

A Complete Streets Policy Plan: Appendix



Table of Contents

NJDOT Complete Streets Policy...	3
Key Federal and State Policies and Standards...	6
Chatham Borough Complete Streets Checklist...	12
Complete Streets Resources...	15
• Federal Highway Administration “Livability Initiatives” Organizations...	15
• Educational Resources...	18
• Sample Educational Materials...	20
• Environmental Resources...	40
• Annotated Reference Materials...	41
▪ Reports, Articles and Strategic Plans...	41
▪ Design/Technical Guidance...	43
Glossary of Terms...	45

New Jersey Department of Transportation Complete Streets Policy¹⁷

New Jersey Department of Transportation Complete Streets Policy

I. PURPOSE

To create and implement a Complete Streets Policy in New Jersey through the planning, design, construction, maintenance and operation of new and retrofit transportation facilities within public rights of way that are federally or state funded, including projects processed or administered through the Department's Capital Program.

II. DEFINITIONS

A Complete Street is defined as means to provide safe access for all users by designing and operating a comprehensive, integrated, connected multi-modal network of transportation options.

III. BACKGROUND

The benefits of Complete Streets are many and varied:

- Complete Streets improve safety for pedestrians, bicyclists, children, older citizens, non-drivers and the mobility challenged as well as those that cannot afford a car or choose to live car free.
- Provide connections to bicycling and walking trip generators such as employment, education, residential, recreation, retail centers and public facilities.
- Promote healthy lifestyles.
- Create more livable communities.
- Reduce traffic congestion and reliance on carbon fuels thereby reducing greenhouse gas emissions.
- Complete Streets make fiscal sense by incorporating sidewalks, bike lanes, safe crossings and transit amenities into the initial design of a project, thus sparing the expense of retrofits later.

IV. POLICY

The New Jersey Department of Transportation shall implement a Complete Streets policy through the planning, design, construction, maintenance and operation of new and retrofit transportation facilities, enabling safe access and mobility of pedestrians, bicyclists, transit users of all ages and abilities. This includes all projects funded through the Department's Capital Program. The Department strongly encourages the adoption of similar policies by regional and local jurisdictions who apply for funding through Local Aid programs.

1. Create a comprehensive, integrated, connected multi-modal network by providing connections to bicycling and walking trip generators such as employment, education, residential, recreational and public facilities, as well as retail and transit centers.
2. Provide safe and accessible accommodations for existing and future pedestrian,

¹⁷ <http://www.state.nj.us/transportation/works/njfit/pdf/completestreets.pdf>.

bicycle and transit facilities.

3. Establish a checklist of pedestrian, bicycle and transit accommodations such as accessible sidewalks curb ramps, crosswalks, countdown pedestrian signals, signs, median refuges, curb extensions, pedestrian scale lighting, bike lanes, shoulders and bus shelters with the presumption that they shall be included in each project unless supporting documentation against inclusion is provided and found to be justifiable.
4. Additionally, in rural areas, paved shoulders or a multi-use path shall be included in all new construction and reconstruction projects on roadways used by more than 1,000 vehicles per day. Paved shoulders provide safety and operational advantages for all road users. Shoulder rumble strips are not recommended when used by bicyclists, unless there is a minimum clear path of four feet in which a bicycle may safely operate. If there is evidence of heavy pedestrian usage then sidewalks shall be considered in the project.
5. Establish a procedure to evaluate resurfacing projects for complete streets inclusion according to length of project, local support, environmental constraints, right-of-way limitations, funding resources and bicycle and/or pedestrian compatibility.
6. Transportation facilities are long-term investments that shall anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future improvements.
7. Address the need for bicyclists and pedestrians to cross corridors as well as travel along them. Even where bicyclists and pedestrians may not commonly use a particular travel corridor that is being improved or constructed, they will likely need to be able to cross that corridor safely and conveniently. Therefore, the design of intersections, interchanges and bridges shall accommodate bicyclists and pedestrians in a manner that is safe, accessible and convenient.
8. Design bicycle and pedestrian facilities to the best currently available standards and practices including the New Jersey Roadway Design Manual, the AASHTO Guide for the Development of Bicycle Facilities, AASHTO's Guide for the Planning, Design and Operation of Pedestrian Facilities, the Manual of Uniform Traffic Control Devices and others as related.
9. Research, develop and support new technologies in improving safety and mobility.
10. Make provisions for pedestrians and bicyclists when closing roads, bridges or sidewalks for construction projects as outlined in NJDOT Policy #705 – Accommodating Pedestrian and Bicycle Traffic During Construction.
11. Improvements should also consider connections for Safe Routes to Schools, Safe Routes to Transit, Transit Villages, trail crossings and areas or population groups with limited transportation options.
12. Establish an incentive within the Local Aid Program for municipalities and counties to develop and implement a Complete Streets policy.
13. Improvements must comply with Title VI/Environmental Justice, Americans with Disabilities Act (ADA) and should complement the context of the surrounding community.
14. Implement training for Engineers and Planners on Bicycle/Pedestrian/Transit policies and integration of non-motorized travel options into transportation systems.
15. Establish Performance Measures to gauge success.

V. EXEMPTIONS

Exemptions to the Complete Streets policy must be presented for final decision to the Capital Program Screening Committee in writing by the appropriate Assistant Commissioner and documented with supporting data that indicates the reason for the decision and are limited to the following:

- 1) Non-motorized users are prohibited on the roadway.
- 2) Scarcity of population, travel and attractors, both existing and future, indicate an absence of need for such accommodations.
- 3) Detrimental environmental or social impacts outweigh the need for these accommodations.
- 4) Cost of accommodations is excessively disproportionate to cost of project, more than twenty percent (20%) of total cost.
- 5) The safety or timing of a project is compromised by the inclusion of Complete Streets.

An exemption other than those listed above must be documented with supporting data and must be approved by the Capital Program Committee along with written approval by the Commissioner of Transportation.

VI. AUTHORITY

N.J.S.A. Title 27

Key Federal and State Policies and Standards

Federal Policies

S. 1056: Safe and Complete Streets Act of 2011 - 112th Congress: 2011-2012

-A bill to ensure that all users of the transportation system, including pedestrians, bicyclists, transit users, children, older individuals, and individuals with disabilities, are able to travel safely and conveniently on and across federally funded streets and highways.

H.R. 1780: Safe and Complete Streets Act of 2011 - 112th Congress: 2011-2012

-A Bill to ensure the safety of all users of the transportation system, including pedestrians, bicyclists, transit users, children, older individuals, and individuals with disabilities, as they travel on and across federally funded streets and highways.

United States Department of Transportation – “Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations”. Signed on March 11, 2010 and announced March 15, 2010.

<http://www.dot.gov/affairs/2010/bicycle-ped.html>

State Policies¹⁸

Agency	Policy	Key Phrase	Year	Link
State of California	A.B. 1358	"...in the development of the circulation element of a local government's general plan that the circulation of users of streets, roads, and highways be accommodated in a manner suitable for the respective setting in rural, suburban, and urban contexts, and that users of streets, roads, and highways include bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, public transportation, and seniors."	2008	http://www.completestreets.org/webdocs/policy/cs-ca-legislation.pdf
California DOT	Deputy Directive 64-R1	"...provides for the needs of travelers of all ages and abilities in all planning, programming, design, construction, operations, and maintenance activities and products on the State highway system. The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system."	2008	http://www.completestreets.org/webdocs/policy/cs-ca-dotpolicy.pdf
State of Colorado	Colorado Revised Statutes 43-1-120	"The needs of bicyclists and pedestrians shall be included in the planning, design, and operation of transportation facilities, as a matter of routine."	2010	http://www.completestreets.org/webdocs/policy/cs-co-legislation.pdf
Colorado DOT	Bicycle and Pedestrian Policy	"The needs of bicyclists and pedestrians shall be included in the planning, design, and operation of transportation facilities, as a matter of routine."	2009	http://www.completestreets.org/webdocs/policy/cs-co-dotpolicy.pdf
State of Connecticut	Public Act 09-154	"Accommodations for all users shall be a routine part of the planning, design, construction and operating activities of all highways...in this state."	2009	http://www.completestreets.org/webdocs/policy/cs-ct-legislation.pdf

¹⁸ <http://www.completestreets.org/webdocs/policy/cs-state-policies.pdf>

Agency	Policy	Key Phrase	Year	Link
State of Delaware	Executive Order No. 6	"The Delaware Department of Transportation...shall enhance its multi-modal initiative by creating a Complete Streets Policy that will promote safe access for all users, including pedestrians, bicyclists, motorists and bus riders of all ages to be able to safely move along and across the streets of Delaware..."	2009	http://www.completestreets.org/webdocs/policy/cs-de-executiveorder.pdf
State of Florida	State Statute 335.065	"Bicycle and pedestrian ways shall be given full consideration in the planning and development of transportation facilities... shall be established in conjunction with the construction, reconstruction, or other change of any state transportation facility..."	1984	http://www.completestreets.org/webdocs/policy/cs-fl-legislation.pdf
State of Hawaii	Act 054	"The department of transportation and the county transportation departments shall adopt a complete streets policy that seeks to reasonably accommodate convenient access and mobility for all users of the public highways...including pedestrians, bicyclists, transit users, motorists, and persons of all ages and abilities."	2009	http://www.completestreets.org/webdocs/policy/cs-hi-legislation.pdf
State of Illinois	Public Act 095-0665	"Bicycle and pedestrian ways shall be given full consideration in the planning and development of transportation facilities, including the incorporation of such ways into State plans and programs."	2007	http://www.completestreets.org/webdocs/policy/cs-il-legislation.pdf
Louisiana DOTD	Complete Streets Policy	"...create a comprehensive, integrated, connected transportation network for Louisiana that balances access, mobility, health and safety needs of motorists, transit users, bicyclists, and pedestrians of all ages and abilities, which includes users of wheelchairs and mobility aides."	2010	http://www.completestreets.org/webdocs/policy/cs-la-dotpolicy.pdf

Agency	Policy	Key Phrase	Year	Link
State of Maryland	Transportation Code §2-602	"Access to and use of transportation facilities by pedestrians and bicycle riders shall be considered and best engineering practices regarding the needs of bicycle riders and pedestrians shall be employed in all phases of transportation planning, including highway design, construction, reconstruction, and repair as well as expansion and improvement of other transportation facilities..."	2000	http://www.completestreets.org/webdocs/policy/cs-md-legislation.pdf
State of Massachusetts	Bicycle-Pedestrian Access Law (Chapter 90E)	"The commissioner shall make all reasonable provisions for the accommodation of bicycle and pedestrian traffic in the planning, design, and construction, reconstruction or maintenance of any project undertaken by the department..."	1996	http://www.completestreets.org/webdocs/policy/cs-ma-legislation.pdf
Massachusetts DOT	Project Development and Design Guide	"...the roadway system of the Commonwealth should safely accommodate all users of the public right-of-way including: pedestrians, (including people requiring mobility aids);... bicyclists; drivers and passengers of transit vehicles, trucks, automobiles, and motorcycles."	2006	http://www.mhd.state.ma.us/default.asp?pgid=content/designGuide&sid=about
State of Michigan	Public Act 135	"The state transportation commission shall do both of the following...: (a) Adopt a complete streets policy for the department. (b) Develop a model complete streets policy or policies to be made available for use by municipalities and counties."	2010	http://www.completestreets.org/webdocs/policy/cs-mi-legislation.pdf

Agency	Policy	Key Phrase	Year	Link
State of Minnesota	Section 52, Minnesota Statutes, Sec. 174.75	"The commissioner shall implement a complete streets policy after consultation with stakeholders, state and regional agencies, local governments, and road authorities. The commissioner, after such consultation, shall address relevant protocols, guidance, standards, requirements, and training, and shall integrate related principles of context-sensitive solutions."	2010	http://www.completestreets.org/webdocs/policy/cs-mn-legislation.pdf
Mississippi DOT	Pedestrians and Bicycles on Highway and Street Projects	"...pedestrians and bicyclists shall be considered (where they are not prohibited, such as on the Interstate System) during the planning, design, construction and maintenance of highway and street facilities."	2010	http://www.completestreets.org/webdocs/policy/cs-ms-dotpolicy.pdf
New Jersey DOT	Policy No. 703	"...shall implement a Complete Streets policy through the planning, design, construction, maintenance and operation of new and retrofit transportation facilities, enabling safe access and mobility of pedestrians, bicyclists, transit users of all ages and abilities."	2009	http://www.completestreets.org/webdocs/policy/cs-nj-dotpolicy.pdf
State of New York	S.5411A/A.8366	"For all State, County, and Local transportation projects that are undertaken by the Department or receive both federal and state funding and are subject to Department of Transportation oversight, the department or agency with jurisdiction over such projects shall consider the convenient access and mobility on the road network by all users of all ages..."	2011	http://www.completestreets.org/webdocs/policy/cs-ny-legislation.pdf

Agency	Policy	Key Phrase	Year	Link
North Carolina DOT	Complete Streets Policy	"The North Carolina Department of Transportation, in its role as stewards over the transportation infrastructure, is committed to providing an efficient multi-modal transportation network in North Carolina such that the access, mobility, and safety needs of motorists, transit users, bicyclists, and pedestrians of all ages and abilities are safely accommodated..."	2009	http://www.completestreets.org/webdocs/policy/cs-nc-dotpolicy.pdf
State of Oregon	Oregon Revised Statutes 366.514	"Footpaths and bicycle trails, including curb cuts or ramps as part of the project, shall be provided wherever a highway, road or street is being constructed, reconstructed or relocated."	1971	http://www.completestreets.org/webdocs/policy/cs-or-legislation.pdf
Pennsylvania DOT	Design Manual 1A Appendix J (adopted in SOL 432-07-02)	"Department policy requires the evaluation of the access and mobility needs of pedestrians and bicycle users in highway and bridge transportation corridors. This revised policy mandates that highway and bridge projects must evaluate the existing, latent, and projected needs of pedestrians and bicycle users. It requires the integration of the identified needs into project planning and design processes."	2007	http://www.completestreets.org/webdocs/policy/cs-pa-dotpolicy.pdf
Puerto Rico	Ley 201	"El Departamento de Transportación y Obras Públicas y la Autoridad de Carreteras y Transportación y los departamentos o divisiones de transportación y carreteras municipales adoptarán como parte de sus reglamentos una política de creación de "calles completas" con el propósito de facilitar el acceso conveniente y movilidad a todos los usuarios de las vías públicas..."	2010	http://www.completestreets.org/webdocs/policy/cs-pr-legislation.pdf

Agency	Policy	Key Phrase	Year	Link
State of Rhode Island	Chapter 31-18: Pedestrians, Section 31-18-21	"Department of Transportation is authorized and directed to provide for the accommodation of bicycle and pedestrian traffic in the planning, design, construction and reconstruction, and to consider this in the resurfacing and striping of any project..."	1997	http://www.completestreets.org/webdocs/policy/cs-ri-legislation.pdf
South Carolina DOT	Bicycling & Walking Resolution	"...bicycling and walking accommodations should be a routine part of the Department's planning, design, construction and operating activities..."	2003	http://www.completestreets.org/webdocs/policy/cs-sc-dotresolution.pdf
Tennessee DOT	Bicycle and Pedestrian Policy	"The policy of TDOT is to routinely integrate bicycling and pedestrian facilities into the transportation system as a means to improve mobility, access, and safety of non-motorized traffic."	2010	http://www.completestreets.org/webdocs/policy/cs-tn-dotpolicy.pdf
State of Texas	Guidelines Emphasizing Bicycle and Pedestrian Accommodations	"TxDOT is committed to proactively plan, design, and construct facilities to safely accommodate bicyclists and pedestrians..."	2011	http://www.completestreets.org/webdocs/policy/cs-tx-dotpolicy.pdf
State of Vermont	H. 198	"Consider the safety and accommodation of all transportation system users – including motorists, bicyclists, public transportation users, and pedestrians of all ages and abilities – in all state and municipally managed transportation projects and project phases..."	2011	http://www.completestreets.org/webdocs/policy/cs-vt-legislation.pdf
Virginia DOT	Policy for Integrating Bicycle and Pedestrian Accommodations	"...will accommodate bicyclists and pedestrians, including pedestrians with disabilities, along with motorized transportation modes in the planning, funding, design, construction, operation, and maintenance of Virginia's transportation network to achieve a safe, effective, and balanced multimodal transportation system."	2004	http://www.completestreets.org/webdocs/policy/cs-va-dotpolicy.pdf

Agency	Policy	Key Phrase	Year	Link
State of Washington	Chapter 257, Laws of 2011	"The department shall establish a complete streets grant program within the department's highways and local programs division...When constructing, reconstructing, or making major improvements...the department must...consider the needs of all users by applying context sensitive design solutions..."	2011	http://www.completestreets.org/webdocs/policy/cs-wa-legislation.pdf
State of Wisconsin	State Statutes Section 1918gr. 84.01 (35)	"...ensure that bikeways and pedestrian ways are established in all new highway construction and reconstruction projects funded in whole or in part from state funds or federal funds..."	2008	http://www.completestreets.org/webdocs/policy/cs-wi-legislation.pdf

Standards

Manual on Uniform Traffic Control Devices (MUTCD) - defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic. The MUTCD is published by the Federal Highway Administration (FHWA) under 23 Code of Federal Regulations (CFR), Part 655, Subpart F.

AASHTO – American Association of State Highway and Transportation Officials

Guide for the Development of Bicycle Facilities, 3rd Edition Supersedes the 1981 *Guide for Development of New Bicycle Facilities*. Provides information on the

development of new facilities to enhance and encourage safe bicycle travel. Planning considerations, design and construction guidelines, and operation and maintenance recommendations are included.

A Policy on Geometric Design of Highways and Streets, 6th Edition *A Policy on Geometric Design of Highways and Streets, 6th Edition, 2011*, commonly referred to as the “Green Book,” contains the current design research and practices for highway and street geometric design. The document provides guidance to highway engineers and designers who strive to make unique design solutions that meet the needs of highway users while maintaining the integrity of the environment. It is also intended as a comprehensive reference manual to assist in administrative, planning, and educational efforts pertaining to design formulation. Design guidelines are included for freeways, arterials, collectors, and local roads, in both urban and rural locations, paralleling the functional classification used in highway planning.

Chatham Borough Complete Streets Checklist

	Initial Measure	Specific Measure	Yes/No Checklist			Potential Complete Street Measures	Notes
			Yes	No	N/A		
Streets/Street Crossings/Sidewalks	Existing Conditions	Are sidewalks provided along the street?					
		Are sidewalks provided on both sides of the street?					
		Are sidewalks in good, average or poor condition? (Place answer in "Notes" section)					
		If no sidewalks exist, is there 5' of available shoulder width or right-of-way?					
		Are travel lanes 10' or less?					
		Are travel lanes 12' or less?					
		Are there bicycle lanes or sharrows?					
		Is there 5' or more on the street to install a bicycle lane?					
		Is there at least 3' on the street to install shared road markings?					
		Is there parking on one or both sides of the street?					
		If there is parking, is there a large amount of turnover?					
		Is there bicycle parking in the project area?					
		Is there 5' or more clear feet on the sidewalk to install bicycling parking?					
		Is the street well maintained? (free from potholes, debris, visible lane markings)					

Streets/Street Crossings/Sidewalks	Initial Measure	Specific Measure	Yes/No Checklist			Potential Complete Street Measures	Notes
			Yes	No	N/A		
Existing Conditions		Is the street well lit?					
		Is the sidewalk well lit?					
		Can pavement markings be seen during the day and night?					
		Are there marked crosswalks?					
		Are there painted or raised medians?					
		Are curb ramps provided at each corner?					
		Is the crossing signalized?					
		Are there pedestrian signals?					
		Are there benches along the sidewalk?					
		Are all entrances within the project limits ADA compliant?					

Streets/Street Crossings/Sidewalks	Initial Measure	Specific Measure	Yes/No Checklist			Potential Complete Street Measures	Notes
			Yes	No	N/A		
Existing Conditions		Are all ramps within the project limits ADA compliant?					
		Are detectable warnings (truncated domes) properly installed and ADA compliant?					
		Are all cut throughs in islands or medians within the project limits ADA compliant?					
		Are all accessible pedestrian signals (pushbuttons) within the project limits ADA compliant?					
		Are all crosswalks within the project limits ADA compliant?					
		Are all sidewalks constructed within the project limits ADA compliant?					

Use	Initial Measure	Specific Measure	Yes/No Checklist			Potential Complete Street Measures	Notes
			Yes	No	N/A		
Existing Conditions		Does project warrant survey of residents directly affected by proposed improvements?					
		Is the street a primary travel street during all hours of the day?					
		Is the street a primary travel street only during AM and PM peak periods?					
		Does the street connect to one or more primary travel streets?					
		Is the street a cul-de-sac?					
		Does the street have 500 or less ADT?					
		Does the street exceed 1000 ADT?					
		Is the street a primary street for trucks?					
		Is the street a primary route for bicyclists?					
		Is the street a primary route for all pedestrians?					
		Is the street a primary route to walk to school?					
		Does this project fill gaps in the sidewalk network?					
		Does this project fill gaps in the bicycling network?					

	Initial Measure	Specific Measure	Yes/No Checklist			Potential Complete Street Measures	Notes
			Yes	No	N/A		
Contextual Factors	Existing Conditions	Is the project within 1/2 mile of a school?					
		Is the project between 1-3 miles from a school?					
		Is the project within 1/2 mile of the train station?					
		Is the project between 1-3 miles from the train station?					
		Is the project within bicycling distance to a downtown or recreational area?					
		Are there existing environmental or historic/cultural resources (wetlands, floodplains, streams, significant trees, historic/cultural resources) in the project area?					
		Is the project within walking distance to a main shopping or recreational area?					

	Initial Measure	Specific Measure	Yes/No Checklist			Potential Complete Street Measures	Notes
			Yes	No	N/A		
Safety	Existing Issues	Is the primary focus of the project to address an overwhelming safety need?					Insert available safety data
		Residents and concerns. 50% of residents in residential areas where major upgrades would take place.					
		Do existing driveways inhibit safe walking along the sidewalk?					
		Are there conflicts between pedestrians and bicyclists on the street?					
		Are there conflicts between pedestrians and bicyclists on the sidewalks?					
		Do wide curb radii lengthen pedestrian crossings and encourage high speed turns?					
		Do 85% of motor vehicles travel at the posted speed limit?					
		Do motorists yield to pedestrians?					
		Are pedestrians visible at crossings?					
		Do pedestrians have enough time to cross the street?					
		Is the project area considered a safe place to walk?					
		Is the project area considered a safe place to bike?					

Complete Streets Resources

Federal Highway Administration “Livability Initiatives” Organizations¹⁹ and Others

- **American Association of Retired Persons (AARP)** - AARP is a nonprofit, nonpartisan organization with a membership that helps people age 50 and over have independence, choice and control in ways that are beneficial and affordable to them and society as a whole, ways that help people 50 and over improve their lives. Since 1958, AARP has been leading a revolution in the way people view and live life.
- **American Association of Highway and Transportation Officials (AASHTO)** - A nonprofit, nonpartisan association representing highway and transportation departments in the 50 states, the District of Columbia, and Puerto Rico. It represents all five transportation modes: air, highways, public transportation, rail, and water. Its primary goal is to foster the development, operation, and maintenance of an integrated national transportation system.
- **America Walks** - A national coalition of local advocacy groups dedicated to promoting walkable communities.
- **The American Planning Association (APA)** – APA is an independent, not-for-profit educational organization that provides leadership in the development of vital communities by advocating excellence in community planning, promoting education and citizen empowerment, and providing the tools and support necessary to meet the challenges of growth and change.
- **National Complete Streets Coalition:** The National Complete Streets Coalition seeks to fundamentally transform the look, feel, and function of the roads and streets in our community, by changing the way most roads are planned, designed, and constructed.

¹⁹ <http://www.fhwa.dot.gov/livability/related/>

- **The Institute of Transportation Engineers (ITE)** - ITE is an international educational and scientific association of transportation professionals who are responsible for meeting mobility and safety needs. ITE facilitates the application of technology and scientific principles to research, planning, functional design, implementation, operation, policy development and management for any mode of ground transportation.
- **National Recreation Trails** - National Recreation Trails recognize exemplary trails of local and regional significance.
- **National Transportation Enhancements Clearinghouse**
- **The Pedestrian and Bicycle Information Center (PBIC)** - A national clearinghouse for information about health and safety, engineering, advocacy, education, enforcement, access, and mobility for pedestrians (including transit users) and bicyclists. The PBIC serves anyone interested in pedestrian and bicycle issues, including planners, engineers, private citizens, advocates, educators, police enforcement, and the health community.
- **Pedestrian and Bicycle Image Library** - The PBIC Image Library is a searchable collection of images relating to walking and bicycling. Images in the Library are intended to serve as examples of the range of real world existing conditions; they are not limited to best practices or approved design and in some cases may reflect conditions that are not recommended.
- **Smart Growth America** - A nationwide coalition promoting a better way to grow: one that protects farmland and open space, revitalizes neighborhoods, keeps housing affordable, and provides more transportation choices.
- **Transportation Enhancement (TE) Project** - Images NTEC's image library is a web accessible media archive with images of TE projects.
- **Transportation Research Board (TRB)** - The mission of TRB is to provide leadership in transportation innovation and progress through

research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal.

- **Urban Land Institute** - The mission of the Urban Land Institute is to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide.

Educational Resources

The Safe Routes Partnership: Youth Bicycle and Pedestrian Safety Education Curriculum Local Models and State Recommendations

<http://www.saferoutespartnership.org/state/bestpractices/curriculum>

Walk Boston (*Boston, Massachusetts; walkboston.org*)

The 15 Safe Routes to Schools lesson plans teach students how walking is good for their bodies and the environment, and to connect walking, health and the environment. The lesson plans are for Kindergarten - Grade 5 students, and provide lessons in Health, Math, Social Studies and Science / Technology.

Texas Bicycle Coalition (*Austin, Texas; biketexas.org*)

Supercyclist Curriculum - this fifteen-lesson Teacher's Guide contains more than 200 pages. Each lesson lasts approximately one hour, with 30 minutes devoted to bicycle-focused academic/classroom activities and 30 minutes devoted to physical activities that improve strength, balance, and flexibility. The curriculum includes:

League of American Bicyclists (*Washington D.C.; bikeleague.org*)

Kids I - Designed for parents, instructors explain how to teach a child to ride a bike. Topics include how to perform a bicycle safety check, helmet fitting and bike sizing. Includes 10-minute 'Kids Eye View' video and parent brochure. Kids II - 7-hour class for 5th & 6th graders includes on-bike skills and safe riding routes.

Bicycle Transportation Alliance (*Portland, Oregon; bta4bikes.org*)

To be taught by expert cyclists, this ten-hour curriculum includes four hours of in-class and six hours of on-the-bike instruction. This curriculum is in use in many communities around the US. The BTA also offers a pedestrian safety curriculum.

Marin County Safe Routes to Schools (*Marin County, California;*

saferoutestoschools.org) This website features lesson plans for safety, fitness and the environment, and covers curriculum for grades 2 through 10, including many lessons for middle school.

Alliance for Active Transportations (*Chicago, IL; <http://www.activetrans.org>*)

Has educational materials for children and adults to encourage smart, active transportation:

- **Early Childhood:** Transportation Safety Lesson Book for Young Children: Teach children ages 3-5 how to safely walk, cycle and use the bus or train. These five transportation safety lessons span a variety of subject areas

including language arts, math, fine arts and physical development.

<http://www.activetrans.org/education/teachers/earlychildhood>

- **Elementary School: Afterschool Challenge Program:** Encourage students to achieve their goals by using this flexible and fun literacy and physical activity program. In “Brain Challenges,” students read and learn about inspirational athletes. In “Body Challenges,” students participate in physical activities related to the athletes featured in the lessons. Educators may use some or all of the 40 lesson pairs flexibly structured into seven character trait-theme units.
<http://www.activetrans.org/education/teachers/elementary>
- **Middle School: Schools Changing Transportation: Student Guide**
Create change by advocating for better active transportation options in your school community. This easy-to-follow guide directs students through the process of selecting and researching an issue, collecting data and lobbying for a cause. Active Transportation Alliance staff may be available to provide speakers, data and general guidance to support your project. Hours spent on this project may qualify as service learning credits for some students.
https://www.activetrans.org/sites/default/files/SCT%20Student%20Guide_1.pdf
- **High School: Driver’s Education Lessons:** Enhance driver’s education class with lessons focused on driving safely while sharing the road with pedestrians and bicyclists. These interactive lessons complement traditional curricula and provide in-depth discussions to help students be fully aware of proper protocol when encountering all road users.
<https://www.activetrans.org/sites/default/files/Share%20the%20Road%20Pedestrians1.pdf>

AARP – How-to-Guide: Start a Senior Citizen Walking Group: Tips, Tools and Resources for Individuals.

<http://createthegood.org/sites/default/files/toolkit-pdf/start-walking-group.pdf?R87oK0JOAf>

Sample Educational Materials²⁰



²⁰ <http://www.nyc.gov/html/dot/html/safety/safetyedu.shtml>



Introduction

Thanks for your interest in this interdisciplinary project designed for lower elementary students. It's simple, rewarding, and a chance for your students to win our design competition! In this packet you will find suggested activities and handouts to help prepare your students' contest entry.

In order to raise awareness about the importance of walking in New York, our suggested activities highlight the following three key categories:



Health: There are major health benefits to walking, from a healthy heart, to weight loss—and more.



Environmental Sustainability: With zero carbon emissions, walking is a great way to go green.



Safety: We can do our part to be safe when we walk by staying alert and making ourselves visible. We can also ask drivers to be alert and slow down to make walking safer!

It's up to you to decide which activity or activities to do with your students. Your studies can examine any of the many aspects of walking that are relevant to your contest entry and correspond to the competition guidelines.

Handouts

- (1) Walk Your Block
- (2) Show How to Be a Safe Walker
- (3) Gas Power, People Power
- (4) Getting to School Every Day
- (5) Maria's Safety Toolbox
- (6) How Do We Get Around the City?
- (7) "Dear Elected Official" letter template

About We're Walking Here

New York City is a city of walkers. The majority of young New Yorkers walk to school, to transit, and around their city each day. We want to take the opportunity this October, the month of International Walk to School Day, to celebrate this achievement – and to encourage students and their families to walk more often.

Safe Routes to School (SRTS) is a national program that was born out of the need to protect school-aged children as they walk or bike to school. Here in New York City, we at NYCDOT's Division of Safety Education and Outreach work directly with schools to educate children to be skilled pedestrians and cyclists. Additionally, NYCDOT is working to make streets safer by slowing traffic around schools and raising awareness about the importance of safe driving and biking behavior.

**WE'RE
WALKING
HERE.** 

EDUCATOR GUIDE

Classroom Activities

Walk Your Block

Categories: Health, Sustainability, Safety
Subjects: Social Studies, Science
Time: 30-45 minutes
Handout: (1) Walk Your Block



Lead the students in a discussion about the area around their school and the way the streets are designed. You can use the "Walk Your Block" handout that we've included. Distribute copies to each student and assign partners. Take a walk with your students on the block directly around the school or a few blocks that are close by. Have the students check the boxes and answer the turn and talk section. When you return from your walk, discuss how these observations and notes can inform their competition entry. How were people getting around? If a lot of kids walk to your school, but people are driving dangerously, what changes should be made to make walking safer in the area? What could your students teach drivers to make them safer? How can they walk more safely?

Show How to Be a Safe Walker

Categories: Safety
Subjects: Social Studies, ELA
Time: 20-30 minutes
Handout: (2) Show How to be a Safe Walker



Have a discussion about the streets outside of the school. Ask students to raise hands to figure out how many people walk each day (you can include those who walk to and from transit for your numbers here). When we are walking to school, how can we be safe? Ask the students to make a drawing of a street from their imagination, and show some of the ways people can walk safely. How could we share this information with grown-ups through our competition entry?

Gas Power, People Power

Categories: Sustainability
Subjects: Environmental Science, Social Studies
Time: 20-30 minutes
Handout: (3) Gas Power, People Power



Ask the class to discuss the different ways we get around town. How does "people power" differ from "gas power?" How you get around affects how much pollution/smoke you put in the air each day. Ask the class about ways we can use people power. Distribute the "Gas Power, People Power" handout to do an activity to learn about the pollution produced by the different modes of transportation. Clarify why walking produces NO pollution. But when we do get around by vehicles, trains and buses are a great way to share your ride and lower your "carbon footprint."

Getting to School Every Day

Categories: Health, Environment
Subjects: Social Studies
Time: 20-30 minutes
Handout: (4) Getting to School Every Day



Have a conversation with the class. How do you get to school every day? Distribute the "Getting to School Every Day" handout and have students draw their mode in the box. Do many students walk to school? How about walking to other places? How is walking healthy? How is it good for the planet? You can have the students cut out their boxes and build a pictograph with the drawings.

**WE'RE
WALKING
HERE.** 



EDUCATOR GUIDE

Worksheets

Grades K-2



School: _____

Class: _____

Name: _____

Date: _____

(1) Walk Your Block

Let's go for a walk on the block around your school.
Work with a partner.

1 What are people doing to get around?

☐

walking

☐

driving a car

☐

riding a bike

☐

getting on the bus

☐_____
(add something)

2

Turn and talk:

Are drivers being safe? Are they driving too fast? Do drivers see you when you cross the street? Write your answer here:



**WE'RE
WALKING
HERE.** 

Elementary School Activities

Grades 3-5

<http://www.nyc.gov/html/dot/html/safety/walkingschools.shtml>

 **NEW YORK CITY**
Safety
Education
& Outreach



Introduction

Thanks for your interest in this interdisciplinary project designed for upper elementary students. It's simple, rewarding, and a chance for your students to win a design competition! In this packet you will find suggested activities and handouts to help prepare your students' contest entry.

In order to raise awareness about the importance of walking in New York, our suggested activities highlight the following three key categories:



Health: There are major health benefits to walking, from a healthy heart, to weight loss—and more.



Environmental Sustainability: With zero carbon emissions, walking is great way to go green.



Safety: We can do our part to be safe when we walk by staying alert and making ourselves visible. We can also ask drivers to be alert and slow down to make walking safer!

It's up to you to decide which activity or activities to do with your students. Your studies can examine any of the many aspects of walking that are relevant to your contest entry and correspond to the competition guidelines.

Handouts

- (1) Neighborhood Walk
- (2) The Carbon Footprint of a Commute
- (3) School Zone Behaviors
- (4) Maria's Safety Toolbox
- (5) How Many Steps?
- (6) NYC Walking Facts
- (7) PSA Planning Sheet
- (8) Safer Streets for Pedestrians
- (9) Outline Your Letter

About We're Walking Here

New York City is a city of walkers. The majority of young New Yorkers walk to school, to transit, and around their city each day. We want to take the opportunity this October, the month of International Walk to School Day, to celebrate this achievement – and to encourage students and their families to walk more often.

Safe Routes to School (SRTS) is a national program that was born out of the need to protect school-aged children as they walk or bike to school. Here in New York City, we at NYCDOT's Division of Safety Education and Outreach work directly with schools to educate children to be skilled pedestrians and cyclists. Additionally, NYCDOT is working to make streets safer by slowing traffic around schools and raising awareness about the importance of safe driving and biking behavior.

**WE'RE
WALKING
HERE.** 

EDUCATOR GUIDE

Classroom Activities

Neighborhood Walk for Safety

Categories: Safety
Subjects: Social Studies, Science
Time: 30-45 minutes
Handout: (1) Neighborhood Walk

Lead the students in a discussion about the area around their school and the way the streets are designed. You can use the "Neighborhood Walk" handout that we've included. Distribute copies to each student and assign teams. Take a walk with your students on the block directly around the school or a few blocks that are close by. Have the students use the handout to write down observations for each category, determining what kinds of behaviors you see that are dangerous. When you return from your walk, discuss how these observations and notes can inform their competition entry. Were you surprised by what you saw? Why is it especially dangerous when drivers don't pay attention? If a lot of kids walk to your school, but people are driving dangerously, what changes should be made to make walking safer in the area? What could your students teach drivers to make them safer? How can they walk more safely?

How We Get Around Town

Categories: Health, Environment, Safety
Subjects: Social Studies, ELA, Math
Time: 20-30 minutes

Have the students list the various modes of transportation available in the city. Encourage them to think outside the box and include things like the ferry, skateboarding, scootering, etc. Now take a poll of the students. Ask them to raise their hands and identify the way they got to school this morning.

Mark these numbers down on the board. Ask students to express them as a fraction or percentage if possible (e.g. two-thirds of us walked today). Figure out how many people walk each day (you can include those who walk to and from transit for your numbers here). Then have a discussion about ways we can get around that are better for ourselves and for our city. What are the healthiest, greenest, and most fun ways to get to school? What could we do to improve our commutes? How could we share this information with grown-ups through our contest entry?

Personal Carbon Footprint

Categories: Environment
Subjects: Environmental Science, Social Studies
Time: 20-30 minutes
Handout: (2) The Carbon Footprint of a Commute

Ask the class to define the term "carbon footprint." If you want to give them an official definition, it's a "measure of the impact human activities have on the environment in terms of the amount of greenhouse gases produced, measured in units of carbon dioxide." In other words, your personal carbon footprint is how much pollution you put in the air from your behavior in a day. For the purposes of this lesson, we will concentrate only on the carbon footprint of a commute to and from school. Use "The Carbon Footprint of a Commute" handout to go over the different amounts of pollution produced by the different modes of transportation. Why is walking so great for the environment?



School-wide Activities

Walking Banner

Categories: Health, Safety, Environment
Subjects: Art, Health, Social Studies



Have a discussion about the social, health, environmental and cost benefits of walking to get around. Think about what kind of images portray these themes. Make a big banner about walking in September, and put up the banner at the front of the school for the month of October to celebrate walking.

Wall Chart or Counting Jar

Categories: Health, Safety, Environment
Subjects: Art, Health, Social Studies



For a week in October, put up a chart or jars in the front of the school with all the different modes of getting around (walking, biking, transit, taxi, car, ferry, other) and have students tick a mark on the chart or put a counter (like a penny or pebble) in large jars for the way they got to school that day. Encourage classrooms to discuss the numbers. Why do so many of us walk and take transit in New York City? If you are in a neighborhood where this isn't the case, why aren't more of us walking? What are the barriers? If many of the students are buses, talk about this and the importance of sharing our ride for environmental health.

School-wide Walk

Categories: Health, Safety, Environment
Subjects: Art, Health, Social Studies



Organize a school-wide walk around the block. Greet walkers with stickers, gifts and refreshments. Public officials can be invited to say a few words. Carry signs that display pedestrian safety messages - or messages for the passing cars and bikes. Have a nutritious breakfast before or after the walk. Wear costumes, and sing or play walking songs. You could hold the walk during lunchtime recess or an as outdoor assembly.

School-wide Active Transportation Competition

Categories: Health, Safety, Environment
Subjects: Art, Health, Social Studies, Science, Math



Create a competition to log miles that students have accumulated via walking, transit, and biking. Classes can compete against each other or different grades, or the school could work as a team to accumulate green miles towards a common goal, such as "Getting To Antarctica." Have an assembly as a culmination of this school-wide project to celebrate sustainable miles logged.

Download the School-wide Activity worksheets at <http://www.myc.gov/html/dot/html/safety/walkingschools.shtml>

**WE'RE
WALKING
HERE.** 



EDUCATOR GUIDE

Worksheets Grades 3-5



School:






Class:

Name:

Date:

(1) Neighborhood Walk

Walk around your neighborhood with your team for twenty minutes. Look at the behaviors of pedestrians, cyclists, and drivers, and note how many people you see doing each one of the dangerous behaviors. What should they be doing differently?

CATEGORY	Put one tick mark for each person you see	How many people do you see?	What should they be doing differently?
DISTRACTED WALKING (using ipod, talking on cell phone, talking to friends) 			
SPEEDING CARS (cars that speed through yellow lights, are going more than 30mph) 			
WALKING AGAINST TRAFFIC SIGNAL (crossing the street during a "don't walk" signal) 			
DISTRACTED DRIVERS 			
NOT "BIKING SMART" (going the wrong way, adults on sidewalks, no helmet) 			

GRADES 3-5: ELEMENTARY SCHOOL WORKSHEET



School:

Class:

Name:

Date:

(3) School Zone Behaviors

Brainstorm with a partner and list the different unsafe behaviors you see car drivers, cyclists, and pedestrians do around your school every day.

DRIVERS:


What could they do differently?

CYCLISTS:


What could they do differently?

PEDESTRIANS:


What could they do differently?



**WE'RE
WALKING
HERE.** 

Middle School Activities Grades 6-8

<http://www.nyc.gov/html/dot/html/safety/walkingschools.shtml>



Safety
Education
& Outreach

**WE'RE
WALKING
HERE.** 

EDUCATOR GUIDE

Classroom Activities

Neighborhood Walk



Categories: Safety
Subjects: Social Studies, Science
Time: 30-45 minutes
Handout: (1) Neighborhood Walk

Lead the students in a discussion about the area around their school and the way the streets are designed. You can use the "Neighborhood Walk" handout that we've included. Distribute copies to each student. Take a walk with your students on the block directly around the school or a few blocks that are close by. Have the students use the handout to write down observations for each category, determining what kinds of behaviors you see that are dangerous. When you return from your walk, discuss how these observations and notes can inform your class contest entry. Were you surprised by what you saw? Why is it especially dangerous when drivers don't pay attention? If a lot of kids walk to your school, but the traffic seems to be going too fast, what behavior changes should be made to encourage walking in the area? If people are making dangerous turns at an intersection, what could your students teach drivers to make them safer?

Mark these numbers down on the board. Ask students to express them as a fraction or percentage (e.g. two-thirds of us walked today). Figure out how many people walk each day (you can include those who walk to and from transit for your numbers here). Then have a discussion about ways we can get around that are better for ourselves and for our city. What are the healthiest, greenest, and most fun ways to get to school? What could we do to improve our commutes? How could we share this information with grown-ups through our contest entry?

Personal Carbon Footprint



Categories: Environment
Subjects: Environmental Science, Social Studies
Time: 20-30 minutes
Handout: (2) The Carbon Footprint of a Commute

Ask the class to define the term "carbon footprint." If you want to give them an official definition, it's a "measure of the impact human activities have on the environment in terms of the amount of greenhouse gases produced, measured in units of carbon dioxide." In other words, your personal carbon footprint is how much pollution you put in the air from your behavior in a day. For the purposes of this lesson, we will concentrate only on the carbon footprint of a commute to and from school. Use "The Carbon Footprint of a Commute" handout to go over the different amounts of pollution produced by the different modes of transportation. Why is walking so great for the environment?

How We Commute



Categories: Health, Safety, Environment
Subjects: Social Studies, ELA, Math
Time: 20-30 minutes



Have the students list the various modes of transportation available in the city. Encourage them to think outside the box and include things like the ferry, skateboarding, scootering, etc. Now take a poll of the students. Ask them to raise their hands and identify the way they got to school this morning.



School-wide Activities

Walking Banner

Categories: Health, Safety, Environment
Subjects: Art, Health, Social Studies



Have a discussion about the social, health, environmental, and cost benefits of walking to get around. Think about what kind of images portray these themes. Make a big banner about walking in September, and put up the banner at the front of the school for the month of October to celebrate walking.

Wall Chart

Categories: Health, Safety, Environment
Subjects: Art, Health, Social Studies



For a week in October, put up a chart in the front of the school with all the different modes of getting around (walking, biking, transit, taxi, ferry, other) and have students tick a mark on the chart for the way they got to school that day. Encourage classrooms to discuss the numbers. Why do so many of us walk and take transit in New York City?

School-wide Walk for a Cause

Categories: Health, Safety, Environment
Subjects: Art, Health, Social Studies



Organize a school-wide fundraiser walk for a cause, to raise money for an issue related to walking, such as an environmental, health, or safety organization. Greet walkers with stickers, gifts and refreshments. Public officials can be invited to say a few words.

School-wide Active Transportation Competition

Categories: Health, Safety, Environment
Subjects: Art, Health, Social Studies, Science, Math



Create a competition to log miles that students have accumulated via walking, transit, and biking. Classes can compete against each other or different grades, or the school could work as a team to accumulate green miles towards a common goal, such as "Getting To Antarctica." Have an assembly as a culmination of this school-wide project to celebrate sustainable miles logged.

Download the School-wide Activity worksheets at <http://www.nyc.gov/html/dot/html/safety/walkingschools.shtml>



School: _____

Class: _____

Name: _____

Date: _____

(5) How Many Steps?

How many steps
(on average) do you
take in a day?

7,500

How many steps
(on average) do you
take in a lifetime?

216,262,500

How many steps
does it take to walk
a mile?

2,000

(range 1,900-2,400)

How many steps
does it take to walk
a block?

200

ACTIVITY (STEPS PER MINUTE)

Basketball (shooting baskets)	188	Rowing machine	212
Basketball game	242	Rugby	808
Bicycling	121 – 884	Running (5mph – 12 minute miles)	242
Billiards/pool	78	Shopping	70
Bowling	91	Skateboarding	152
Cooking	61	Skiing	182 - 242
Football	242	Ski mobiling	212
Frisbee	91	Sledding	212
Gymnastics	121	Soccer	212
Health club	187	Softball	152
Hiking	182	Stretching, yoga	78
Hockey (field/ice)	242	Swimming	182 - 808
Ice skating	212	Tennis	212
Inline skating	884	Weight lifting	121 – 182
Jogging	212	Wrestling	182
Jump rope	808		
Roller skating	212		

Estimate how many
steps it takes to walk
around your school:



**WE'RE
WALKING
HERE.** 

High School Activities Grades 9-12

<http://www.nyc.gov/html/dot/html/safety/walkingschools.shtml>



Safety
Education
& Outreach



EDUCATOR GUIDE

Classroom Activities

Neighborhood Walk



Categories: Safety
Subjects: Social Studies, Science
Time: 30-45 minutes
Handout: (1) Neighborhood Walk

Lead the students in a discussion about the area around their school and the way the streets are designed. You can use the "Neighborhood Walk" handout that we've included. Distribute copies to each student and assign teams. Take a walk with your students on the block directly around the school or a few blocks that are close by. Have the students use the handout to write observations for each category, determining what kinds of behaviors they see that are dangerous. When you return from your walk, discuss how these observations and notes can inform their contest entry. Were you surprised by what you saw? Why is it especially dangerous when drivers don't pay attention? If a lot of kids walk to your school, but the traffic seems to be going too fast, what behavior changes should be made to encourage walking in the area? If people are making dangerous turns at an intersection, what could your students teach drivers to make them safer?

these numbers down on the board. Ask students to express them as a fraction or percentage (e.g. two-thirds of us walked today). Figure out how many people walk each day (since so many students take transit, you can include those who walk to and from transit for your numbers here). Then have a discussion about ways we can get around that are better for ourselves and for our city. What are the healthiest, greenest, and most fun ways to get to school? What could we do to improve our commutes? How could we share this information with adults through the competition entry?

Commuter Choices



Categories: Health, Safety, Environment
Subjects: Social Studies, ELA, Math
Time: 20-30 minutes

Have the students list the various modes of transportation available in the city. Encourage them to think outside the box and include things like the ferry, skateboarding etc. Now take a poll of the students. Ask them to raise their hands and identify the way they got to school this morning. Mark

Personal Carbon Footprint



Categories: Environment
Subjects: Environmental Science, Social Studies
Time: 20-30 minutes
Handout: (2) The Carbon Footprint of a Commute

Ask the class to define the term "carbon footprint." If you want to give them an official definition, it's a "measure of the impact human activities have on the environment in terms of the amount of greenhouse gases produced, measured in units of carbon dioxide." In other words, your personal carbon footprint is how much pollution you put in the air from your behavior in a day. For the purposes of this lesson, we will concentrate only on the carbon footprint of a commute to and from school. Use "The Carbon Footprint of a Commute" handout to go over the different amounts of pollution produced by the different modes of transportation. Why is walking so great for the environment?

WE'RE WALKING HERE.

EDUCATOR GUIDE

Crashstat.org

Categories: Safety
Subjects: Social Studies
Time: 45 minutes
Handout: (3) Crashstat.org



Distribute the "Crashstat.org" handout. Have students work with partners at a computer. Look at the mapped crash statistics for the area around the school and fill out the worksheet. Come back together for a class discussion. Why is it important for the streets to be safe for pedestrians? What percentage of people getting around are pedestrians? Which pedestrians are most vulnerable? If the students believe that people are generally driving dangerously in the area, encourage them to think about what particular changes need to be made to mitigate this problem. Do we need better education, engineering, or enforcement? Do we need all three? If so, how would we go about doing any of these things? And in the meantime, what could we do to protect ourselves?

Public Service Announcements

Categories: Health, Safety, Environment
Subjects: ELA, Social Studies
Time: 1.5 hours
Handout: (4) PSA Planning Sheet



Create posters or flyers promoting walking and safe driving. As a class, you can define what is a Public Service Announcement (PSA) and think of some examples of PSA campaigns that have been effective (around smoking or obesity, for example). You can explain to the class that we can make our own PSAs to advocate for change in our communities. Students can work alone, with partners, or in groups to make their PSAs. (We've included a planning sheet you can use).

They can present these as posters or flyers to their classmates, the rest of the school, or leaders in their community. Put up posters at the front entrance for the month of October, or hand out flyers at a school-wide event.

Walkability Maps

Categories: Health, Safety, Environment
Subjects: Geography, Urban Planning
Time: 1.5 hours

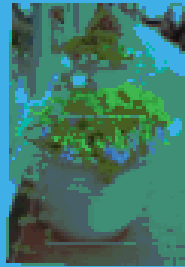


Create "walkability" maps by surveying the area around the school. As a class, create a set of criteria such as how clear are the street markings, how safe are the street crossings, are there places to sit and rest along the route, etc. Then go outside to conduct research, and then split into groups to create the maps. You can use NYC Oasis (www.oasisnyc.net/map.aspx) to find a good aerial view of your school zone. Have a discussion about the areas where you can walk more safely and easily than others. Why is it important to be able to walk to get around? Use these maps as a jumping off point for your design ideas.

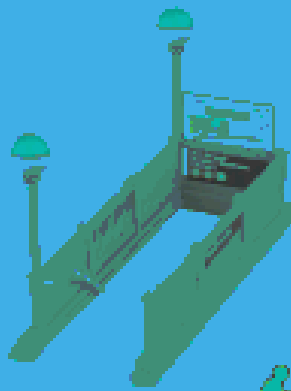
WE'RE WALKING HERE.

(6) Redesign Your Street

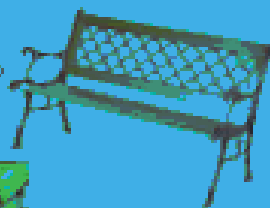
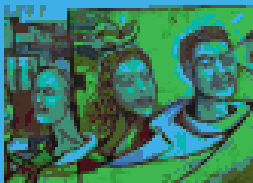
Beautification Measures
(tree pits, flowers, how
does the block look?)



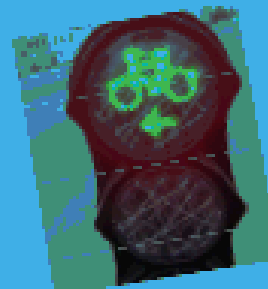
Public Transportation (bus
stops, subway entrances,
how close are these to the
school?)



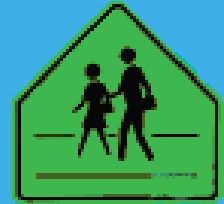
Other
(things on the street
that catch your eye?)



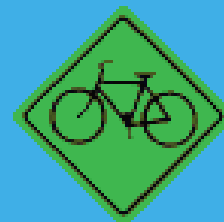
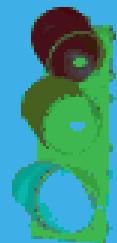
For Cyclists
(Are people on bikes able
to get around easily and
safely?)



For Pedestrians
(crosswalks, signs,
sidewalks, curbs)



Car Traffic Control and Calming (traffic
signals, signs, speed humps)



GRADE 5 • 5th FLOOR • 200 WORKSHEET

NEW YORK CITY
 Safety
Education
& Outreach

Environmental Resources

Chatham Borough Environmental Resource Inventory Update (2008; revised August, 2010):

<http://chathamborough.org/chatham/Announcements/Environmental%20Resource%20update.pdf>

Chatham Borough Master Plan (2006):

Part 1:

<http://www.chathamborough.org/chatham/PlansReports/Master%20Plan%20Part%201.pdf>

Part 2:

<http://www.chathamborough.org/chatham/PlansReports/Master%20Plan%20Part%202%282%29.pdf>

Chatham Borough Open Space and Recreation Plan (2002; revised July, 2010):

<http://chathamborough.org/chatham/Announcements/Open%20Space%20and%20Recreation%20update%20MP.pdf>

Association of New Jersey Environmental Commissions (ANJEC):

ANJEC, a non-profit organization, helps New Jersey environmental commissions, individuals, local and state agencies preserve natural resources and promote sustainable communities. <http://anjec.org/SustPathways.htm>

Sustainable Jersey: SUSTAINABLE JERSEY™ is a certification program for municipalities in New Jersey that want to go green, save money, and take steps to sustain their quality of life over the long term.

<http://www.sustainablejersey.com/>

Annotated Reference Materials²¹

Reports, Articles and Strategic Plans

Complete Streets: Best Policy and Implementation Best Practices - This Planners Advisory Service report, a joint project of the American Planning Association and the National Complete Streets Coalition, draws on lessons learned from 30 communities across the country. The report provides insight into successful strategies and practices to create complete streets, including how to build support for complete streets, adopt policies, and integrate the policy into everyday practice. Co-edited by Barbara McCann and Suzanne Rynne, with chapters written by Coalition staffer Stefanie Seskin, it also covers topics such as cost, design, and working with stakeholders.

Complete Streets: Best Policy and Implementation Best Practices — Chapter 5: Making the Transition (.pdf) - This chapter from the *Best Practices* report covers how communities make the transition from traditional, automobile-based transportation planning to a more inclusive and multimodal process through the four key steps for successful implementation: 1) Restructure procedures to accommodate all users on every project; 2) Develop new design policies and guides; 3) Offer workshops and other training opportunities to planners and engineers; and 4) Institute better ways to measure performance and collect data on how well the streets are serving all users.

Planning Complete Streets for an Aging America - A major report from the AARP Public Policy Institute, working with the Renaissance Planning Group, the National Complete Streets Coalition, the Institute of Transportation Engineers and others, on considering the needs of older people in multimodal street planning.

Complete Streets in the United States - In this paper, John LaPlante and Barbara McCann discuss the growth of the Complete Streets movement and how the design of our streets can provide more room for nonmotorized travelers and control traffic speeds for safety (January 2011).

Complete Streets: We Can Get There from Here (.pdf) - Authored by John LaPlante and Barbara McCann; in the journal of the Institute of Transportation Engineers (May 2008).

²¹ <http://www.completestreets.org/complete-streets-fundamentals/resources/>

Retrofitting Urban Arterials into Complete Streets (.pdf) - John LaPlante's research at TRB's 3rd Urban Street Symposium (2007).

Public Policies for Pedestrian and Bicyclist Safety and Mobility (.pdf) - This 2010 Federal Highway Administration report identifies and provides examples of effective policies and implementing programs that support pedestrian and bicyclist safety and mobility, based on examples from the U.S. and abroad.

Aging Americans: Stranded Without Options - This report concludes that as Americans grow older, our existing transportation network is unable to meet their needs of the national's aging population particularly as they become less willing and able to drive.

Model Complete Streets Communications Plan (.doc) - In January 2007, the Partnership for Active Communities in Sacramento, California, kicked off its campaign, based on this Communications Plan, to build support for Complete Streets.

Partnership Moves Community Toward Complete Streets - Published in the *American Journal of Preventative Medicine*, this article describes how the Partnership for Active Communities brought together multidisciplinary organizations to support increased walking and bicycling through a 5-year project.

Constructing, Maintaining, and Financing Sidewalks in New Jersey - Research done to explore who is responsible for sidewalks, with a review of state and national guidelines, consultation with national professionals, and a legal analysis of sidewalk-related case law.

Dangerous by Design - Transportation for America's 2009 report ranks pedestrian safety in major metro areas, finding 'incomplete' streets a major culprit in the deaths of thousands of Americans every year.

Bicycling and Walking in the United States: 2010 Benchmarking Report - This report from the Alliance for Biking Walking highlights data on biking and walking levels, safety, funding, policies, and more from 50 states and the 51 largest cities.

New Jersey Safe Routes to School Program: Strategic Plan: 2006 – NJDOT – The purpose of this strategic plan is to establish an operational framework to guide NJDOT in the administration of the SRTS program. The NJDOT has developed a broad vision through a series of stakeholder meetings.

Design/Technical Guidance

Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities (ADAAG) - This document contains scoping and technical requirements for accessibility to buildings and facilities by individuals with disabilities under the Americans with Disabilities Act (ADA) of 1990. These scoping and technical requirements are to be applied during the design, construction, and alteration of buildings and facilities covered by titles II and III of the ADA to the extent required by regulations issued by Federal agencies, including the Department of Justice and the Department of Transportation, under the ADA. (<http://www.accessboard.gov/adaag/html/adaag.htm>)

Designing Walkable Urban Thoroughfares: A Context Sensitive Approach: An ITE Recommended Practice - This new Institute of Transportation Engineers Recommended Practice advances the successful integration of land use consideration and multi-modal streets to create walkable communities.

Revised Draft Guidelines for Accessible Public Rights-of-Way - The latest draft of new guidelines being developed by the US Access Board for public rights-of-way that will address various access issues.

Urban Bikeway Design Guide - The Urban Bikeway Design Guide, issued by the National Association of City Transportation Officials, is based on national and international best practices in bikeway design and will be updated regularly. It can be adopted by individual cities, counties, or states as either a stand-alone document or as a supplement to other guidance documents.

Design Issues for Sidewalks - US Access Board videos that address design sidewalk accessibility issues.

Relationship of Lane Width to Safety for Urban and Suburban Arterials (.pdf) - Road design policy research that argues that encouraging narrow lanes will not increase safety risk in most cases.

Rethinking the Suburban Bus Stop (.pdf) - This report from the Airport Corridor Transportation Association suggests designs to improve different types of suburban bus stops and is a great guide for all suburban communities and transit agencies.

Road Diet Handbook: Setting Trends for Livable Streets - This resource from Jennifer Rosales at Parsons Brinckerhoff, and available through the Institute of

Transportation Engineers, takes a practitioner through planning, analysis, design, and implementation of road diet projects.

Bicycle Facilities and the Manual on Uniform Traffic Control Devices - This table from the Federal Highway Administration lists information regarding approval status (e.g., can be implemented, currently experimental) of various bicycle related treatments not directly covered in the Manual of Uniform Traffic Control Devices (MUTCD).

Complete Intersections: A Guide to Reconstructing Intersections and Interchanges for Bicyclists and Pedestrians (.pdf) - This guide from the California Department of Transportation discusses how to balance the needs of all users - including pedestrians, bicyclists, transit riders and vehicles - at intersections.

MassDOT Project Development & Design Guide - The Massachusetts road design manual integrates all modes and gives cities and towns more control over design decisions.

Smart Transportation Guidebook - Developed by the New Jersey and Pennsylvania Departments of Transportation, the Guidebook details design guidelines for both roadway and roadside elements and a template of flexible design values for various road and community environments.

Charlotte, NC Urban Street Design Guidelines - The USDG are the implementation tool for planning and designing Charlotte's streets and for providing viable transportation choices for all Charlotteans.

San Francisco Better Streets Plan - The Better Streets Plan creates a unified set of standards, guidelines, and implementation strategies to govern how the San Francisco designs, builds, and maintains its pedestrian environment. The Better Streets Plan process brings together staff of multiple City agencies to comprehensively plan for streets.

City of New Haven Complete Streets Design Manual (.pdf) - The Complete Streets Design Manual provides technical guidance on the building, rebuilding, repair, and rehabilitation of New Haven streets and equips citizens with the tools and information needed to engage in the transportation planning and design process.

New York City Street Design Manual - The Street Design Manual is a thoughtful, comprehensive document covering the many street types found in all five boroughs and is recognized as one of the best in the nation.

Tacoma, WA Complete Streets Design Guidelines - Tacoma's new Complete Streets Guidelines will provide a comprehensive set of city-wide design guidelines. So far, guidance has been adopted for Mixed-Use Centers (.pdf) and for Residential areas (.pdf). The project team will soon develop guidance for industrial areas and major connector streets.

Maricopa Association of Governments Complete Streets Guide (.pdf) - This guide for the Phoenix, AZ area provides sample outcomes, examples of best practices, and policy guidance to ensure that all new and retrofitted streets in the MAG region serve all users.

Glossary of Terms^{22, 23}

Accessible: Accessible facilities are those that can be reached, used, and traversed by people of all ages and abilities without difficulty.

Active Transportation: Also known as Non-Motorized Transportation and Human-Powered Transportation, includes walking, bicycling, small-wheeled transport (skates, skateboards, push scooters and hand carts) and wheelchair travel (Victoria Transportation Policy Institute).

Americans with Disabilities Act (ADA): The legislation defining the responsibilities of and requirements for transportation providers to make transportation accessible to individuals with disabilities (FHWA).

Bicycle Facilities: Facilities designed to accommodate bicycle travel for recreational or commuting purposes. Bikeways are not necessarily separated facilities (such as off-road paths), but may be designed to be shared and operated along with other travel modes (such as painted on-road bike lanes or sufficiently wide shoulders with bicycle signage).

Chicane - Barriers built into the street using high curbs, plantings, trees or bollards to create a serpentine design on a roadway. This traffic calming measure slows motor vehicle traffic as it requires motorists to zigzag through a street.

Connectivity: A measure of how well transportation facilities (such as roads and sidewalks) are connected to each other and to important destinations.

Crosswalk: Also known as a pedestrian crossing, a crosswalk is a point on a roadway that employs some means of assisting pedestrians or other non-motorized transportation modes to safely cross the road. Crosswalks usually consist of some combination of on-road paint, a crossing signal for pedestrians, and signage warning motorists of the presence of pedestrians. Crosswalks are most commonly located at signalized intersections but can be located anywhere along a roadway.

Curb Cut: Also known as a Curb Ramp, a curb cut is a short ramp installed where a sidewalk meets a road to create a smooth transition between the two surfaces rather than a steep drop of several inches. Curb cuts are especially essential for

²² <http://www.ipa.udel.edu/healthydetoolkit/glossary.html>

²³ http://www.peoplespeeds.com/traffic_calming_terms.html

sidewalk users such as bicyclists, pedestrians with limited mobility, and those using wheelchairs or strollers.

Curb extension - sidewalks that project into traffic intersections to slow turning drivers and protect crossing pedestrians.

Greenway: A corridor of undeveloped land, usually including some kind of trail or pathway that is provided for recreational purposes and/or environmental protection.

Healthy Community: A neighborhood, town, or other area that promotes the physical, mental, and emotional health of its citizens through the designs and practices of the places and organizations that touch people's lives every day. These include schools, work sites, healthcare sites, parks, the built environment, and other community settings. Healthy communities provide their citizens with opportunities for healthy lifestyles through various policies, urban designs, food options, exercise facilities, etc.

Land Use: Refers to the division and usage of natural land for various human purposes. In planning terms, land use usually refers to the designation of land space for discrete purposes, through ordinances or zoning codes, such as commercial, residential, or industrial development. Land use can also connote the physical quantity of land that is consumed for human purposes, rather than left as wilderness.

Livable: Refers to the suitability of a place (town, city, or neighborhood) to support a high quality of life that contributes to the health and happiness of its residents.

Median/Pedestrian Refuge/Pedestrian Island - a raised island dividing multiple lanes of vehicular traffic.

Mobility: The ability to move or be moved from place to place (FHWA).

Multimodal: The availability of transportation options using various modes (such as automobile, bicycle, and pedestrian) within a system or corridor (FHWA).

Multi-use Path: An off-road path, paved or unpaved, intended for use by pedestrians, bicyclists, joggers, skaters, and others for recreational or transportation purposes.

Paved Trail: A relatively smooth path covered with paving material such as asphalt, concrete, or macadam. Paved trails can include off-road paths, such as greenway trails, as well as sidewalks alongside a roadway.

Pedestrian-Scale (or Human-Scale) Design: Encompasses a number of design strategies that enhance a pedestrian's experience of the built environment. Pedestrian-scaled design includes designing roadways, buildings, signage, and parking lots for the convenience and comfort of pedestrians as well as motorists. Examples include lighting on sidewalks, parking lots located behind or to the side of buildings, attractive storefronts, and way-finding signs intended to guide people who are traveling on foot rather than in automobiles.

Pedestrian Facilities: Includes roadside sidewalks, trails, and paved or unpaved off-road trails.

Pedestrian Network: A continuous sidewalk or pedestrian-facility system that allows pedestrians to make uninterrupted trips and accommodates stroller or wheelchair users to utilize the sidewalks (Kansas City Walkability Plan).

Pedestrian Signals: Electronic signals placed at pedestrian-crossing locations intended to notify pedestrians when it is safe to cross the street. Pedestrian signals can also be programmed to provide an exclusive pedestrian phase at signalized intersections, whereby all automobile traffic is given a red light and only pedestrian crossing movement is allowed.

Right of Way: A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes (FHWA).

Safe Routes to School: A federally funded and state-administered program that encourages local schools and jurisdictions to undertake projects that will encourage children to walk or bicycle to school and to make such trips safer.

Sharrow/Shared-Lane Marking: A street marking placed between the parking or curb lane and the center of a travel lane indicating that a bicyclist may use the full travel lane. Sharrow markings are frequently used on streets too narrow to accommodate a standard bicycle lane.

Sidewalk: A paved walkway along the side of a street; also the portion of a right-of-way intended for pedestrian use.

Traffic Calming: A way to design streets using engineering principles to encourage people to drive more slowly. Traffic calming involves physical and visual cues that induce drivers to travel at appropriate speeds (Kansas City Walkability Plan).

Traffic Signals: Electronic signaling devices located at road intersections to control competing flows of traffic.
go to top of pageU

Universal Design: Transportation systems designed to accommodate a wide range of users, including people with disabilities and other special needs (Victoria Transportation Policy Institute).

Walkability: Walkability is often measured according to the environmental, health, financial, and safety benefits offered to pedestrians within a community. More broadly, walkability is a measure of how conducive an environment is to walking (walkscore.com).