

Section 2: Themes and Strategies for Healthy Apartment Neighbourhoods By Design

Themes and Strategies

Theme 1: Natural Environment

Theme 2: Built Environment

Theme 3: Transportation

Theme 4: Housing

Theme 5: Employment, Income and Opportunities

Theme 6: Education and Learning

Theme 7: Food Security

Theme 8: Community Health

Health Strategies Summary Chart



Theme 3: Transportation

How does the transportation systems affect health?

The transportation system can affect health by influencing: the levels of physical activity among residents, the rates of vehicle-related injuries and deaths, levels of air pollution and noise, access to services and social cohesion. Numerous studies have demonstrated the benefits of active transportation such as walking and cycling for health (TPH, 2011; TPH, 2012a; TPH, 2012b).

Transportation systems can affect health by influencing the:

- **Levels of Physical Activity** - Studies have found that individuals who cycle or walk to work are more fit, less overweight, and have a reduced risk for cardiovascular disease, than those who use motorized modes of transportation (Gordon-Larsen et al., 2005; Pucher et al., 2010; Oja et al., 1991; Hamer & Chida, 2008). Studies have also found that people who use public transit have increased levels of physical activity as a result of accessing the transit services (CIHI, 2006). A Toronto study has estimated that current levels of walking and cycling in Toronto for utilitarian purposes prevents at least 120 deaths per year from chronic diseases, producing health benefits worth approximately \$130 to \$478 million per year, and saving about \$110 to \$160 million per year in direct medical costs (TPH, 2012b).
- **Risk of Vehicle-Related Collisions** - On average, 2200 pedestrians are involved in collisions with vehicles each year in Toronto. On average, 189 of those pedestrians will experience major injuries while another 26 will be killed (TTS, 2012a). It has been estimated that pedestrian-vehicle collisions in Toronto cost over \$53 million per year in medical costs, indirect costs, and human costs (TPH, 2012b). On average, 1160 cyclists are involved in collisions with vehicles each year in Toronto. On average, 41 of those cyclists will experience major injuries while two will be killed (TTS, 2012c). It has been estimated that cyclist-vehicle collisions in Toronto cost over \$9 million per year in medical costs, indirect costs, and human costs (TPH, 2012b). Studies suggest that a much smaller proportion of pedestrians and cyclists are injured or killed in countries that have invested in walking and cycling infrastructure (Pucher & Kijkstra, 2003; Jacobsen, 2003).
- **Access to Opportunities and Services** - Convenient and affordable public transit enables residents to access jobs, schools, health and social services, cultural and recreational opportunities, and stores that sell fresh and affordable foods (WHO, 2011). Accessible transit systems are particularly important for individuals who live on low incomes, the elderly, people with disabilities, and young people, who cannot drive or do not have access to an automobile (TPH 2011). In Toronto, the neighbourhoods with the greatest percentage of people living on low incomes are concentrated in the inner suburbs which tend to have less access to public transit (FCM, 2010; Hulchanski, 2010).

The Opportunity in Apartment Neighbourhoods

Apartment neighbourhoods offer many potential opportunities for promoting healthier, non-auto modes of transportation such as walking, cycling, and public transit.

In Toronto's apartment neighbourhoods, public transit, walking and cycling are proportionally more common than in other types of neighbourhoods, according to a recent study by the Province of Ontario.[GGH] As well, residents of apartment neighbourhoods already consider walking, cycling and transit as central to their daily routines and lifestyle, according to findings of a study by Jane Farrow of Jane's Walk, and Paul Hess of the University Toronto. [Hess and Farrow, 2010].

While many residents in apartment neighbourhoods rely on active transportation, pedestrians and cyclists in these communities contend with considerable barriers and deterrents to safe and convenient travel.

Many stores, services and other daily conveniences upon which residents of apartment neighbourhoods depend are situated away from residential towers, along major roads at the periphery of apartment neighbourhoods or beyond. While these facilities are well placed for car travel, they are poorly situated for those who walk, cycle or use public transit for transportation. This is particularly true for children and the elderly and when weather conditions are poor. Walking through apartment neighbourhoods, residents face deterrents in the form of fencing and large open spaces that have no sidewalks or pathways. Connections with adjacent neighbourhoods are often limited by fencing that demarcates property lines.

Because these fences have been installed in response to issues of security, liability and maintenance, it can be difficult to have them removed. As a result, walking routes within apartment neighbourhoods can be indirect and much longer than necessary, making neighbourhood destinations considerably less convenient and accessible.

The following solutions promote health by reducing barriers to healthy modes of transportation in apartment neighbourhoods:

3.1 Remove Physical Barriers to Active Transportation

3.2 Integrate Transit stops and Stations with Apartment Towers

3.3 Improve Cycling Networks and Infrastructure

3.4 Enable Access to Carshare Programs

3.5 Reduce Parking Requirements to Allow Conversion to Alternative Uses

3.1 Remove Physical Barriers to Active Transportation

Context

In apartment neighbourhoods, walking is a common way for residents to access local amenities, such as schools, transit stops and shopping destinations. Many apartment neighbourhoods had been originally designed with pedestrian walkways linking apartments to one another and to local amenities. Today, however, many of these connections have been severed by fencing that demarcates property boundaries of individual towers sites. As a result, walking trips must now follow indirect routes which make nearby amenities inconveniently more distant.

In addition, the pedestrian environments in and around apartment neighbourhoods have been neglected or maintained in a marginal condition, which discourages walking by making it uncomfortable and unenjoyable. Walking conditions are often worse in winter.

Solution

Establishing more direct and well maintained pathways through apartment sites, as well as the provision of gates in fences, could improve the efficiency of neighbourhood pedestrian networks. It can also reduce walking and cycling distances to shops, services and transit stops. Improving the overall pedestrian environment could provide more positive experiences for pedestrian travel and thereby encourage more active transportation.

Making it Happen

The following describes the extent to which the current planning framework in apartment neighbourhoods would be supportive, limiting, or neutral, should a community or building owner propose solutions such as these at a particular site.

Official Plan: Supportive

The Toronto Official Plan supports improvements to local walking networks. Expanding path networks or removing fences and other barriers would likely not require amendments to the Official Plan.

Zoning by-laws: Supportive

Adding pathways and gates would likely not require amendments to zoning by-laws or applications for minor variances. Due to some site-specific zoning by-laws, variances may be required due to specific landscape and setback provisions.

Other considerations

Establishing walking paths for residents connecting multiple buildings may require property owners to jointly establish rights-of-way across private land. The parties involved would also have to establish protocols for maintaining the pathways and for addressing issues of liability. The City or other third parties could help to facilitate such agreements.



Images:

Top, left: Footpaths through typical apartment site blocked by fences, Toronto, 2009

Top, right: Limited access to walking, typical apartment site, Toronto, 2006

Bottom, left: Public walking path between apartment blocks, Marzahn, Berlin, Germany, 2006

Bottom, right: Pedestrian paths and plantings through apartment neighbourhood, Göteborg, Sweden, 2009

3.2 Integrate Transit Stations with Apartment Towers

Context

Transit is a vital part of travel within and beyond apartment neighbourhoods. As discussed above, residents of apartment neighbourhoods rely on transit more than the average Torontonian. Apartment neighbourhoods also provide nodes of population density, and therefore transit ridership, in Toronto's inner suburbs which help make frequent public transit service more economically viable.

All of Toronto's apartment neighbourhoods are serviced by at least a bus route, and many are near subway stations. Funded LRT lines will connect even more of these neighbourhoods to high-order transit in the near future. However, transit stops and stations have yet to be directly integrated into apartment neighbourhoods.

Solution

Improving access from apartment properties to existing and planned transit stops and stations can be achieved by building direct pathways through apartment neighbourhoods (as discussed above), as well as improved cross-walks, priority signalling, and larger and more comfortable waiting areas at transit stop locations.

Access to public transit can be further facilitated by relocating or providing new stops within, or directly adjacent to apartment neighbourhoods. These transit stops, if incorporated with well planned waiting areas, could also become 'hot spots' for social gathering, local commerce, and local vitality.

Making it Happen

The following describes the extent to which the current planning framework in apartment neighbourhoods would be supportive, limiting, or neutral, should a community or building owner propose solutions such as these at a particular site.

Official Plan: Supportive

These solutions would generally be supported by current Official Plan policies.

Zoning by-laws: Neutral

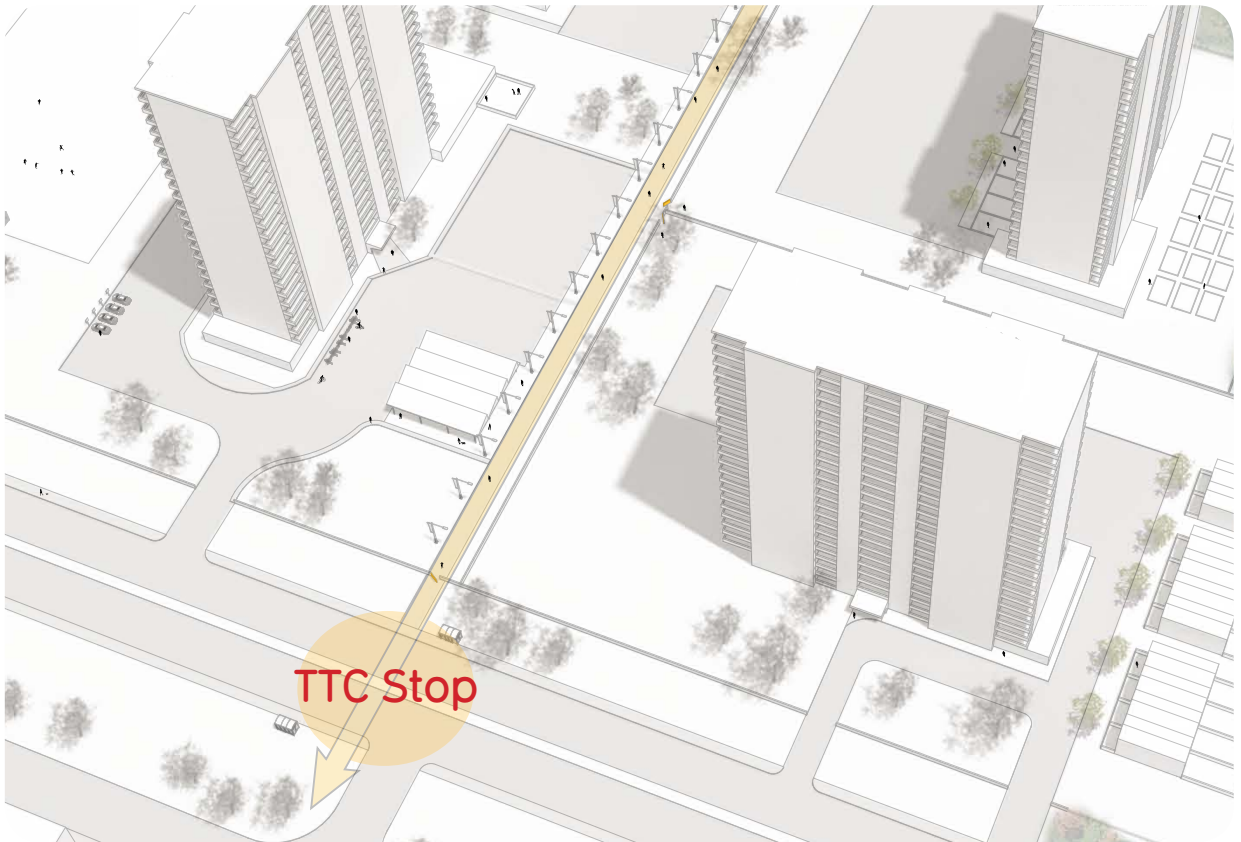
Adding pathways and gates to improve transit access would likely not require amendments to zoning by-laws or applications for zoning variances. Some site-specific zoning by-laws may trigger variances due to specific landscape and setback provisions.

Introducing a waiting area within an apartment property adjacent to a public transit stop may involve a reduction in parking which could be contrary to site specific zoning by-laws. The introduction of new uses, such as temporary vending on private property next to a transit stop, would likely require an amendment to the zoning by-law.

Other considerations

The coordination and cooperation of various property owners would be critical in improving access to transit stops. The City could serve as an agent in facilitating this cooperation.

Direct improvements to public space would require investment by the city and its agencies, such as the TTC. New special 'Apartment Improvement Areas', modelled on the City's various Business Improvement Areas, could be a mechanism for funding the integration of transit with apartment neighbourhoods.



Images:

Top Diagram: Path connecting apartment properties to TTC waiting area

Left: Covered transit waiting area integrated into apartment district, Stockholm, Sweden, 2009

Right: Light rail integrated into apartment district, Amsterdam, Netherlands, 2009

3.3 Improve Cycling Networks and Infrastructure

Context

Apartment neighbourhoods have the potential to integrate cycling as a convenient and prevalent mode of transportation. Residents who now cycle in apartment neighbourhoods often feel unsafe using arterial roadways, and at times must resort to using sidewalks [Hess and Farrow, 2010]. Lack of convenient bicycle storage and fear of bicycle theft have been indicated as further deterrents to cycling.

Solution

Apartment neighbourhoods often contain informal cycling networks made up of ad hoc trails in local parks and ravines, informal routes across apartment properties and parking lots, and sidewalks and shoulders along local and arterial roadways.

These networks could be formalized by introducing dedicated cycling or multi-use paths which could provide convenient and safe access to neighbourhood destinations such as schools and shops, and to other neighbourhoods and city districts. The ample open spaces associated with apartment neighbourhoods could provide ideal areas to expand and formalize future cycle networks.

In addition, safe, long term bicycle storage, such as bike locker sheds on parking lots, could be added to apartment properties to make biking more secure and convenient.

Likewise, apartment neighbourhoods may offer suitable locations for bicycle share stations, similar to the *Bixi* system found in downtown Toronto.

Making it Happen

The following describes the extent to which the current planning framework in apartment neighbourhoods would be supportive, limiting, or neutral, should a community or building owner propose solutions such as these at a particular site.

Official Plan: Supportive

These solutions would generally be supported by current Official Plan policies

Zoning by-laws: Neutral

Some variance from current zoning by-laws could be required if bike routes were to alter the site in a significant manner. However, routes would be generally permitted, as they involve no construction of new buildings or structures.

In the case of bicycle storage, such a use had not been commonly anticipated in the site-specific by-laws for older apartment sites. As such, a zoning by-law amendment or variance may be required if the number parking spaces on the site are reduced.

Other considerations

Bicycle network infrastructure would involve both public and private investment. Financial resources dedicated for such initiatives would need to be identified.

By addressing right-of-way and access concerns, bike route networks could expand to extend across apartment sites, commercial sites, and connect informal routes on the side streets. Forming these networks would involve the co-operation of both City departments and landowners. Extending bike networks to ravines and parks would involve the City's Parks and Recreation Department and the Toronto and Region Conservation Authority.

Providing structures dedicated to bicycle storage could require site plan approval.



Images:

Top, left: Cycle paths alongside roadway, Amsterdam, Netherlands, 2009

Top, right: Cycle path within apartment neighbourhood, Amsterdam, Netherlands, 2009

Bottom, left: Cycle path within apartment neighbourhood, Berlin, Germany, 2006

Bottom, right: Cycle Storage within apartment neighbourhood, Göteborg, Sweden, 2009

3.4 Improved Access to 'Green Fleet' Carshare Programs

Context

Beyond walking, cycling and transit, residents of apartment neighbourhoods often still rely on driving to get to work, for regional travel, and for some local trips. With the costs of car ownership rising, and many residents only requiring auto use for a short-term basis, alternatives to full car ownership are becoming more attractive.

Solution

Apartment neighbourhoods may be suited to support a carshare service. Such services could allow residents access to cars without the burden of full ownership. A carshare program operating from an apartment building site could utilize surplus visitor parking spaces, and include more sustainable models of auto transport such as a green fleet of electric or hybrid cars.

Making it Happen

The following describes the extent to which the current planning framework in apartment neighbourhoods would be supportive, limiting, or neutral, should a community or building owner propose solutions such as these at a particular site.

Official Plan: Neutral

The current Official Plan recognizes the value of alternatives to private owner-operator automobile transportation, such as carpooling. The current OP however, was established before carshare programs became widespread. The Plan provides no policy direction specifically about car sharing in apartment neighbourhoods.

Zoning by-laws: Limiting

Zoning by-laws establish the number of parking spaces required at each apartment site. Replacing tenant or visitor parking spaces with carshare spaces could reduce the number of spaces below what is required by the site's zoning. Even if an apartment site has spaces in surplus, a carshare program may require an amendment to the zoning bylaw.



Images:

Top: Carshare station in apartment neighbourhood, Amsterdam, Netherlands, 2009

Opposite: Parking lot, typical apartment site, Toronto, 2010

3.5 Reduce Parking Requirements to Allow Conversion to Alternative Uses

Context

Apartment neighbourhoods built in the 1960s and 1970s were designed to include a generous supply of parking with an expectation that residents would use cars for much of their daily needs. Surface parking lots covering 30% to 60% of the total site area were not uncommon. Today, however, as more residents walk or take transit, the historic supply of surface parking is no longer needed. Without the same parking needs, apartment neighbourhoods may consider other uses for paved areas originally set aside for car parking.

Solution

Parts of parking lots could be reclaimed for new community or commercial uses by reducing the number parking spaces to reflect current needs and parking supply standards. Surplus parking spaces could be used for a range of uses, including carshare programs (as noted above), community gathering spaces, children's play and sports areas, or other uses discussed elsewhere in this report.

Making it Happen

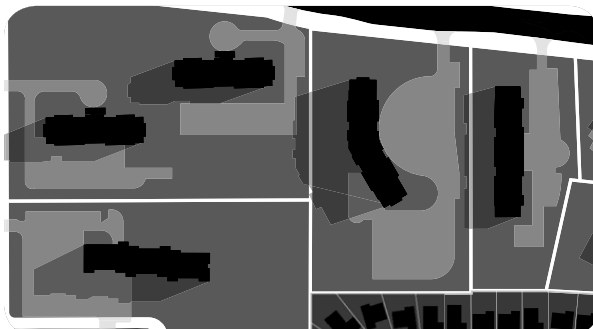
The following describes the extent to which the current planning framework in apartment neighbourhoods would be supportive, limiting, or neutral, should a community or building owner propose solutions such as these at a particular site.

Official Plan: Supportive

These solutions would generally be supported by current Official Plan policies.

Zoning by-laws: Neutral

Parking requirements are typically set out in site-specific zoning by-laws for each site. Small reductions in these parking requirements could be considered as a minor variance from the established zoning by-law for the site, while larger reductions could require a zoning by-law amendment. In either case, a parking study could be required to support the application.



Surface Parking lots
often more than 40%
of site area

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