

# CIAC Road Types & Cycling Infrastructure

**Note:** these are guidelines only and not based on urban road design criteria or municipal designations. Refer to the [Urban Street Design Guide](#) for more information on current road design practices.

## Road types

**Grade 1:** Quiet residential road, ex cul-de-sac, crescent with very limited traffic.



**Grade 2:** Typical residential road: no centre line, parked cars, often only one driving lane, low traffic volume and low traffic speed typically.



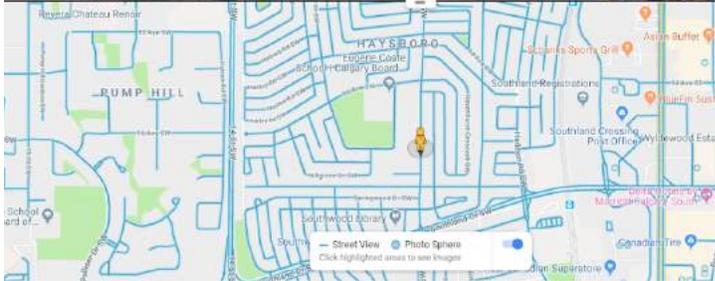
**Grade 3:** Residential “feeder” road: parked cars do not interfere with driving lane in each direction, more traffic, but this road does not act as a “cut through” so traffic volume and speed usually remains reasonably low.



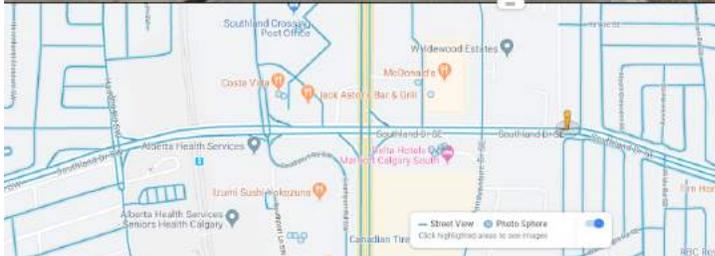
**Grade 4:** Residential “collector” road: often has a centre line, parked cars do not interfere with driving lane, often used as a “cut through” or through road through an area, may or may not have cycling route associations (signs, sharrows, etc) but is common for cyclists to use, speeding may be a common concern.



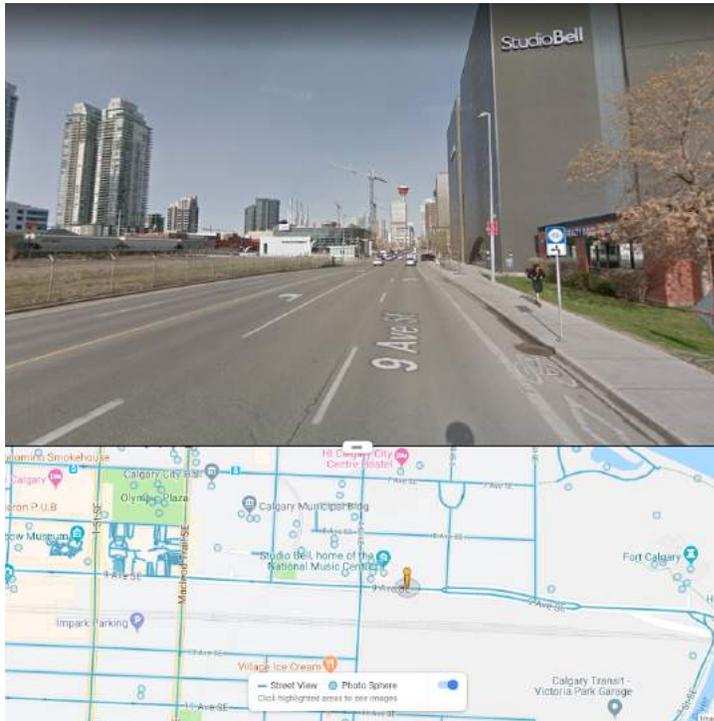
**Grade 5:** Residential “arterial” road: may or may not have parked cars but is definitely a main road used by a higher volume of autos, often 2 lanes in each direction and though the speed limit is still low (50km/h or less), speeding is a very common concern; cyclists may avoid this road unless they’re what would be considered “dedicated cyclists.”



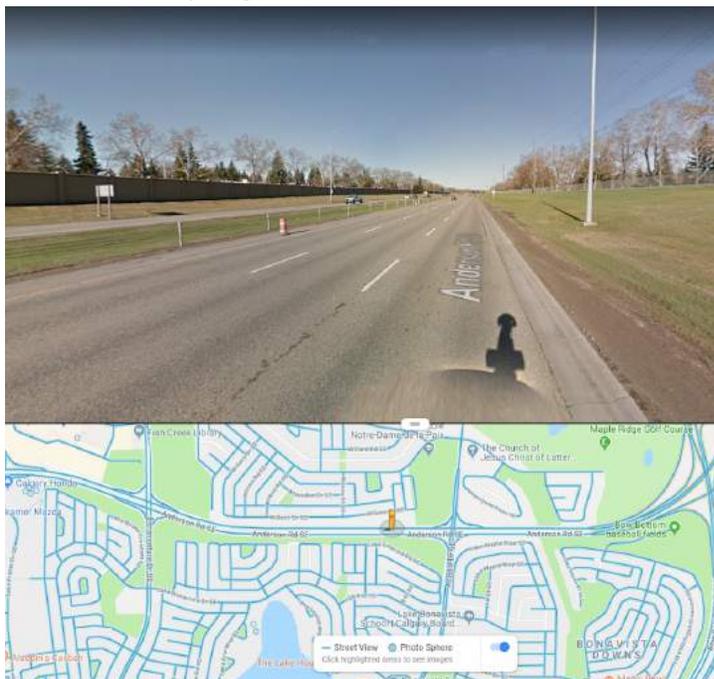
**Grade 6:** Urban arterial road: comes in a number of flavours, but typical road has little to no parking, a speed limit up to 60km/h, moderately heavy traffic all the time; few cyclists will use this road unless there’s no other options, or it has a painted bike lane or separated cycletrack.



**Grade 7:** “Downtown” arterial road: in a dense urban area, such as dense commercial or residential areas with lots of high rise buildings; traffic is always or nearly always heavy, often where the cycletracks are located because few cyclists are comfortable riding on the road with traffic. However, speed limits are typically 60km/h or less.



**Grade 8:** Heavy arterial road: speed limit up to 80km/h, volume is moderate or heavy all the time; likely does not have cycling infrastructure.



**Grade 9:** Highway: divided or undivided with speed limits greater than 80km/h and typically high volume of traffic. Cycling may be prohibited on these roads within city/town limits.



(Cycling Infrastructure next page)

## Cycling Infrastructure

The presence of cycling infrastructure does not influence the classification of a road as the infrastructure itself may be separate. It is possible to find a Grade 4 road with a separated bike lane (cycletrack), a Grade 7 road with a painted bike lane and a Grade 5 with “sharrows.” Depending on where your course takes place, introducing the different types of infrastructure may vary. Novice participants are unlikely to experience bike infrastructure beyond a signed/designated cycling route (signs only); Intermediate participants may experience sharrows or painted bike lanes but are unlikely to experience cycletracks; Advanced participants should experience as many types of infrastructure as possible.

### Infrastructure types

**Signed/designated bike route:** typically indicated with signs showing direction of route only. This example is a Grade 2 road.



**Sharrows:** may include signs but always has painted markings on the road. This example, which includes a sign and a painted marking, is a Grade 4 road.



**Bike lanes:** painted lines and diamond symbols on the road, usually accompanied by signs. This example, which has a sign as well as paint, is a Grade 4 road.



**Separated bike lanes/barrier-protected bike lanes/cycletracks:** the exact wording may vary as does the look, but typically these are bike lanes separated by some type of barrier from auto traffic. Coloured paint (green or blue are typical) at crossing points is often added. This example, which becomes a painted bike lane after the traffic light, is a Grade 6 road.



For more information on bike lane design, see the [Urban Bikeway Design Guide](#)