

# **Safe, Secure, and Accessible: A gender-inclusive approach to the provision of pedestrian infrastructure**



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# Background and Need

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- ▶ Similar to collisions, assault and harassment can result in injury and have psychological implications
- ▶ Personal security issues also influence mobility
- ▶ Gender-based differences in the value of personal security, level of fear, and travel response to that fear

**A gender-inclusive approach to the provision of pedestrian infrastructure would incorporate crime prevention through environmental design principles as a subset of road safety and accessibility.**

# Introduction

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- ▶ **Gender-related differences in personal security in transportation and strategies for addressing personal security issues using crime prevention through environmental design (CPTED)**
- ▶ **Practical reference/site assessment tool that outlines common environmental design issues associated with personal security and common treatments**
- ▶ **Provision of pedestrian infrastructure**
- ▶ **Apply road safety management approach to personal security issues**
- ▶ **Literature review**

# Outline

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- ▶ **Gender-based differences in personal security in transportation**
- ▶ **Crime Prevention Through Environmental Design (CPTED)**
- ▶ **Site assessment tool**
- ▶ **Conclusions and recommendations**

# **Gender-based differences in personal security in transportation**

25th CARSP Conference - May 27 to 30, Ottawa, ON

# Value of personal security

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- ▶ Women place greater value on personal security in transport than men and report greater fear of assault or harassment while traveling
- ▶ Proportion of women to report fear associated with traveling as a pedestrian is about **double** that of men (usually at night, walking to/from or waiting for transit)
- ▶ Why?
  - ▶ Reduced physical ability to defend themselves
  - ▶ Parental advice and social cautions
  - ▶ Additional concern for their children who often accompany them
  - ▶ Persistent sexual harassment that women face while traveling

# Magnitude of the problem

- ▶ Greater fear among women – but fewer police-reported crimes => Is their fear irrational?
- ▶ Frequent and unreported incidents: verbal assault, catcalls, stalking, following, ogling, threat, indecent exposure, sexual assault



# Mobility impacts

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- ▶ **Women will limit their activities and adopt precautionary measures and strategies:**
  - ▶ Not travel at night
  - ▶ Avoid certain places or certain modes of transportation
  - ▶ Only use certain modes of transportation at certain times of the day or if traveling accompanied
- ▶ **Can result in reduced participation in socioeconomic activities**
- ▶ **2<sup>nd</sup> Pillar of the UN Decade of Action calls for safer roads and mobility for all road users**



# **Crime Prevention Through Environmental Design (CPTED)**

# CPTED - 1

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- ▶ **Manipulate the built environment to alter human behaviour and reduce crime and fear of crime**
- ▶ **Natural surveillance**
- ▶ **Natural access control**
- ▶ **Territorial reinforcement**
- ▶ **Pedestrian facilities: streets, alleys, sidewalks, pathways, grade-separated pedestrian crossing facilities, transit stops, transit stations, indoor parking garages, surface parking lots, parks, plazas – in residential, commercial, industrial, and mixed land-use areas**

# CPTED - 2

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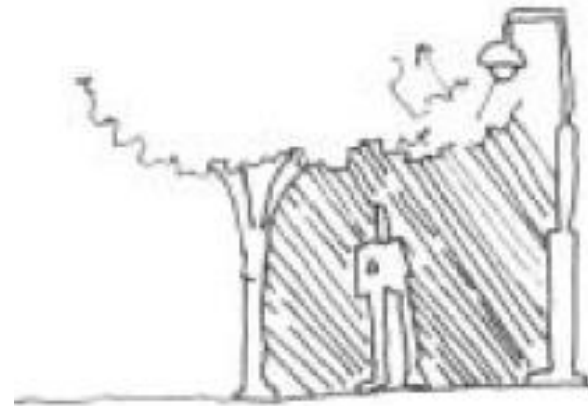
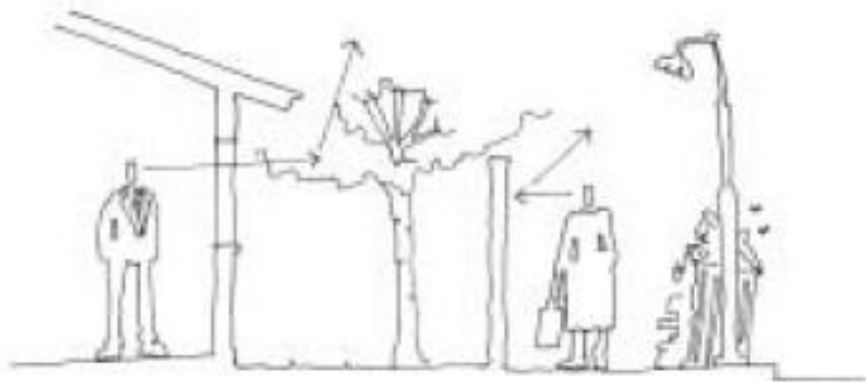
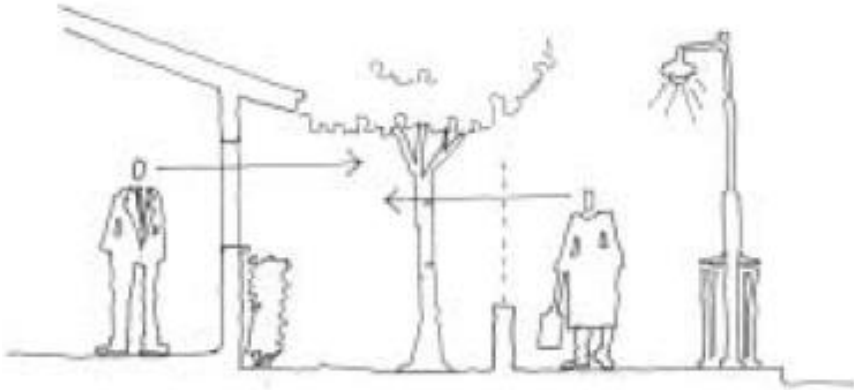
## Provide

- ▶ Clear sightlines
- ▶ Illumination
- ▶ Mixed land-use
- ▶ Good maintenance and management
- ▶ Signage and information
- ▶ Safe and accessible designs

## Reduce

- ▶ Predictable routes
- ▶ Entrapment spots
- ▶ Isolated areas

# Clear sightlines and illumination



# Safe and accessible

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- ▶ Encourages use => promotes natural surveillance
- ▶ Universal design
- ▶ Crosswalks: pavement markings, audible signals, tactile markings, countdown signals, curb ramps
- ▶ Sidewalks: wide, clear of obstructions
- ▶ Parking lots: designated stalls
- ▶ Transit: request-stop programs

# Entrapment spots and isolated areas

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- ▶ **Small, confined and isolated areas that allow offenders to hide, ambush, and trap victims**
- ▶ **Alcoves, dead end alleys, corners, vegetation that creates hiding spaces, stairwells in parking garages, recessed entrances**
- ▶ **Transparent material (bus shelters)**
- ▶ **Isolated => lack of natural surveillance**
- ▶ **Buildings overlook parking lots, double frontage, panic buttons, CCTV, intercoms (women prefer human interventions)**

# Site Assessment Tool

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# Security Audit (or “Women’s Safety Audit”)

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- ▶ Conducted across the world - often government-community partnerships
- ▶ First developed in 1989 in Toronto by METRAC
- ▶ Identify aspects of the built environment that may contribute to crime and fear, develop solutions, develop implementation plan
- ▶ View the site through a personal security lens => may require new training
- ▶ Multidisciplinary collaboration
- ▶ Potential to identify sites through assault and harassment report analysis



# Site Assessment Tool

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- ▶ **Identifies common issues and potential treatments by CPTED component:**
  - ▶ **Sightlines**
  - ▶ **Illumination**
  - ▶ **Predictable routes**
  - ▶ **Entrapment spots**
  - ▶ **Isolation**
  - ▶ **Land-use**
  - ▶ **Maintenance and management**
  - ▶ **Signage and information**
  - ▶ **Safety and accessibility**

## **SIGHTLINES**

### **Issues**

- Sharp corners or sudden changes in grade
- Presence of sightline obstructions between interior and exterior spaces (fences, vegetation, poles, signs, lack of windows, small windows, poorly located windows, transit shelters, other structures, etc.)

### **Treatments**

- Install mirrors around sharp corners
- Clear vegetation
- Use transparent material for fences/shelters

## **ILLUMINATION**

### **Issues**

- Absent illumination
- Inadequate illumination (pedestrians unable to make eye contact from 15 metre distance)
- Uneven illumination (dark spots present)
- Improper intensity of illumination (too bright, not bright enough)
- Illumination not provided at pedestrian level (light standards are high)
- Light poles are not vandalism-resistant (uncaged)

### **Treatments**

- Add illumination
- Replace posts to height of pedestrian level

# Conclusions and Recommendations

# Road safety management approach applied to personal security

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- ▶ Use assault and harassment reports to target resources to specific locations (similar to a blackspot collision analysis)
- ▶ Conduct audits or in-service reviews at facilities identified with personal security issues (similar to a road safety audit or in-service road safety review)
- ▶ Use CPTED principles to identify personal security issues and treatments
- ▶ Work with a multidisciplinary team (transportation engineers and planners, community and women's groups, and police)
- ▶ Monitoring assault and harassment reports post audit/in-service review to the evaluate impact of the work

# Recommendations

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- ▶ **Develop guidelines and protocols for incorporating CPTED into pedestrian infrastructure design and for conducting security audits/in-service reviews**
- ▶ **Site assessment tool could be a starting point**
- ▶ **Address in general transport planning documents (e.g. master plans)**
- ▶ **Internal/external partnerships**
- ▶ **Community engagement and participation**
- ▶ **Capacity building for staff on women's issues in transportation, personal security, and CPTED**

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