



UPLIFT (Utilizing Progressive Lending Investments to Finance Transformation) Design and Construction Standards

Context

Affordable housing financed under the Maryland Department of Housing and Community Development (DHCD) Community Development Administration's (CDA) UPLIFT Program involves the use of public resources and therefore requires adherence to standards of safety, accountability, quality, cost-effectiveness, and the execution of all associated project requirements. The following illustrates at a general level the standards that UPLIFT projects will be required to meet for project administration, design, construction, maintenance, marketing, and aesthetics and will guide the Department's evaluation of the specific elements of any project.

Most of the following will be regarded as minimal or threshold requirements. In some programs, however, additional evaluation points are given to encourage quality, performance, or durability above even these very high standards. There is therefore also a section identifying what the hurdle levels are for a project to receive points.

Design and Construction Threshold Criteria

Safety

There is no higher priority on any project than the safety of workers, residents, vendors, third-party consultants, visitors, and neighbors. Each project will have a safety plan approved by the Department. Sites are to be maintained in stable, clean, and orderly condition.

- Sanitary Facilities: Workers will have access to satisfactory sanitary facilities.
- A safety plan must be implemented and discussed during all progress meetings and site walks.
- Proper PPE required at all times on-site.

Energy and Environmental Requirements

Building Standards

Projects will meet one of the following standards for Energy and Environmental construction:

Standards Entity	Rating Components	Website
US EPA	Energy Star, WaterSense, Indoor Airplus	https://www.energystar.gov/sites/default/files/National%20Program%20Requirements%20Version%203.1_Rev%2011.pdf
Enterprise Green Communities	Current Enterprise Green Communities Criteria	www.enterprisecommunity.org/green
U.S. Green Building Council (USGBC)	Current LEED version as appropriate to project type.	www.usgbc.org https://www.ngbs.com/the-ngbs-green-promise
Southface	Current Earthcraft version appropriate to, as updated	www.southface.org

Related Energy and Environmental Requirements

- Carpets/Floor Coverings: must meet the Carpet and Rug Institute's Green Label Plus Certification standards.
- Mold and mildew: Eliminate any existing and conducive conditions.
- Radon: EPA Radon Zone 1: Install reduction system
- Lead: Follow MDE Requirements:
 - <https://www.epa.gov/lead/real-estate-disclosures-about-potential-lead-hazards#homebuyers>.

- Habitat Protection: Protect or provide 50-year easement 3X area offsets
- Toilets: 1.28 gals/flush; shower heads, bath & kitchen faucets 2.0 Gals/Min (GPM) or less.
- Waste/Recycling: Design for household recycling. Highlight in turnover materials.
- Flooding: FEMA Flood Zone Area building is not permitted, except on a waiver basis.
- Chlorofluorocarbons (CFCs): are not permitted.
- Paints and Surface Treatments: Non-toxic and no (VOC) paint, primer, sealers, and adhesives

Construction Categories

The Department classifies construction in four types:

1. New Construction: which includes gut renovation and adapted reuse projects: Structural elements are essentially replaced or created and new systems are installed.
2. Substantial Rehabilitation: Structural Elements largely remain and two or more systems are replaced.
3. Moderate Renovation: Structural Elements essentially remain and no more than a single System is replaced.
4. Modest Renovation: Neither Structural Elements nor Systems are replaced. Appliances are replaced, surfaces refreshed.

Accessibility

- Sales offices, common areas, and model units are to meet the latest USBC accessibility requirements. 25% of units incorporate universal design features.

Standards for Overall Administration and Management

- Owner is responsible for securing all necessary permits (building, fire, etc.).
- Bi-monthly progress meetings (one virtual and one on-site, for example) are required unless otherwise agreed.
- The General Contractor/Builder will hold a pre-installation meeting with architect and manufacturer prior to significant installations. Manufacturer's observation reports to include documentation of meeting.
- Store materials to meet manufacturers' requirements in a safe, secure location.
- Manufacturer's representative to review the final installation to confirm all requirements are met prior to installation of exterior cladding. Manufacturer's observation reports documenting installation acceptance is required and must be maintained on site.
- Owner/Developer will offer the homeowner a "User Manual" outlining use, warranty, and operating instructions for all systems in the home.

Associate Project Requirements

- Codes: All projects must demonstrate compliance with applicable State and local building codes.
- Depending on funding or location, projects may have M/WBE or targeted categorical goals for subcontracting, local hiring, & wage rates.
- Projects required to comply with historic standards will accommodate those standards in their design and specifications.
- Communications: CDA expects timely communication to designated staff regarding any conditions actually or potentially affecting lives, health, or safety of site workers, visitors, or neighbors or the ability of the project to succeed.
- Verifications: The Architect of Record or other 3rd parties accepted by CDA. Only written modifications or changes with CDA to the project are accepted. CDA must pre-approve modifications or changes.

- Departmental Signage: Sites shall have signage as approved by CDA. Approved CDA signage shall be displayed in a conspicuous area of the site.

Scopes of Work and Standards

- Due diligence will shape design, scopes of work, budgets, and schedules. Projects will identify all relevant site characteristics including hazardous materials/conditions such as asbestos, lead paint, radon, mold, and contaminated soils. Address or abate all hazardous materials per applicable regulations.
- Generally, all installation of materials, equipment, products, and building systems will meet all manufacturers' requirements, specifications, and recommendations. All acceptable work will be rated by CDA as workmanlike or superior.
- Renovations: When pre-existing elements are retained, they will be made to appear and function as nearly new and can be expected to have a useful life approximately comparable to a new installation.

Exterior

Site/Setting

- Any new construction around existing foundations shall be graded to allow water to drain away from the building.
- New construction sites will provide a firm, stable, water-shedding, accessible basis for the housing resting upon it.
- New development should consider the use of impervious surfaces for storm water management as applicable.
- New landscaping should be compatible with the neighborhood and landscape elements should be designed to assist with storm water management. Plantings should be climate zone appropriate.
- Landscaping: Use at least 50% native or regionally adapted plantings. Protect trees and root zones during construction. All planting and sods will be done at seasonally appropriate times with adequate watering and care.
- All unpaved areas should be landscaped and planted. Low maintenance native plants and trees shall be used.
- Site lighting should be adequate – one-foot candle is the standard for lighting. Each unit should have external lighting controlled by an inside switch. Use of dark-sky lighting with a motion sensor is highly recommended.
- Driveways, Sidewalks, Other Flatwork, and Masonry will have sufficient subgrade, subbase, base, and surface material. Repair or replace all damaged asphalt.
- Identify areas that require grading to drain water away from buildings and areas where adjoining grades are higher than finished floor of buildings

Building Shell

- Exterior elements and design will lift up and architecturally relate to the surrounding community.
- Structure will efficiently shed water and wind.
- Provide roofs/overhangs over exterior entrance doors to all units and buildings that are accessed by residents or visitors.
- Crawl spaces will be conditioned.
- All doors and windows, as well as their openings, will contribute to the energy efficiency of the building's envelope.
- All buildings shall be equipped with a seamless gutter and downspout system. Downspouts should discharge underground into a stormwater system where feasible.
- Concrete Under-Slab Preparation: Adequate compaction and concrete thickness are required to ensure the structural integrity of the building according to industry standards.

- All exterior or below slab penetrations shall be sealed with polyurethane (or exterior grade) caulk. All sealants should consist of no or low VOC's
- Roof shingles shall offer a minimum 30-year warranty. Flat roofs shall offer a minimum 20-year warranty.
- All panel type siding to be installed over vertical furring to allow adequate drainage and ventilation, or provide siding product with integrated vented rain screen.
- All exterior trim should be no or low-maintenance material.
- A waterproof membrane shall be applied to the foundation wall per applicable code. Use additional drainage systems such as French drains or drain tiles to ensure proper drainage around foundation walls.

Interior

Spaces - Kitchens, Living, Dining, Bedrooms, and Storage

- Designs will emphasize open floor plans optimizing functionality and flexibility.
- Floors will be durable and attractive. Repairs, including previous repairs, are to match the adjacent surface and the unit's intended finish.
- Whenever repairing or replacing damaged, stained, or mismatched flooring, all flooring must match in color and design. All rooms must have finished floor and base.
- Finished flooring shall continue under refrigerators, dishwashers, and any movable base cabinets or islands. Additionally, all LVT flooring in kitchens, bathrooms, utility closets must be waterproof and offer at least a 15-year warranty.
- In areas where tile is to be installed, non-slip floor tile shall be used.
- Units will have adequate storage
- In bathrooms, the number, size, as well as quality of the cabinets, fixtures, electrical outlets, and hardware will offer functionality, durability, and value.
- Mounts will use concealed solid dimensional wood blocking (2x material).
- Provide a pass-through opening with counter space when kitchen and dining/living areas are separated by a wall.
- In kitchens the number, size, as well as quality of the cabinets, appliances, electrical outlets, fixtures, and hardware will offer functionality, durability, and value.
- Kitchen wall cabinets are to be securely fastened to blocking with a minimum of four washer head cabinet screws; two in each upper and lower nailing strip for each wall cabinet.
- Plastic laminate countertops are to be post formed or have back splashes that are factory attached to the countertop and sealed and a side splash is to be installed where countertops abut walls.
- Nail pops and settling drywall must be re-screwed to framing.
- All appliances shall be Energy Star Rated.
- All interior and exterior painted surfaces shall be primed with 1 (one) coat primer and 2 (two) coats of paint.
- All interior doors should be undercut a minimum of $\frac{1}{2}$ " to allow for adequate air flow.
- Mold & Moisture Resistant drywall should be used behind sinks, tubs, showers, etc.
- Smoke detectors and carbon monoxide detectors must be hard wired and located per code for all new construction and rehabilitation projects.
- All units must have a proper sub-floor to achieve a flat, smooth, level floor to accept finishes.

Systems

HVAC\Electrical\Plumbing

- All subcontracts to include appropriate warranties.
- Indoor air quality will be ensured by using air supply diffusers located near windows in living rooms, dens and bedrooms.
- Kitchens are to have a minimum of one light fixture 4 feet long with either LED or two 32-watt fluorescent bulbs, or lighting fixture(s) that provide a minimum illumination of 30-foot candles

distributed across all countertops. Pre-wire cable TV and internet outlets will be provided for all bedrooms, living rooms, family rooms, and dens, providing at least one landline telephone outlet in each unit. All wiring for the interior and exterior of the building is to be concealed within the walls. All units must facilitate adequate connectivity to internet and broadband access.

- All existing sanitary lines to be scoped to ensure the lines are in good working order.
- All water heater tanks must be placed in an overflow pan piped to the exterior of the building.
- Government standards for SEER rating should be followed when installing HVAC equipment.
- Use of cross-linked polyethylene (PEX) for plumbing applications is encouraged (unless otherwise prohibited by code).
- All duct seams must be sealed. Ductwork in the attic must be insulated.
- Electrical panels must be properly sized for power demand. Leave spare breakers for future demand.

General Practices/Miscellaneous Items

- New air filters must be installed after construction is complete.
- A professional clean must be completed before turnover.
- Floor protection/RAM board must be used once finished flooring is installed.
- Cover ductwork once installed to avoid dust and debris from entering air ducts.
- An air test and balance should be performed prior to turnover to ensure adequate air flow. Blower door tests as required by code.
- Vacant units after construction must be conditioned to inhibit mold growth and should be kept at a minimal temperature to ensure pipes do not freeze.
- Properties should have an appropriate security system.
- Site security during construction should be considered (barricades, fencing, cameras, security guard, etc.).

Design and Construction Scoring Criteria

Design Quality Standards: Maximum 20 points

DHCD will award points for features that significantly enhance long-term durability, life-style functionality, and surrounding property values. Details about point allocations are provided in the application.

Exterior Impact, Functionality, & Durability - Up to 12 points

- The building architecture, structure, and mass have an evident positive impact on the overall quality of the existing neighborhood's appearance adding transformational interest. {4 points}
- Relevant features can include architectural accessories such as decorative door surrounds, larger window trim, corner eave, cornice and column details, or other special features. {4 points}
- Trees, parking, fencing, and storage are designed and located to enhance the visual appeal and functionality of the project. {4 points}

Interior Functionality & Durability - Up to 16 points

- A den/mini office of at least 35 square feet with an electrical outlet is provided to allow one household member to periodically work from home. {4 points}
- Storage space exceeds the minimum of a four (4) square foot of closets per person in each bedroom as well as an entry coat closet, linen closet, utility closet, and additional storage for storing seasonal or bulky items. Closets intended for appliances (i.e. washer/dryer, HVAC) are not counted as storage space. {4 points}
- A half bath is provided on the living/dining/kitchen level in layouts with more than one (1) story, and the bath is visitable. For single-story units, at least one (1) bath is visitable. {4 points}
- Ceilings are 10' or greater in height. {4 points}