Fatalities per Facility Type and VMT (2001 data)

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Fatalities per 100m VMT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interstate</td>
<td>0.59</td>
</tr>
<tr>
<td>Other arterials</td>
<td>0.97</td>
</tr>
<tr>
<td>Collector</td>
<td>0.73</td>
</tr>
<tr>
<td>Local</td>
<td>1.34</td>
</tr>
</tbody>
</table>
Fire vs. Vehicle Injuries and Fatalities

<table>
<thead>
<tr>
<th>Incidents per Year</th>
<th>Fatalities</th>
<th>Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire</td>
<td>2,596.00</td>
<td>43,560.00</td>
</tr>
<tr>
<td>Vehicle</td>
<td>3,032,672.00</td>
<td>16,400.00</td>
</tr>
</tbody>
</table>
Residential Street Typology and Injury Accident Frequency

Accidents excluded

1. **Road conditions** that were wet, icy or snow covered
2. **Substance abuse** - Any notation of the driver being impaired or suspicion of being under the influence of any substance.
3. **Traffic volume** - accidents which occurred on any street other than a “local”. A local street has less than 2,500 Average Daily Traffic (ADT).

Other criteria were that the accident must include at least one motorized vehicle and the accident produced a physical injury.
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Normative Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Street Curves</td>
<td>Degree of curvature</td>
</tr>
<tr>
<td>2 Street width (curb face)</td>
<td>In 2’ (60 cm) increments</td>
</tr>
<tr>
<td>3 Distance to nearest curb-cut</td>
<td>&lt;20’, 21’-50’ or &gt;50’</td>
</tr>
<tr>
<td>4 Curb type</td>
<td>modified, 6” (15 cm) vertical or none</td>
</tr>
<tr>
<td>5 Tree density</td>
<td>Trees per 100 feet (28m) within 200 feet (55m) of the accident site</td>
</tr>
<tr>
<td>6 Traffic control</td>
<td>device distance from accident</td>
</tr>
<tr>
<td></td>
<td>&lt;20’, 21-50’, 51-100’ or &gt;100’</td>
</tr>
<tr>
<td></td>
<td>&lt;5.5m, 5.8-13.8m, 14-55m or &gt;55m</td>
</tr>
<tr>
<td>7 ADT</td>
<td>Ave. annual vehicles per day</td>
</tr>
<tr>
<td>8 Sight distance</td>
<td>Clear or obstructed view</td>
</tr>
<tr>
<td>9 Parking Density</td>
<td>Vehicles per 100 feet (28m) parked within 200 feet (55m) of the accident site.</td>
</tr>
<tr>
<td>10 VMT</td>
<td>Vehicle miles traveled</td>
</tr>
</tbody>
</table>
485% Increase In Injury Accidents
Impact Speed vs. Pedestrian Injury (impact only)

Abbreviated Injury Severity

AIS Severity (6=fatal)

Abbreviated Injury Severity
1 Minor Superficial abrasion or laceration of skin; digit sprain; first-degree burn; head trauma with headache or dizziness (no other neurological signs).

2 Moderate Major abrasion or laceration of skin; cerebral concussion (unconscious less than 15 minutes); finger or toe crush/amputation; closed pelvic fracture with or without dislocation.

3 Serious Major nerve laceration; multiple rib fracture (but without flail chest); abdominal organ contusion; hand, foot, or arm crush/amputation.

4 Severe Spleen rupture; leg crush; chest-wall perforation; cerebral concussion with other neurological signs (unconscious less than 24 hours).

5 Critical Spinal cord injury (with cord transection); extensive second- or third-degree burns; cerebral concussion with severe neurological signs (unconscious more than 24 hours).

6 Fatal Injuries which although not fatal within the first 30 days after an accident, ultimately result in death.

36 mph; $3,000,000
1 Minor Superficial abrasion or laceration of skin; digit sprain; first-degree burn; head trauma with headache or dizziness (no other neurological signs).

2 Moderate Major abrasion or laceration of skin; cerebral concussion (unconscious less than 15 minutes); finger or toe crush/amputation; closed pelvic fracture with or without dislocation.

3 Serious Major nerve laceration; multiple rib fracture (but without flail chest); abdominal organ contusion; hand, foot, or arm crush/amputation.

4 Severe Spleen rupture; leg crush; chest-wall perforation; cerebral concussion with other neurological signs (unconscious less than 24 hours).

5 Critical Spinal cord injury (with cord transection); extensive second-or third-degree burns; cerebral concussion with severe neurological signs (unconscious more than 24 hours).

6 Fatal Injuries which although not fatal within the first 30 days after an accident, ultimately result in death.

33 mph; $2,287,500
1 Minor Superficial abrasion or laceration of skin; digit sprain; first-degree burn; head trauma with headache or dizziness (no other neurological signs).

2 Moderate Major abrasion or laceration of skin; cerebral concussion (unconscious less than 15 minutes); finger or toe crush/amputation; closed pelvic fracture with or without dislocation.

3 Serious Major nerve laceration; multiple rib fracture (but without flail chest); abdominal organ contusion; hand, foot, or arm crush/amputation.

6 Fatal Injuries which although not fatal within the first 30 days after an accident, ultimately result in death.

5 Critical Spinal cord injury (with cord transection); extensive second- or third-degree burns; cerebral concussion with severe neurological signs (unconscious more than 24 hours).

28 mph; $562,500

4 Severe Spleen rupture; leg crush; chest-wall perforation; cerebral concussion with other neurological signs (unconscious less than 24 hours).
1 Minor Superficial abrasion or laceration of skin; digit sprain; first-degree burn; head trauma with headache or dizziness (no other neurological signs).

2 Moderate Major abrasion or laceration of skin; cerebral concussion (unconscious less than 15 minutes); finger or toe crush/amputation; closed pelvic fracture with or without dislocation.

   26 mph; $172,500

3 Serious Major nerve laceration; multiple rib fracture (but without flail chest); abdominal organ contusion; hand, foot, or arm crush/amputation.

6 Fatal Injuries which although not fatal within the first 30 days after an accident, ultimately result in death.

5 Critical Spinal cord injury (with cord transection); extensive second- or third-degree burns; cerebral concussion with severe neurological signs (unconscious more than 24 hours).

4 Severe Spleen rupture; leg crush; chest-wall perforation; cerebral concussion with other neurological signs (unconscious less than 24 hours).
1 Minor Superficial abrasion or laceration of skin; digit sprain; first-degree burn; head trauma with headache or dizziness (no other neurological signs).

20 mph; $46,500

2 Moderate Major abrasion or laceration of skin; cerebral concussion (unconscious less than 15 minutes); finger or toe crush/amputation; closed pelvic fracture with or without dislocation.

3 Serious Major nerve laceration; multiple rib fracture (but without flail chest); abdominal organ contusion; hand, foot, or arm crush/amputation.

5 Critical Spinal cord injury (with cord transection); extensive second- or third-degree burns; cerebral concussion with severe neurological signs (unconscious more than 24 hours).

4 Severe Spleen rupture; leg crush; chest-wall perforation; cerebral concussion with other neurological signs (unconscious less than 24 hours).

6 Fatal Injuries which although not fatal within the first 30 days after an accident, ultimately result in death.
16 mph; $6,000

1 Minor Superficial abrasion or laceration of skin; digit sprain; first-degree burn; head trauma with headache or dizziness (no other neurological signs).

2 Moderate Major abrasion or laceration of skin; cerebral concussion (unconscious less than 15 minutes); finger or toe crush/amputation; closed pelvic fracture with or without dislocation.

3 Serious Major nerve laceration; multiple rib fracture (but without flail chest); abdominal organ contusion; hand, foot, or arm crush/amputation.

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4 Severe Spleen rupture; leg crush; chest-wall perforation; cerebral concussion with other neurological signs (unconscious less than 24 hours).
Spatial Definition by Height-to-Width Ratio

3:1
2:1
1.5:1

The best for thoroughfares

1:1
The best for squares

1:6
The perceivable maximum
Figure 5.51. Speed versus Pavement Width and Pavement Width Plus Setbacks.

ACCIDENT SEVERITY AND INJURY
Must be reduced by controlling Vehicular speed.
FIRE OPERATIONS
Parking Density MUST be evaluated
Figure 2. Average Speed vs. On-Street Parking Density

2.4 7.6 (per 500' block)
24' wide Street Analysis
Exceeding the Uniform Fire Code

The wheels do not leave the pavement. The green line represents the boundary of the body of the ladder truck.
Mid-Project Northbound, left turn

1. All clear

Mid-Project Southbound

1. All clear. Northbound also clear.