New Jersey Housing and Mortgage Finance Agency

Special Needs Application

2018 Best Methods

Design Questionnaire

As developed by the Technical Services and Supportive Housing Divisions

April 2018

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Introduction

As a long term partner in every project it finances, the Agency has a vested interest in buildings that are high quality, energy and resource efficient, appropriate for the community, and designed with the end user's special needs in mind. To this end, the Agency has developed this Best Methods Design Questionnaire. The Questionnaire will walk the applicant and their design team through a series of design issues that must be considered and addressed in order for the project to receive funding. All Special Needs Housing applicants must review the Questionnaire as part of the application process and complete it prior to commitment. PLEASE COMPLETE AS EARLY AS POSSIBLE IN THE DESIGN & APPLICATION PROCESS.

This Questionnaire has two primary purposes:

- To encourage the applicant to review their project's design considerations in a thoughtful, relevant way.
- To provide a basis for Plan and Specification review by Technical Services and a starting point for design dialogue with the applicant.

Contents

The Best Methods Questionnaire has three guiding principles that have been synthesized into a holistic approach to design. These guiding principles are as follows:

I. User Needs – Reviewing the special needs of the residents and the implications for the physical design of the housing to support recovery, wellness and community integration. The goal of these design features is to assist residents to function at the peak of their abilities; reduce environmental stressors; remove physical barriers; create flexible, universally designed spaces.

II. Sustainability – Examining Green Building considerations including energy efficiency, durability, operations, maintenance, resource conservation, and indoor air quality. The goal is to create a healthy environment while lowering operating costs.

III. Design Excellence – Reviewing key attributes of a well-designed housing project including building location and layout, shape, appearance, open space, landscaping, and parking. The goal of these features is to create a project that meets the needs of the tenants while integrating the built structure into the neighborhood fabric, thereby creating an asset in the community.

Completing the Questionnaire

All applicants seeking Special Needs financing must complete this questionnaire.

1) Share the Questionnaire with your design professionals as early as possible to ensure that the design considerations are incorporated into the project plans and specifications. This will also insure early inclusion of all possible cost considerations.

2) Complete the Questionnaire prior to the Agency's funding commitment. Point out where each item is addressed in the architectural plans and specifications. If necessary, provide a narrative description of the item. If Not Applicable, please give reasons why.

Cost Implications

Most of the elements included in this Questionnaire will not require additional costs. However, some items are above and beyond a typical building scope of work and may require additional expense. Design aspects that are deemed appropriate and reasonable by the Agency that may increase the overall development budget will be considered eligible costs and funded by the Agency. Applications that maximize the good design considerations embodied in the Questionnaire **will be a priority** for Agency funding.

More Information

The Special Needs Application and the Design Questionnaire can be found at
http://www.state.nj.us/dca/hmfa/media/download/special/sn_best_methods_questionnaire.pdf

For questions regarding items in the Questionnaire, please contact Pamela DeLosSantos, NJHMFA Technical Services Division, at 609-278-7627.

Please be aware that this document is a work-in-progress and part of an ever-changing dynamic process that is refined as new projects and their knowledge come on line. We encourage sponsor and designer input into the further refinement of this document.

Environmental Conditions
(This Section is the only Mandatory section!)

Take into consideration during site selection and before the Contract of Sale is signed.

Phase I Environmental Site Assessment: Conduct a Phase I and provide a plan for abatement if necessary. Perform a Phase II Assessment if potential hazards are observed or recognized in the Phase I report.

Lead-Based Paint: For properties built before 1978, conduct a LBP-inspection. Use lead-safe work practices during renovation, remodeling, painting and demolition. Also obtain a certification that the building is free of lead based paint if children under 18 will be present.

Asbestos-Containing Materials: Have an environmental consultant perform an inspection for ACM‟s. Obtain a certification that the building is free of Asbestos-containing Materials. If Asbestos is being removed as part of demolition, provide the proper chain of custody documentation and removal procedures.

Radon: Have a radon test performed at the basement or ground floor slab. For radon levels above 4.0 picocuries, install a radon removal system. Refer to the ASTM Standard “Radon Resistant Design and Construction of New Low Rise Residential Buildings.”

Mold Remediation/Prevention: In existing buildings, if there is evidence of mold, provide for and document the proper removal. In new construction, show evidence of proper construction details that mitigate the effects of moisture infiltration.

The Population

1. Identify the target population of the project

2. **Unique needs/Accessibility**: Identify the unique needs of the target population that should be considered in the design of the building(s). Specify which design features unique to the population, including accessibility, will be included.

The Site & Land Use

Passive Solar, Ventilation and Shading Design: Take maximum advantage of the climate, especially solar access and natural ventilation. Describe the building's orientation for maximum solar access, reducing need for lighting, heating & cooling loads. *Locate plants to provide shading in the summer and allow for heat gain in the winter.*

Preservation Plan: On the project site plan, demarcate existing, healthy trees to remain.

Smart Growth Principles - **Community access** *(within ½ mile of project) Show on a Google or MapQuest map the project with the following:*

a. Pedestrian Paths (sidewalks) & Bike Trails: *Connect project to pedestrian grid. Include sidewalks or other all-weather pathways within a multifamily property or single-family subdivision linking residential development to public spaces, open spaces and adjacent development.*
b. Secure & Safe Bike Racks.
c. Safe Shelter for Commuters.
d. Access to:
    i. Neighborhood or Project Park, recreational and social activities and libraries.
    ii. Public Transit (bus, rail, ferry).
    iii. Employment opportunities.
    iv. Commercial facilities, shopping, grocery stores and restaurants.
    v. Medical facilities.
    vi. Houses of worship.

Space for a Community Garden/Outside opportunities for on-site exercise, also: basketball hoop, shuffleboard, kick ball, maintaining gardens, children's playground (if appropriate), etc. The space(s) should be protected from the street and easily monitored.

Onsite Storm water Retention & Filtration: provide copy of site plan with layout.

Water Efficient Landscaping (Native/Drought Tolerant) and groundcover in lieu of turf grass. Landscaping shall not require irrigation.

Gutters discharged at least 3'-0" from foundation. Employ rain barrels if feasible.

Access to existing roads, water, sewer and utilities: Provide all these elements on the site plan.

Sensitive Areas, High Water Tables: No development within 100 feet of wetlands, threatened species habitats, prime farmland or elevations below 100-year flood plain. In areas of high water tables, the design must reflect the appropriate measures to mitigate water infiltration and damage. Existing buildings must revise grading or install drainage systems where existing grading is problematic (5% slope: 6 inches per 10 feet).

Brownfield Development*:* if possible and cost effective, project may be located on a *Grayfield* (underutilized commercial site such as an old, vacant shopping mall or formerly industrial waterfront site) or *Brownfield* (previously used commercial/industrial site with low concentrations of hazardous waste or pollution).

Adaptive Reuse: if possible and cost effective, project may be located in an existing non-residential building provided that program and adequate window layout (all bedrooms to have at least one window) can be provided for.

Parking Considerations

Minimization: Design for parking that does not dominate the site, the building or the street. Minimize the overall impact of the garages, driveways and parking areas.

Access & Surveillance: Provide easy access to all parking spots and provide multiple opportunities for surveillance of the parking area(s). Design to maximize the security of the parking area(s).

Vehicle/Pedestrian Interaction: Design to minimize vehicle/pedestrian interaction.

"The Outdoor Room"

Public Open Areas: Design to the same level of quality as any other "space" in the development**.** Design public open spaces as if they were outdoor rooms.

Boundaries: Provide clear boundaries between publicly-, community- and privately- controlled spaces.

Visual Access: Provide visual access to shared open spaces from individual dwelling units to facilitate surveillance of these spaces.

Landscaping: Design so that landscaping is never a secondary consideration. Provide as rich a variety of native and/or drought-tolerant plantings as possible.

Paved Areas & Seating: Design all paved areas to work with the landscaping. Design all paths and any outdoor seating provided as an integral part of the landscape plan.

Edges: Give design attention to the edges where planted areas and hard surfaces meet.

Storage: Provide adequate storage for landscape maintenance materials and equipment.

The Building Exterior

Height/Setbacks: Relate the overall height of the new structure(s) to the heights of adjacent structures and/or of buildings in the immediate neighborhood. Maintain existing setback patterns within the immediate vicinity of the building.

Forms/Roofs: Consider utilizing a variety of building forms and roof shapes, rather than box-like forms with large, unvaried roofs. Relate the roof shape(s) of the new building to those found in similar, good quality buildings in the surrounding neighborhood or region.

Image to the Street: Consider a building image that fits in with the image of housing in the community where the project is located. Design the building to respect its street, enhance its site and respond to its climate.

Character/Rhythm: Provide as much architectural and visual complexity as possible to the building's appearance. Relate the character of the new building facade to the facades of similar, good quality buildings in the surrounding neighborhood or region. Respect the size and rhythm of openings – particularly on the street facades – of similar, good quality buildings in the neighborhood or surrounding area.

Existing Design Elements: Preserve original elements, to the extent feasible, in architecturally interesting or historically significant buildings.

Openings: Maximize (within budget constraints) the number and size of windows to enhance views and make spaces feel larger, but do not exceed 30% of wall area for purposes of energy efficiency.

Trim/Details: Pay careful design attention to trim and details, particularly on the street facades of the building.

Materials/Colors: Use materials and colors for the facade (including foundation walls) and roofing that are compatible with those in similar, good quality buildings in the surrounding neighborhood or region. If cost effective, specify 50-year or more durable siding and trim (fiber cement).

The Building Entry and Security

Entry Control: Design the site and the building entries/exits in a neighborhood-appropriate manner to make it easy to monitor and control who comes into the building. Consider ways to maximize security by design. Pay careful design attention to entries with respect to issues of shelter, security, lighting, durability, and identity. Ensure that the site entry is clearly delineated.

Visitor Waiting Area: Design buildings to screen visitors before they get into the building. Provide a place where visitors, who have been screened, can wait for residents/tenants without entering the building.

Security Systems: Provide security systems that are highly visible to both residents/tenants and anyone who approaches or comes into the building. Using high profile security serves as a deterrent to inappropriate use of the building, theft, and threats to personal safety and security. Support staffs' ability to monitor the building.

A**ccessibility**: If the project will serve persons with physical disabilities, are all floors and common space accessible? Treat stairs, especially entry stairs, as major design elements and integrate accessible building entrances into the design.

Common Areas, Corridors, Mechanical Spaces

Interaction & Activity: Design for interaction, visiting and activity areas.

Variety: Plan for separate spaces *with visual privacy* that allow for quiet activities (i.e., reading and computer) and noisy/social ones (television, music, pool, ping pong, etc.). Multi-use space can lead to conflict. Provide space (or series of adjoining spaces) large enough for a residents'/tenants' social event or meeting.

Smoking: Determine if smoking is to be allowed in the building or on the grounds. If yes, appropriate ventilation and protection measures should be considered. Shared living space should be smoke-free. If smoking is prohibited in the building is there a designated area outside the building for smoking?

Central Location: Attempt to locate central facilities and common rooms centrally, and ensure that they are comfortable, accessible, durable and flexible.

Support Spaces: Carefully consider the design and location of key support and service areas: Managers office, Support Services office, maintenance rooms, Janitors facilities, mechanical equipment rooms and trash collection areas. If tenant files are maintained on site, they must be in a secure, locked location.

Elevators: Pay attention to the location of elevators and to the design of the space in front of them.

Corridors: Pay attention to the design of access corridors and avoid corridors that are excessively long.

Dwelling Unit Issues to Consider

Accessibility: List the accessibility features that will go into each unit.

Personal Control: Create residents/tenants ability to regulate the ambient qualities of personal environments. Ensure residents/tenants ability to regulate noise, light, and other environmental stimuli with the potential to induce psychological stress. Provide adequate options for visual privacy. Design for adequate sound insulation between units, between units and the street, and between units and social spaces so residents/tenants can create a peaceful environment in their dwellings.

Ease of Use: Control units, appliances and fixtures should be uncomplicated to use and present a minimum number of options. Controls should be easy to read with both large printed directions and visual graphics.

Kitchen, Food Storage and Preparation

Adequate Space: Build adequate storage space for dry foods (cabinets) and cooking/eating utensils (cabinets and drawers). Provide adequate space for residents/tenants to prepare meals, such as a sufficient amount of counter space and a sink large enough for food preparation and clean up.

Appliances: Provide adequate cooking appliances, including stove, oven, cook top, and microwave. Specify cooking appliances that are consumer friendly, safe and easy to use:

- Electric burners that remain red as long as they are hot.
- Clearly defined burner edges.
- Controls that are clearly labeled and can be turned on with one hand.
- Controls that can be regulated without reaching over the cook top.

Maintaining the Household

Finishes: Select finishes that are easy to keep clean:

- Flooring that is easy to mop and does not show the dirt.
- Backsplashes behind cooking areas that are easy to wipe down.
- Cement board behind tiles and grouted material.
- No vinyl wallpaper or unsealed grout.

Closets/Built-ins: Design for adequate storage for supplies and belongings to minimize clutter and maximize access. Supply adequate storage/closet space. Plan for built-ins that can free-up floor space.

Window Treatment: Specify window treatments that are easy to maintain and provide privacy.

Maintaining Personal Hygiene

Each person should have their own bathroom.

Ease of Use: Design safe and accessible bathrooms.

- Plumbing fixtures that are easy to understand and use (for example, clearly indicate the hot and cold regions on faucets with circular displays). Directions should have printed (hot, cold) and visual (blue, red) cues.
- Faucets that can be operated with one hand (lever or single blade lever handles)

Bathing: Specify shower and or bathtub, keeping in mind the needs of the resident population.

Provision of Personal Space

Unit Size: Provide living units that offer adequate size for the residents/tenants. (Indicate square footage for bedroom and individual units.) Ensure a design of individual apartments and individual living units that promote a sense of personal, identifiable 'My' space and territory. Recommended Studio/Efficiency units with a minimum of its‟ own bathroom and kitchenette:

350 square feet minimum; One Bedroom: 500 square feet. The bedroom size for shared living is recommended to be a minimum of 150 square feet.

Separation of Spaces: Design for visual separation of cooking area from living/sleeping area.

Finishes: Select finishes and furnishings that do not trigger hallucinations and optical illusions:

- Severely defined wood grains
- Laminates with ominous or illusion inducing patterns
- Floor patterns that create illusion of movement
- Flooring and furniture finishes that reflects excessive glare

Design for Active Living

Exercise Space: Design for opportunities for physical exercise in the building.

For Shared Living and Community Residences

Kitchens/Common Areas: Design kitchens, laundries and other common areas that can be used simultaneously by more than one person at a time.

Bedrooms: Design for separate bedrooms that provide privacy from shared livings areas. Minimum bedroom sizes should be 150 square feet.

Bathrooms: Ensure that each individual has their own bathroom. If not, minimize the number of people that share a bathroom, *no more than 2 adults should share a bathroom.*

Space: When more than one resident will share a dwelling, design of the unit should:

- Provide residents with separate spaces for storing their groceries, dishes, utensils, cook ware, etc.
- Provide residents/tenants with individual storage space for personal belongings.

- Provide more than one common area so residents/tenants can pursue different activities at the same time (television, videos, music, cards and games, etc.).
- Provide private space for visitors.

Indoor Air Quality

Ducts and HVAC protected from dust during construction or cleaned prior to occupancy

Low-VOC Interior Paints & Finishes *(comply with current Green Seal standards)*

Low-VOC Adhesives & Sealants *(Adhesives to comply with Rule 1168 of the South Coast Air Quality Management District, Caulks & sealants to comply with Regulation 8, Rule 51 of the Bay Area Air Quality Management District)*

Durable, Healthy Flooring
Use durable, healthy flooring in dining/living rooms, kitchens, baths, corridors and entries
Acceptable Materials: ***We do not recommend using carpeting***

- Ceramic Tile
- Natural Linoleum (No PVC-containing tile or sheet goods)
- Hardwood with Low-VOC finishes and adhesives or bamboo with low urea formaldehyde content in its binders. If wood or bamboo flooring needs to be finished on site, use a low VOC water-based polyurethane finish.

MERV-8 (**M**edium **E**fficiency **R**eporting **V**alue) or Higher Air Filters for ducted forced air systems: If a higher MERV is used, coordinate with mechanical designer for optimized equipment efficiency.

Directly vented or power-vented combustion devices; sealed combustion furnaces, boilers and direct or power-vented water heaters.

Automatic Bathroom Ventilation; connect to light switch and equip with a humidistat sensor or timer, or operate continuously. Comply with **ANSI/ASHRAE 62.2-2016**, *which addresses dwellings in buildings of any height, including high-rise multifamily buildings.*

Direct Vent of Kitchen*:* power vented fans or range hoods that exhaust directly to outside. *Comply with **ANSI/ASHRAE 62.2-2016**, which addresses dwellings in buildings of any height, including high-rise multifamily buildings.* For new construction and major rehab, no recirculating hoods.

Urea Formaldehyde-free composite wood and cabinets: *(Particleboard and MDF to comply with **ANSI A208.1 and A208.2-2016**).* If using nonrated composite wood, all exposed edges and sides must be sealed with low-VOC sealants.

Insulation with Low Formaldehyde content: UF-free batts, spray foam or blown-in cellulose.

Operable windows: Provide access to Daylighting & Views while allowing residents to protect themselves from direct sunlight if desired.

ENERGY EFFICIENCY

Obtain Energy Star Certification *and/or exceed ANSI/ASHRAE 90.1-2016 or IECC 2015 by 15%*

- *Units should consume 40,000 Btu/sq ft/yr or less of primary energy, not including plug loads.*
- *Large A.C. units should not exceed one ton per 600 square feet.*
- *If Heat Pump system units are selected, use high efficiency heat pumps where SEER >15, EER>12, HSPF= > 9.25, with supplemental, thermostatically controlled, electrical strips. Mini-split systems are preferred, with no electric resistance heat.*
- *Use whole-building approach: reduce heating & cooling loads by downsizing HVAC system and increasing building envelope insulation.*
- *Gas Furnaces should have an AFUE>95%*
- *Employ a computerized energy analysis during design.*

- *In existing buildings, replace equipment that is more than 10 years old.*

Appliances: *Energy Star washers, dryers, dishwashers, refrigerators.* At a minimum, provide an Energy Star-rated refrigerator with freezer. In existing buildings, replace any appliances more than 6 years old with Energy Star-rated models. Must be in the top one-third of the DOE Energy Guide rating scale. Washers above the ground floor must have overflow pans underneath.

Lighting*: (Energy Star or equivalent)*

- *Lighting load should consume 0.9 watts/sq ft or less electrical energy for ambient lighting.*
- *Use high efficacy LED lighting or provide Energy Star rated lights*
- *In existing buildings, replace any lighting with LEDs or Energy Star rated lights.*
- Employ Occupancy sensors in common spaces & Day-lighting Controls, where possible.
- Provide Photocells or timers on exterior lighting.

Building Envelope – *Comply with the IECC-2015 Standard for Climate Zones 4 & 5

- *Increase insulation in the walls and ceiling to reduce heat loss and improve comfort*
- Exterior Wall Drainage Plane and Window Flashing Details: *provide sealing and caulking to interior and exterior sides of all walls and exterior penetrations.*
- *Employ light colored exterior walls and white roofs to improve cooling loads; provide aluminized roof coating to reflect summer rays.*
- **Ceiling/Roof Insulation: R-49 or higher*
- **Wall Insulation: R-20 or higher, best is rigid, continuous exterior insulation*
- **Basement/Crawl Spaces: R-15 continuous or R19 cavity*
- **Under slab Insulation: R-10 for 2 feet*
- Install 30-yr warrantied pitched/20-yr warrantied flat roof

Windows: Install Energy Star Windows or Low-E, High Efficiency windows with a U-factor of .27, or less. Do not exceed 30% of wall area.

Ductwork in Conditioned space: Do not employ ductwork if possible, or if unheated spaces are used, ductwork must be wrapped in a minimum of R-8 insulation. Total duct leakage shall be < 4 CFM25 per 100 square ft.

Hot Water Heaters High Energy Factor Water Heaters above Energy Star standards: 40 gal Gas EF = 0.61, Electrical EF = .93, tank-less gas (coordinate with low-flow fixtures). Provide overflow pan with drains for storage type heaters.

Easy-to-Use Programmable Thermostats: Specify environmental control units that are accessible, comprehensible, and easy-to-read.

Renewable Energy *(if cost effective)*

- Photovoltaic (PV) Solar Electrical System: optimize energy needs for master-metered buildings or provide 70-80% of the common area energy needs of an individually metered building.
- Geo-thermal Heat Pump System: provide closed or open loop geothermal heat pumps to save energy.
- Consider cogeneration system if possible.

Resource Efficiency

Construction Waste Management Plan: Recycle or Salvage construction & demolition debris by 50% or more.

Recycling: Provide for a development-wide recycling program on-site and within each unit. Provide tenants with recycling baskets.

Incorporation of Salvaged materials or products with Recycled Content: Example: a single pane window that is no longer code compliant can be used as a transom in an interior wall partition. Also, look for building products that utilize Post-Consumer waste or Pre-Consumer content.

WATER CONSERVATION

Low-Flow Fixtures:

- Showerheads: 2.0 gpm or less
- Kitchen faucets: 1.5 gpm or less
- Bathroom faucets: 0.5 gpm or less
- Water saving dishwashers and washing machines

Toilets: Use EPA WaterSense-labeled High Efficiency toilets with 1.28 gpf or less

OPERATIONS AND MAINTENANCE

Property Management O&M Manual and Training: Must be provided to the owner including all materials, systems and equipment used in the construction, explaining the Green Building components and amenities, how they benefit the property and how to properly maintain them.

Tenant Manual & Training: Explain the Green Building components and amenities and how they benefit from them. Provide explanations for resident's control of HVAC, lighting, refrigerator maintenance, recycling procedures, and hot water.

Integrated Pest Management: Provide evidence of a contract with a pest control company that employs IPM methods. Seal all exterior openings and cracks. Holes to be sealed with copper or stainless steel mesh. Keep all vegetation away from building foundation at least 3 feet. Keep trash enclosures neat and sealed tightly.