

Getting Safety on Track

*Expanding Edmonton's LRT Design Guidelines to Improve
Women's Perceptions of Safety at Transit Stations*

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EXECUTIVE SUMMARY

People base their travel choices on their perceptions of personal safety in environments such as transit stations. Women are more likely to perceive public spaces as threatening and they use public transit more than men, to access fundamental needs such as employment, childcare, education and healthcare. Effective design can reduce crime and fear by creating defensible spaces that assert ownership, and offer opportunities for natural surveillance. This is the underlying concept of Crime Prevention Through Environmental Design (CPTED).

Creating transit stations that make users feel safe could potentially increase use of public transit among women, particularly at off-peak hours. Identifying elements that affect women's feelings of safety in suburban (non-central) surface LRT stations in Edmonton can guide future station development, and reduce experiences of fear in existing stations for a safer and more inclusive transit system.

The aim of this study is to determine how the City of Edmonton can better address women's safety in suburban (non-central) surface LRT stations through expanding their existing design guidelines to incorporate both CPTED guidelines as well as additional elements addressed by the safety audit checklist provided in the City of Edmonton's *Safety Audit Guide for Crime Prevention* (2000). The main questions guiding research are:

1. In what ways do the City of Edmonton's existing *LRT Design Guidelines* for Edmonton Transit System (ETS) incorporate CPTED guidelines, if at all?
2. What are the similarities and differences between the CPTED guidelines and the criteria that enhance safety in public spaces as noted in the *Safety Audit Guide for Crime Prevention* developed by the City of Edmonton, which is based on the Metropolitan Action Committee on Violence Against Women and Children (METRAC) *Women's Safety Audit Guide*?
3. How can the City of Edmonton's *LRT Design Guidelines* be expanded to enhance women's safety at above-ground suburban light-rail transit stations?

The research involved a review of the published literature on gendered fear of crime in public spaces, the relationship of the built environment to perceptions of safety, and situational crime prevention. This was followed by a document review of the City of Edmonton's *LRT Design Guidelines* for Edmonton Transit System (ETS) (2011), as well as CPTED guidelines from the existing literature. A safety audit was undertaken using the a slightly modified version of the *Checklist of Safety Audit for Crime Prevention* in the City of Edmonton's *Safety Audit Guide for Crime Prevention* (2000).

The key CPTED principles of natural surveillance, territorial definition, compatible building placement, and building form formed the broad framework under which the specific concerns addressed by the safety audit were classified. The findings of the safety audits conducted at Clareview and Century Park stations showed that there had been some, but not full, integration of CPTED principles in the design and upkeep of these stations.

The newer Century Park station benefitted from the transparency resulting from the extensive use of glass in the building, and offered better natural surveillance opportunities than the older Clareview station which used concrete and had no windows on the lower level. Century Park was also noticeably better-maintained than Clareview, where signs of vandalism, disrepair, and poor maintenance contributed to feelings of insecurity. Both stations were fairly isolated at night, due to lack of activity-generating land uses in the immediate area of the station. The findings of the safety audit emphasize the importance of natural surveillance and territorial definition (maintenance and defensibility of space) in creating feelings of safety in transit users.

Recommendations were formulated based on the findings of the safety audits:

Conduct safety audits at all LRT stations. The results of these safety audits could then inform the design of future LRT stations in the expanding network, and provide a CPTED framework that is better tailored to the specific opportunities and challenges of the Edmonton transit system.

Expand safety audits to include other 'vulnerable' groups, such as children, those with disabilities, and senior citizens. This would help to broaden the CPTED framework that

informs LRT station design by incorporating the specific concerns of these groups, and lead to more inclusive design.

Emphasize transparency in station design. Natural surveillance is strongly emphasized in the CPTED literature as one of the key elements in reducing both crime and the fear of crime. The use of glass at Century Park station greatly improved levels of natural surveillance, and contributed to feelings of security relative to Clareview station which used concrete and had no windows on the lower level.

Integrate a variety of land uses into and immediately around the station. Most of the surrounding land uses of the two stations such as retail/commercial, residential or services were too far removed to be within a short enough eye or ear distance in case a passenger was in distress at the station. In order to attract increased activity and traffic to LRT stations and their immediate vicinity during operating hours, compatible uses such as retail and services could be integrated into the station or into the parking lots by the stations. This would serve the dual purposes of increasing natural surveillance and providing convenient access to retail or services to transit users.

Install real-time displays of train arrival and other information at all LRT stations. Older existing stations should be retrofitted with this technology, and future stations should continue to use these displays as well. This is a relatively inexpensive, yet highly visible way to improve feelings of security and satisfaction among LRT passengers.

Carry out regular and adequate maintenance and repair of all LRT stations, particularly those in less central locations. While proper care of the surroundings is important at all stations, disrepair, poor maintenance, and signs of vandalism can have a greater effect on passengers in more isolated stations in non-central areas. Clean stations in good condition can contribute greatly to feelings of security even in isolated areas as they indicate that due care and attention are being paid to these spaces.

Efforts to improve perceptions of transit safety, particularly in light of recent highly-publicized transit-related violent crimes, could move the city closer to achieving its goal of increased transit ridership.