



## Grade-separated crossing

### Definition

Structure built to provide a pedestrian way across high-speed, high volume roadways by means of either an overpass (bridge) or underpass (tunnel).

### Objective

To provide complete separation of pedestrians and cyclists from motor vehicle traffic.

### Advantage

Improves pedestrian and bicyclist safety by eliminating conflicts with vehicular traffic.

Eliminates the potential for vehicular delay.

### Challenge

Some travelers may still try to cross the roadway at-grade.

High design, materials, and construction costs; in addition, grade separations often requires extensive ROW acquisition and modifications to adjacent properties.

May raise security concerns/issues.

### Resources

Pedestrian and Bicycle Information Center — Pedestrian Overpasses/ Underpasses <http://www.walkinginfo.org/engineering/crossings-overpasses.cfm>.

Pedestrian and Bicycle Information Center— Pedestrian Grade Separation Locations: A Priority Ranking System <http://www.walkinginfo.org/library/details.cfm?id=2428>.

PEDSAFE Case Studies: Medians—Overpass/ Underpass [http://www.walkinginfo.org/pedsafe/case\\_studies2.cfm?op=C&subop=a&CM\\_NUM=6](http://www.walkinginfo.org/pedsafe/case_studies2.cfm?op=C&subop=a&CM_NUM=6).

FHWA Pedestrian Safety Improvements — Countermeasures (Overpasses/ Underpasses) <http://safety.fhwa.dot.gov/saferjourney/library/countermeasures/07.htm>.

FHWA Designing Sidewalks and Trails for Access: Part II Best Practices Design Guide [http://www.fhwa.dot.gov/environment/bicycle\\_pedestrian/publications/sidewalks/chap4b.cfm#gra2](http://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/sidewalks/chap4b.cfm#gra2) (Section 4.4.10: Grade-Separated Crossings).

FHWA: Signalized Intersections: Informational Guide <http://www.fhwa.dot.gov/publications/research/safety/04091/09.cfm> (Chapter 9.1.6—Grade-Separate Pedestrian Movements).

Safe Routes to School Guide—Pedestrian and Bicycle Bridges and Tunnels [http://guide.saferoutesinfo.org/engineering/pedestrian\\_and\\_bicycle\\_bridges\\_and\\_tunnels.cfm](http://guide.saferoutesinfo.org/engineering/pedestrian_and_bicycle_bridges_and_tunnels.cfm).



Images (clockwise from main image):

Example of a grade-separated crossing.  
Source: Dan Burden, pedbikeimages.org.

Additional examples:  
Sources: Dan Burden, pedbikeimages.org; Kathy Eisenman, pedbikeimages.org; Laura Sandt, pedbikeimages.org; Julia Diana, pedbikeimages.org; Dan Burden, pedbikeimages.org; Dan Burden, pedbikeimages.org.