



Build Better Program

Durability and Quality Assurance

durability ('dʊrə'bilədē) *adj.* :

The ability of a material, product, or building to maintain its intended function for its intended life expectancy with intended levels of maintenance in intended conditions of use.

- National Association of Home Builders

Purpose: To promote durability and high performance of the building enclosure and its components and systems through appropriate design, materials selection, and construction practices. The details and specifications shall be submitted in the drawings, details or in packet form and shall address the applicable items listed below. (As a reminder, standard building code requirements that help improve durability have also been included.)

Exterior Water

Build Better Program Requirements:

- Keep all building materials stored on-site dry

FOUNDATIONS:

Build Better Program Requirements:

- Install a continuous footing drain with stone, covered with filter fabric, drained to daylight or if necessary to drain to the interior with the use a sealed sump pump system, where applicable.
- Damp-proof or water-proof exterior surface of below grade walls.

Standard Building code requirements:

- *Provide drainage away from walls and foundations*
- *Seal all plumbing, electrical, and other penetrations of walls and floors, and seal joints*
- *Provide a surface water management system (final grade tamped & sloped away from foundation)*
- *Slope garage floor toward main vehicle entryway or to drain*
- *Install vapor retarder (poly or rigid insulation) directly under slab of conditioned spaces.*
- *Damp-proof the exterior of below grade foundation for basements only.*

WALLS:

Build Better Program Requirements:

- Install drainage system (e.g. flashing or equivalent) at bottom of all wall cladding
- Install continuous drainage plane behind exterior wall cladding fully sealed at all penetrations
- Install all deck ledger boards attached to homes without disrupting drainage plane
- Raise paper covered gypsum board 1/2" above concrete slab
- Flashing on all rough openings effectively, including membrane flashing on bottom of all rough openings for windows and doors using adhesives compatible with drainage plane materials and window and door head casing flashing.
- Install materials with proper detailing to control degradation from moisture, including wood >8" above soil (building code requires 6"), roof/wall flashing with siding cut 2" above roofing, and minimum 10" overhang size at eaves with a sloped roof.

Standard Building Code Requirements:

- *Scope of Work: Window Installation*
- *Fully flash all window and door openings*

- *Provide drainage away from windows and walls*

ROOFS:

Build Better Program Requirements:

- Install ice flashing over sheathing at eaves.
- Step flashing at all roof/wall intersections & terminated with "kickout" flashing.
- Install bituminous membrane on the entire roof system, including on all eaves, valleys, & penetrations.

Standard Building Code Requirements:

- *Install at least attic/roof-slope insulation of R-30, extending over outside of exterior walls.*
- *Install airtight recessed light fixtures in insulated flat ceilings and in insulated cathedral ceilings.*
- *Install metal drip edge at all exposed roof decking*
- *Install bituminous membrane at all eaves, valleys, & penetrations*

Wet Rooms (Interior Water)

Build Better Program Requirements:

- Install drains and drain pans to capture leaks under water heaters or use tankless water heaters
- Design and install washer and water heater drain pans
- Use highly durable materials in wet areas
- Install water resistant flooring, not carpet, in kitchens, bathrooms, spa areas, laundry rooms, or within 3' of exterior door.

Standard Building Code Requirements:

- *Use nonpaper-faced backer board on walls around tubs, showers, and spa areas.*

Air Infiltration

Standard Building Code Requirements:

- *Scope of Work: Air Sealing*
- *Scope of Work: Insulation Installation*
- *Install IC Airtight rated recessed lights in insulated ceilings*
- *Complete air barrier between attic and conditioned space & seal all penetrations.*
- *Air seal ventilation ductwork.*

Interstitial Condensation

Build Better Program Requirements:

- Avoid plumbing in exterior walls.

Standard Building Code Requirements:

- *Vent clothes dryers to the outdoors.*
- *Insulate all hot water pipes.*

Heat Loss

Build Better Program Requirements:

- Install insulation wind baffles at attic eave bays
- Install minimum R-10 continuous insulation under slab and minimum R-5 slab edge insulation break at foundation wall intersection and R-10 slab edge insulation outward of any wall, whenever carpet is installed on slab-on-grade or on concrete basement floor,
- Insulate all ventilation exhaust ductwork (minimum R-8) outside of the insulated envelope.

Standard Building Code Requirements:

- *Insulate exterior walls per IECC.*
- *Create either a conditioned crawl space by insulating the crawlspace walls and installing a complete and continuous sealed vapor retarder on the crawlspace floor, which is sealed to the walls or an unconditioned crawl space by insulating the floor and sealing all floor penetrations.*

Ultraviolet Radiation

Build Better Program Requirements:

- Install materials with proper detailing to control degradation from sun, including minimum 10" overhang size at eaves with a sloped roof.

Other

Build Better Program Requirements:

- Purchase a roof with a minimum 25-year expected lifetime warranty.
- Define "proper refrigerant charge" to be within 10% of manufacturer recommendations.
- Mechanical equipment must be accessible for service, including AC condensate drain pan and trap.