure safety for children and other residents of the project or the surrounding neighborhood.
- 10.2. Retentions/detention ponds must be clearly marked with "No Trespassing" signs; forbidding trespassing, swimming, skating, fishing, or boating.
- 10.3. Overflow and drainpipes must have safety grating.

## L. INTERIOR REQUIREMENTS

The below requirements apply to all projects. However, rehabilitation and adaptive reuse projects may request exceptions.

These requirements are specific to OHFA. They are in addition to all other applicable local and state codes, including those governing accessibility.

### 1. Durable Materials – Interior

- 1.1. For all projects, the elements in this section are required to be constructed with the following:
  - 1.1.1. Materials must meet Expected Useful Life (EUL) or longer, as defined by the OHFA EUL table found in Appendix C;
  - 1.1.2. Materials that have a 30-year warranty or industry standard warranty for the material; or
  - 1.1.3. Any of the below pre-approved materials.
- 1.2. Materials that do not fall into any of the above categories must be approved by the OHFA architect.
- 1.3. Rehab Durability
  - 1.3.1. All new materials must meet the requirements in 1.1.
  - 1.3.2. Materials with a RUL of 50% or more or items in which the RUL of 50% as defined by the EUL table, may be replaced with OHFA's approval through the Exception Request process.
  - 1.3.3. Any material designated as existing to remain must meet the requirements of 1.1.1 and 1.1.3 and the DAS.
- 1.4. If a conflict between any of the required durable materials and a green certification requirement exists, the highest durability standard that is compatible with certification must prevail.
- 1.5. Pre-Approved Materials
  - 1.5.1. Countertops
    - 1.5.1.1. Plastic laminate on moisture resistant, high-density fiberboard substrates
    - 1.5.1.2. Solid surface
    - 1.5.1.3. Granite and natural stone are not approved materials.
  - 1.5.2. Cabinets and Drawers
    - 1.5.2.1. Cabinet materials must be in accordance with the requirements of ANSI A161.1 "Minimum Construction Performance Standards for Kitchen Cabinets" and must also include:
      - 1.5.2.1.1. Solid wood doors/fronts
      - 1.5.2.1.2. Wood stile with plywood panel
      - 1.5.2.1.3. Plywood frame
      - 1.5.2.1.4. Particle board frame
  - 1.5.3. Residential Living Unit Floors
    - 1.5.3.1. Ceramic tile
    - 1.5.3.2. Hardwood
    - 1.5.3.3. Vinyl plank or tile
    - 1.5.3.4. Sheet vinyl
    - 1.5.3.5. Stained concrete
  - 1.5.4. Carpet must be solution-dyed nylon. If a pad is required, a closed-cell pad must be used with antimicrobial and water-resistant material
  - 1.5.5. Gypsum board wall finish
    - 1.5.5.1. Paperless gypsum board ("PGB") or equivalent must be used at minimum in the following areas.
      - 1.5.5.1.1. Shower walls where the PGB will not have an exposed finish except 6 inches beyond shower and tub jams (floor to top of tub surround or 6 inches above shower nipple and this may be cased with water and rot-resistant trim).
      - 1.5.5.1.2. Behind toilets, the space between a tub/shower enclosure, and to the top of toilet tanks must be covered by PGB, as each is a high failure point.
    - 1.5.5.2. Paper-faced moisture-resistant gypsum board is required in the following areas:
      - 1.5.5.2.1. Located on ceilings that bathroom or toilet rooms are above.
      - 1.5.5.2.2. Within 4 feet horizontally and vertically of any water source, except directly behind areas specified for PGB under 1.5.5.1.

- 1.5.5.2.3. Within 4 feet in any direction behind laundry/clothes washing machines, water heaters, water meters, etc.
- 1.5.5.2.4. On walls less than 4 feet from sprinkler service controls and water service lines located in service rooms.
- 1.5.5.2.5. Behind public drinking fountains.
- 1.5.5.3. Water-resistant gypsum, when used on ceilings must be rated for the span.

## 2. Building Systems

Requirements in this section apply to all building systems, common areas, and residential units.

- 2.1. Plumbing systems
  - 2.1.1. Water heaters must meet ASHRAE 90.1-2019 or current Ohio adopted standard.
  - 2.1.2. All bathroom fixtures must meet EPA WaterSense requirements.
  - 2.1.3. All existing buildings should have full port stainless steel shut-off valves replaced.
- 2.2. HVAC systems
  - 2.2.1. Must be Energy Star-rated and/or meet the specific energy efficiency requirements of the applicable green building certification.
  - 2.2.2. Must meet ASHRAE 90.1-2019 or current Ohio adopted standard.
  - 2.2.3. Package Terminal Air Conditioning (PTAC) units are permitted only in rehabilitation projects in which they currently exist. Sleeves must be replaced with composite nonconductive energy efficient type. PTAC ducts may not block controls or windows.
  - 2.2.4. All affordable units must be air conditioned.
  - 2.2.5. Stacked mechanical units, if used, must allow for the access, service, and replacement of one unit without the removal of another (for example, a furnace must be able to be repaired without the removal of an adjacent water heater).
- 2.3. Electrical systems
  - 2.3.1. All light bulbs must have a 20,000-hour minimum life.
  - 2.3.2. Residential fixtures shall use common lamp base type fixtures such as A-19 or tube bi-pin. Bases such as GU24 and similar specialty bases are prohibited in residential areas and discouraged in multitenant buildings as well. LED lights are encouraged and required in all unheated areas.
  - 2.3.3. Obsolete electrical panels, meter equipment, disconnects etc. throughout the entire property must be replaced. This includes electrical panels that contain components that are not readily and commonly available at a reasonable cost. Common examples include: Federal Pacific, Wadsworth, Byant, Sylvania, Challenger, Cleveland (Cleveland Switch Board), Push-O-matic, Zinsco, any screw-in fuses, any split buss panels, etc.. The PCNA must document equipment size, make and manufacturer. Replacement equipment must show load calculations with major load change such as HVAC.
    - 2.3.3.1. Where MDP or disconnects utilize renewable cartridge fuses (such as Bussmann, Cooper, etc) these are not considered obsolete.
    - 2.3.3.2. Where panels no longer manufactured have currently manufactured replacement breakers. These replacement breakers must have an Underwriters test letter from the replacement breaker manufacturer that allows the new U/L rated breakers to be installed in the project specific obsolete panel make and model number.
  - 2.3.4. In developments serving a family population, electrical outlets must be tamper resistant.

## 3. Common Areas

- 3.1. Community facilities such as offices, dining, mail pick-up, and other necessary functions must be situated where they can be easily found by the residents. Most of these facilities shall be centrally located in close proximity to the primary entrance.
- 3.2. The maximum common area, using the Common Space definition for what constitutes common area, must not exceed 20 percent of the total gross building square footage.
  - 3.2.1. This requirement does not apply to single-family homes, 1, 2, or 3-family dwellings, and townhomes, if the common area space is exclusively for use of the individual resident.
  - 3.2.2. This requirement does not apply to existing rental units unless the footprint of the original building is expanded.
  - 3.2.3. Developments serving seniors or a PSH population may submit an exception request to exceed 20 percent. Exception request should be based upon programmatic space needs.



- 3.3. Hallways must be a minimum of 42" in width (new construction only).
  - 3.3.1. Floor drains and clean out caps must be within 12" of the hallway walls and cannot be in entry vestibules and directly outside of entries/exits.

#### 4. Elevators

- 4.1. All developments that exceed three stories must have an elevator accessible to all residents.
- 4.2. Developments serving seniors or a PSH population must not exceed one story unless the building has an elevator accessible to all residents. Exceptions for some PSH populations will be considered.
  - 4.2.1. This requirement does not apply to single-family homes, 1-, 2-, or 3-family dwellings, or townhouses.

#### 5. Interior Doors

- 5.1. In projects involving new construction, interior doors must meet the following requirements:
  - 5.1.1. 36" doors are required to achieve minimum 32" clear width
- 5.2. Solid wood or solid core (ex: particle board core, foam core)
  - 5.2.1. Closet doors are not required to be solid wood or solid core.
  - 5.2.2. Lever-style handles are required on all doors with latches or locks.
  - 5.2.3. Mechanicals are not considered closets and are required to meet 5.1.2. or rated as required by the building code.
- 5.3. In projects involving rehabilitation or adaptive reuse, interior doors must meet the following requirements:
  - 5.3.1. Existing bedroom and bathroom doors, if replaced, must be replaced with solid wood or solid core doors (ex: particle board core, foam core) or insulated steel.
  - 5.3.2. Existing door widths may remain as is except for units modified to meet requirements for Section 504.
  - 5.3.3. Lever-style handles are required on all doors with latches or locks.
- 5.4. For mobility units, closet or pantry doors without latches or locks must have loop pulls or similar non grasable hardware. Roller catches do not constitute a latch or lock.

#### 6. Floor Coverings

- 6.1. Floor coverings must be non-glare and slip resistant, and uniform in thickness and color throughout the entire room/space. Where intentional patterns or borders are included, then different colors are acceptable (for example flooring patterns selected to aid in navigation of senior developments).
- 6.2. Carpet is only permitted in the following development types and locations:
  - 6.2.1. Management and social service office areas;
  - 6.2.2. Bedrooms in residential living units (except for Service Enriched housing developments);
  - 6.2.3. In senior developments, carpet is permitted in living/dining rooms only if a walk-off area is provided in front of any exterior/entry door.

#### 7. Storage Space

- 7.1. All affordable units must include adequate storage space for unit residents. OHFA recognizes that adequacy will vary by population served and construction type.
- 7.2. In mobility units, storage space within each room must be equivalent to storage space in non-accessible units.

#### 8. Unit Sizes

- 8.1. All affordable units must meet the following minimum size requirements:
  - 8.1.1. 0-bedroom/Efficiency units (i.e. studio, efficiency):
    - 8.1.1.1. New Construction/Adaptive Reuse: 450 square feet
    - 8.1.1.2. Rehabilitation: 450 square feet
    - 8.1.1.3. Assisted Living: 350 square feet
  - 8.1.2. 1-bedroom units:
    - 8.1.2.1. New Construction/Adaptive Reuse: 550 square feet
    - 8.1.2.2. Rehabilitation: 500 square feet

- 8.1.2.3. Service Enriched: 450 square feet
- 8.1.2.4. Assisted Living: 450 square feet, or all HTC 1-bedroom units combined must average 500 square feet
- 8.1.3. 2-bedroom units:
  - 8.1.3.1. New Construction/Adaptive Reuse: 750 square feet
  - 8.1.3.2. Rehabilitation: 700 square feet
- 8.1.4. 3-bedroom units: 950 square feet
- 8.1.5. 4+ bedroom units: 1,100 square feet
- 8.2. Single-room occupancy units (SROs) are not permitted.
- 8.3. Senior Developments may not have any unit larger than two bedrooms.
- 8.4. Single-family homes must contain three or more bedrooms.
- 8.5. OHFA reserves the right to limit the size of units during the application review process.

## 9. Bedroom Sizes

- 9.1. All affordable unit bedrooms must meet the following minimum size requirements:
  - 9.1.1. Primary bedroom:
    - 9.1.1.1. New Construction/Adaptive Reuse: 120 square feet
    - 9.1.1.2. Rehabilitation: 110 square feet
  - 9.1.2. Secondary bedrooms:
    - 9.1.2.1. New Construction/Adaptive Reuse: 100 square feet
    - 9.1.2.2. Rehabilitation: 90 square feet
- 9.2. OHFA encourages bedrooms on accessible floors wherever practical.
- 9.3. At a minimum, three- and four-bedroom affordable units must support double occupancy in each bedroom under local zoning and building requirements.
- 9.4. Closets are excluded from the required minimum size requirements identified in 9.1.

## 10. Bathrooms

- 10.1. For new construction only, affordable units must provide the following number of bathrooms based on unit size:
  - 10.1.1. 0-bedroom/Efficiency units (i.e. studio, efficiency): 1 full bathroom
  - 10.1.2. 1-bedroom units: 1 full bathroom
  - 10.1.3. 2-bedroom units: 1 full bathroom up to 2 full bathrooms
  - 10.1.4. 3-bedroom units: Either 1.5 bathrooms or 2 full bathrooms
  - 10.1.5. 4+ bedroom units: Either 2 full bathrooms or 2.5 bathrooms
- 10.2. All plumbing fixtures must have lever-style handles.
- 10.3. Any wall-hung sinks must have concealed floor and stud-braced carriers. For wall-hung sinks on masonry walls, a carrier arm bracket mounted on epoxy studs may be used.
- 10.4. New construction multi-story townhomes must have an accessible bathroom or accessible half-bathroom on the accessible floor.
- 10.5. All 504 mobility units provided must have one roll-in shower.
  - 10.5.1. If a trench drain is not provided at the threshold of the roll-in shower, then a floor drain must be provided outside of the shower. When a floor drain is used, it must be approximately at the center of the open floor.
- 10.6. Sink cabinets may be removable in accessible units. If removable cabinets are used, the flooring and walls underneath the cabinet must be finished. Excluding the removable cabinet, equivalent storage must be provided within the bathroom.

## 11. Kitchen & Appliances

- 11.1. All affordable unit kitchens must include:
  - 11.1.1. Either a stand-alone range that is at least 30-inches wide or a cooktop and wall oven;
  - 11.1.2. An Energy Star-certified refrigerator (under-counter refrigerators will not be accepted);

- 11.1.3. An Energy-Star certified dishwasher (if provided); and
- 11.1.4. Plumbing fixtures with lever-style handles.
- 11.2. All kitchen appliances that are replaced or installed must be new.
- 11.3. All kitchen venting must exhaust to the outside of building. This may be by hood, ceiling vent or wall vent.
  - 11.3.1. Moderate Rehabilitation A only required to have a recirculating hood will be required.
  - 11.3.2. If venting is not possible in a rehab or historic building, an exception request is required. If a hood exception is approved, then a recirculating hood will be required.
- 11.4. Kitchens in accessible units must have at least a 12" x 15" appliance-free counter-space adjacent to all appliances.
- 11.5. Sink cabinets may be removable in accessible units. If removable cabinets are used, the flooring and walls underneath the cabinet must be finished. Excluding the removable cabinet, equivalent storage must be provided within the kitchen.
- 11.6. Refrigerator doors must open to access 15" landing zone adjacent to the refrigerator.
- 11.7. Kitchens in accessible units, common areas, or staff kitchenettes must have a continuous countertop surface that does not exceed 34" in height, including the sink, stove/cooktop and adjacent landing zones.
  - 11.7.1. Forward approach worksurfaces may be multi height based on the project selected safe harbor (PSSH).
- 11.8. Assisted Living units must be hard wired for an optional stove and located such that adding it does not require modification to the countertop or cabinet layout. Kitchen venting (11.3) must be provided. When requested, the optional stove must be installed and made available at owner expense.

## 12. Laundry Facilities

- 12.1. All affordable units must include washer and dryer hookup unless laundry facilities are provided on-site.
  - 12.1.1. This requirement does not apply to Service Enriched, Assisted Living, or 0-bedroom/Efficiency units (i.e. studio, efficiency).
- 12.2. When provided, laundry facilities must be centrally located to the greatest extent possible.
- 12.3. Laundry facilities must comply with accessibility requirements. This is inclusive of accessible units.
  - 12.3.1. When multiple machines are provided, there must be a mix of front and top loading washers.
- 12.4. When provided, laundry sinks must accommodate accessible side approach.
- 12.5. All clothes washers and clothes dryers provided by the property owner must be Energy Star certified, excluding common area laundry facilities.

## 13. Holes & Penetrations

- 13.1. Provide sealed separation between floors and adjacent units.
  - 13.1.1. This includes electrical outlets and panels that are on shared walls
- 13.2. Seal all penetrations to the back of the cabinets
- 13.3. Seal all holes and penetrations to stud and joist cavities (e.g. behind cabinets, mechanical closets)

## M. OPERATIONS & MAINTENANCE PLANS

Provide OHFA operations and maintenance (O&M) plans at project closeout or 8609 submission. O&M plans should be produced by the Architect or General Contractor on the project team. O&M Plans provided must include the following:

- Project Section 504 Requirements (Must be provided by Architect)
  - List safe harbor
  - List special features required for long term maint: lever hardware, Delay action closers – (common area and units entry, etc), 9" toe kicks (UFAS),
  - What features were provided and required to be maintained for 504 MU compliance
  - What features were provided and required to be maintained for 504 SU compliance
- A simple list of building products, manufacturers, and warrantees, at minimum:
  - Lever hardware manufacture (MFR), finish, warranties
  - Doors (solid core/ hollow where applicable) MFR, finish, warranties
  - Flooring: MFR, finish, warranties
  - Siding: MFR, finish, warranties
  - Shingles: MFR, finish, warranties
  - Windows: MFR, finish, warranties
- O&M guidance for all mechanical and electrical equipment and appliances (building level and dwelling unit level)
- HVAC specifications, and O&M schedules
  - A maintenance schedule for furnace filters (a standard 30 day filter in commercial use does not make it a quarterly filter) or filter cleaning (ductless split), etc.
- Refrigerant management
- Location of mechanical, electrical, gas, and water-system turnoffs
  - Main shutoff valve must clearly identify direction of control for on and off (e.g. color coding or legible tags/signs)
- Lighting equipment specifications and replacement guidance
- Landscaping and hardscaping specifications and maintenance plan, including any specific instructions for community gardens or growing spaces
- Green cleaning product specifications and cleaning schedules
- Integrated pest management protocol
- Maintenance of active recreation and play spaces (e.g., playgrounds, ground markings, exercise equipment)
- An occupancy turnover plan that describes the dwelling unit turnover protocol, including all materials that are frequently replaced at turnover
- Any O&M plans required by the third-party green certification that are not covered by the above.

## N. ARCHITECTURAL SUBMISSION AND REVIEW PROCESS

### Submissions and Correspondence

All communications related to the architectural review, including notification of submission of architectural plans, must be sent to [arch@ohiohome.org](mailto:arch@ohiohome.org). State the project name as it appears in the AHFA/GFA and OHFA tracking number in the subject line, and carbon copy the OHFA architectural staff, and the OHFA Underwriting Analyst on the email. Architectural plans must be submitted with the project's application on [OHFA's File Transfer Site \(FTS\)](#). *OHFA is not able to accept submissions through any of the following: external file transfer protocol (FTP) sites, Dropbox, Box, Google Drive, or OneDrive.*

All drawings and specifications must be prepared under direct supervision of an Ohio Licensed (active and current) Architect in accordance with the Architectural Practice Act, bear the license number of the architect, and if the architect is part of any business structure other than a sole proprietorship, he or she must include the Project Design Firm registration number on the drawings. The drawings are required to be signed and sealed by the design architect ("Architect of Record").

*All contacts for a proposed project should be consistent throughout the AHFA, DCF, submitted architectural drawings, and any other OHFA forms at the time of submission. OHFA must be notified if there are changes to the contacts after submission and send updated contacts to the OHFA Underwriting Analyst and [arch@ohiohome.org](mailto:arch@ohiohome.org).*

### Review Process

It is recommended that OHFA staff be involved in the design concept at the earliest stage possible to provide guidance through the review process.

Applicants must receive design approval from OHFA before proceeding with any element of construction or rehabilitation. OHFA will review plans for conformity to the requirements contained herein which include but are not limited to appropriateness for occupancy served, functionality, life safety, durability, quality of life, and scope of work. The development must not change, convert, modify, reconfigure, or otherwise alter the number of bedrooms and the size of those bedrooms without prior written approval from OHFA.

All OHFA architectural reviews and approvals should be completed prior to construction commencement. For any outstanding items the development team must contact the OHFA architectural staff the earlier of 60 days prior to construction commencement or as identified in the architectural review. OHFA may complete a joint architectural review with any other governmental entity involved in the project, including but not limited to USDA, HUD, SHPO, and local governments.

Requirements identified in the Architectural Review/Approval must be followed. All OHFA architectural reviews and approvals must be posted on site with the permit and construction documents.

Decisions made by the OHFA Staff Architect may be appealed to the Director of Multifamily Housing in writing. Appeals must be specific and, where appropriate, cite the governing regulation that conflicts with the Staff Architect decision.

### Required Documents - Preliminary Architectural Submission

At minimum, the proposal application architectural submission must include all of the following:

- The [Design and Construction Features Form](#) (DCF), including Construction Certification, completed, signed and submitted as a pdf.
- [Scope of Work form](#).
- Exception Request form(s), if applicable.
- Preliminary drawings, which must include all of the following:
  - Cover sheet with name of development, development address, development team, drawing index, code information, and table indicating unit schedule (including accessible, adaptable and sensory impaired units), types and sizes
  - Site plan
    - including adjacent parcel information (e.g. zoning, roads, railroad tracks, etc.)
      - clearly show the context of the neighborhood that the property will exist
    - all site details, and parking data and layouts
  - Landscape intent

- Description of historic features (adaptive reuse & historic rehabs)
- Dimensioned floor plans with room designations and proposed finishes
- Exterior elevations with material notations
- Typical wall sections (new construction only)
- Schematic Drawings and/or specifications for HVAC, plumbing, and electrical or similar items included in the scope of work.

Preliminary drawings, described above, must be submitted in all of the following formats:

- Electronic format (pdf)
  - Single PDF file for all drawings specified above.
  - Separate PDF for specifications.
- Hard copy
  - Full set of architectural plans, 11"x17" scaled to fit. **Full-size architectural plans will be rejected.**

*Upon request only, preliminary drawings must be submitted in DXF R-14 format or DWG AutoCAD R-14 format.*

## Required Documents - Final Architectural Submission

Final applications must include 80 percent complete permit sets, including final plans for all trades. Unless approved by OHFA, the plans must include the project name as submitted with the proposal application and OHFA tracking number. The submission must show conformity to the preliminary submittal, including the information included within the Design and Construction Features Form.

At minimum, the final application architectural submission must include all of the following:

- AHFA, DCF, SoW and 80% plans must all be consistent with matching information (e.g. safe harbor, number of units, accessible units, contact information, etc.).
- The DCF included/incorporated into the front of the 80% plan sets. The DCF must include:
  - Updated information, if needed, from the proposal application submission, matching the information in the 80% plans;
  - The signed Construction Certification pages;
  - Completed verifications, as applicable, that the drawings comply with accessibility (a single Section 504 safe harbor), energy efficiency, universal design, and/or green building requirements required for the development or committed to in the application for funding.
- Updated Scope of Work form.
- Asbestos, mold, lead-based paint considerations as required.
- Items required to be completed per Phase I or II Environmental Site Assessment, or per applicable Environmental Review performed by OHFA.
- Plan sets must include 80% minimum, which must include all of the following:
  - Site plans
    - including adjacent parcel information (e.g. zoning, roads, railroad tracks etc.)
    - all site details, and parking data and layouts;
  - Landscape intent
  - Demolition plan
  - Plan identifying historic features (adaptive reuse & historic rehabs)
  - Interior and Exterior elevations
    - Interior includes material notations (casework, PGB and MR gypsum board locations, etc.)
  - Dimensioned floor plans
  - Wall sections (if applicable)
  - Structure (if applicable)
  - Finishes and schedules
  - Details
  - Mechanical plans



- Drawings must have a dimensioned plumbing plan and control points located for rough-in site verification. All pipes-through-floor and the walls they are intended to be located within must be dimensioned relative to the foundation where they must align with walls and/or islands above.
- OHFA strongly encourages a surveyor to locate wall and through-slab pipe penetrations. Foundation over dig must be filled with insulation or forms and then back filled.

Plan sets, described above, must be submitted in all of the following formats:

- Electronic format (pdf)
  - Single PDF files for drawings including all site plans, dimensioned floor plans, elevations, wall sections, structure, finishes, details and mechanical plans.
  - Separate PDF file for specifications.
- Electronic format (AutoCAD)
  - Dimensioned floor plans only, submitted in DXF or DWG AutoCAD R-14 format.
    - Required to include the project architect's polylines used for the area calculations as required by BOMA.
    - If drawings are externally referenced (xref), submissions must be bound (xbind) prior to creating files for OHFA.
    - Proprietary authorship information such as title blocks, Architecture seals, etc. should be removed.
    - DXF should be generated from the base file and not a plan sheet file.
- Hard copy
  - Full set of architectural plans, 11"x17" scaled to fit. **Full-size architectural plans will be rejected.**

## O. EXCEPTION REQUESTS

### New Construction

All items in the Site and Exterior Requirements and Interior Requirements sections are **required** for developments involving new construction. Requests for exceptions may only be submitted for the following:

- Items that are subject to non-OHFA (such as local codes or design standards, funding source, etc.) requirements that may conflict with the DAS; or
- Items that are unable to be complied with for a compelling reason, as fully described by the applicant in the Exception Request form.

Exception requests will be reviewed on a case-by-case basis and must include supporting documentation to justify the request. As noted in the Exceptions section, the OHFA staff architect will review requests and make a recommendation to the management team to accept, deny, or modify the exception. A final determination will be made by OHFA by the date indicated in the program calendars.

### Rehabilitation and Adaptive Reuse

Projects involving rehabilitation or adaptive reuse may seek an exception to certain requirements in the Site and Exterior Requirements and Interior Requirements sections as noted below if able to evidence that incorporating a specific element is infeasible. The exception request must include adequate supporting documentation to demonstrate how incorporation of the element is infeasible.

- |                                 |                        |
|---------------------------------|------------------------|
| • Durable Materials - Exterior  | • Common Areas         |
| • Holes & Penetrations          | • Elevators            |
| • Main Entry                    | • Interior Doors       |
| • Site Design & Landscaping     | • Floor Coverings      |
| • Parking & Pathways            | • Unit Sizes           |
| • Outdoor Recreational Features | • Bedroom Sizes        |
| • Stormwater Management         | • Bathrooms            |
| • Durable Materials - Interior  | • Kitchen & Appliances |
| • Building Systems              | • Laundry Facilities   |

Rehabilitation and adaptive reuse projects may also request exceptions to the following:

- Universal Design mandatory features
- Existing-to-remain that does not meet DAS requirements
- Items with 75% or more RUL (if replacement required for green certification)
- Accessibility requirements (if compliance is technically infeasible)

## Historic Preservation

If a project's development budget includes federal and/or state historic tax credits, the applicant is not required to submit an Exception Request form for approval in advance of the proposal application.

The Exception Request form must still be completed only to identify those areas in which the project cannot meet OHFA's requirements. The form must be submitted with the proposal application, physically attached to the preliminary plans. OHFA will work with the State Historic Preservation Office (SHPO) to ensure those OHFA requirements that can be met, will be met.

## Submission Requirements

Applicants will be required to submit the request using the OHFA Exception Request form found on the OHFA [website](#) and must provide supporting documentation as necessary to justify the request. All exception requests must include concise supporting documentation such as an applicable section of code, site plan, floor plan, etc. as is applicable. All exception requests must be submitted to [arch@ohiohome.org](mailto:arch@ohiohome.org) and with the appropriate program application.

All requests must include:

- Reasonable justification for the request
  - How different is the proposed exception from the OHFA standard?
  - What impact will the proposed exception have on the project?
  - What unique characteristics with the project have created a technical infeasibility or justification for the request?
- Number of units and building included in the request
- Site or floor plans or elevations pertaining to the request
- Material requests should include detail on the existing materials and conditions.

Universal Design exceptions for mandatory items must include two non-mandatory items as accepted by OHFA.

## Deadlines

Applicants must reference the applicable program guidelines to determine when exception requests are due. All requests for design exceptions are due prior to the applicable application deadline, *with the exception of the following which may be submitted with the application:*

- Developments utilizing federal or state historic tax credits; or
- Developments applying for 4% tax credits only (non-BGF); or
- Existing rental rehabilitation developments seeking an exception to minimum unit size and/or minimum bedroom size requirements.

In the above cases, the Exception Request form for these items must still be completed but must be submitted with the application, physically attached to the preliminary plans.

## Exceptions after Architectural Review Approval

Exceptions submitted after Architectural Review Approval must be based on something that is outside of the control of the project team. Any exceptions requested cannot violate the program requirements or scoring criteria used for OHFA funding received. OHFA must be notified of such a request within 30 days, and the complete exception request can be submitted when a solution has been identified. The complete exception request must include all information required in the Submission Requirements noted above. OHFA will respond to the complete exception request within two weeks.

### Supply Chain Delays

OHFA will consider exception requests related to significant supply chain shortages that are either protracted or it is unclear when it will be resolved. These requests must include supporting documentation that clearly identify what materials there are a shortage of, impacted features, and what materials will be used in place. Any materials substituted should meet the durability requirements of the EUL tables, and if they do not meet this, additional discussion during the review of the request will be required. It is at OHFA's discretion if the exception is in materials is long-term or for initial construction only, where upon replacement, materials that are fully compliant with the DAS requirements must be used.

## P. CONSTRUCTION PROGRESS & MONITORING

### Construction Monitoring

The OHFA Project Administration team ensures that construction progresses according to schedule and that the recipient fulfills all terms of the funding agreements and related policies. Staff will conduct periodic site visits during construction to provide technical assistance, verify that the project is on schedule to meet required deadlines, and to ensure requirements of the various funding sources are being met based on the Architectural Approval for the project and DAS that the project was awarded under. Staff may provide suggestions for best practices where a concern is flagged that is not specifically addressed by the DAS or Architectural Approval.

For projects utilizing HDAP funds, staff will also review construction costs, progress, third-party inspection reports and change orders as part of each request for funds. OHFA may request copies of change orders if additional information is needed to verify project costs or to verify that commitments made by the recipient during the application process will still be met.

Additionally, for all OHFA projects, OHFA requires the submission of any change orders for any major building systems that do not have a substantially similar material or solution.

Examples of change orders that should be submitted included but not limited to: 1) durability of materials, 2) changes in or removal of features, e.g. fences, pools, community rooms/buildings, accessibility features, 3) loss or moving of units between buildings, 4) changes in programmatic space, 5) substantial changes in costs including, cost changes of 20% or greater, use of contingency 10% or greater, cost savings of \$10,000 or more, and value engineering.

The development must notify OHFA of any substantial changes in plans, scope of work, or materials that are contemplated after submitting 80 percent plans and throughout construction of the project. This includes any damages, fires, or environmental issues that adversely impact the project, project completion or occupancy. Notifications must be made through the existing [constructionmonitoring@ohiohome.org](mailto:constructionmonitoring@ohiohome.org) mailbox. When a change order is submitted it should include the related AIA G702 and AIA G703. OHFA staff will provide a response within two weeks.

OHFA will consider requests related to significant supply chain shortages that are either protracted or it is unclear when it will be resolved. These requests must include supporting documentation that clearly identify what materials there are a shortage of, impacted features, and what materials will be used in place. Documentation must include verification from the manufacturer regarding the availability. Any materials substituted must be approved EUL table materials and meet the durability requirements, and if they do not meet this, additional discussion during the review of the request will be required. It is at OHFA's discretion if the exception is in materials is long-term or for initial construction only, where upon replacement, materials that are fully compliant with the DAS requirements must be used.

### Notification of Construction Start

Projects must notify OHFA when construction begins and should invite an OHFA Project Administration Staff to any pre-construction meetings, if held. Regular communication with the Project Administration team ensures that projects meet all the necessary requirements and are completed on time.

## Quarterly Construction Monitoring Reports

All developments utilizing HTC or HDAP funds are required to complete the [OHFA Quarterly Construction Monitoring Report](#) (QCM), available on the OHFA webpage. The Report must be submitted quarterly beginning the first quarterly reporting period following either OHFA Board approval or actual construction start, whichever is earlier. Reports are due January 1, April 1, July 1, and October 1 of each year until the project is placed into service. OHFA reserves the right to suspend disbursement of funds if the Report is not submitted.

## Additional Documentation required for HOME and NHTF

Starting with 2021 awards, all HOME and NHTF awards must complete documentation to comply with Section 3 requirements. Documentation at minimum includes identifying the total hours, Section 3 hours, and Section 3 targeted hours for all contractor employees working on the project on the [Monthly Section 3 Utilization Report](#), identification of if the contractor has Section 3 business concern status, and to the greatest extent feasible meet or exceed the following benchmark goals.

1. Section 3 workers are 25% or more of the total number of labor hours worked by all workers on a Section 3 project.
2. Targeted Section 3 workers are 5% or more of the total number of labor hours worked by all workers on a Section 3 project.

Please note that contractors also have to submit [Section 3 Worker Status Certification](#) forms (for each worker) and a [Contractor Workforce Section 3 Certification](#) form to OHFA with the first Monthly Section 3 Utilization Report. Review [Policy 21-04](#) for details on compliance including when the benchmarks aren't met to complete "Qualitative efforts".

For additional details on all Section 3 requirements review the Ohio Department of Development resource page. All Section 3 submissions to OHFA can be attached to the [OHFA Quarterly Construction Monitoring Form](#). Contact your Project Administration Analyst with any questions.

## Construction Completion

OHFA Project Administration staff will conduct a construction closeout visit once construction is substantially complete to verify all requirements are being met based on the Architectural Approval for the project and DAS that the project was awarded under. Staff may provide suggestions for best practices where a concern is flagged that is not specifically addressed by the DAS or Architectural Approval.

In addition, the following documents are required to be submitted to OHFA with the request for HDAP project closeout and/or issuance of Form 8609:

- Certificate(s) of Occupancy (or Final Inspection from the governing jurisdiction, if applicable);
- AIA G704 Certificate of Substantial Completion;
- O&M Plans;
- Evidence of final certification from third-party for Sustainability requirements;
- Verification that architectural/design requirements that were committed, such as Exceptional Development criteria, exercise and wellness features, or universal design features, have been completed; and
- Verification that any unresolved site-specific mitigations as specified in the project's environmental review clearance letter from OHFA have been completed (HDAP and 811 only).

Project closeout and issuance of Form 8609 will not occur until the above have been submitted and reviewed by OHFA and any remaining issues have been resolved.

## APPENDIX A: UNIVERSAL DESIGN FEATURES

In all units, Developments must incorporate all mandatory Universal Design features (marked R), as well as the specified number of additional features required for points. Exception requests for mandatory features will be accepted for rehabilitation projects, and for each mandatory item included in the exception request will require from any category two non-mandatory items as accepted by OHFA.

### Entry

- R** 36"-wide (minimum) entry door
  - On rehab/adaptative reuse only, not required on all units if infeasibility can be proven
- R** Entry door with lever-style handle
- R** For primary entrance, minimum 5' x 5' level clear space inside and outside entry door
- R** Adequate non-glare lighting at walkways, accessible routes, and exterior spaces
- R** Adequate lighting both inside and outside the building and unit entrance
- R** High visibility address numbers (both building and exterior units)
- R** Overhead weather protection at entrances
  - On rehab/adaptative reuse only, not required on all units if infeasibility can be proven
- Built-in shelf/bench/ledge located outside the door
- Nonslip surfaces on walkways and entryways
- Primary unit entry with an accessible/dual peephole and backlit doorbell
- Door locks that are easy to operate, such as keyless locks with remote control or keypad
- No-step entry (1/2" or less threshold) at main entrance

### Interior Stairs and Hallways

- R** Adequate lighting to illuminate all stairway(s), landings, and hallway(s)
- R** Hallways with a minimum width of 42"
- R** Anti-slip strips on front edge of steps in color-contrast material
- Color contrast between stair treads and risers
- Handrails on both sides of interior stairs

### Interior Doors

- R** 34"-wide (minimum) doors leading to habitable room, allowing for a 32" minimum clearance
- R** Lever-style door hardware on all interior doors
- R** Interior maximum door threshold of ¼ inch beveled or flush
- Pocket doors with easy-to-grip handles

### Faucets

- R** Anti-scald faucets with lever handle for all sinks, bathtubs, and showers
- R** Pressure balanced faucets

### Electrical

- R** Thermostat and control panels that are easy to read and simple to operate
- R** Rocker, touch light, or hands-free switches
- R** Extra electrical outlets (for medical equipment or rechargeable items, etc.) placed 18" to 24" above finished floor (bedroom only)
- Lighted switches visible in the dark
- Switched outlets for lamps, etc. to be turned on with wall switch
- Electrical outlets, phone jacks, and data ports at least 18" above finished floor
- Light switches between 44"-48" above finished floor; thermostats no more than 48" above finished floor
- Clear access space of 30" by 48" in front of switches, outlets, and controls
- Audible and visual alarms for smoke/fire/carbon monoxide in all code-required accessible areas and all units

## Bathrooms

- R** Countertops with beveled/radiused corners. Outside corners are suggested to be a two-inch corner radius, waterfall edge with one-inch radius, or two-inch chamfer.
- R** Adjustable-height showerhead (articulated arm or similar) or hand-held showerhead with flexible hose and easily operable controls
- R** Non-glare lighting at vanities
- A full- or half-bath on the main floor with clear floor space of 30" x 48"
- Overhead light fixture in tub/shower
- Mirror(s) placed for both standing and sitting, such as a full-length or tilting mirror
- Toilet centered at least 18" from any side wall, tub, or cabinet
- In at least one bathroom per unit:
  - Low-threshold or curbless shower at least 5' x 3' OR ADA bathtub with seat
  - Clear knee space (at least 27" high) under sink. May be open knee space or achieved by means of removable vanity or fold-back or self-storing doors. Pipe protection panels must be provided to prevent contact with hot or sharp surfaces.
  - Grab bars, or wall-blocking for future installation of grab bars, in tub/shower, and toilet. Grab bars must be properly anchored and supported.

## Kitchen

- R** At least 15" clear space/"landing zone" on each side of stove and sink, and at least one side of refrigerator. This is countertop clear space and may be shared with another appliance and/or required work surface if applicable.
- R** Loop handles on drawers and cabinets
- R** Non-glare task lighting to illuminate sink, stove, and work areas
- Adjustable height shelves in wall cabinets
- Base cabinets with pull out drawers
- Pull-out work surface near the oven, refrigerator and/or microwave.
- Visual contrast at front edge of countertop or between the countertop and the cabinets
- Side-by-side refrigerator-freezer
- Cooktop/range with front or side-mounted controls (senior units only)
- Extra outlets for small appliances, electronics, etc.
- Clear knee space (at least 27" high) under sink, counters, and/or cook tops. If under sink, pipes must have protection and may not be in the required knee space. May be open knee space or achieved by means of removable base cabinets or fold-back or self-storing doors.

## Closets/Storage

- Area is well-lit with a switch located outside the space
- Doors and handles that are easy to operate. No bi-fold or accordion-type doors.
- Adjustable-height shelving and/or closet rods OR clothes rods installed at multiple heights
- Pull out-shelves, rollout cabinets, and other easy to access storage components



## APPENDIX B: OHFA PCNA TABLE OF CONTENTS

This PCNA Table of Contents (TOC) template must be used in all PCNAs submitted to OHFA. All items in the TOC must be included in the PCNA. If an item is not applicable, it must be stated as such.

| Section   | Page # |
|---|--------|
| <b>1. Executive Summary</b>   |        |
| <b>1.1. General description of property (use, size, age, location, construction type, design style, occupancy status)</b>   |        |
| <b>1.2. Name of consultant preparing the PCNA</b>   |        |
| <b>1.3. Name of user of the PCNA</b>  |        |
| <b>1.4. User's position with respect to the subject property</b>  |        |
| <b>1.5. Date of the site visit</b>  |        |
| <b>1.6. General physical condition</b>  |        |
| 1.6.a. Subject property's general physical condition  |        |
| 1.6.b. Summary of the apparent level of preventive maintenance exercised  |        |
| 1.6.c. Summary of any significant deferred maintenance  |        |
| 1.6.d. Schedule of material physical deficiencies   |        |
| 1.6.e. Any significant capital improvements that are pending, in-progress, or were recently implemented   |        |
| 1.6.f. Any significant findings resulting from research (This should include material life-safety code and building code violations)  |        |
| <b>1.7. Opinions of costs</b>   |        |
| <i>Present the aggregate sum of opinions of costs segregated between immediate and short-term costs.</i>  |        |
| <b>1.8. Deviations from ASTM E2018-15 or current standard</b>   |        |
| <b>1.9. Consultant/Field Observer relationship</b>  |        |
| <b>1.10. Recommendations/Discussions</b>  |        |
| 1.10.a. Briefly identify those assemblies and systems necessitating further study, research, testing, intrusive survey, or exploratory probing.   |        |
| 1.10.b. This section also may be used to discuss any obvious major deviations from the subject property description provided by the user to the consultant, ongoing repairs or improvements, or other relevant issues.  |        |
| <b>2. Purpose and Scope</b>   |        |
| <b>2.1. Provide a short paragraph specifically stating the purpose the PCNA should serve and the client's position with respect to the real estate transaction. If the client does not disclose the PCNA's purpose or its role to the consultant, the PCNA should so state.</b> |        |
| <b>2.2. Identify the improvements that comprise the subject property.</b>   |        |
| <b>2.3. Provide an outline of the scope of work completed for the PCNA and methods utilized.</b>  |        |
| <b>2.4. If there were any constraints preventing the consultant from performing the PCNA in accordance with this outline, these constraints should be identified.</b>   |        |

| Section  | Page # |
|--|--------|
| <b>3. System Descriptions and Observations</b>   |        |
| <p><i>For each major building system listed in the OHFA EUL Table, provide a brief description of each system and its assemblies and observed physical deficiencies, if any. Please notate with corresponding numbers listed in the EUL Table. Include <b>all</b>:</i></p> <ul style="list-style-type: none"> <li>• <i>The item's Estimated Useful Life (based on the OHFA EUL table) and Remaining Useful Life;</i></li> <li>• <i>The item's current physical condition, stated as "good", "fair", or "poor"; and</i></li> <li>• <i>PCNA provider's recommendation for critical replacements/repair.</i></li> </ul> <p><i>This list should not be considered all-inclusive. Conversely, some items may not be applicable to the subject property and should be noted as such.</i></p> |        |
| <b>4. Document Reviews and Interviews</b>  |        |
| <p><i>Identify any material information relating to physical deficiencies of the subject property resulting from the review of documents and interviews conducted.</i></p>   |        |
| <b>5. Additional Considerations</b>  |        |
| <p><i>Identify any material additional considerations or out of scope considerations that are included in the PCNA. This may include:</i></p> <ul style="list-style-type: none"> <li>• <i>Capital improvements, enhancements, or upgrades to building components, systems, or finishes; and/or</i></li> <li>• <i>Improvements, capital expenditures, repairs, maintenance and other activities that are or may be required at a future date, except as needed in the review of short term and long-term needs; and/or</i></li> <li>• <i>Environmental considerations, such as mold, asbestos, or lead-based paint.</i></li> <li>• <i>Observations for accessibility should be based on Section 504 (not a safe harbor such as UFAS or ADA).</i></li> </ul>                             |        |
| <b>6. Opinions of Costs</b>  |        |
| <b>6.1. Identification of material physical deficiencies and suggested remedies, including opinions of costs.</b>  |        |
| <p><i>For each material physical deficiency, the consultant should provide a suggested remedy, which may include recommending further research or testing, or both, if appropriate in the consultant's opinion.</i></p>  |        |
| <p><i>Opinions of costs should be provided for material physical deficiencies and not for repairs or improvements that could be classified as: (1) cosmetic or decorative; (2) part or parcel of a building renovation program (3) tenant improvements/finishes; (4) enhancements to reposition the subject property in the marketplace; (5) for warranty transfer purposes; or (6) routine or normal preventive maintenance, or a combination thereof.</i></p>  |        |
| <p><i>Identify all Immediate Repairs as occurring in year zero and project the expected reserve requirements necessary for at least the following 20 years of operations.</i></p>  |        |
| 6.1.a. Immediate Costs (table)   |        |
| <p><i>Identify each material physical deficiency, suggested remedy, and opinion of cost.</i></p>   |        |
| 6.1.b. Short-term Costs (table)  |        |
| <p><i>Identify each material physical deficiency, suggested remedy, and opinion of cost.</i></p>   |        |
| 6.1.c. Replacement Reserves/Ongoing Physical Needs (table)   |        |
| <p><i>Provide opinion of cost for all long-term capital expenses. Long-term capital expenses are typically based on the expected useful life of the building systems and assemblies.</i></p>   |        |
| 6.1.d. Costs for Additional Study  |        |
| <p><i>Provide the opinions of costs for additional study for any physical deficiencies that warrant further study/research or design, testing, exploratory probing, and exploration of various repair schemes, or a combination thereof, in order to determine the appropriate suggested remedy or scope.</i></p>  |        |
| <b>7. Qualifications</b>   |        |
| <p><i>Provide the qualifications for the professionals contributing to and completing the PCNA.</i></p>  |        |

| Section   | Page # |
|---|--------|
| <b>8. Limiting Conditions</b>                                       |        |
| <i>Provide all limiting conditions of the PCNA.</i>                 |        |
| <b>9. Exhibits</b>  |        |
| <b>9.1. Representative photographs *</b>                            |        |
| <b>9.2. Pre-survey questionnaire</b>                                |        |
| <b>9.3. User/owner submitted documents</b>                          |        |
| <b>9.4. Photocopied plot plans, sketches, etc.</b>                  |        |
| <b>9.5. Inspected units list (unit number, size, accessibility)</b> |        |
| <b>9.6. Other exhibits considered appropriate by the consultant</b> |        |

Representative photographs must typically include photographs of existing roof condition, exterior windows, sidings, doors, gutters downspouts, existing site feature conditions(ex: swimming pools, play areas, maintenance building, garages, dumpster etc.), interior unit conditions(includes all room), mechanical units, electrical panels (type), Accessible unit (includes all room), Common areas such community room, laundry room etc.), Asphalt paving condition, sidewalk condition, site signage, fence, parking etc.

## APPENDIX C: OHFA EUL TABLE

Note: this table is sorted by [CSI Divisions](#) with assemblies and parts grouped within the divisions. Each Division corresponds with the format of the OHFA Scope of Work (SoW) excel form.

Any materials used in OHFA projects (New or rehab) must be in the table to be used in OHFA projects. This includes existing items to remain.

| Division          | Section    | Assembly | Description   | Family | Senior |
|-------------------|------------|----------|---|--------|--------|
| <b>Division 3</b> |            |          | <b>Concrete</b>   |        |        |
|                   | <b>3-A</b> |          | <b>Framing</b>  |        |        |
|                   |            | 3-A-i    | Reinforced concrete   | 100    | 100    |
|                   | <b>3-B</b> |          | <b>Exterior Stairs &amp; Railings</b>                         |        |        |
|                   |            | 3-B-i    | Exterior Stairs, Concrete                                     | 50     | 50     |
|                   | <b>3-C</b> |          | <b>Balcony/Porch/Canopy</b>                                   |        |        |
|                   |            | 3-B-ii   | Balcony/Porch, concrete                                       | 40     | 40     |
|                   |            | 3-B-iv   | Canopy, Concrete  | 50     | 50     |
|                   | <b>3-D</b> |          | <b>Foundation</b>   |        |        |
|                   |            | 3-A-i    | Slab, reinforced concrete                                     | 100    | 100    |
|                   |            | 3-A-ii   | Slab, post tensioned  | 100    | 100    |
|                   |            | 3-A-iii  | Continuous reinforced concrete footer and CMU stem wall       | 100    | 100    |
|                   |            | 3-A-iv   | Piers, reinforced concrete footer and CMU pier                | 100    | 100    |
| <b>Division 4</b> |            |          | <b>Masonry</b>  |        |        |
|                   | <b>4-A</b> |          | <b>Framing</b>  |        |        |
|                   |            | 4-A-i    | Reinforced masonry, concrete masonry units (CMUs)             | 100    | 100    |
|                   |            | 4-A-ii   | Solid Masonry (obsolete)                                      | 100    | 100    |
| <b>Division 5</b> |            |          | <b>Metals</b>   |        |        |
|                   | <b>5-A</b> |          | <b>Framing</b>  |        |        |
|                   |            | 5-A-i    | Tie downs, clips, braces, straps, hangers, shear walls/panels | 75     | 75     |
|                   |            | 5-A-ii   | Steel, beams, trusses   | 100    | 100    |
|                   |            | 5-A-iii  | Steel frame and sheet metal or insulated panel sheathing      | 100    | 100    |
|                   | <b>5-B</b> |          | <b>Exterior Stairs &amp; Railings</b>                         |        |        |
|                   |            | 5-B-i    | Exterior Stairs-steel frame/stringer                          | 40     | 40     |
|                   |            | 5-B-ii   | Exterior Stair Tread-metal, concrete filled                   | 20     | 20     |
|                   |            | 5-B-iii  | Fire escapes, metal   | 50     | 50     |
|                   |            | 5-B-iv   | Railings, metal   | 50     | 50     |
|                   | <b>5-C</b> |          | <b>Balcony/Porch/Canopy</b>                                   |        |        |
|                   |            | 5-C-i    | Balcony/Porch, steel frame                                    | 40     | 40     |
|                   |            | 5-C-ii   | Canopy, Metal   | 40     | 40     |
|                   | <b>5-D</b> |          | <b>Foundation</b>   |        |        |
|                   | <b>5-E</b> |          | <b>Interior Metal Stairs &amp; Railings</b>                   |        |        |
|                   |            | 5-E-i    | Interior Stairs   | 50     | 50     |
|                   |            | 5-E-ii   | Interior Stair and loft railings                              | 15     | 25     |
| <b>Division 6</b> |            |          | <b>Wood, Plastics, and Composites</b>                         |        |        |
|                   | <b>6-A</b> |          | <b>Framing</b>  |        |        |
|                   |            | 6-A-i    | Wood, timbers, dimensioned lumber, laminated beams, trusses   | 100    | 100    |
|                   |            | 6-A-ii   | Roof wood frame and board or plywood sheathing                | 75     | 75     |

| Division          | Section    | Assembly | Description  | Family | Senior |
|-------------------|------------|----------|--|--------|--------|
|                   | <b>6-B</b> |          | <b>Exterior Stairs and Railings</b>                  |        |        |
|                   |            | 6-B-i    | Exterior Stairs, wood frame/stringer                 | 30     | 30     |
|                   |            | 6-B-i    | Exterior Stair Tread-wood                            | 15     | 15     |
|                   |            | 6-B-i    | Railings, wood                                       | 20     | 20     |
|                   |            | 6-B-i    | Railings, composite                                  | 50     | 50     |
|                   | <b>6-C</b> |          | <b>Balcony/Porch/Canopy</b>                          |        |        |
|                   |            | 6-C-i    | Wood decking   | 20     | 20     |
|                   |            | 6-C-ii   | Composite decking                                    | 50     | 50     |
|                   |            | 6-C-iii  | Balcony/Porch, wood frame                            | 25     | 25     |
|                   |            | 6-C-iv   | Canopy, Wood   | 40     | 40     |
|                   | <b>6-D</b> |          | <b>Foundation</b>                                    |        |        |
|                   |            | 6-D-i    | Piers, treated timber post/pole                      | 40     | 40     |
|                   | <b>6-E</b> |          | <b>Interior Stairs and Railings</b>                  |        |        |
|                   |            | 6-E-i    | Interior wood Stairs                                 | 50     | 50     |
|                   |            | 6-E-ii   | Stair and loft railings                              | 15     | 25     |
| <b>Division 7</b> |            |          | <b>Thermal &amp; Moisture Protection</b>             |        |        |
|                   | <b>7-A</b> |          | <b>Flashing &amp; Moisture Protection</b>            |        |        |
|                   |            | 7-A-i    | Foundation Waterproofing                             | 40     | 40     |
|                   |            | 7-A-ii   | Caulking and Sealing                                 | 15     | 15     |
|                   |            | 7-A-iii  | Concrete/Masonry Sealants                            | 10     | 10     |
|                   |            | 7-A-iv   | Wood waterproofing and sealants                      | 10     | 10     |
|                   |            | 7-A-v    | Building wraps & moisture resistant barriers         | 50     | 50     |
|                   |            | 7-A-vi   | Paints and stains, exterior                          | 8      | 8      |
|                   | <b>7-B</b> |          | <b>Sloped Roofs</b>                                  |        |        |
|                   |            | 7-B-i    | Asphalt Shingle                                      | 30     | 30     |
|                   |            | 7-B-ii   | Metal  | 50     | 50     |
|                   |            | 7-B-iii  | Slate shingle  | 75     | 75     |
|                   |            | 7-B-iv   | Clay/cementitious barrel tile                        | 60     | 60     |
|                   |            | 7-B-v    | Wood Shingle, Cedar Shakes/Shingles                  | 25     | 25     |
|                   | <b>7-C</b> |          | <b>Low Slope/Flat Roofs</b>                          |        |        |
|                   |            | 7-C-i    | Low slope-Built-up Roof, with gravel finish          | 20     | 20     |
|                   |            | 7-C-ii   | Low slope-Built-up Roof, no mineral or gravel finish | 10     | 10     |
|                   |            | 7-C-iii  | Low slope-Adhered rubber membrane, (EPDM)            | 15     | 15     |
|                   |            | 7-C-iv   | Low slope-Thermoplastic membrane, (TPO, vinyl)       | 15     | 15     |
|                   |            | 7-C-v    | Low slope-Rubberized/elastomeric white/cool roof     | 15     | 15     |
|                   | <b>7-D</b> |          | <b>Roof Drainage, Trim &amp; Accessories</b>         |        |        |
|                   |            | 7-D-i    | Gutters/Downspouts, aluminum                         | 20     | 20     |
|                   |            | 7-D-ii   | Gutters/Downspouts, copper                           | 50     | 50     |
|                   |            | 7-D-iii  | Low slope-roof drains, scuppers                      | 30     | 30     |
|                   |            | 7-D-iv   | Soffits, Wood, Vinyl, Metal                          | 20     | 20     |
|                   |            | 7-D-v    | Fascia, Wood, Vinyl                                  | 20     | 20     |
|                   |            | 7-D-vi   | Roof Hatch   | 30     | 30     |
|                   |            | 7-D-vii  | Service Door   | 30     | 30     |

| Division          | Section    | Assembly | Description   | Family | Senior |
|-------------------|------------|----------|---|--------|--------|
|                   |            | 7-D-viii | Roof Skylight                                       | 30     | 30     |
|                   | <b>7-E</b> |          | <b>Attics &amp; Eaves</b>                           |        |        |
|                   |            | 7-E-i    | Screened gable end or soffit Vents                  | 30     | 30     |
|                   |            | 7-E-ii   | Roof vents, passive                                 | 40     | 40     |
|                   |            | 7-E-iii  | Roof Vents, powered                                 | 20     | 20     |
|                   | <b>7-F</b> |          | <b>Crawl Spaces, Envelope Penetrations</b>          |        |        |
|                   |            | 7-F-i    | Sealed crawl space system                           | 40     | 40     |
|                   |            | 7-F-ii   | Vents, screens, covers                              | 30     | 30     |
|                   |            | 7-F-iii  | Vapor Barrier (VDR) ground or underfloor            | 30     | 30     |
|                   |            | 7-F-iv   | Penetrations, caulking/sealing                      | 15     | 15     |
|                   | <b>7-G</b> |          | <b>Insulation</b>                                   |        |        |
|                   |            | 7-G-i    | Loose fill, fibre glass, cellulose, mineral wool    | 50     | 50     |
|                   |            | 7-G-ii   | Batts, blankets, rolls, fibre glass or mineral wool | 60     | 60     |
|                   |            | 7-G-iii  | Rigid foam board                                    | 60     | 60     |
|                   |            | 7-G-iv   | Sprayed foam  | 60     | 60     |
|                   | <b>7-H</b> |          | <b>Façades, Curtainwall, or Sidewall System</b>     |        |        |
|                   |            | 7-H-i    | Aluminum Siding                                     | 40     | 40     |
|                   |            | 7-H-ii   | Vinyl Siding  | 25     | 25     |
|                   |            | 7-H-iii  | Cement Board Siding                                 | 45     | 45     |
|                   |            | 7-H-iv   | Plywood/Laminated Panels                            | 20     | 20     |
|                   |            | 7-H-v    | Stucco, over wire mesh/lath                         | 50     | 50     |
|                   |            | 7-H-vi   | Metal/Glass Curtain Wall                            | 40     | 40     |
|                   |            | 7-H-vii  | Precast Concrete Panel (tilt-up)                    | 60     | 60     |
|                   |            | 7-H-viii | Brick/block veneer                                  | 60     | 60     |
|                   |            | 7-H-ix   | Stone Veneer  | 50     | 50     |
|                   |            | 7-H-x    | Glass Block   | 50     | 50     |
|                   |            | 7-H-xi   | Cedar/Redwood shakes, clapboard                     | 50     | 50     |
|                   |            | 7-H-xii  | Pine board, clapboard                               | 50     | 50     |
| <b>Division 8</b> |            |          | <b>Openings</b>                                     |        |        |
|                   | <b>8-A</b> |          | <b>Exterior Doors &amp; Entry Systems</b>           |        |        |
|                   |            | 8-A-i    | Unit Entry Door, Exterior, solid wood/metal clad    | 25     | 30     |
|                   |            | 8-A-ii   | Common Exterior Door, aluminum and glass            | 30     | 30     |
|                   |            | 8-A-iii  | Common Exterior Door, solid wood /metal clad        | 25     | 25     |
|                   |            | 8-A-iv   | Storm/Screen Doors                                  | 5      | 10     |
|                   |            | 8-A-v    | Sliding Glass Doors                                 | 25     | 30     |
|                   |            | 8-A-vi   | French or Atrium Doors, wood/metal clad             | 25     | 30     |
|                   |            | 8-A-vii  | Automatic Entry Doors                               | 30     | 30     |
|                   |            | 8-A-viii | Commercial Entry Systems                            | 50     | 50     |
|                   |            | 8-A-ix   | Overhead Door                                       | 30     | 30     |
|                   |            | 8-A-x    | Automatic Opener, overhead door                     | 20     | 20     |
|                   | <b>8-B</b> |          | <b>Windows</b>                                      |        |        |
|                   |            | 8-B-i    | Wood, (dbl, sgl hung, casement, awning, sliders)    | 35     | 45     |
|                   |            | 8-B-ii   | Wood, fixed pane, picture                           | 40     | 45     |



| Division           | Section     | Assembly  | Description  | Family | Senior |
|--------------------|-------------|-----------|--|--------|--------|
|                    |             | 8-B-iii   | Aluminum   | 35     | 40     |
|                    |             | 8-B-iv    | Vinyl  | 30     | 30     |
|                    |             | 8-B-v     | Vinyl/Alum Clad Wood   | 50     | 50     |
|                    |             | 8-B-vi    | Storm/Screen Windows   | 7      | 15     |
|                    | <b>8-C</b>  |           | <b>Interior Doors</b>  |        |        |
|                    |             | 8-C-i     | Interior, hollow core doors  | 20     | 25     |
|                    |             | 8-C-ii    | Interior doors, solid core, wood, metal clad, fire rated                               | 30     | 35     |
|                    |             | 8-C-iii   | Door trim  | 20     | 30     |
|                    |             | 8-C-iv    | Wall trim (base, chair rail, crown moldings)   | 30     | 35     |
|                    |             | 8-C-v     | Passage & lock sets  | 15     | 20     |
|                    |             | 8-C-vi    | Bifold & sliding doors   | 15     | 20     |
| <b>Division 9</b>  |             |           | <b>Finishes</b>  |        |        |
|                    | <b>9-A</b>  |           | <b>Interior finished walls, ceilings, floors - (Common Areas &amp; Dwelling Units)</b> |        |        |
|                    |             | 9-A-i     | Drywall  | 35     | 40     |
|                    |             | 9-A-ii    | Plaster  | 50     | 50     |
|                    |             | 9-A-iii   | Paints, stains, clear finishes, interior   | 15     | 20     |
|                    |             | 9-A-iv    | Wallpapers   | 15     | 20     |
|                    |             | 9-A-v     | Wall tile, ceramic, glass, natural stone   | 35     | 50     |
|                    |             | 9-A-vi    | Floor tile, ceramic, natural stone   | 40     | 50     |
|                    |             | 9-A-vii   | Concrete/Masonry/Terrazo   | 75     | 75     |
|                    |             | 9-A-viii  | Hardwood floor (3/4" strip or parquet)   | 50     | 50     |
|                    |             | 9-A-ix    | Wood floor, laminated/veneered   | 20     | 25     |
|                    |             | 9-A-x     | Resilient tile or sheet floor (vinyl, linoleum)  | 15     | 20     |
|                    |             | 9-A-xi    | Carpet   | 6      | 10     |
|                    |             | 9-A-xii   | Acoustic tile/drop ceiling   | 15     | 20     |
| <b>Division 10</b> |             |           | <b>Specialties</b>   |        |        |
|                    | <b>10-A</b> |           | <b>Mailboxes &amp; Postal Equipment</b>  |        |        |
|                    |             | 10-A-i    | Interior Mail Facility   | 20     | 25     |
|                    | <b>10-B</b> |           | <b>Storage Accessories</b>   |        |        |
|                    |             | 10-B-i    | Closet/storage specialties, shelving   | 20     | 25     |
|                    |             | 10-B-ii   | Mirrors & medicine cabinets  | 20     | 25     |
|                    |             | 10-B-iii  | Bath accessories (towel bars, grab bars, etc)  | 7      | 12     |
| <b>Division 11</b> |             |           | <b>Equipment</b>   |        |        |
|                    | <b>11-A</b> |           | <b>Appliances</b>  |        |        |
|                    |             | 11-A-i    | Refrigerator/freezer   | 15     | 15     |
|                    |             | 11-A-ii   | Range, cook top, wall oven   | 20     | 25     |
|                    |             | 11-A-iii  | Range hood   | 20     | 25     |
|                    |             | 11-A-iv   | Microwave  | 10     | 10     |
|                    |             | 11-A-v    | Disposal (food waste)  | 7      | 10     |
|                    |             | 11-A-vi   | Compactors (interior, residential grade)   | 7      | 10     |
|                    |             | 11-A-vii  | Dishwasher   | 10     | 15     |
|                    |             | 11-A-viii | Clothes washer/dryer   | 10     | 15     |
|                    |             | 11-A-ix   | Ceiling fans   | 15     | 15     |

| Division           | Section     | Assembly  | Description  | Family | Senior |
|--------------------|-------------|-----------|--|--------|--------|
| <b>Division 12</b> |             |           | <b>Furnishings &amp; Casework</b>                        |        |        |
|                    | <b>12-A</b> |           | <b>Windows</b>   |        |        |
|                    |             | 12-A-i    | Window treatments, drapery rods, shades, blinds, etc     | 15     | 25     |
|                    | <b>12-B</b> |           | <b>Amenities/ Common Areas</b>                           |        |        |
|                    |             | 12-B-i    | Indoor recreation and fitness equipment                  | 10     | 15     |
|                    |             | 12-B-ii   | Seating for entertainment centers                        | 15     | 25     |
|                    | <b>12-C</b> |           | <b>Kitchen &amp; Baths</b>                               |        |        |
|                    |             | 12-C-i    | Cabinets & vanities                                      | 20     | 25     |
|                    | <b>12-D</b> |           | <b>Counter Tops</b>                                      |        |        |
|                    |             | 12-D-i    | engineered stone   | 50     | 50     |
|                    |             | 12-D-ii   | solid surface, stainless steel                           | 40     | 50     |
|                    |             | 12-D-iii  | plastic laminates, wood                                  | 15     | 25     |
|                    |             | 12-D-iv   | Vanity tops, cultured marble, molded acrylic, fiberglass | 25     | 35     |
| <b>Division 14</b> |             |           | <b>Conveying Equipment</b>                               |        |        |
|                    | <b>14-A</b> |           | <b>Elevators/ Escalators</b>                             |        |        |
|                    |             | 14-A-i    | Electrical switchgear                                    | 50     | 50     |
|                    |             | 14-A-ii   | Electrical wiring  | 30     | 30     |
|                    |             | 14-A-iii  | Elevator controller, call, dispatch, emergency           | 10     | 20     |
|                    |             | 14-A-iv   | Elevator cab, interior finish                            | 10     | 20     |
|                    |             | 14-A-v    | Elevator cab, frame                                      | 35     | 50     |
|                    |             | 14-A-vi   | Elevator, machinery                                      | 20     | 30     |
|                    |             | 14-A-vii  | Elevator, shaftway doors                                 | 10     | 20     |
|                    |             | 14-A-viii | Elevator, shaftway hoist rails, cables, traveling        | 20     | 25     |
|                    |             | 14-A-ix   | Elevator, shaftway hydraulic piston and leveling         | 20     | 25     |
|                    |             | 14-A-x    | Escalators   | 50     | 50     |
| <b>Division 21</b> |             |           | <b>Fire Suppression</b>                                  |        |        |
|                    | <b>21-A</b> |           | <b>Sprinklers and Standpipes</b>                         |        |        |
|                    |             | 21-A-i    | Building fire suppression sprinklers, standpipes         | 50     | 50     |
|                    |             | 21-A-ii   | Fire pumps   | 20     | 20     |
|                    |             | 21-A-iii  | Fire hose stations                                       | 50     | 50     |
|                    |             | 21-A-iv   | Fire extinguishers                                       | 10     | 15     |
| <b>Division 22</b> |             |           | <b>Plumbing</b>  |        |        |
|                    | <b>22-A</b> |           | <b>Water Supply and Waste Piping</b>                     |        |        |
|                    |             | 22-A-i    | PVC/CPVC pipe, supply and waste                          | 75     | 75     |
|                    |             | 22-A-ii   | Copper/brass hard pipe, supply                           | 75     | 75     |
|                    |             | 22-A-iii  | Copper Tube, supply                                      | 50     | 50     |
|                    |             | 22-A-iv   | Galvanized pipe, supply                                  | 40     | 40     |
|                    |             | 22-A-v    | Cast iron sanitary waste                                 | 75     | 75     |
|                    |             | 22-A-vi   | Domestic Cold Water Pumps                                | 20     | 20     |
|                    |             | 22-A-vii  | Sewage Ejectors  | 50     | 50     |
|                    |             | 22-A-viii | Commercial Sump Pump                                     | 20     | 20     |
|                    |             | 22-A-ix   | Residential Sump Pump                                    | 15     | 15     |
|                    |             | 22-A-x    | Water Softener/Filtration                                | 15     | 15     |

| Division           | Section     | Assembly   | Description   | Family | Senior |
|--------------------|-------------|------------|---|--------|--------|
|                    | <b>22-B</b> |            | <b>Domestic Water Heating</b>                             |        |        |
|                    |             | 22-B-i     | DHW circulating pumps                                     | 15     | 15     |
|                    |             | 22-B-ii    | DHW storage tanks   | 15     | 15     |
|                    |             | 22-B-iii   | Exchanger, in tank or boiler                              | 15     | 15     |
|                    |             | 22-B-iv    | External tankless heater, gas or electric                 | 20     | 20     |
|                    |             | 22-B-v     | Solar hot water   | 20     | 20     |
|                    |             | 22-B-vi    | Residential hot water heater, gas or electric             | 12     | 15     |
|                    |             | 22-B-vi    | Flue, gas water heaters                                   | 35     | 35     |
|                    | <b>22-C</b> |            | <b>Fixtures</b>   |        |        |
|                    |             | 22-C-i     | Faucets & valves  | 15     | 20     |
|                    |             | 22-C-ii    | Bathtubs & sinks: cast iron                               | 75     | 75     |
|                    |             | 22-C-iii   | Bathtubs & sinks: enameled or stainless steel, fiberglass | 40     | 40     |
|                    |             | 22-C-iv    | Bathtubs & sinks: porcelain                               | 50     | 50     |
|                    |             | 22-C-v     | Toilets/bidets/urinals                                    | 40     | 40     |
|                    |             | 22-C-vi    | Flush valves  | 10     | 15     |
|                    |             | 22-C-vii   | Tub/shower units or integrated assemblies                 | 30     | 30     |
| <b>Division 23</b> |             |            | <b>HVAC</b>   |        |        |
|                    | <b>23-A</b> |            | <b>Centralized Heating/Cooling Equipment</b>              |        |        |
|                    |             | 23-A-i     | Boilers, Oil Fired, Sectional                             | 25     | 25     |
|                    |             | 23-A-ii    | Boilers, Gas/Dual Fuel, Sectional                         | 25     | 25     |
|                    |             | 23-A-iii   | Boilers, Gas/Dual Fuel, Low MBH                           | 30     | 30     |
|                    |             | 23-A-iv    | Boilers, Gas/Dual Fuel, High MBH                          | 40     | 40     |
|                    |             | 23-A-v     | Boilers, Gas Fired Atmospheric                            | 25     | 25     |
|                    |             | 23-A-vi    | Boilers, Electric   | 20     | 20     |
|                    |             | 23-A-vii   | Boiler Blowdown and Water Treatment                       | 25     | 25     |
|                    |             | 23-A-viii  | Boiler Room Pipe Insulation                               | 25     | 25     |
|                    |             | 23-A-ix    | Boiler Room Piping  | 50     | 50     |
|                    |             | 23-A-x     | Boiler Room Valves  | 25     | 25     |
|                    |             | 23-A-xi    | Boiler Temperature Controls                               | 15     | 15     |
|                    |             | 23-A-xii   | Heat Exchanger  | 35     | 35     |
|                    |             | 23-A-xiii  | Combustion Air, Duct with Fixed Louvers                   | 30     | 30     |
|                    |             | 23-A-xiv   | Combustion Air, Motor Louvers and Duct                    | 25     | 25     |
|                    |             | 23-A-xv    | Combustion Waste Flue                                     | 40     | 40     |
|                    |             | 23-A-xvi   | Cooling tower   | 25     | 25     |
|                    |             | 23-A-xvii  | Chilling plant  | 20     | 20     |
|                    |             | 23-A-xviii | Steam supply station                                      | 50     | 50     |
|                    |             | 23-A-xix   | Free standing chimney                                     | 50     | 50     |
|                    | <b>23-B</b> |            | <b>Centralized Heat/Air/Fuel Distribution</b>             |        |        |
|                    |             | 23-B-i     | Fuel oil/propane storage tanks                            | 40     | 40     |
|                    |             | 23-B-ii    | Remediate/remove abandoned tanks/fuel lines               | 100    | 100    |
|                    |             | 23-B-iii   | Fuel transfer system                                      | 25     | 25     |
|                    |             | 23-B-iv    | Gas/oil distribution lines                                | 50     | 50     |
|                    |             | 23-B-v     | Gas meter   | 40     | 40     |

| Division           | Section     | Assembly   | Description  | Family | Senior |
|--------------------|-------------|------------|--|--------|--------|
|                    |             | 23-B-vi    | 2 pipe/4 pipe hydronic distribution-above grade                    | 50     | 50     |
|                    |             | 23-B-vii   | 2 pipe/4 pipe hydronic distribution-in ground                      | 25     | 25     |
|                    |             | 23-B-viii  | Hydronic/Water Circulating Pumps                                   | 20     | 20     |
|                    |             | 23-B-ix    | Hydronic/Water Controller  | 20     | 20     |
|                    |             | 23-B-x     | Radiation-steam/hydronic (baseboard or freestanding radiator)      | 50     | 50     |
|                    |             | 23-B-xi    | Fan Coil Unit, Hydronic  | 30     | 30     |
|                    |             | 23-B-xii   | Central exhaust fans/blowers                                       | 20     | 20     |
|                    | <b>23-C</b> |            | <b>Decentralized and Split HVAC Systems (Dwelling/Common Area)</b> |        |        |
|                    |             | 23-C-i     | Electric heat pump, condenser, pad or rooftop                      | 15     | 15     |
|                    |             | 23-C-ii    | Electric AC condenser, pad or rooftop                              | 15     | 15     |
|                    |             | 23-C-iii   | Electric furnace/air handler                                       | 20     | 20     |
|                    |             | 23-C-iv    | Gas furnace/air handler  | 20     | 20     |
|                    |             | 23-C-v     | Hydronic heat/electric AC air handler                              | 25     | 25     |
|                    |             | 23-C-vi    | Hydronic feed electric heat pump/air handler                       | 25     | 25     |
|                    |             | 23-C-vii   | Wall mounted electric/gas heater                                   | 25     | 25     |
|                    |             | 23-C-viii  | Electric baseboard heater  | 30     | 30     |
|                    |             | 23-C-ix    | PTAC Thruwall (packaged terminal air conditioning)                 | 15     | 15     |
|                    |             | 23-C-x     | Window or thru-wall air conditioners                               | 10     | 10     |
|                    |             | 23-C-xi    | Package HVAC roof top  | 15     | 15     |
|                    |             | 23-C-xii   | Air filtration/humidity control devices (humidifiers, HRV's)       | 20     | 20     |
|                    |             | 23-C-xiii  | Duct, rigid sheet metal, insulated if not in conditioned space     | 35     | 35     |
|                    |             | 23-C-xiv   | Duct, flexible, insulated  | 20     | 20     |
|                    |             | 23-C-xv    | Duct, sealing-mastic or UL 181A or 181B tape.                      | 20     | 20     |
|                    |             | 23-C-xvi   | Diffusers, registers   | 20     | 20     |
|                    |             | 23-C-xvii  | Fireplace, masonry & firebrick, masonry chimney                    | 75     | 75     |
|                    |             | 23-C-xviii | Fireplace, factory assembled                                       | 35     | 35     |
|                    |             | 23-C-xix   | Fireplace insert, stove  | 50     | 50     |
|                    |             | 23-C-xx    | Chimneys, metal, and chimney covers                                | 35     | 35     |
|                    | <b>23-D</b> |            | <b>HVAC Controls</b>   |        |        |
|                    |             | 23-D-i     | Dwelling/common area thermostat                                    | 15     | 20     |
|                    |             | 23-D-ii    | Heat sensors   | 15     | 15     |
|                    |             | 23-D-iii   | Outdoor temperature sensor   | 10     | 10     |
|                    | <b>23-E</b> |            | <b>Exhaust and Fans</b>  |        |        |
|                    |             | 23-E-i     | Bath/kitchen vent/exhaust fans                                     | 15     | 15     |
| <b>Division 26</b> |             |            | <b>Electrical (Building)</b>                                       |        |        |
|                    | <b>26-A</b> |            | <b>Electric Service &amp; Metering</b>                             |        |        |
|                    |             | 26-A-i     | Building service panel   | 50     | 50     |
|                    |             | 26-A-i     | Building meter   | 40     | 40     |
|                    |             | 26-A-i     | Tenant meters, meter panel   | 40     | 40     |
|                    | <b>26-B</b> |            | <b>Electrical Distribution</b>                                     |        |        |
|                    |             | 26-B-i     | Tenant electrical panel  | 50     | 50     |
|                    |             | 26-B-ii    | Unit/building wiring   | 50     | 50     |

| Division           | Section     | Assembly  | Description  | Family | Senior |
|--------------------|-------------|-----------|--|--------|--------|
|                    | <b>26-C</b> |           | <b>Electric Lighting &amp; Fixtures</b>                          |        |        |
|                    |             | 26-C-i    | Switches & outlets   | 35     | 35     |
|                    |             | 26-C-ii   | Lighting - exterior entry  | 15     | 20     |
|                    |             | 26-C-iii  | Lighting- interior common space                                  | 25     | 30     |
|                    |             | 26-C-iv   | Lighting - Tenant Spaces   | 20     | 25     |
|                    |             | 26-C-v    | Doorbells, chimes  | 20     | 25     |
| <b>Division 27</b> |             |           | <b>Communications</b>  |        |        |
|                    | <b>27-A</b> |           | <b>Telecommunications Equipment</b>                              |        |        |
|                    |             | 27-A-i    | Satellite dishes/antennae  | 20     | 20     |
|                    |             | 27-A-ii   | Telecom panels & controls  | 20     | 20     |
|                    |             | 27-A-iii  | Telecom cabling & outlets  | 20     | 20     |
|                    | <b>27-B</b> |           | <b>Integrated Audio-Video Systems and Equipment for Theaters</b> |        |        |
|                    |             | 27-B-i    | Theater projection for Entertainment centers                     | 15     | 25     |
| <b>Division 28</b> |             |           | <b>Electronic Safety and Security</b>                            |        |        |
|                    | <b>28-A</b> |           | <b>Alarm, Security &amp; Emergency Systems</b>                   |        |        |
|                    |             | 28-A-i    | Tenant space alarm systems                                       | 10     | 15     |
|                    |             | 28-A-ii   | Residential smoke detectors                                      | 5      | 7      |
|                    |             | 28-A-iii  | Call station   | 10     | 15     |
|                    |             | 28-A-iv   | Emergency/auxiliary generator                                    | 25     | 25     |
|                    |             | 28-A-v    | Emergency/auxiliary fuel storage tank                            | 25     | 25     |
|                    |             | 28-A-vi   | Emergency lights, illuminated signs                              | 5      | 10     |
|                    |             | 28-A-vii  | Smoke and fire detection system, central panel                   | 15     | 15     |
|                    |             | 28-A-viii | Buzzer/intercom, central panel                                   | 20     | 20     |
|                    |             | 28-A-ix   | Tenant buzzer / intercom /secured entry system                   | 20     | 20     |
|                    | <b>28-B</b> |           | <b>Other Systems</b>   |        |        |
|                    |             | 27-B-i    | Pneumatic Lines and Controls                                     | 30     | 30     |
|                    |             | 27-B-ii   | Auto-securing doors/entries/lock down                            | 30     | 30     |
| <b>Division 31</b> |             |           | <b>Earthwork</b>   |        |        |
|                    | <b>31-A</b> |           | <b>Storm Water Drainage</b>                                      |        |        |
|                    |             | 31-A-i    | Catch basins, inlets, culverts                                   | 50     | 50     |
|                    |             | 31-A-ii   | Marine or stormwater bulkhead                                    | 35     | 35     |
|                    |             | 31-A-iii  | Earthwork, swales, drainways, erosion controls                   | 50     | 50     |
|                    |             | 31-A-iv   | Storm drain lines  | 50     | 50     |
|                    |             | 31-A-v    | Stormwater management ponds                                      | 50     | 50     |
|                    |             | 31-A-vi   | Fountains, pond aerators   | 15     | 15     |
|                    | <b>31-B</b> |           | <b>Access and Egress</b>   |        |        |
|                    |             | 31-B-i    | Security gate - lift arm   | 10     | 10     |
|                    |             | 31-B-ii   | Security gate - rolling gate                                     | 15     | 15     |
|                    | <b>31-C</b> |           | <b>Site Utilities-Water</b>                                      |        |        |
|                    |             | 31-C-i    | Water Mains/Valves   | 50     | 50     |
|                    |             | 31-C-ii   | Water Tower  | 50     | 50     |
|                    |             | 31-C-iii  | Irrigation System  | 25     | 25     |
|                    | <b>31-D</b> |           | <b>Radon Systems</b>   |        |        |

| Division           | Section     | Assembly  | Description   | Family | Senior |
|--------------------|-------------|-----------|---|--------|--------|
|                    |             | 31-D-i    | Foundation suction, drainage, moisture or radon gas controls/alarms | 10     | 10     |
|                    |             | 31-D-ii   | Crawl space, (de)pressurization, fans, pumps, radon gas alarms      | 10     | 10     |
| <b>Division 32</b> |             |           | <b>Exterior Improvements</b>  |        |        |
|                    | <b>32-A</b> |           | <b>Paving, Curbing and Parking</b>                                  |        |        |
|                    |             | 32-A-i    | Asphalt Pavement  | 25     | 25     |
|                    |             | 32-A-ii   | Asphalt Seal Coat   | 5      | 5      |
|                    |             | 32-A-iii  | Concrete Pavement   | 50     | 50     |
|                    |             | 32-A-iv   | Curbing, Asphalt  | 25     | 25     |
|                    |             | 32-A-v    | Curbing, Concrete   | 50     | 50     |
|                    |             | 32-A-vi   | Parking, Gravel Surfaced  | 15     | 15     |
|                    |             | 32-A-vii  | Permeable Paving Systems (brick, concrete pavers)                   | 30     | 30     |
|                    |             | 32-A-viii | Striping and Marking  | 15     | 15     |
|                    |             | 32-A-ix   | Signage, Roadway / Parking  | 15     | 15     |
|                    |             | 32-A-x    | Carports, wood frame  | 30     | 30     |
|                    |             | 32-A-xi   | Carports, metal frame   | 40     | 40     |
|                    | <b>32-B</b> |           | <b>Flatwork (walks, plazas, terraces, patios)</b>                   |        |        |
|                    |             | 32-B-i    | Asphalt   | 25     | 25     |
|                    |             | 32-B-ii   | Concrete  | 50     | 50     |
|                    |             | 32-B-iii  | Gravel  | 15     | 15     |
|                    |             | 32-B-iv   | Permeable Paving (brick, concrete pavers)                           | 30     | 30     |
|                    | <b>32-C</b> |           | <b>Landscaping and Appurtenances</b>                                |        |        |
|                    |             | 32-C-i    | Fencing, chain-link   | 40     | 40     |
|                    |             | 32-C-ii   | Fencing, wood picket  | 15     | 20     |
|                    |             | 32-C-iii  | Fencing, wood board (=>1"x 6")                                      | 20     | 25     |
|                    |             | 32-C-iv   | Fencing, wrought Iron   | 60     | 60     |
|                    |             | 32-C-v    | Fencing, steel or aluminum  | 20     | 25     |
|                    |             | 32-C-vi   | Fencing, concrete Masonry unit (CMU)                                | 30     | 30     |
|                    |             | 32-C-vii  | Fencing, PVC  | 15     | 20     |
|                    |             | 32-C-viii | Signage, Entrance/Monument  | 25     | 25     |
|                    |             | 32-C-ix   | Mail Kiosk  | 15     | 20     |
|                    |             | 32-C-x    | Retaining Walls, heavy block (50-80 lb)                             | 60     | 60     |
|                    |             | 32-C-xi   | Retaining Walls, re-enforced concrete masonry unit (CMU)            | 40     | 40     |
|                    |             | 32-C-xii  | Retaining Walls, treated timber                                     | 25     | 25     |
|                    |             | 32-C-xiii | Storage sheds   | 30     | 30     |
|                    | <b>32-D</b> |           | <b>Recreational Facilities</b>                                      |        |        |
|                    |             | 32-D-i    | Sport Court- asphalt  | 25     | 25     |
|                    |             | 32-D-ii   | Sport Court- synthetic  | 15     | 20     |
|                    |             | 32-D-iii  | Sport Court-hardwood  | 50     | 50     |
|                    |             | 32-D-iv   | Tot Lot (playground equipment)                                      | 10     | 15     |
|                    |             | 32-D-v    | Tot Lot- loose ground cover   | 3      | 5      |
|                    |             | 32-D-vi   | Pool Deck   | 15     | 15     |
|                    |             | 32-D-vii  | Pool/Spa Plastic Liner  | 8      | 8      |
|                    |             | 32-D-viii | Pool/Spa pumps and equipment  | 10     | 10     |



| Division           | Section     | Assembly  | Description  | Family | Senior |
|--------------------|-------------|-----------|--|--------|--------|
|                    |             | 32-D-ix   | Decks-treated lumber                                     | 20     | 20     |
|                    |             | 32-D-x    | Decks-composite  | 50     | 50     |
| <b>Division 33</b> |             |           | <b>Utilities/ Electrical</b>                             |        |        |
|                    | <b>33-A</b> |           | <b>Site Utilities-Electric</b>                           |        |        |
|                    |             | 33-A-i    | Electric distribution center                             | 40     | 40     |
|                    |             | 33-A-ii   | Electric distribution lines                              | 40     | 40     |
|                    |             | 33-A-iii  | Transformer  | 30     | 30     |
|                    |             | 33-A-iv   | Emergency Generator                                      | 25     | 25     |
|                    |             | 33-A-v    | Solar Photovoltaic panels                                | 15     | 15     |
|                    |             | 33-A-vi   | Photovoltaic Inverters                                   | 10     | 10     |
|                    |             | 33-A-vii  | Pole mounted lights                                      | 25     | 25     |
|                    |             | 33-A-viii | Ground lighting  | 10     | 10     |
|                    |             | 33-A-ix   | Building Mounted Lighting                                | 10     | 10     |
|                    |             | 33-A-x    | Building Mounted High Intensity Discharge (HID) Lighting | 10     | 20     |
|                    | <b>33-B</b> |           | <b>Site Utilities-Gas</b>                                |        |        |
|                    |             | 33-B-i    | Gas Main   | 40     | 40     |
|                    |             | 33-B-ii   | Gas Supply Lines   | 40     | 40     |
|                    |             | 33-B-iii  | Site Propane, Storage & Distribution                     | 35     | 35     |
|                    |             | 33-B-iv   | Gas lights/fire pits                                     | 20     | 20     |
|                    | <b>33-C</b> |           | <b>Site Utilities-Sewer</b>                              |        |        |
|                    |             | 33-C-i    | Sanitary Sewer lines                                     | 50     | 50     |
|                    |             | 33-C-ii   | Sanitary waste treatment system                          | 40     | 40     |
|                    |             | 33-C-iii  | Lift Station   | 50     | 50     |
|                    | <b>33-D</b> |           | <b>Site Utilities-Trash</b>                              |        |        |
|                    |             | 33-D-i    | Dumpsters  | 15     | 15     |
|                    |             | 33-D-ii   | Compactors (exterior, commercial grade)                  | 20     | 20     |
|                    |             | 33-D-iii  | Recycling containers/equipment                           | 15     | 15     |
|                    |             | 33-D-iv   | Composting, organic recycling equipment                  | 10     | 10     |