

2. Transport and land use

Land use features almost equally with transport as a topic of the guidelines set out here. How land is used is a key factor in how people and freight move. The more settlement spreads out, the more cars are likely to be used, for two reasons. The first, which applies to most communities, is that when settlements are spread out distances can be too far for practicable access other than by motorized means. The second is that low densities in larger urban areas make transit alternatives financially difficult to sustain.

Also in play are two processes whereby car use reinforces itself. One is the fundamental synergy between the automobile and low-density development. The car makes low-density development possible; otherwise there would be no ready access to the development. Once constructed, such development encourages car use that in turn reinforces the place of the car in society, making more low-density development feasible and likely. The second mechanism of self-reinforcement arises from the way the car takes over the landscape. Where there is much car traffic, travel by foot or bicycle—and even access to transit—can be challenging, less secure, and less enjoyable, thereby reinforcing further use of the car and further provision for the car, reducing more the likelihood of travel by foot, bicycle or transit.

Another relevant aspect of land use concerns smaller communities and the extent to which they have the facilities and resources needed for everyday living. Without them, journeys must be made to what are often quite distant communities, usually by car. For the present guidelines, the most relevant facilities and resources are schools. Elementary and secondary schools are gradually being centralized in many parts of Canada,¹² meaning that on average young people make longer journeys to and from school, and are more likely to travel by car or school bus than by foot or bicycle.

It's not only schools that have been centralized. Small local stores have been replaced by stores in malls, usually at a greater distance from customers, or by larger stores serving a broader catchment area. Children, who might once have learned much from running errands to a local store, now find themselves accompanying parents on long shopping trips by car. Access by foot, bicycle, or transit to malls and larger stores is often challenging.

Density may be the most important factor influencing car use, but there are others. How land uses are mixed can be important. If schools, workplaces, and stores are near residences, the result may be more walking and wheeling, other things being equal.¹³ If uses are clustered into nodes, transit may be viable along connecting corridors, even though overall urban densities are low.

As well as more general factors influencing overall use of the different modes, there can be local features that help favour one mode over another. An example is provision of sidewalks and bicycle lanes and paths. Another is the particular positioning of schools

and community facilities, which can be on main roads to facilitate access by motorized vehicles, or within neighbourhoods to facilitate access by pedestrians and cyclists.

In summary, land use and transport affect each other powerfully. It makes sense to have guidelines that address both factors.