

PEDESTRIAN ACCESS

GOAL

Promote walkable communities by providing sidewalk facilities within the roadway right of way.

CREDIT REQUIREMENTS

Achieve Credit AE-3 Context Sensitive Solutions (CSS) and describe the need, purpose and appropriateness for planned, new, or upgraded pedestrian facilities in the submitted documentation for Credit AE-3. The CSS document should clearly note whether pedestrian facilities or improvements are required or have otherwise been requested by the public. Table AE-5.1 shows the points available for this credit.

Table AE-5.1: Available Points for Credit AE-5

Points	Requirements
1	Implement new (or improve existing) operations or technologies for pedestrian facilities. This includes added signage or minor access improvements for pedestrians, such as signalized intersections or crosswalks, shelters, and wheelchair ramps.
2	Implement physical or constructed changes to the roadway structure, dimensions or form that provide pedestrian access within the ROW, such as a sidewalk, raised crosswalk, bulb-out or pedestrian bridge structure.

Details

Pedestrian is defined as a person whose main mode of transportation is walking, including disabled individuals that need assistance devices for personal travel and mobility.

Sidewalk is defined as a paved surface provided specifically for pedestrian travel that is separate from the roadway and located within the roadway Right-of-Way.

Shared-use pathway is defined as a multi-use pathway for all non motorized users including pedestrians and bicyclists. This may be located within a roadway Right-of-Way yet must be separated from the roadway and have wider widths than sidewalks.

Current facilities do not qualify for this credit without additional effort, such as upgrades, improvements or construction of new facilities. The attempt to provide pedestrian access must be deliberate and as a direct result of the project.

DOCUMENTATION

- Copy of the section that focuses on pedestrian facilities in the Credit AE-3: Context Sensitive Solutions documentation. This section should address:
 - a. Purpose and need for pedestrian access on the roadway project, including how it fits with existing land uses and/or existing General and Transportation Plans
 - b. Regulatory or jurisdictional standards addressed, if any
 - c. Results of public input on proposed pedestrian facilities, if any
 - d. Total cost associated with new or improved pedestrian facilities
 - e. Copy of the contract specifications and plans for proposed pedestrian facilities.



AE-5

1-2 POINTS

RELATED CREDITS

- ✓ AE-3 Context Sensitive Solutions
- ✓ AE-4 Traffic Emissions Reduction
- ✓ AE-6 Bicycle Access
- ✓ AE-7 Transit & HOV Access

SUSTAINABILITY COMPONENTS

- ✓ Equity
- ✓ Economy

BENEFITS

- ✓ Reduces Fossil Fuel Use
- ✓ Reduces Air Emissions
- ✓ Reduces Greenhouse Gases
- ✓ Improves Access
- ✓ Improves Mobility
- ✓ Improves Health & Safety
- ✓ Improves Local Economies

APPROACHES & STRATEGIES

- Include elements such as sidewalks or adjacent shared-use paths in designs when required by design standards, or community transportation plans, or by community request.
- Consider how a new or redesigned roadway will impact the existing or planned pedestrian networks and integrate design elements with other modal facilities (e.g. bicycle and transit) to mitigate overall impacts. This may mean providing connections or adaptability for future pathways, sidewalks, and crossings within the pedestrian network. Review local walking plans and maps of the existing pedestrian networks to understand how the roadway will interact with the existing and planned pedestrian and bicycle system. This may include shared-use paths or park plans.
- Include local pedestrian planners and advocates in advisory committees, project development or management teams, or decision-making committees as appropriate.
- Consult with planners and ADA advocates to understand how the project can support development of the pedestrian network to promote walkable communities.
- Design the roadway to accommodate existing new and planned pedestrian facilities.
- Upgrade or improve existing access points and sidewalks to meet the requirements of the Americans with Disabilities Act (ADA). Guidance on ADA transition plans is provided by the FHWA here: http://www.fhwa.dot.gov/civilrights/programs/ada_sect504qa.htm#q10
- Rely on the assessment of local planners and advocates where no existing pedestrian plan exists about how to integrate existing and future multimodal facilities into the project design. AASHTO provides helpful guidance in its *AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities*.

Mulry Square - New York City

In 2001 Mulry Square in New York City was improved to improve and enhance pedestrian mobility through the area. As shown in the figures below, the crosswalks were more clearly marked as well as sidewalks being renovated to provide a more safe interaction between pedestrian and vehicle traffic (CSS, 2005).

Figure AE-5.1 and AE-5.2 show the clear difference before and after the intersection improvements were made. The pedestrian facilities are clearly improved in order to promote safer travel to pedestrians and make traffic more aware of pedestrians in the vicinity.



Figure AE-5.1: Mulry Square Before Construction (Context Sensitive Solutions, 2005)



Figure AE-5.2 - Mulry Square After Construction (Context Sensitive Solutions, 2005)

POTENTIAL ISSUES

1. A number of aesthetic treatments to the roadway or thoroughfare may be considered “pedestrian” benefits, but those treatments are covered elsewhere in Greenroads and are not included in this credit. See AE-8 Scenic Views and AE-9 Cultural Outreach.
2. Major intersections could see an increase in pedestrian vehicle accidents.
3. Many rural areas do not have surrounding pedestrian infrastructure or master plans to support the addition of new pedestrian facilities. Short term and long term goals, objectives and general pedestrian strategy should be considered when accommodating pedestrians within these areas.

RESEARCH

The inclusion or improvement of a pedestrian facility can drastically improve not only the quality and comfort of how people travel, but can change the mode of transportation used. Several sustainability components can be addressed by the improvement of pedestrian facilities, including: ecology, equity, and economy.

Reduced Emissions

Improved access and dedicated pedestrian facilities can convince people to change their mode of travel to walking instead of driving their vehicles. With fewer cars driving, there will be an obvious decrease in the greenhouse gas emissions associated with fossil-fuel driven vehicles.

Improved Health & Safety and Improved Mobility & Access

A person’s transportation mode choice can be based around several different decisions. Several studies link the comfort and safety of the travel to the overall mode choice of a traveler (i.e. walking on a shoulder of a highway versus a sidewalk). Therefore an improvement of the safety of the current pedestrian facilities means that people will be more likely to travel on foot.

Designing facilities that are safe for pedestrians are of the utmost importance when considering pedestrian mobility. The main goal is to ensure the pedestrians have a means of travel that is separate from vehicle traffic to avoid any possible collisions. Typical design standards allow for timed crossing signals at cross walks, sidewalks that are elevated from the roadway, and other various methods. Raised sidewalks provide not only a slight barrier of separation, but also provide a slight comfort to the user that they are separated from traffic (Ewing & Dumbaugh,

2009). Other means of safe design include, increasing the distance between the stop line and cross walk at an intersection and putting up some sort of notification to drivers (signs, lights, etc.) that pedestrians are likely to be present in the area (Ewing & Dumbaugh, 2009).

Benefits of Active Transport

Increased pedestrian travel can also provide health benefits. A recent study compared the current state of travel and modeled a more sustainable type of travel using more walking and bicycles and reducing the amount of cars on the road. The study found the tendency for several chronic diseases could be reduced by having a higher population of travelers whom use walking or bicycles as their main mode of transportation (Woodcock et. al., 2009).

Considerations for Disabled Users

The goal of providing pedestrian facilities is to provide a means for everyone to travel, including people with special needs. Some improvements to sidewalks are mandated by the Americans with Disabilities Act (ADA) of 1990 and specific guidelines are available at: <http://www.access-board.gov/adaag/html/adaag.htm>. For transportation facilities this could include: sidewalks sloped for easy access or noise making devices installed at intersection crosswalks.

Boost Local Economies & Improve Mobility

The advent of new facilities on its own can also encourage travel throughout the area. This is simply based on increasing the overall pedestrian network throughout the area. With gaps in a pedestrian network, it can increase the distance a pedestrian is forced to travel, and can discourage them from using walking as a primary mode of transportation (Randall & Baetz, 2001).

GLOSSARY

ADA	Americans with Disabilities Act
Pedestrian	A person whom is traveling without the use of a mechanical device and main mode of transportation is walking.
Sidewalk	A surface provided specifically for pedestrian travel that is separate from the roadway

REFERENCES

- American Association of State Highway Transportation Officials. (2004). *AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities*. 1st ed. Washington, DC: AASHTO.
- Context Sensitive Solutions. (2005). New York City, Mulry Square. Accessed at: http://www.contextsensitivesolutions.org/content/case_studies/mulry-square
- Ewing, R., & Dumbaugh, E. (2009). The Built Environment and Traffic Safety: A Review of Empirical Evidence. *Journal of Planning Literature*, 23(4), 347-367. doi: 10.1177/0885412209335553.
- Randall, T. A., & Baetz, B. W. (2001). Evaluating Pedestrian Connectivity for Suburban Sustainability. *Journal of Urban Planning and Development*, 127(1), 1-15. doi: 10.1061/(ASCE)0733-9488(2001)127:1(1).
- Woodcock, J., Edwards, P., Tonne, C., Armstrong, B. G., Ashiru, O., Banister, D., et al. (2009). Public health benefits of strategies to reduce greenhouse-gas emissions: urban land transport. *Lancet*. 374(9705), 1930-1943.
- Zhou, H., Zhao, J., Hsu, P., & Rouse, J. (2008). Identify Factors Affecting Number of Students Walking or Biking to School. In *ASCE Conf. Proc.* (Vol. 330, p. 253). Chengdu, China: ASCE. doi: 10.1061/40996(330)253.