



## Transportation Management Training Companion Guide

**BEFORE** you watch the web training, answer the following questions:

1. What do you think are the components of green transportation management plan?
2. What do you currently have in place in your school or district?

**AFTER** you watch the web training, answer the following questions:

1. What additional aspects of transportation management did you learn during the training?
2. What will you do to begin to improve transportation management at your school or district?
3. What further information do you need to get started and where can you find it?

**Green Schools:** A green school creates a healthy environment that is conducive to learning while saving energy, resources and money.

**Transportation:** CO<sub>2</sub> emissions associated with student commuters, parent drop-off, and school buses is one of the largest factors in a school's carbon footprint, so a transportation management plan needs to include efforts to increase the number of children and staff who walk to school, carpool, use public transit or embrace alternative modes of transportation.

The goals of a transportation management plan are to:

- Reduce the school's carbon footprint
- Decrease automobile commuting
- Encourage staff and teachers to use public transportation
- Increase the number of staff members, teachers and students who walk or bike to school
- Encourage programs to stop bus idling

### **Recommended Assessments**

Gathering the answers to the preliminary assessment questions below can help you determine how far along your school or district is in implementing a transportation management plan. This is not an exhaustive list, but it does provide a good starting point.

#### **Transportation**

- Develop and administer a commuter survey (see below).
- How do faculty and staff get to work?
- Is there a carpool program for faculty, staff or parents to sign up with?
- Is there reserved parking for carpool, fuel efficient or alternative fuel vehicles?
- Do students ride public or private buses to school?
- Is there adequate bicycle parking for students, faculty, and staff?
- Is there a walk-to-school program?
- Are there showers and changing facilities for faculty and staff, as well as students?

#### **Commuter Survey**

A commuter survey will help you better understand the school's current commuting patterns and will establish the baseline from which you can measure the effectiveness of a new plan. If your municipality has a formal commuter-reduction program, it may be collecting the data you need to establish a baseline. If not, you may need to develop a commuter survey and data collection process. It is recommended that you use the methods described in South Coast Air Quality Management District (SCAQMD) Rule 2202.

The survey can be conducted online or by phone and should focus on students, staff and faculty. Either solicit data from the entire population or from a randomly selected sample and extrapolate

results. It should be conducted during a normal week that is free of holidays and harsh weather. Conducting the survey in both fall and spring will establish the best data, accounting for seasonal commuting variations. Make sure to avoid spring and summer breaks and weeks with in-service days. The survey must be conducted either each day over five consecutive workdays or at the conclusion of five consecutive workdays. USGBC's Occupant Commuting Survey spreadsheet can help you organize and analyze survey data. A link to the spreadsheet is located in the Resources section below.

## **Elements of Successful Transportation Management Plans**

**Bicycle Storage:** One barrier to bicycling to school is the lack of secure bicycle storage. If a cyclist does not feel there is a safe place to store their bike, they may choose not to ride. Secure storage could be external bicycle racks, bicycle lockers, an internal storage room, or even a covered bicycle shelter.

**Bus Idling:** Unnecessary bus idling pollutes the air, wastes fuel, and causes excess engine wear. Exhaust from buses can also enter school buildings through air intakes, doors, and open windows. A bus idling policy stipulates that when school bus drivers arrive at loading or unloading areas to drop-off or pick-up passengers, they should turn off their buses as soon as possible. They should also not restart the buses until they are ready to depart and there is a clear path to exit the pick-up area. Exceptions include situations that would compromise passenger safety, such as extreme weather conditions.

**Carpooling/Vanpooling:** One of the best ways to help reduce single-occupancy vehicle commuting is by carpooling. Developing a carpooling database for parents and employees and/or hosting a carpooling event where commuters can find potential carpool mates encourages carpooling and educates commuters about carpooling as a potential option.

**Changing Facilities:** Another barrier to alternative transportation commuting is that the commuter may require showers and a changing area to freshen up after the commute. Based on your commuter population, determine the number of showers and changing facilities needed. Often, schools have existing locker rooms that can serve this purpose.

**Charging or Refueling Stations for Alternative Fuel Vehicles:** Although not yet mainstream, alternative fuel vehicles — electric vehicles, plug-in hybrid electric vehicles, compressed air, and natural-gas vehicles — will be more popular in the near future. Providing the necessary infrastructure for one or all of these types of vehicles encourages commuters to consider these transportation options. Results from your commuter survey can help you determine the need and number of charging stations for your school.

**Employee/Student Recognition:** Develop a program where students and/or employees can be recognized for their commitment to environmentally friendly commuting. For example, for every ten times an employee or student uses alternative transportation to commute, they could become eligible to win an award. Awards can be simple and inexpensive, such as gift certificates or school-related apparel.

**Guaranteed Ride Home Programs:** These programs subsidize taxi rides home for non-automobile commuters, so if an employee misses the bus, has to leave early for an emergency or must stay late, they have a guaranteed ride home with little or no cost to the commuter.

**Inter-office and Inter-grade Competitions:** Develop a competition where staff and students compete against one another to see which team can reduce their commuting carbon footprint the greatest. This type of competition could be tied to a school lesson plan. Awards can be as simple as a pizza party or ice cream social.

**Local/Regional Transportation Planning Boards:** Since schools have many commuters, it is important that school districts be active participants in local and regional transportation planning — planning that affects bus routes, commute times and student safety. School engagement helps to provide planners with much-needed feedback from the community. District staff will also want to be in direct communication with the local transit authority to closely align school busing and city bus routes. Several school districts have had success in subsidizing the use of public buses for high school and older middle school students instead of providing separate school buses.

**Preferred Parking for Carpools and Vanpools:** Providing dedicated parking for commuters using carpools or vanpools encourages participation. Preferred parking can be as simple as designating an area of the parking lot with signage or painted pavement markers.

**Preferred Parking for LEVs and FEVs:** Consider providing dedicated parking for low-emitting and fuel-efficient vehicle commuters. These vehicles get better gas mileage and have less impact on the environment. Providing dedicated parking encourages commuters to consider purchasing these types of vehicles. The American Council for an Energy Efficient Economy's GreenCars program rates vehicles based on CO<sub>2</sub> emissions and miles per gallon, making it easy to determine which vehicles qualify as LEVs and FEVs.

**Pre-tax Transit Passes:** Many larger transit authorities offer programs that allow employees of local businesses and institutions to purchase transit passes with pre-tax income.

**Public Transit:** Provide your students and employees with information about public transit, available options, and how to use it. Printed materials with routes, schedules, and locations can serve as a catalyst for public transportation usage. Consider hosting the local transit authority for an assembly presentation or taking field trips to their offices or transit centers.

**Shuttles to Public Transit:** Depending on your school's location, provide a shuttle to a commuter rail station, light rail stop, or transit center to increase participation. Often schools can be just outside of walking distance to transit facilities, and providing a shuttle from the school to public transit provides commuters an additional commuting option. Shuttles could be as simple as a school van that makes runs during arrival and departure times or as formal as a dedicated shuttle bus.

**Subsidized Transit Passes:** Schools or school systems can opt to subsidize the cost of all or part of the commuters monthly transit pass. Transit pass subsidies encourage commuters to consider this transportation option.

**Subsidy/Payback Programs:** Provide subsidies or a payback program for employees and students to purchase bicycles for commuting. The school or school system can opt to subsidize the cost of all or part of the purchase of a bicycle for students and employees to use for commuting.

## LEED Certification: A Way to Define Green for New and Existing Schools

In 2000, the U.S. Green Building Council (USGBC) established the LEED® rating system as a way to define and measure “green buildings.” In school terms, LEED is like a report card for buildings, demonstrating to the community that a facility is built and/or operated in a way that supports the health and well-being of occupants and saves energy, resources and money. LEED is an internationally recognized certification system that measures how well a building performs using several metrics:

- sustainable land use
- energy savings
- water efficiency
- CO<sub>2</sub> emissions reduction
- improved indoor environmental quality
- stewardship of resources

LEED provides a concise framework for identifying and implementing practical and measurable green building solutions. Based on established sustainable building practices and emerging concepts, the LEED rating systems are performance-based and comprehensive in scope. Points are awarded on a 100-point scale, and credits are weighted to reflect their potential environmental impacts. Different levels of certification are granted based on the total number of earned points. The four progressive levels of certification are: Certified, Silver, Gold and Platinum.

Once the credits are implemented and the energy-efficiency and performance requirements met, the final step for certification is submitting the project certification documentation using the Web-based LEED Online system. The Green Building Certification Institute (GBCI) reviews the application and provides feedback. If all requirements are met, GBCI awards LEED certification to the building.

LEED Rating Systems:

LEED® for New Construction & Major Renovations™  
LEED® for Existing Buildings: Operations & Maintenance™  
LEED® for Commercial Interiors™  
LEED® for Core & Shell™  
LEED® for Schools™  
LEED® for Neighborhood Development™  
LEED® for Homes™  
LEED® for Retail™  
LEED® for Healthcare™

### Green Building Certification Institute (GBCI)

Established in 2008, GBCI is the institution that grants both project certification and professional credentials that recognize excellence in green building performance and practice. GBCI administers project certification for commercial and institutional buildings and tenant spaces under USGBC's LEED rating systems. GBCI also manages the professional credentialing programs based upon the LEED rating systems, including the LEED Green Associate and LEED AP credentials.

### How Much Does LEED Cost?

The cost to certify a school facility is based on the project's square footage. The process provides a comprehensive third-party review of the energy and environmental performance of the school and ensures that the stated goals of the project are met.

The cost to register and certify at 100,000-square-foot school for USGBC members is less than \$4,000 using LEED for Existing Buildings: Operations & Maintenance, and less than \$5,500 using LEED for Schools.

Prices are determined by GBCI and are subject to change. For complete pricing information, visit [www.gbci.org](http://www.gbci.org).

## Glossary

**Alternative Fuel Vehicles (AFVs)** – Vehicles whose main fuel source is not petroleum based. For example: compressed air, natural gas, or electric vehicles.

**Fuel-efficient Vehicles (FEVs)** – Vehicles with high miles per gallon (MPG) ratings and/or use fuel in more efficient ways than tradition vehicles.

**Low-emitting Vehicles (LEVs)** – Vehicles that have low CO<sub>2</sub> emissions

Note: AFVs, FEVs and LEVs are not mutually exclusive. One vehicle could fit all three categories. Even though these vehicles are better for the environment than their traditional counterparts, it is still better to carpool, take public transit, or ride a bicycle.

### **LEED for Existing Buildings: Operations & Maintenance Rating System Credits Related to a Transportation Management Plan**

The LEED for Existing Buildings: Operations & Maintenance rating system credits that apply to a transportation management plan fall under the Sustainable Sites (SS) credit category.

**SS Credit 4** – Alternative Commuting Transportation (1-15 points)

Reduce pollution and land development impacts from automobile use for commuting. Reduce the number of commuting round trips made by regular building occupants using single occupant, conventionally powered and conventionally fueled vehicles.

## U.S. Green Building Council Publications and Resources

### **Green Existing Schools Implementation Workbook (PDF)**

The *Green Existing Schools Implementation Workbook* includes sample policies, programs, and plans; data collection forms and tables; and sample surveys.

### **Green Existing Schools Project Management Guide (PDF)**

The *Green Existing Schools Project Management Guide* includes general guidance on navigating the LEED for Existing Buildings: O&M certification process, including how to conduct personnel and organizational assessments, educate and train staff, initiate the certification process, and manage a school or district-wide sustainability program.

### **LEED 2009 for Existing Buildings: Operations & Maintenance Project Checklist (XLS)**

The LEED Project Checklist is a scorecard to track the credits being pursuing toward certification.

### **LEED 2009 for Existing Buildings: Operations & Maintenance Rating System (PDF)**

The LEED 2009 for Existing Buildings: Operations & Maintenance rating system summarizes the intent, requirements, and technologies/strategies for each credit.

[Sustainable Purchasing Tracker – Materials and Resources](#)

[Sustainable Purchasing Tracker – Indoor Environmental Quality](#)

[Solid Waste Management Tracker](#)

[Occupant Commuting Survey - Summary Table](#)

**The publications and resources can be found at the Centers for Green School's Green Existing Schools Toolkit at [www.centerforgreenschools.org/k12toolkit](http://www.centerforgreenschools.org/k12toolkit).**

### **Questions?**

The Center for Green Schools at USGBC has assembled a panel of experts, facilities staff, and school district sustainability officers to answer your questions. Please email [schools@usgbc.org](mailto:schools@usgbc.org) with the subject line "Green Existing Schools," and we will promptly connect you with a peer who can help you find the answers.

## Transportation Management References and Resources

American Council for an Energy Efficient Economy (ACEEE)  
<http://www.aceee.org>

American Public Transportation Association (APTA)  
<http://www.apta.com/>

Association of Commuter Transportation (ACT)  
<http://www.actweb.org>

The Center for Green Schools at USGBC  
<http://www.centerforgreenschools.org/>

Green Building Certification Institute (GBCI)  
<http://www.gbci.org>

Green Existing Schools Toolkit  
[www.centerforgreenschools.org/k12toolkit](http://www.centerforgreenschools.org/k12toolkit)

Occupant Commuting Survey – Summary Table  
<http://www.usgbc.org/ShowFile.aspx?DocumentID=6418>

U.S. Department of Transportation Commuter Choice Guide  
[http://www.itsdocs.fhwa.dot.gov/JPODOCS/REPTS\\_PR/13669.html](http://www.itsdocs.fhwa.dot.gov/JPODOCS/REPTS_PR/13669.html)

U.S. EPA Green Vehicle Guide  
<http://www.epa.gov/greenvehicles/Index.do>

U.S. EPA SmartWay  
<http://www.epa.gov/smartway/>

U.S. Green Building Council (USGBC)  
<http://www.usgbc.org>

Walking School Bus.ORG  
<http://www.walkingschoolbus.org>

### **Safe Routes to School** [www.saferoutesinfo.org](http://www.saferoutesinfo.org)

The National Center for Safe Routes to School assists states and communities in enabling and encouraging children to safely walk and bicycle to school. The center serves as the clearinghouse for the federal Safe Routes to School program. It also provides technical support and resources and coordinates online registration efforts and provides technical support and resources for U.S. Walk to School Day and facilitates worldwide promotion and participation.