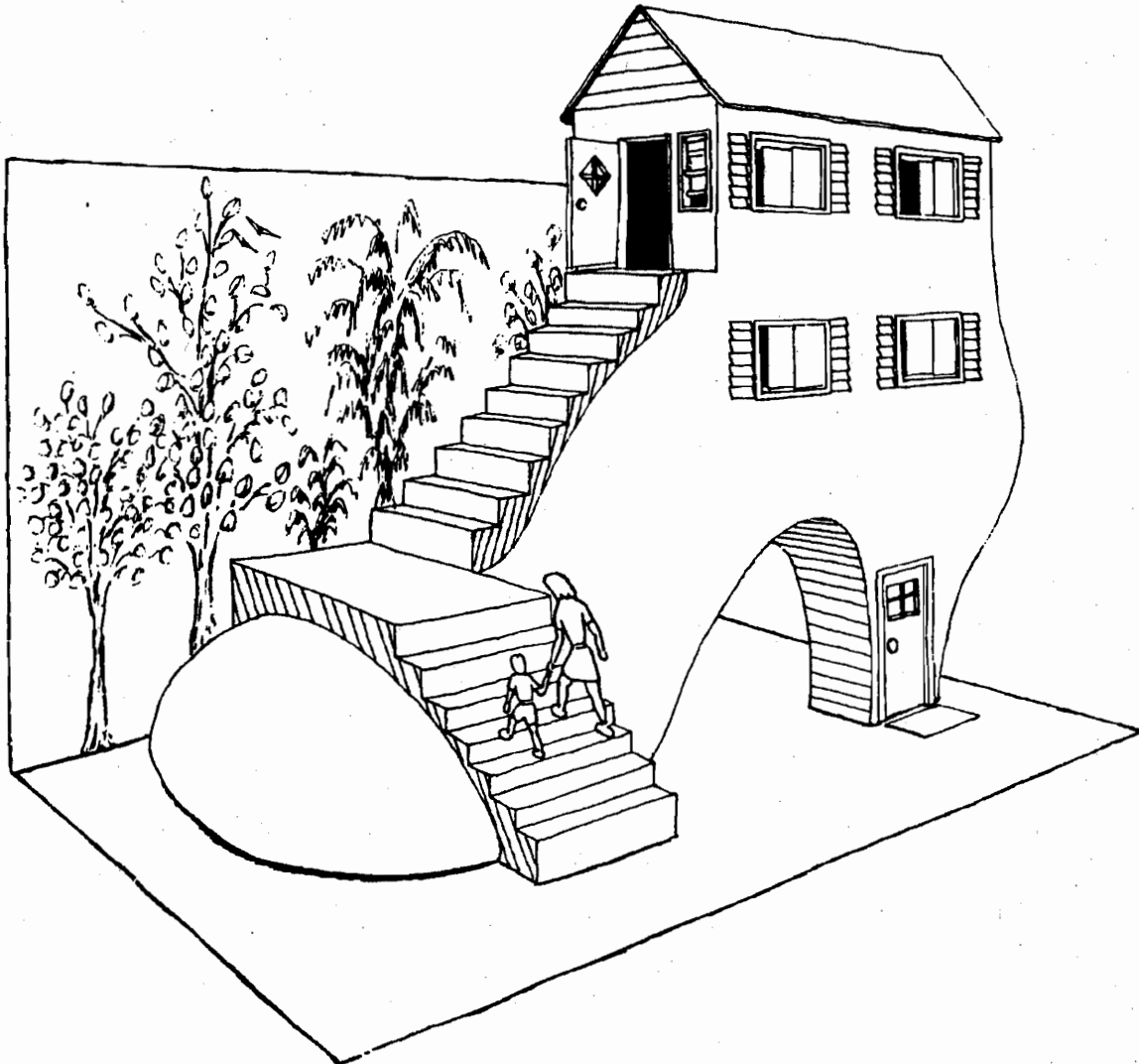


City of Vancouver *Land Use and Development Policies and Guidelines*
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HIGH-DENSITY HOUSING FOR FAMILIES WITH CHILDREN GUIDELINES

Adopted by City Council March 24, 1992



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1 Application And Intent

These guidelines are to be used in conjunction with the **Zoning and Development By-law** or an official development plan for new conditional approval residential developments, both market and non-market, of 75 and more units per hectare in density, which are designed specifically for families with children.

The intent of the guidelines is to address the key issues of site, building and unit design which relate to residential livability for families with children.

The applicant is encouraged to consider creative approaches to accomplish the objectives stated for each guideline. Although quantitative standards are given in some cases, these are provided to assist applicants in their design as well as City staff in their evaluation. They are not necessarily absolute requirements.

The guidelines are grouped into three categories which follow the planning and design process: Project Planning guidelines deal with site selection and other general issues to be addressed at the beginning of the development process; Project Design guidelines discuss building design issues; and Unit Design guidelines address livability concerns specific to the individual unit design.

Each guideline is presented in three parts: the objective - a short statement of the goal or intent; the criteria - specific desired standards; and the discussion - additional considerations, supporting information, more detailed rationale, examples and suggested design solutions.

2 Guidelines For Project Planning

2.1 Site Selection

2.1.1 Objective:

Families with children should have reasonable and effective access to essential community services and recreational amenities.

2.1.2 Criteria:

Sites selected for family housing development should be within 0.8 km walking distance of an elementary school and its outdoor play area, a daycare centre, an after-school care facility, a community centre, and grocery shopping and within 0.4 km walking distance to a playground and a public transit stop. See second paragraph in Discussion.

Effective access means a walking route which is both safe (free from barriers such as the need to cross a major, unsignalled traffic arterial) and secure (having an environment suitable for elementary school children).

2.1.3 Discussion:

Maximum walking distances reflect experience with the physical capabilities of school-aged children and with acceptable travel times. These standards are based on situations with fairly level terrain; reasonable distances will be reduced where children must climb hills to reach their destination.

The site selection process should recognize the need for flexibility and allow for trade-offs, given that some sites may be suitable for families without having all amenities within walking distance. Where the maximum distances are exceeded, the solution may involve providing additional on-site amenities such as additional outdoor and indoor play space.

Consideration should be given to ensuring that key services and amenities have sufficient capacity to serve the anticipated population of the new development.

If a new housing development would overload the existing neighbourhood facilities and services, consideration must be given as to how the additional demand could be accommodated. Discussions should be held with City, Park and School Board staff early in the site selection process to determine the capacity of community amenities. In the case of large residential developments, community-based agencies such as family places or neighbourhood houses and the Vancouver Public Library may be consulted as well.

2.2 Surrounding Land Uses

2.2.1 Objective:
Housing for families with children should be protected from conflicts with adjacent land uses.

2.2.2 Criteria:
Care should be taken when family housing is developed on sites adjacent to non-residential land uses to provide for physical separation and security and for visual and acoustic privacy.

Mixing of non-residential uses on the same site as family housing requires clear separation of pedestrian and vehicular access, distinct and separate parking areas, and secure, semi-private open space for the family project.

2.2.3 Discussion:
Residents' satisfaction is dependent on lack of intrusion by strangers and control of the housing site. Parents do not want their children to play in areas easily accessible to strangers. Uncontrolled access also increases opportunities for theft and vandalism.

Experience indicates that children will play throughout the site. Where there are non-residential uses on the same site as family housing, children may be attracted to playing in inappropriate and unsafe areas. Teenagers, particularly, tend to hang out in commercial areas. Consequently, if mixed uses are planned, the design should take this into consideration.

Guideline 4.2 on "Privacy" describes the criteria for visual and acoustic privacy.

2.3 Neighbourhood Compatibility

2.3.1 Objective:
To encourage new high-density family developments to fit into their surrounding neighbourhoods.

2.3.2 Criteria:
Family housing developments should be compatible in scale, character, and materials to their surrounding neighbourhood. In new development areas with a wide range of social and economic mix, the scale of buildings and quality of design should be comparable for all projects. The use of high quality, durable materials is critical in family projects due to the intensive use which children make of their immediate environment.

2.3.3 Discussion:
Residents like their development to conform as much as possible to the norms of its neighbourhood for orientation, setbacks, materials, height, and form. These considerations are particularly important in cases where family housing projects are sited in already developed neighbourhoods. In cases where a neighbourhood is in transition to higher density, design should reflect the planning intention.

Where social and economic mix varies from building to building within a development area, research indicates that satisfaction is enhanced when the scale and quality of development is consistent throughout.

Important considerations in creating quality design include architectural style and detailing, provision of views, sunlight penetration, privacy, landscaping, and the individualization of entries to units or groupings of units.

In the long term, use of good quality materials will result in lower annual maintenance costs and higher resident satisfaction.

2.4 Number of Family Units

2.4.1 Objective:

There should be a sufficient number of family units in a project in order to give children peers to play with; to encourage a sense of community; and to support provision of adequate outdoor and indoor amenities for families and children.

2.4.2 Criteria:

Twenty family units in a single project is the suggested minimum. This could be reduced if the project is located close to other family developments.

The number of households related to a common, semi-private outdoor open space should not exceed 100. This maximum of 100 units may be comprised of one or more projects, provided that the common open space is designed to reflect the anticipated population, ownership, and management mix.

2.4.3 Discussion:

The choice of project size should also consider the anticipated number of children. When the child density is more than 75 children to the hectare or 70 children in one project, special care must be taken with site planning and design. Extra provisions should then be made for management, maintenance, and children's play.

While past experience supports project size in the 20 to 100 unit range, factors promoting the sense of belonging and identification with a development should be featured in the site and building design. The most important factor is the design and location of the common open space.

The size of non-market family projects should be consistent with CMHC and BCHMC program guidelines which are reviewed annually.

2.5 Household Mix

2.5.1 Objective:

In developments planned for a mix of household types, the family units should be grouped together in the most appropriate parts of the building or site.

2.5.2 Criteria:

Family units should be located in the portions of the building or site overlooking common outdoor play areas, closest to community services and recreational amenities and where exposure to non-residential land uses and heavily used traffic routes is minimized.

2.5.3 Discussion:

Most people like to live in a community where there is broad mix of people but they also want to be close to others of roughly the same age group or stage in the life cycle. Where there is a mix of family and non-family households within a building, similar households should be grouped together to encourage neighbouring behaviour and social contact. Grouping of similar households results in higher levels of satisfaction and fewer complaints about children's activities and noise. In multiple-storey buildings with double-loaded corridors this grouping can be accomplished by locating family units on the lower floors or alternately by locating family units on the side of the building facing the common outdoor play area. There are advantages to both approaches. Consider building design, construction and future management style.

3 Guidelines For Project Design

3.1 Hierarchy of Spaces

3.1.1 Objective:

To ensure that residents and visitors can easily distinguish among the private, semi-private (areas for the use of residents only), semi-public (accessible to the public but still on-site), and public realms in and around a development.

3.1.2 Criteria:

A clear hierarchy of spaces should be established within each development.

Individual units, their entries, and private outdoor spaces should be designed to maximize privacy.

Common outdoor open space and indoor amenity space should have access limited to residents and their invited guests.

The amount of semi-public territory should be minimized, especially in high-density projects.

3.1.3 Discussion:

Where feasible, it is desirable to provide private entries to units from the outside. Where it is necessary to group units around a common entry or along a corridor, the design should seek to individualize the entries to every unit. Achieving an individualized entry requires more than just painting the doors different colours; possible design solutions might utilize variation of corridor width, a combination of recessed and flush entries, different door types, or small windows or sidelights into the hall.

In buildings with double-loaded corridors, entry doors should be staggered to protect privacy by reducing the opportunities for neighbours to look into each other's entries or be disturbed by each other's comings and goings.

Ideally, no more than 12 units should be grouped together on the same hall, corridor, or entry. This suggested maximum is based on experience indicating that this is an upper limit to ensure maintenance and to foster neighbouring activities.

Residents should be encouraged through the design of the project to develop a sense of ownership and responsibility for the semi-private spaces they share with neighbours. Furthermore, they should also be permitted to alter, adapt, and personalize these spaces, where feasible. This approach should encourage residents to maintain their shared spaces.

Experience with high-density family projects in Vancouver clearly indicates that satisfaction with common outdoor open space increases as residents have control over its use and as outsiders are effectively prevented from entering it uninvited. Gated and locked central courtyards are the preferred design solution.

Semi-public open space should be limited to small areas of landscaping on the sides of the project which are adjacent to public sidewalks and should be designed to buffer the project from intrusion. Limited hard landscaping may also be appropriate, such as a seating area at the front entrance. These areas should not, however, be considered as meeting any part of the outdoor open space needs of residents.

3.2 Common Open Space

3.2.1 Objective:

There should be appropriate open space to meet the on-site needs of children and adults.

- 3.2.2 **Criteria:**
Experience has shown that children will play everywhere; the entire site should be designed to withstand use by children.

A small common space for use by adults only is encouraged in both developments intended for families with children and those with a mix of family and non-family households.

- 3.2.3 **Discussion:**
With children using an outdoor space, it is essential that the landscape materials used stand up to wear and tear. Initial plantings of trees and shrubs should be of sufficient size to withstand the rough and tumble of children's play. Landscaping should be designed to create varied spaces within a large common open space and to use a mixture of hard and soft surfaces. Materials should be selected to be interesting and safe.

The extent to which sunlight will penetrate into the common, open spaces of a project will affect its usage. The open space should be located and designed to maximize sunlight access, especially in the winter.

Adult-only open space within a family project should be designed to discourage its use by children. Consider roofdeck and terrace locations.

Open space for non-family households in a mixed project should be located near that portion of the building or site where non-family units are grouped.

3.3 **Outdoor Play Areas for Children**

- 3.3.1 **Objective:**
Children of all ages should have easy access to appropriately located, designed and landscaped outdoor play areas suited to their developmental and play needs.

3.3.2 **Criteria:**

- a) **General**
Total outdoor play area should range in size from 130 m² to 280 m². This can be achieved in one or more locations. See third point in following discussion.

Outdoor play areas should be situated to maximize sunlight access. There should be a minimum of 2 hours of sunlight between the hours of 10:00 a.m. and 5:00 p.m. on December 21st.

Adequate artificial lighting should be provided.

- b) **Preschool Children's Play Areas**
There should be a minimum of 1.0 m² per bedroom, excluding the master bedroom, allocated for pre-school play areas. The main pre-school play area should be a minimum of 50 m².

There should be seating provided for adults to facilitate supervision and socialization.

Preschool play areas should be located near common indoor amenity areas and laundry rooms where they can be overlooked by adults.

- c) **Elementary And Teen Aged Children Play Area**
There should be a minimum of 1.5 m² per bedroom, excluding the master bedroom, allocated for play areas for elementary school-aged and older children. The main play area for this age group should be a minimum of 85 m².

- 3.3.3 **Discussion:**
Separation of adjacent play areas for different age groups may be achieved either by landscaping, surface treatment, or a change of grade within the common open space.

The extent of these areas can be reduced if there is reasonable access to nearby playgrounds, playfields, and community facilities designed for these age groups. Reasonable access varies with age groups. For elementary school aged children 0.4 km is considered reasonable.

There is extensive literature available on the play needs of various age groups and the types of play areas which successfully meet these needs. Play areas should be designed to recognize and minimize the differences and potential conflicts between interests of different age groups. In general, both preschool and school-aged children require opportunities for active and quiet play, for group and individual play, for structured and creative play. The appropriate size of play area and the types of equipment vary for these age groups.

Play equipment should be chosen to provide children with a variety of experiences. Opportunities for water and sand play are especially important. Children need play places where they can intervene and interact with their environment, where they can move things around and create their own spaces. Children should also be provided with places for quiet and individual play.

Sand is the preferred surface material under active play equipment, since it cushions falls well. However, sand is not always suitable, particularly where pets from the neighbourhood may have access to the open space. In these cases, pea gravel is an acceptable alternative.

Provision of toilet facilities which are accessible to children from outdoor play areas is desirable, particularly in projects where access to individual units from outside is constrained by locked doors and buzzer systems.

The value of some covered play area for rainy days should be considered.

Amenity areas for teenagers tend often to be overlooked at the planning stage. This oversight can lead to problems later. Consider the on-site recreation needs and patterns of teens. Teenagers have less time for recreation because of school, homework, and part-time jobs and they will use places close to home where they can play for brief periods of time, such as before or after dinner, and which do not require them to walk to a school or community centre.

Teenagers will congregate in informal gathering places. There should be places for sitting and overlooking other activities. Some of the area could be covered for rainy weather.

Teenagers will readily use available outdoor space for informal ball games. Appropriate design solutions include a small court for shooting baskets or a windowless wall suitable for practising tennis strokes.

3.4 Supervision of Children's Play

3.4.1 Objective:

Recognize that small children require supervision while playing in common outdoor and indoor play spaces and facilitate opportunities to achieve that supervision by parents and other caregivers from within individual units or their private open spaces.

3.4.2 Criteria:

The design of a family development should maximize the potential for adults to supervise children at play. The basic elements of this supervision are:

- visual access for the parent or caregiver, preferably from the unit;
- natural surveillance from other overlooking units and common areas; and
- a direct and unobstructed route between the family units or observation point and the common play area along which visual contact with the play area can be maintained.

Projects with a mix of household types should be designed to maximize the number of family units overlooking children's play areas. As a minimum, every floor with family units should have an observation point to overlook the children's play areas. Stairs or door to the play area should be close by.

3.4.3

Discussion:

The potential to supervise play from the unit must be combined with a common outdoor open space that is secure and semi-private, otherwise small children often will not be allowed out into it by themselves.

Ideally, each family unit should have both visual and direct physical access to at least one common play area for small children. In buildings with double loaded corridors and/or over 3 storeys this can be problematic especially if the outside play space is located at grade on one side. Consider design solutions such as play lounges, observation corridors to allow visual access to the common play area, roof terrace play areas, and enlarged balconies. Observation lounges or corridors should have a balcony door or window that opens to permit verbal communication with the play area. Stairwells should be located close to observation points to facilitate quick access from observation points to play areas. Where possible locate stairwells on the exterior of the building and leave the outside wall open or glaze it to facilitate visual contact with the play area.

In projects with a mix of family and non-family households, consider mixing family and non-family units on the same level with the family units overlooking children's play areas.

Consideration should be given to siting indoor amenity spaces and, especially, laundry rooms where adults in them can easily view children's play areas.

Some building features limit the use of outdoor open spaces by small children such as locked doors requiring children to be able to use keys or buzzer systems. Elevators and fire doors on stairs also may act as obstacles to children's access. Intercoms, code-activated entry systems and/or automatic door openers can be considered but there should be back-up, in case of system failure.

3.5 Children's Safety

3.5.1

Objective:

Design the whole environment with the safety needs of children in mind.

3.5.2

Criteria:

The safety of children should be considered both within each unit and in the indoor and outdoor common spaces of a development.

3.5.3

Discussion:

Some of the specific design features of developments which need particular attention in family projects include opening windows, stair and balcony railings, stair configuration and proportions, above grade play area enclosures and railings, the locations of heaters and electrical outlets, and the choice of non-toxic landscape materials.

The appropriate play equipment for each age group should be selected based on its safety ratings.

All children's play equipment shall be installed strictly according to the manufacturer's specifications.

It is essential to strictly segregate children's play and circulation areas from vehicular routes, parking and loading areas.

3.6 Pedestrian Circulation Routes

3.6.1

Objective:

Ensure that both internal and external circulation routes are designed to enhance security, especially for women, children and seniors, and to accommodate the full range of activities which can be expected to occur in them.

3.6.2

Criteria:

Sightlines affect one's ability to see and be seen. Avoid blind corners and heavy landscaping which obstruct sightlines along pedestrian routes.

Locate and design entrances, lobbies, corridors, stairwells, elevators and walkways to maximize the potential for casual surveillance from units, semi-private and public areas. Create a safer night-time environment by providing appropriate lighting of access points and circulation routes.

Design circulation routes to be used comfortably for moving furniture and household possessions and for circulation of strollers, tricycles, bicycles, and wheeled toys.

Provision for handicapped access should be made; features such as ramps and wide doorways will also facilitate children's circulation through the development.

3.6.3 Discussion:

It is desirable to have more than one elevator, especially in buildings over 4 storeys or where there are seniors/handicapped units on upper storeys, so that one is always available when the other is being repaired or is tied up with moving day.

Design corridors to acknowledge that children will play in them. Corridors which are wider than standards require will be safer because they will permit people to circulate past strollers, tricycles, or wheeled toys parked temporarily in the hall. Durable, high quality construction materials are important.

3.7 Common Indoor Amenity Space

3.7.1 Objective:

Provide appropriate common indoor amenity space for families with children where individual units are not suited to desired indoor activities.

3.7.2 Criteria:

A multi-purpose/meeting room with a wheelchair accessible washroom and kitchenette should be provided for non-market and moderate rental family housing developments. It should be large enough to accommodate at one time, 40 percent of the estimated adult population.

Where laundry facilities are not provided within each unit, common laundry room or rooms should be provided.

The potential for other indoor amenity spaces such as a hobby room, a workshop, an indoor play space for small children, or a teenage lounge should be considered with regard to the anticipated age mix of residents, the ability of management to supervise them, and the availability of similar amenities in accessible, nearby community facilities.

3.7.3 Discussion:

The multi-purpose/meeting room should be designed to permit a range of activities and gatherings, including birthday and holiday parties. The furnishing, equipping, maintenance, and supervision of this room and other indoor spaces should be provided for. Experience has shown that rooms of at least 37 m² provide for the greatest range of use. A room size of less than 27.9 m² should be avoided.

The potential role of common indoor space in creating community interaction and safety should be fostered. For example, the location of common laundry rooms adjacent to other amenity spaces like lounges, children's play and outdoor open space areas can do a great deal to support interaction among residents and residential satisfaction. Moreover, the location of laundry rooms where they can receive informal supervision from regularly used circulation routes and where they will have access to daylight can support tenant security and supervision of a building.

In rental or non-market family projects common laundry rooms should have a minimum of one set of washer and dryer for every 10 dwelling units and be equipped with a sink, a sorting table, and a chair as a minimum. Laundry rooms should be located so that noise and heat from them does not annoy residents.

Consider including a day care or after-school care facility.

There is an increased need for common hobby or workshop space when units are too small to permit repair and maintenance activities.

3.8 Residents' Parking

3.8.1 Objective:

Parking should be secure, accessible and adequate for the needs of residents and visitors.

3.8.2 Criteria:

Casual surveillance of the garage entries should be maximized by locating them near building entries, sidewalks, or other busy pedestrian areas. Underground parking should be well-lit and ventilated.

Each residential development should have a separate, secure parking area with access limited to residents only.

Where access is not at grade, elevator access should be provided.

Parking spaces should be assigned to specific units and be clearly marked.

Residents' parking should be sited so as to minimize walking distance to units.

3.8.3 Discussion:

The Vancouver Parking By-law contains standards for parking garages.

The size of parking spaces should be generous enough to permit loading and unloading of such regularly transported goods as strollers, toys, and groceries.

It is preferred that visitors' parking be provided at grade, near the entry to the project. Alternatively, it can be located in accessible underground parking separate from the secure underground parking for residents. In either case, it should be clearly marked and directional signs should be provided. Some effective means should be found to ensure that visitors' parking is not used by project residents or by people going to other destinations in the vicinity of the project, particularly commuters.

Techniques to keep vehicles from speeding into and inside underground parking garages should be employed.

It is desirable to provide a car maintenance area within the garage. This area should have an electrical outlet. Similarly, a separate area with a water connection should also be provided for washing cars.

4 Guidelines for Unit Design

4.1 Unit Size and Interior Layout

4.1.1 Objective:

The size and layout of units should be appropriate to meet the needs of families with children.

4.1.2 **Criteria:**
Family units require a minimum of two bedrooms. Each bedroom should be large enough to accommodate a single bed, a dresser, a desk or table, and in children's bedrooms, some floor space for playing.

4.1.3 **Discussion:**
Single family dwellings have a range of spaces which can be used for recreation and study including attic spaces, basements, dens and family rooms. Apartment units, especially non-market ones, do not have the same number or range of spaces as do houses. Therefore, dining, living and bedroom spaces should be designed to accommodate a variety of family activities. For example, children's bedrooms will be used for study and play.

The design of the unit should provide for separation of conflicting uses.

The dining room floor should be washable and waterproof rather than carpeted.

The bathroom should be larger than the minimum size so that a parent and child can be in it together.

Unit sizes for non-market family housing should be consistent with BCHMC program guidelines.

The private outdoor space should be visible from the kitchen.

A generous entry area is highly desirable to permit room for toys and equipment, for dressing children on cold or rainy days, and for drying of wet shoes, boots, and outerwear. The floor surface of the entry should be washable, not carpeted.

Consider the layouts of adjacent units to ensure that "sleeping" areas are not affected adversely by proximity to neighbouring "living" areas.

4.2 Privacy

4.2.1 **Objective:**
Protect the privacy of family households.

4.2.2 **Criteria:**
Minimize the visual and acoustic intrusion into all dwelling units and into their private open spaces.

4.2.3 **Discussion:**
Research indicates that satisfaction with high-density living is very dependent on visual and acoustic privacy. Lack of privacy will increase a person's perception of crowding.

Acoustic privacy should be achieved between rooms in a unit, between units, and between buildings in a development. Common walls between units and around shared areas should have a Sound Class of 55 decibels. Floors between units should have an Impact Isolation Class of 55 decibels.

Concrete and masonry buildings will have better acoustic properties than wood frame buildings. Mixing family and non-family units in wood frame buildings can be problematic if there is not adequate noise separation.

Visual privacy between units can be achieved by separating building facades by 24.4 m or through screening with architectural and landscape elements.

In buildings with double-loaded corridors, unit doorways should be offset to avoid visual and acoustical intrusion.

4.3 Private Open Space

4.3.1 Objective:
Ensure that each household has a private outdoor open space adjacent to its unit for its exclusive use.

4.3.2 Criteria:
Each family unit should have a private open space which is a minimum of 1.8 m deep by 2.7 m wide.

The private open space should be designed to maximize sunlight access, safety, adaptability for a variety of family activities.

4.3.3 Discussion:
The private open space should be able to accommodate a range of activities including sitting out, tending plants, barbecuing, outdoor eating, quiet children's play, and minor household maintenance. Provision of storage for this equipment is desirable.

Use of and satisfaction with private open space is dependent on its size, orientation, availability of sunlight, ease of access from the unit, ease of supervision, privacy, and safety.

Special design consideration should be given to the private outdoor areas of north facing units to maximize exposure to sunlight. Avoid recessed north facing private outdoor areas.

4.4 Storage

4.4.1 Objective:
Provide sufficient bulk storage within the unit or within easy access of the unit.

4.4.2 Criteria:
In addition to adequately sized clothes and linen closets, a minimum of 5.7 m³ (2.3 m²) of bulk storage should be provided for each dwelling unit. Preferably all but at least 2.8 m³, should be located in a separate storage room within the unit at or near the entry. The balance of the storage space may be located in an easily accessible, secure area of the building.

Secure bicycle storage should be provided in accordance with the City's Bicycle Parking Standards.

4.4.3 Discussion:
Bulk storage space does not include clothes or linen closets.

Storage spaces should be suitable for large household items such as strollers, wheeled toys, suitcases, sports equipment and holiday decorations.

Communal storage rooms should be in secure areas of the development and have sturdy, lockable, individual, full height, storage lockers.

Bicycle storage is critical. Provide a lockable indoor bicycle storage room adjacent to a building entrance. If the bicycle storage room is located in the parking garage, it should be well lit and adjacent to the elevator or exit ramp.

Lockable outdoor bicycle racks should be provided near the building entrance.

A special room for children's bicycles, wheeled toys and strollers adjacent to the common outdoor space is desirable.

