

Attachment F: Sustainable Design/Energy Efficiency/Universal Design

Sustainable Design:

Please provide a letter from a design team member (e.g. the architect, engineer, green building consultant, or other design team member) demonstrating the application of individual features from this category to be incorporated into the project. If possible, please identify the product(s) being used to meet the characteristics of the various development features in this category. Please provide adequate documentation to demonstrate efforts to minimize the development's impact on the site and the use/reuse/recycling/reduction of building materials. The letter must be signed with a handwritten signature, on letterhead/stationary from the signatory, and dated within six months of the opening of the BHRI funding round.

*** Documentation that is difficult for the Administrative Agent or the Housing Resources Commission to interpret or does not clearly demonstrate eligibility under this category may be rejected. ***

Some examples of sustainable design elements may include but are not limited to:

- Construction waste recycling of at least 25% of total construction and demolition material from the project. (Please describe what percentage of recycling will be achieved during construction/development.)
- Use of recycled-content building materials that are composed of at least 25% post-consumer or post-industrial material. (Please describe what types of recycled building materials will be used and what percentage of the overall development will use recycled building materials.)
- Use of regional building materials that were extracted, processed, and manufactured within 500 miles of the project for a minimum of 25%, based on cost, of the building materials' value. (Please describe what types and how much of regional building materials will be used.)
- Surface storm water management techniques such as, but not limited to, reducing impervious surfaces, retaining, or treating storm water for harvesting/use on site or recharging the groundwater, or improving site grading and drainage.
- Installation of roofing to reduce heat island effect. May include Energy Star compliant roofing (cool or green).
- Installation of paving to reduce heat island effect.
- Incorporate passive solar design, orientation, and shading that maximizes the energy efficiency and thermal performance of the project.
- Use of indigenous, non-invasive plants in lieu of grass and/or the preservation of planting of deciduous trees along the south side of buildings to provide shade.
- Disaster prevention and mitigation development activities to reduce the risk of damage or loss. (Please describe the activity, the potential disaster, and how this will reduce the initiative's risk.)
- Other (please describe)

Energy Efficiency:

Please provide a letter from a design team member (e.g. the architect, engineer, green building consultant, or other design team member) demonstrating the application of individual features from this category to be incorporated into the project. If possible, please identify the product(s) being used to meet the characteristics of the various development features in this category. Please provide adequate documentation to demonstrate efforts to meet the characteristics of the various operational features (efficient operations in terms of energy and water use and indoor air quality). The letter must be signed with a handwritten signature, on letterhead/stationary from the signatory, and dated within six months of the opening of the BHRI funding round.

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Some examples of sustainable design elements may include but are not limited to:

- Large R-value insulation (such as walls, roof, or foundation). (Please identify the insulation to be used and explain why these have been chosen e.g. expected energy savings and/or exceeds building codes.)
- Electricity-generating renewable energy features e.g. photovoltaic panels, co-generation, wind turbines, or other technology.
- Water-conserving fixtures or features (such as, but not limited to, toilets 1.1 gpf, showerheads 1.5 gpm, kitchen faucets 1.5 gpm, or bathroom faucets 1.0 gpm).
- On demand (tankless) water heaters or solar hot water heaters.
- High-efficiency heat pumps with efficiencies greater than or equal to 87%, furnaces with efficiencies greater than or equal to 90%, or boilers with efficiencies greater than or equal to 95%, including but not limited to geo-thermal systems.
- Ventilation-installation of ventilation system adequate to provide fresh air. (Please describe the ventilation system capable of providing adequate fresh air. This may include continuous or whole house ventilation as well as Energy Star-labeled kitchen and bathroom fans.)
- Energy-efficient low-E argon windows or other energy-efficient or Energy Star-qualified windows.
- Energy Star-qualified appliances and Energy Star-qualified lighting or fixtures. Can be fulfilled with other equivalent high-performance appliances and lighting fixtures (may include interior, exterior, and/or common areas).
- Installation of individual or sub-metered electric meters and/or water meters for all dwelling units.
- Appropriately size HVAC equipment for project design and locate HVAC equipment and distribution system within the building envelope in order to reduce thermal distribution losses.
- Commissioning the building's energy-related systems to ensure successful installation, operation, and performance. Systems may include but are not limited to heating and air conditioning, ventilation, lighting, hot water, or any renewable energy system. (Please describe the commissioning plan and the parties identified as the commissioning agent)
- Operations or maintenance-building maintenance manual or other educational materials for residents, owners, or property management.
- Other (please describe)

Universal Design:

Please provide a letter from a design team member (e.g. the architect, engineer, green building consultant, or other design team member) demonstrating the application of individual features from this category to be incorporated into the project. If possible, please identify the product(s) being used to meet the characteristics of the (7) seven principals of universal design, which are:

- 1) Equitable Use - The design is useful and marketable to people with diverse abilities.
 - 2) Flexibility in Use - The design accommodates a wide range of individual preferences and abilities.
 - 3) Simple and Intuitive Use - Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.
 - 4) Perceptible Information - The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
 - 5) Tolerance for Error - The design minimizes hazards and the adverse consequences of accidental or unintended actions.
 - 6) Low Physical Effort - The design can be used efficiently and comfortably and with a minimum of fatigue.
 - 7) Size and Space for Approach and Use - Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.
 - 8) Other (Specify): _____
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Please provide adequate documentation to demonstrate efforts to incorporate principals. The letter must be signed with a handwritten signature, on letterhead/stationary from the signatory, and dated within six months of the opening of the BHRI funding round.

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Some examples of universal design elements may include but are not limited to:

- Handrails – installed on both sides of common hallways at all wall sections 4’0” or more in length uninterrupted by door or window opening, meeting accessibility requirements.
- Automatic door openers – provision of automatic door openers at main assessable entrances to all main buildings, including entrances from accessible parking areas, meeting accessibility requirements.
- Accessible signage – provision of accessible signage for all common rooms and dwelling unit entries with visual characteristics and Braille characteristics. Whenever possible, unit entry signage should be mounted no more than 60” above the floor to the top of the sign and located on the wall adjacent to the latch side of the door. Accessible signage applies to all dwelling unit entries including units accessed by an exterior entrance.
- Accessible public bathrooms – provision of accessible public bathroom adjacent to public gathering area. This common area toilet shall have clearances that comply with accessibility requirement.
- Circular or T-shape turning space in kitchen and accessible level floor bathrooms – meeting accessibility requirements.
- Accessible sinks/vanities – meeting accessibility requirements.
- Accessible toilets – meeting accessibility requirements.
- Standard roll-in type shower compartment in accessible level floor bathrooms – meeting accessibility requirements.

- Adequate clearance on closets doors – meeting accessibility requirements.
- Adequate passage through all interior doors – meeting accessibility requirements.
- Appropriate siting of garbage disposal switches, range hood controls and electrical receptacles – meeting accessibility requirements.
- Visitable units – provides accessible route from parking area to dwelling units
- Low profile thresholds.
- Provision of reinforcement for the future installation of grab bars at toilets, bathtubs, and shower compartments.
- Permanent lining on bathroom/shower compartments with non-skid surface or pattern covering.