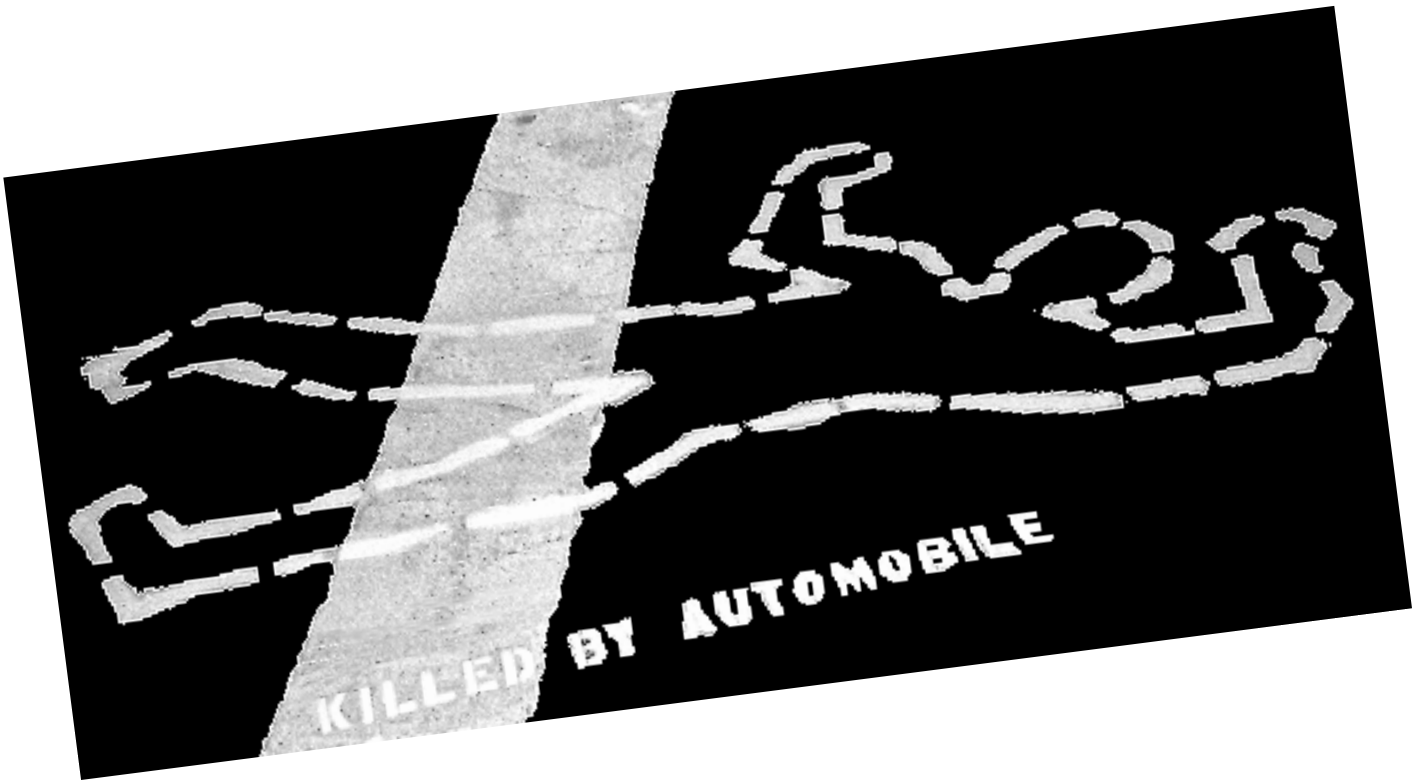

MEAN STREETS

PEDESTRIAN SAFETY AND REFORM OF THE NATION'S TRANSPORTATION LAW

SURFACE
TRANSPORTATION
POLICY
PROJECT

ENVIRONMENTAL
WORKING GROUP™

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STPP is a nonprofit coalition of roughly 175 groups devoted to ensuring that transportation policy and investments help conserve energy, protect environmental and aesthetic quality, strengthen the economy, promote social equity, and make communities more livable.

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The following organizations participated in the release of *Mean Streets:*

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Contents

Foreword

"Look both ways before you cross."

It's survival lesson number one for children of the internal combustion era. We drum it into their little heads starting more or less from the time they take their first steps. It's about the best a parent can do to prepare kids for life afoot in the built environment, which for many decades now has been built mainly to serve the imperatives of tens of millions of cars and trucks: a swift and constant flow of traffic, through ever more numerous, ever-widening roads, connecting every conceivable dot on the map.

It is a world engineered to specifications that classify the pedestrian as a traffic "flow interruption," ideally kept off the streets altogether. Set foot in this world and it can kill you, even if you *do* look both ways. After all, some 6,100 pedestrians die in traffic accidents each year in the United States—one automobile-related fatality out of 7—and more than 110,000 are injured.

The authors of *Mean Streets* argue that we can do much better by our pedestrian selves by making our streets and communities safer for walking.

All that is required is a reengineering and reinvestment strategy that makes the well being of *H. sapiens* central to the roads we build, expand and maintain with our own tax dollars. Communities that have made pedestrian safety central to road design and spending decisions have saved lives and reduced injuries to a dramatic degree. More and more communities would like to go down the same road, and in 1991 Congress gave them a decent vehicle: the Intermodal Surface Transportation Efficiency Act (ISTEA).

For many years prior to 1991 the law was known colloquially (and accurately) as "the highway bill," the federal law through which the government, among other things, disbursed tens of billions of dollars each year, derived from Uncle Sam's excise tax on gasoline. Congress gave the law a more progressive mandate in 1991, and under it a small fraction of spending on roads went to making them safer for pedestrians. Another chunk went to mass transit. And still another

portion was allocated to bike paths and a range of other environmental and safety measures that are called "enhancements."

ISTEA is up for reauthorization in 1997, with more than $150 billion in spending on the table over the next 6 years. If the road construction, automobile and trucking interests (a.k.a., "the Road Gang") have their way, the next version of the law will be a throwback to the days when every penny was poured into highway construction. Even they will call their proposal the "Highways Only Transportation Efficiency Act." As in "HOTEA." Get it?

This report, a collaborative product of the Surface Transportation Policy Project (STPP) and the Environmental Working Group (EWG), offers competing notions of nostalgia and of progress. Its authors argue that America's streets once again ought to invite and protect the pedestrian. They make the case for investments in a range of measures that have made many communities safer places in which to travel, by foot, to school or shop or work. It is by no means an anti-auto outlook or prescription. Plenty of money can and will still be spent maintaining and building roads. *Mean Streets* simply makes a reasoned plea to begin correcting decades of imbalanced spending policies, in order to save lives, prevent injury, and give local people greater say in making their neighborhoods more livable.

We happen to think that a pro-pedestrian policy will have considerably more appeal to the average American than the case the Road Gang is making for a retrograde, "highways only" spending spree. With Congress on the threshold of deciding how to proceed, we can only advise—look both ways.

Hank Dittmar
Executive Director
Surface Transportation
Policy Project

Ken Cook
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Environmental
Working Group

Executive Summary

Hundreds of millions of dollars are spent every year to make America's roads safer, yet this investment is failing to ensure the safety of all of us who engage in the most basic form of transportation — walking. Millions of Americans walk — to school, to work, to the store, or just around the block for a little bit of exercise. Our findings indicate that from 1986 to 1995, approximately 6,000 pedestrians were killed by automobiles each year, and more than 110,000 were injured. This carnage is attributable only in part to individual misjudgment — a failure to "look both ways" as children are taught. These deaths and injuries are also the consequences of a transportation system gone badly wrong — a system focused on making the streets safe for cars instead of making communities safe for people. Indeed, people are 1.6 times more likely to get killed by a car while walking than they are to be shot and killed by a stranger with a gun.

In *Mean Streets,* we analyzed the failures of this system, taking a close look at pedestrian fatalities, and spending on our streets, roads and highways — the billions of dollars spent each year that frequently makes the roads *less* safe for pedestrians. Our analysis of Federal Highway Administration (FHWA) and National Highway Traffic Safety Administration (NHTSA) data found that:

Thousands of Pedestrians Are Killed Each Year by Automobiles

- Between 1986 and 1995, approximately 6,000 pedestrians died every year in the United States after being hit by cars. This is a significant public health and safety problem — the equivalent of a commercial airline crash with no survivors every two weeks. And for every pedestrian who is killed by an automobile, almost 20 more are injured — more than 110,000 pedestrians are injured by automobiles each year.

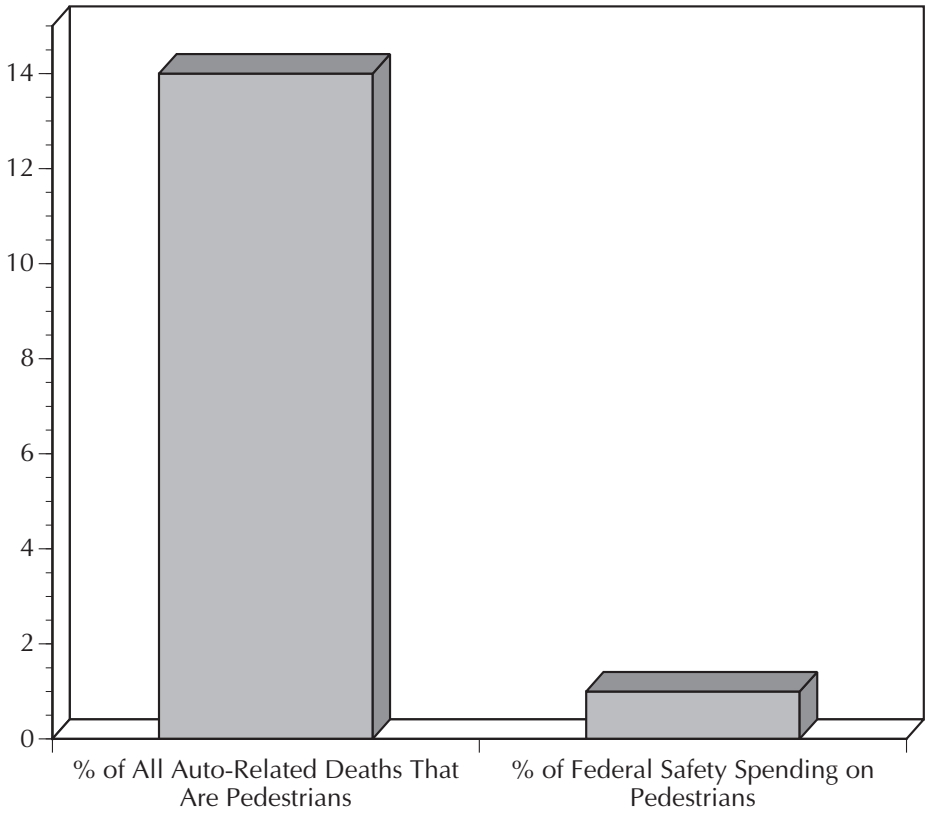
Highway Safety Money Is Not Being Used To Protect Pedestrians

- Pedestrians account for 14 percent of all motor vehicle-related deaths, yet only 1 percent of federal highway safety funds are spent on

Between 1986 and 1995, approximately 6,000 pedestrians died every year in the United States after being hit by cars.

People are 1.6 times more likely to get killed by a car while walking than they are to be shot and killed by a stranger with a gun.

Figure 1. Pedestrians do not receive their fair share of federal safety funds.



Source: Environmental Working Group. Compiled from FHWA and NHTSA data.

The Highway Capacity Manual — one of the industry bibles — defines a pedestrian as a traffic "flow interruption."

pedestrian safety[1] (Figure 1). The remaining 99 percent is spent on automotive safety measures (such as road widening) that typically remove the obstacles to more rapid traffic flow. The Highway Capacity Manual — one of the industry bibles — provides the typical highway engineer's definition of a pedestrian: a traffic "flow interruption." Traffic safety features are designed primarily to allow drivers to move at higher speeds. This basic tenet of highway engineering often makes roads more dangerous for pedestrians.

Senior Citizens Are At The Highest Risk

- Senior citizens (persons age 65 and over) comprise 13 percent of the population, but account for 23 percent of all pedestrian fatalities — meaning that seniors are almost twice as likely to be killed by an automobile as members of the general public. As a group, senior

citizens are particularly dependent on safe streets for walking because many of them no longer drive.

Most Fatalities Occur On Neighborhood Streets

- More than half — 55 percent — of all pedestrian deaths by automobiles occur on neighborhood streets. The problem is not that pedestrians are walking in the wrong places, but that our local streets are becoming speedways — designed to accommodate more cars passing through, not the people who live, walk, and play in their communities.

The Most Dangerous Cities For Walking

The high rate of pedestrian fatalities is a national problem. In some communities however, the problem is worse than most. In this report, for the first time, we present a list of the most dangerous communities in which to walk.

The cities with the largest numbers of walkers — New York, for example, will have the most pedestrian fatalities. This does not always mean, however, that cities like New York are the most dangerous places to walk relative to the number of people walking.

The most dangerous metropolitan areas for walkers tend to be newer, sprawling, southern and western communities, where transportation systems are most biased toward the car at the expense of other transportation options. Among large metropolitan areas (those with populations of one million or more) the five most dangerous communities in which to walk are Ft. Lauderdale, FL., Miami, FL, Atlanta, GA, Tampa-St. Petersburg-Clearwater, Fl., and Dallas, TX. The safest walking communities are Pittsburgh, Milwaukee, Boston, New York City, and Rochester, NY (Table 1). In these metropolitan areas, walking activity is high, but there are relatively few fatalities. Our findings indicate that is eleven times more dangerous to walk in Ft. Lauderdale than it is to walk in Pittsburgh.

The most dangerous metropolitan areas for walkers tend to be newer, sprawling, southern and western communities, where transportation systems are most biased toward the car at the expense of other transportation options.

The Solution: Making Our Streets Safe For People

Solutions to make our streets safer for pedestrians are well understood, but too seldom implemented. Indeed, some communities have demonstrated how to reduce pedestrian death and injuries. The key to improving pedestrian safety is to attack the problem at its source, and reduce hazards by improving poorly designed roadways and transportation systems. For years, traffic engineers have placed the blame on the walker rather than on the motorist or road condition. Instead of blaming pedestrians for being hit by cars, planners and engineers must design communities and roads that are safe for walking. Communities can take

Instead of blaming pedestrians for being hit by cars, planners and engineers must design communities and roads that are safe for walking.

Table 1. Fort Lauderdale is the most dangerous large metropolitan area for walking; Pittsburgh is the safest.

Metropolitan Area (Populations of 1 million or more)	Average Annual Pedestrian Fatalities	% of All Auto-Related Fatalities that are Pedestrians	Annual Pedestrian Fatality Rate (per 100,000)	Percentage of Commuters Walking to Work	Pedestrian Fatality Index (0-100)
Fort Lauderdale--Hollywood--Pompano Beach, FL PMSA	58	28%	4.6	1.8%	90
Miami--Hialeah, FL PMSA	100	30%	5.2	2.5%	73
Atlanta, GA MSA	84	16%	3.0	1.5%	70
Tampa--St. Petersburg--Clearwater, FL MSA	85	22%	4.1	2.3%	64
Dallas, TX PMSA	76	19%	3.0	1.9%	51
Houston, TX PMSA	101	20%	3.1	2.2%	48
Detroit, MI PMSA	107	21%	2.5	1.9%	47
Riverside--San Bernardino, CA PMSA	92	13%	3.6	2.7%	47
Phoenix, AZ MSA	79	19%	3.7	2.6%	44
Charlotte--Gastonia--Rock Hill, NC--SC MSA	29	14%	2.5	2.1%	43
Orlando, FL MSA	48	20%	4.5	3.5%	41
New Orleans, LA MSA	47	23%	3.8	3.1%	40
Salt Lake City--Ogden, UT MSA	28	24%	2.6	2.3%	40
Nassau--Suffolk, NY PMSA	80	24%	3.0	2.7%	39
Sacramento, CA MSA	37	16%	2.5	2.7%	37
San Jose, CA PMSA	33	25%	2.2	2.1%	37
Los Angeles--Long Beach, CA PMSA	299	27%	3.4	3.3%	36
St. Louis, MO--IL MSA	51	14%	2.1	2.1%	33
Kansas City, MO--KS MSA	27	12%	1.7	1.9%	31
San Diego, CA MSA	96	27%	3.8	4.5%	29
Indianapolis, IN MSA	24	13%	1.9	2.2%	27
San Antonio, TX MSA	37	20%	2.8	3.6%	27
Newark, NJ PMSA	51	26%	2.8	3.7%	25
Baltimore, MD MSA	66	22%	2.8	4.0%	23
Portland, OR PMSA	34	17%	2.7	3.5%	23
Chicago, IL PMSA	180	23%	3.0	4.2%	21
Washington, DC--MD--VA MSA	98	19%	2.5	3.9%	21
Cleveland, OH PMSA	36	16%	1.9	2.9%	20
Denver, CO PMSA	28	15%	1.7	3.0%	20
Cincinnati, OH--KY--IN PMSA	23	13%	1.6	2.8%	19
Seattle, WA PMSA	37	18%	1.9	3.3%	19
Columbus, OH MSA	20	12%	1.4	3.3%	15
Norfolk--Virginia Beach--Newport News, VA MSA	25	16%	1.8	3.7%	15
Philadelphia, PA--NJ PMSA	120	21%	2.5	5.4%	15
San Francisco, CA PMSA	43	31%	2.7	5.9%	15
Minneapolis--St. Paul, MN--WI MSA	35	15%	1.4	3.2%	14
New York, NY PMSA	310	46%	3.6	9.7%	12
Rochester, NY MSA	17	12%	1.7	4.3%	11
Boston, MA PMSA	22	48%	0.8	6.5%	10
Milwaukee, WI PMSA	19	15%	1.3	4.0%	10
Pittsburgh, PA PMSA	33	12%	1.6	5.1%	8

Source: Environmental Working Group. Compiled from NHTSA and U.S. Census data.

a variety of actions designed to make roads safer, including:

- Traffic calming — The installation of speed bumps, traffic circles or other devices in residential neighborhoods that slow cars down, and ensure that pedestrians are safe.
- Providing separate walkways and other spaces for pedestrians.
- Designing public spaces to be more pedestrian friendly — including the installation of sidewalks, handrails for the infirm, bricked crosswalks, and

even actions as simple as changing the patterns of the lines on the road.

- Enhanced public education on pedestrian safety, and adequate enforcement of laws designed to protect pedestrians.

These tools are already making the roads safer for pedestrians in some communities. In Seattle, the city's traffic calming program reduced pedestrian accidents by more than 75 percent. In Portland, OR, traffic circles reduced the number of reported accidents by 50 percent. These examples clearly indicate that America has the means to make our nation's streets safer for pedestrians. We lack only the public demand and political resolve to reduce pedestrian injury and death.

In Seattle, the city's traffic calming program reduced pedestrian accidents by more than 75 percent.

Reauthorizing ISTEA - The Nation's Transportation Law

This year, Congress is poised to reauthorize the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). This legislation will provide over $150 billion for states and communities to spend on their transportation systems — roads, bridges, public transportation, and trails and paths for those who walk and bike. The highway lobby, known as the "road gang" — including road contractors, automobile manufacturers, truckers and even several state Departments of Transportation — is pushing to weaken the legislation, so that money is spent exclusively to build highways, while less is spent to make communities safe for walking and otherwise make America's transportation system more sustainable.

The Road Lobby's Efforts To Weaken Transportation Law, Making Streets Less Safe For Pedestrians

The "road gang" is pushing hard for legislation, such as the Highways Only Transportation Efficiency Act (HOTEA) and STEP 21, which would make the existing pedestrian safety problem even worse. These proposals would abolish existing environmental and safety programs, as well as the Enhancements program (which currently provides funding for bicycle and pedestrian activities). In their place would be a program focused on roadbuilding and maintenance that would strongly bias transportation spending towards retrograde emphasis on highway construction.

Pedestrian safety should be recognized as a national transportation safety priority on par with automobile and railroad safety programs.

The Clinton Administration Proposal

The Clinton Administration recently released its ISTEA reauthorization package, which was introduced by Senators Chafee and Moynihan as S. 468. This legislation would maintain the basic structure of current law, while increasing overall funding for bicycle and pedestrian projects (via an increase in funding for the Enhancements pro-

Congress must fund projects that promote pedestrian safety at a level equivalent to the rate of pedestrian fatalities nationwide.

gram), and measures to promote clean air.

Opportunities To Improve Pedestrian Safety

Pedestrian safety should be recognized as a national transportation safety priority on par with automobile and railroad safety programs. To make our roads safer for walking we recommend that Congress:

(1) Preserve and Strengthen ISTEA's Current Safety Programs to Better Protect Pedestrians

Congress should establish the goals of doubling the percentage of total trips made by biking and walking, while reducing fatalities by 10 percent.

Congress must adequately fund pedestrian safety activities. Specifically, ISTEA's safety programs must be improved to

(a) Fund projects that promote pedestrian safety (from the federal safety set-aside program) at a level equivalent to the rate of pedestrian fatalities nationwide (i.e. roughly 14 percent).

(b) Expand the federal safety funding program (ISTEA's "safety set-aside") to enhance opportunities for funding safety programs for pedestrians, bicyclists and people with disabilities.

(c) Allow more local control over where and how federal safety funds are spent to ensure that local pedestrian safety and other community transportation priorities are given full consideration.

(d) Continue other federal highway safety programs (S. 402 and 410 of ISTEA) and promote increased public involvement.

(2) Establish A National Goal of Increasing Pedestrian Safety

Congress should establish the goals of DOT's National Bicycling and Walking Study — a doubling of the percentage of total trips made by biking and walking, while reducing fatalities by 10 percent — as national policy. ISTEA should contain an incentive program for transportation safety based on measurable changes in a state's per capita fatality rate. A goal and incentive system of this type will create financial incentives for pedestrian safety through a dedicated fund linked to measurable improvements in reductions in accidents and fatalities.

(3) Ensure that Road-Building Projects Don't Increase Hazards for Pedestrians, including Children, the Elderly and the Disabled

All ISTEA-funded projects should be required to plan for the safe accommodation of pedestrians as well as other vulnerable users of the roadway (bicyclists, children, elderly and the disabled). All too often, past highway safety "improvements" have exactly the opposite effect on pedestrians. In order to remedy this problem, Congress must ensure that all existing and new roads on which pedestrians are permitted are designed and constructed to provide appropriate walking spaces and safety features for pedestrians.

(4) Collect More Accurate and Detailed Data on Pedestrians and Walking

Pedestrian safety efforts are hindered by the widespread lack of reliable and comprehensive data on walking. There is no comprehensive information on miles walked, as there is for vehicle miles traveled. Little is known about how much people walk, why they walk, what other options they have, and how these factors vary with the age of the pedestrian. The reauthorization of ISTEA presents an ideal opportunity to fill this information vacuum by requiring that the U.S. Department of Transportation collect better, more detailed and more accurate data on levels of walking, injury and fatality rates and the relative risks faced by pedestrians.

Note

[1]This includes funding for dedicated pedestrian projects only, such as installing speed bumps, constructing roundabouts (a form of traffic circle), diverting non-local drivers away from local streets, changing pavement surfaces, and narrowing the roadway. It does not include funds for auto safety projects, like traffic signals, that have an incidental effect on pedestrians.

Walk at Your Own Risk

"First and foremost, the safety and security of all of our nation's transportation systems will be my highest priority — a moral commitment as well as a policy imperative. Nothing is more important to me [and] to the American people..."

US Secretary of Transportation Rodney E. Slater. 1997

Pedestrian Safety Is A Major Public Health and Safety Problem

Thousands of Pedestrians Are Killed and Tens of Thousands Are Injured Every Year

The public expects an effective response to transportation safety issues such as airport security measures, drunk driver prevention programs, motorcycle helmets or air bags. Accordingly, Secretary of Transportation Rodney E. Slater recently embraced this challenge by identifying transportation safety as his "highest priority." (Slater 1997)

But amid this rhetoric, safety for those engaged in the most basic form of transportation — walking — is forgotten. Traffic engineers regard walkers as an impediment to the smooth flow of traffic — in fact their standard text, the Highway Capacity Manual, still refers to walkers as traffic "flow interruptions." (Highway Capacity Manual 1994). Numerous polls have indicated that the public supports walkable streets (FHWA 1994). Yet many traffic engineers still do not regard pedestrian safety as a serious problem deserving of major public investment. Many, in fact, regard it as solely a matter of individual responsibility. If we are to ensure that our streets are safe to walk on, this perception must change.

National Highway and Transportation Safety Administration (NHTSA) data indicate that, between 1986 and 1995, pedestrian fatalities accounted for roughly 14 percent of all automobile-related fatalities in the United States, or about 6,150 deaths per year. This means that one in seven people killed in car crashes are pedestrians — the equivalent of one large commercial plane crash with no survivors every two weeks.

One in seven people killed in car crashes are pedestrians — the equivalent of one large commercial plane crash with no survivors every two weeks.

Since 1991, the number of pedestrian fatalities has hovered at or slightly above 5,500.

Pedestrians also pay a heavy toll in injuries. NHTSA data indicate that for every pedestrian killed by a car, approximately eight more suffer severe injuries and eleven suffer less serious injuries. Between 1991 and 1995, over 100,000 pedestrians were injured each year — roughly 47,500 pedestrians suffering severe injuries, and 66,000 more suffering mild to moderate injuries annually. And since many injuries go unreported, these numbers underestimate the actual number of pedestrian injuries.[2]

The consequences of these injuries are also disproportionately serious. Though motor vehicle-pedestrian crashes constitute just 2 percent of total crashes, they result in 14 percent of all traffic-related fatalities.[3]

Over this five year period, very little federal highway safety money has been spent to protect pedestrians.

Between 1986 and 1991, pedestrian fatalities dropped steadily, from 6,779 in 1986 to 5,797 in 1991. This reduction may have been due to a decrease in walkers, not safer roads for them. U.S. Census data show that between 1980 and 1990, the percentage of the population commuting to work by walking decreased by 15 percent (FHWA 1994). It is unclear if this reduction in fatalities was due to safer roads or fewer walkers. However, since 1991, this progress has stopped, and the number of pedestrian fatalities has hovered at or slightly above 5,500 (Figure 2). Between 1994 and 1995 (the last year for which data is available), pedestrian fatalities increased by 2 percent, from 5,489 to 5,585. Over this five year period, our analysis found that very little federal highway safety money has been spent to protect pedestrians. ISTEA contains the tools to make pedestrians safe. However federal, state, and local officials have not given these tools the chance to work

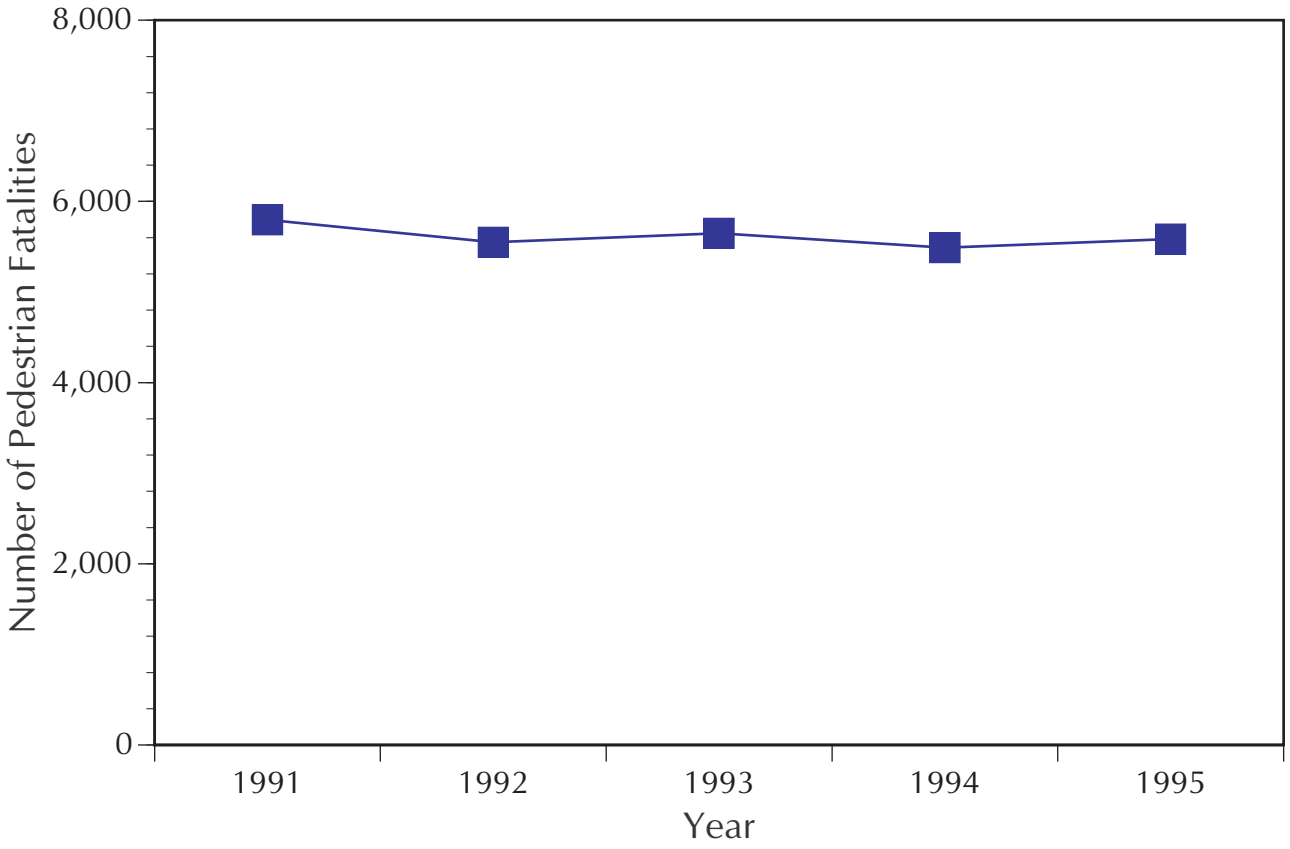
Putting Things In Perspective - The Risks of Walking On Our Nation's Streets

Pedestrian death and injury constitutes a critical public health and safety problem — one that does not receive the attention it deserves. Public safety officials and the media for example, often focus on less common types of fatalities, such as child fatalities caused by air bags[4], while all but ignoring the fact that more than 1,000 children every year are killed by motor vehicles while walking.

Violent crime provides an even more compelling comparison. We fear criminals, and with good reason. Our analysis shows that, as Americans walk on our nation's streets, they have just as much to fear from reckless drivers. Crime and traffic safety were compared in a compelling 1996 study by Northwest Environment Watch (Durning 1996). This analysis revealed that a person is more likely to die in a car crash in the suburbs than they are to be killed by a criminal in the city.

Our analysis takes the comparison one step further, com-

Figure 2. Since 1991, little progress has been made in reducing pedestrian fatalities in the United States.



Source: Environmental Working Group. Compiled from NHTSA data.

paring the risk of being killed by strangers while walking on our nation's streets. We compared two groups of strangers — strangers with guns, and strangers driving automobiles — and found that in 1995 a pedestrian was 1.6 times more likely to be killed after being hit by an automobile than to be killed by a stranger with a gun. FBI and NHTSA data reveal that in 1995, strangers committed approximately 3,500 homicides with guns, while vehicle crashes killed 5,585 pedestrians.[5] At the state level, a person is more likely to be killed by a stranger with a car than by a stranger with a gun in all but two of the fifty states (Table 2).

A person is more likely to be killed by a stranger with a car than by a stranger with a gun in all but two of the fifty states.

Walking is Particularly Hazardous for Elderly Pedestrians

Pedestrian fatality rates reveal that walking may be especially hazardous for senior citizens. Senior citizens make up only 13 percent of the population, yet account for 23 percent of all pe-

Table 2. A person is more likely to be killed by an automobile than by a stranger with a gun.

State	Average Annual Pedestrian Fatalities (1986-1995)	Approximate # of Homicides Committed By Strangers With Guns (1995)	Relative Risk Pedestrian Death: Homicide By Stranger With Gun
Alabama	91	95	1.0
Alaska	14	0	∞
Arizona	145	116	1.3
Arkansas	54	33	1.6
California	902	912	1.0
Colorado	55	23	2.4
Connecticut	60	24	2.5
Delaware	20	0	∞
Florida	564	173	3.3
Georgia	191	76	2.5
Hawaii	28	0	N/A
Idaho	14	5	2.9
Illinois	246	218	1.1
Indiana	86	41	2.1
Iowa	33	2	16.4
Kansas	29	0	N/A
Kentucky	71	19	3.7
Louisiana	133	132	1.0
Maine	20	1	19.7
Maryland	131	71	1.8
Massachusetts	116	17	6.8
Michigan	203	120	1.7
Minnesota	59	23	2.6
Mississippi	65	18	3.6
Missouri	93	70	1.3
Montana	13	0	∞
Nebraska	21	0	∞
Nevada	44	33	1.3
New Hampshire	14	0	∞
New Jersey	202	68	3.0
New Mexico	86	15	5.7
New York	510	148	3.4
North Carolina	198	65	3.0
North Dakota	7	2	3.7
Ohio	167	71	2.4
Oklahoma	59	14	4.2
Oregon	64	15	4.3
Pennsylvania	229	179	1.3
Rhode Island	17	2	8.5
South Carolina	118	42	2.8
South Dakota	13	1	13.1
Tennessee	104	33	3.1
Texas	487	259	1.9
Utah	41	8	5.2
Vermont	7	0	∞
Virginia	116	65	1.8
Washington	86	24	3.6
West Virginia	36	5	7.3
Wisconsin	61	17	3.6
Wyoming	6	1	5.7
U.S. Average	6,129	3,256	1.9

Source: Environmental Working Group. Compiled from NHTSA and FBI data.

Table 3. Senior citizens are at particular risk of becoming pedestrian fatalities.

Age Group	Average Number of Ped. Fatalities (1986-1995)	% of Fatalities	% of Population	Population-Adjusted Risk
< 5 Years	252	4%	8%	0.5
5-17 Years	781	13%	18%	0.7
18-24 Years	618	10%	10%	1.0
25-44 Years	1,884	31%	32%	1.0
45-64 Years	1155	19%	19%	1.0
> 65 Years	1,382	23%	13%	1.8

Source: Environmental Working Group. Compiled from NHTSA and U.S. Census data.

destrian fatalities — meaning that, relative to the rest of the population, senior citizens are 1.8 times more likely to be killed by a car while walking (Table 3).

A significant number of children are also killed in pedestrian accidents. Thirty-two percent of all the 5-9-year-olds who died in car crashes in 1995 were pedestrians. Since 1986, seventeen percent of all pedestrian fatalities — an average of approximately 1,033 per year — involve children under age 18.

Pedestrian Fatalities: Coming Soon to a Neighborhood Near You

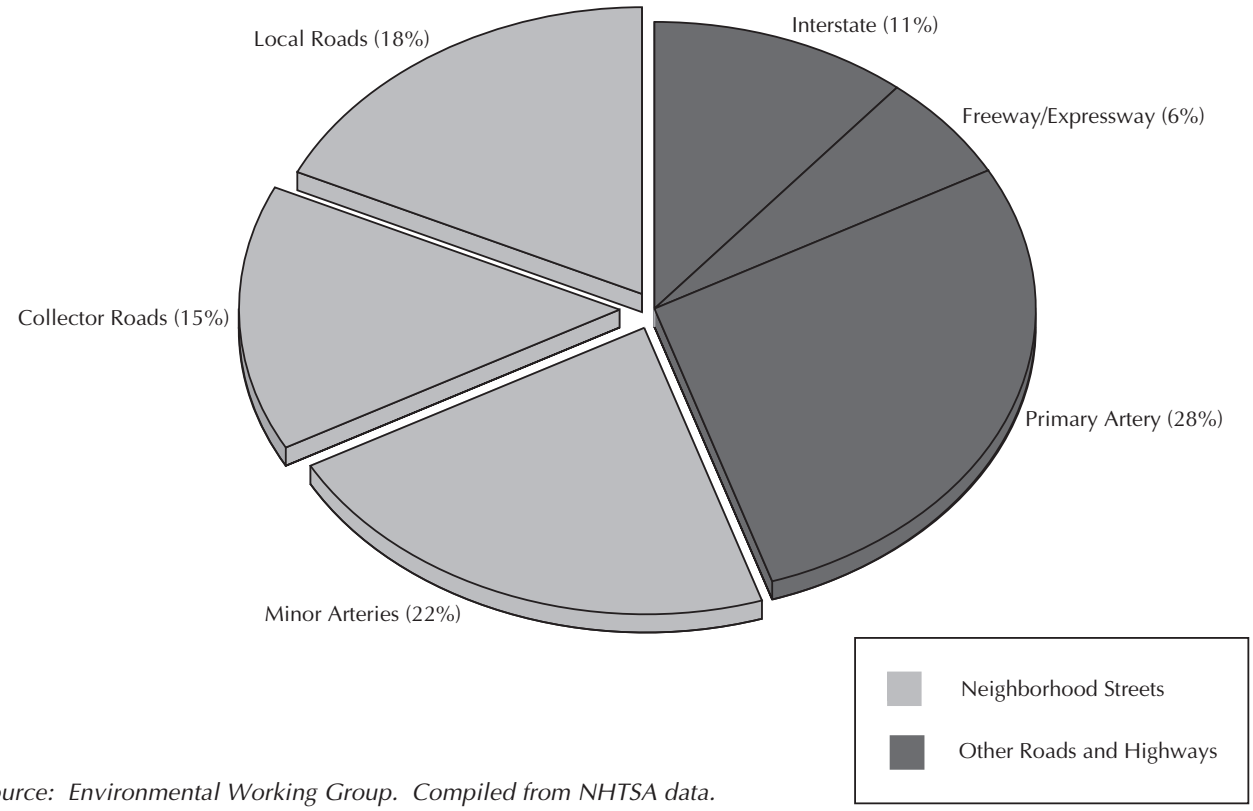
Most pedestrians are killed by cars on neighborhood streets — the streets where we walk, and where our children play. NHTSA data indicate that over half — 55 percent — of all pedestrian fatalities occurred on streets — defined in engineering parlance as "Local Roads", "Collectors", and "Minor Arterials" — that run through residential neighborhoods (Figure 3).[6] This problem is evident in many communities, where small streets become speedways due to so-called "improvements," or as they are invaded by commuters rushing to work, pizza delivery people, or unsafe drivers just looking for a shortcut.

Confusing Transportation Safety with Motorist Safety

Streets are dangerous for pedestrians because for decades, transportation planners, engineers and builders have equated traffic safety almost exclusively with driver and passenger safety. Driving is safer, thanks to mandatory crash testing, seat belt laws, drunk driving programs, and other road construction and redesign efforts.[7] Pedestrian safety, on the other hand, has focused largely on tell-

Driving is safer, thanks to mandatory crash testing, seat belt laws, drunk driving programs, and other road construction and redesign efforts. Pedestrian safety, on the other hand, has focused largely on telling pedestrians to get out of the way.

Figure 3. More than half of all pedestrian fatalities occur on neighborhood streets.



Source: Environmental Working Group. Compiled from NHTSA data.

ing pedestrians to get out of the way.

Part of the problem is that pedestrian safety has always been a secondary traffic engineering issue. The overriding goal of traffic engineering has been to improve roadway "levels of service" (LOS), which often means designing roads with wide lanes and shoulders, large turn radii at intersections, passing and turning lanes, and other features so that more vehicles may travel at higher speeds (Ewing 1995). Few efforts have focused on ensuring that streets are safe for both pedestrians and vehicles: fewer still have sought to modify driving

Table 4. Increasing auto speeds dramatically increase risks for pedestrians.

Vehicle Speed	Risk of Pedestrian Fatality In Collision
20 mph	5%
30 mph	45%
40 mph	85%

Source: U.K. Department of Transportation.

behavior to better protect and accommodate pedestrians.

Speed Kills

The relentless pursuit of improved traffic flow has increased speeds on many residential roads, which in turn puts pedestrians at higher risk. A ten-mile per hour increase in speed, from 20 mph to 30 mph, increases the risk of death for a pedestrian in a collision ninefold (Table 4). If a car going 20 miles per hour hits a person, there is a 95 percent chance that the person will survive. If that same car is going 30 miles per hour, the person has slightly better than a 50/50 chance of survival.

This simple safety fact is ignored or obscured by the highway lobby. The American Automobile Association (AAA), for example, has for decades argued that wider and straighter roads are needed to improve motorist safety. AAA's ongoing lobbying campaign includes a national push for "higher-grade roads" that have wider travel lanes (at least twelve feet), shoulders at least eight feet wide, medians 30 feet wide, and no "roadside hazards" at the sides of roads up to 30 feet in each direction — rules that would all but prohibit pedestrians from walking anywhere near these roads. "Higher grade roads are more forgiving of driver error, such as failure to stay in the proper lane or running off the road," states AAA in their recent *Crisis Ahead* report (AAA 1996). Despite their professed concern for transportation safety, the road lobby consistently overlooks the adverse impacts of such "upgrades" on pedestrian safety — longer street crossing times, higher vehicle speeds, and less motorist vigilance for pedestrian activity.

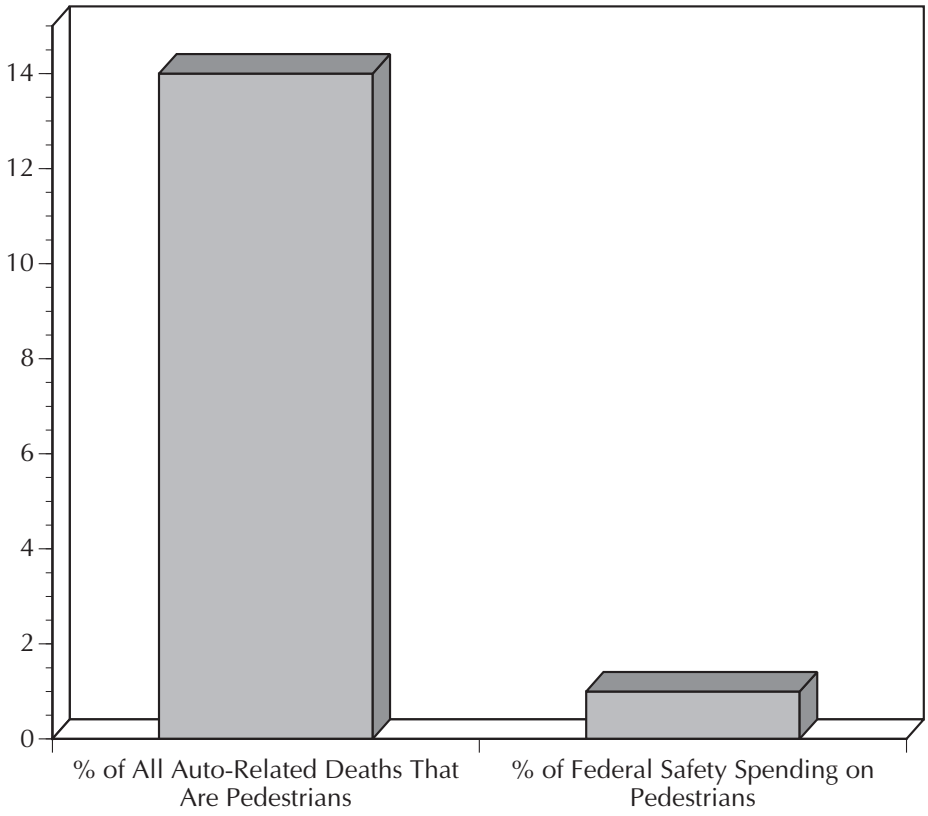
The road lobby's misguided priorities are characteristic of a transportation system that fails to protect people who walk, and blames the walker rather than the poorly designed roads that create hazards for them. Over a decade ago, DOT officials acknowledged that pedestrian fatality rates were alarming, and called for more action to improve public safety (U.S. DOT 1985). Still, state and local transportation agencies have failed to implement the measures necessary to meet this challenge.

Traffic Safety Funds Are Being Misspent

Federal resources available for pedestrian and bike facilities increased significantly in 1991, when Congress passed the Intermodal Surface Transportation Efficiency Act (ISTEA).[8] ISTEA explicitly allocated funds to promote transportation safety, a program known as the Surface Transportation Program safety set-aside, or "STP safety funds." About $300 million is available each year for this program, and pedestrian safety is an eligible activity. Thousands of pedestrians continue to die every year while state and federal agencies do not invest federal safety funds in measures to protect pedestrians.

Over a decade ago, DOT officials acknowledged that pedestrian fatality rates were alarming, and called for more action to improve public safety.

Figure 4. Pedestrians do not receive their fair share of federal safety funds.



Source: Environmental Working Group. Compiled from FHWA and NHTSA data.

Spending on pedestrian safety must be increased at least tenfold during the next ISTEA reauthorization to reduce the current unacceptable levels of death and injury to the nation's walkers.

State Departments of Transportation (DOTs) have devoted nearly all of their STP safety funds to motor vehicle safety measures like railroad grade crossings, roadway widening, and guardrails. Analysis of federal and state highway spending records shows that just 1 percent of all federal transportation safety funds spent between 1992 and 1996, a mere $13.1 million, was devoted to making roads safer for pedestrians.[9] Meanwhile, pedestrian death rates remained constant at about 14 percent of all vehicle-related fatalities (Figure 4). In contrast, ten times as much money is spent annually on railroad crossing safety programs (approximately $150 million per year) even though one-tenth the number of people (500) are killed at these crossings each year (FHWA 1994).

One percent of the safety funds clearly is not solving 14 percent of the nation's transportation safety problem. Spending on pedestrian safety must be increased at least tenfold during the next ISTEA reauthorization to reduce the current unacceptable levels of death and injury to the nation's pedestrians.

Table 5. Even in metropolitan areas where pedestrians account for the highest percentage of auto-related deaths, almost no federal money is spent on pedestrian safety.

Metropolitan Area	Average Annual # of Auto-Related Fatalities	Average Annual # of Auto-Related Fatalities that are Pedestrians	Percentage of Auto-Related Fatalities that are Pedestrians	% of Federal Safety Spending Devoted to Pedestrian Safety
New York, NY	677	310	46%	0%
Jersey City, NJ	36	15	42%	0%
El Paso, TX	99	32	32%	0%
San Francisco, CA	136	43	31%	0%
Bergen--Passaic, NJ	101	31	31%	0%
Miami--Hialeah, FL	331	100	30%	0%
Honolulu, HI	74	22	30%	3.3%
Fort Lauderdale--Hollywood--Pompano Beach, FL	205	58	28%	0.3%
Newark, NJ	179	49	27%	0%
Albuquerque, NM	83	23	27%	0%
Los Angeles--Long Beach, CA	1099	299	27%	1.2%
San Diego, CA	352	96	27%	0%
Wilmington, NC	15	4	27%	7.9%
Chicago, IL	585	158	27%	0%
San Jose, CA	130	33	25%	0%
Boston, MA	235	58	25%	0%
Anaheim--Santa Ana, CA	241	59	25%	4.0%

Source: Environmental Working Group. Compiled from FHWA and NHTSA data.

Pedestrian Safety Spending in Metropolitan Areas

Local use of federal funds for pedestrian safety follows national and state trends (Table 5). A study conducted by the Tri-State Transportation Campaign showed that pedestrians constitute 53 percent of traffic fatalities in New York City's five boroughs, yet only 5 percent of the city's state safety set-aside funds were dedicated to pedestrian safety (Orcutt 1995). In 111 metropolitan areas, pedestrians accounted for more than 15 percent of automobile related fatalities; no more than three percent of all federal safety funds were spent to protect walkers in any of these communities.

At the state level things are no better. New York is one of only fourteen states to have spent any of its federal safety money on pedestrian safety from 1992 to 1996.[10] Thirty-six states and the District of Columbia spent none of their federal STP safety funds on pedestrian safety (Table 6).

States have spent other money — over $1 billion — on pedestrians and bicycles, through an ISTEA program known as the "Enhancements" program. This fund has supported development of bike paths and separate pedestrian spaces. While this funding does help provide access and alternate routes for bikes and pedestrians, it is not rightly considered a safety program.

Thirty-six states and the District of Columbia spent none of their federal STP safety funds on pedestrian safety.

Table 6. Most states spend no federal safety money to protect pedestrians.

State	Average Annual Number of Pedestrian Pedestrian Deaths	Percentage of all Traffic Fatalities Accounted for by Pedestrians	Percentage of Federal Safety Funding Spent on Dedicated Pedestrian Projects
Alabama	90	8%	0%
Alaska	13	15%	0%
Arizona	145	16%	0%
Arkansas	53	9%	0%
California	901	19%	0.7%
Colorado	54	10%	0%
Connecticut	59	16%	0%
Delaware	20	16%	0%
Florida	564	20%	1.3%
Georgia	190	13%	0%
Hawaii	28	20%	0.8%
Idaho	14	6%	0%
Illinois	245	16%	0%
Indiana	85	9%	0%
Iowa	32	7%	0%
Kansas	29	7%	0%
Kentucky	70	9%	0%
Louisiana	133	15%	0.1%
Maine	19	9%	0%
Maryland	130	18%	0%
Massachusetts	116	20%	0%
Michigan	203	13%	0%
Minnesota	58	10%	0%
Mississippi	65	9%	0%
Missouri	93	9%	0%
Montana	13	6%	0%
Nebraska	20	8%	0%
Nevada	44	16%	0%
New Hampshire	14	9%	0%
New Jersey	201	23%	0%
New Mexico	85	18%	0%
New York	510	25%	3.4%
North Carolina	197	14%	0.3%
North Dakota	7	8%	6.0%
Ohio	167	11%	0%
Oklahoma	58	9%	0.3%
Oregon	64	11%	0%
Pennsylvania	229	13%	21.2%
Rhode Island	16	18%	0%
South Carolina	117	13%	0%
South Dakota	13	9%	1.2%
Tennessee	103	9%	0%
Texas	486	15%	0%
Utah	41	14%	0%
Vermont	7	7%	0%
Virginia	115	12%	0%
Washington	85	12%	1.5%
West Virginia	36	8%	0%
Wisconsin	61	8%	0.2%
Wyoming	5	4%	4.3%
U.S. Average	6,150	14%	1.1%

Source: Environmental Working Group. Compiled from FHWA and NHTSA data.

The Most Dangerous Metropolitan Areas For Walking

As a general rule, the cities with the largest numbers of walkers — New York, for example, will have the most pedestrian fatalities. This does not always mean, however, that they are the most dangerous places to walk *relative to* the number of people walking. To create safety rankings that account for the number of walkers in each metropolitan area, we created a 'pedestrian fatality index' by comparing pedestrian fatality rates in metropolitan areas with the level of pedestrian activity in those communities. Because the FHWA does not track the miles walked in each community, we used U.S. census data on the percentage of people in each community who walk to work. We used this data as a surrogate for walking activity, assuming that the more people who walk to work in each community, the higher the level of pedestrian activity.

The pedestrian fatality index was calculated by dividing the overall fatality rate (per 100,000 people) by the percentage of people walking to work. We then normalized these data on a scale of 1 to 100, with 1 being the safest and 100 the most dangerous. Communities with high fatality rates in spite of having little walking activity will have a higher pedestrian fatality index. Communities with high fatality rates and lots of walkers will have a lower index. The higher the pedestrian fatality index, the more dangerous it is to walk in a particular community.

Metropolitan areas with lower pedestrian activity are generally less safe than communities with higher pedestrian activity (perhaps indicating that low levels of pedestrian activity reflects the high degree of danger that walkers face in these communities). The most dangerous metropolitan areas to walk in tend to be newer, sprawling, southern and western communities, where vast distances make walking impractical, and where transportation systems are designed for motor vehicle travel at the expense of other transportation options.

Among large metropolitan areas (those with populations of one million or more) the five most dangerous communities in which to walk are Ft. Lauderdale, FL; Miami; Atlanta, GA; Tampa-St. Petersburg-Clearwater; FL, and Dallas (Table 7). The safest walking communities are Pittsburgh, Milwaukee, Boston, New York City, and Rochester, NY. In these metropolitan areas, walking activity is high, but there are still few fatalities. Our findings indicate that is eleven times more dangerous to walk in Ft. Lauderdale than it is to walk in Pittsburgh.

The most dangerous metropolitan areas to walk in tend to be newer, sprawling, southern and western communities, where vast distances make walking impractical, and where transportation systems are designed for motor vehicle travel at the expense of other transportation options.

Table 7. Fort Lauderdale is the most dangerous large metropolitan area for walking; Pittsburgh is the safest.

Metropolitan Area (Populations of 1 million or more)	Average Annual Pedestrian Fatalities	% of All Auto-Related Fatalities that are Pedestrians	Annual Pedestrian Fatality Rate (per 100,000)	Percentage of Commuters Walking to Work	Pedestrian Fatality Index (0-100)
Fort Lauderdale--Hollywood--Pompano Beach, FL PMSA	58	28%	4.6	1.8%	90
Miami--Hialeah, FL PMSA	100	30%	5.2	2.5%	73
Atlanta, GA MSA	84	16%	3.0	1.5%	70
Tampa--St. Petersburg--Clearwater, FL MSA	85	22%	4.1	2.3%	64
Dallas, TX PMSA	76	19%	3.0	1.9%	51
Houston, TX PMSA	101	20%	3.1	2.2%	48
Detroit, MI PMSA	107	21%	2.5	1.9%	47
Riverside--San Bernardino, CA PMSA	92	13%	3.6	2.7%	47
Phoenix, AZ MSA	79	19%	3.7	2.6%	44
Charlotte--Gastonia--Rock Hill, NC--SC MSA	29	14%	2.5	2.1%	43
Orlando, FL MSA	48	20%	4.5	3.5%	41
New Orleans, LA MSA	47	23%	3.8	3.1%	40
Salt Lake City--Ogden, UT MSA	28	24%	2.6	2.3%	40
Nassau--Suffolk, NY PMSA	80	24%	3.0	2.7%	39
Sacramento, CA MSA	37	16%	2.5	2.7%	37
San Jose, CA PMSA	33	25%	2.2	2.1%	37
Los Angeles--Long Beach, CA PMSA	299	27%	3.4	3.3%	36
St. Louis, MO--IL MSA	51	14%	2.1	2.1%	33
Kansas City, MO--KS MSA	27	12%	1.7	1.9%	31
San Diego, CA MSA	96	27%	3.8	4.5%	29
Indianapolis, IN MSA	24	13%	1.9	2.2%	27
San Antonio, TX MSA	37	20%	2.8	3.6%	27
Newark, NJ PMSA	51	26%	2.8	3.7%	25
Baltimore, MD MSA	66	22%	2.8	4.0%	23
Portland, OR PMSA	34	17%	2.7	3.5%	23
Chicago, IL PMSA	180	23%	3.0	4.2%	21
Washington, DC--MD--VA MSA	98	19%	2.5	3.9%	21
Cleveland, OH PMSA	36	16%	1.9	2.9%	20
Denver, CO PMSA	28	15%	1.7	3.0%	20
Cincinnati, OH--KY--IN PMSA	23	13%	1.6	2.8%	19
Seattle, WA PMSA	37	18%	1.9	3.3%	19
Columbus, OH MSA	20	12%	1.4	3.3%	15
Norfolk--Virginia Beach--Newport News, VA MSA	25	16%	1.8	3.7%	15
Philadelphia, PA--NJ PMSA	120	21%	2.5	5.4%	15
San Francisco, CA PMSA	43	31%	2.7	5.9%	15
Minneapolis--St. Paul, MN--WI MSA	35	15%	1.4	3.2%	14
New York, NY PMSA	310	46%	3.6	9.7%	12
Rochester, NY MSA	17	12%	1.7	4.3%	11
Boston, MA PMSA	22	48%	0.8	6.5%	10
Milwaukee, WI PMSA	19	15%	1.3	4.0%	10
Pittsburgh, PA PMSA	33	12%	1.6	5.1%	8

Source: Environmental Working Group. Compiled from NHTSA and U.S. Census data.

True Story

"On December 18, 1994, my friends and I were walking to the corner store. We have to cross a six-lane street to get there. That day a truck ran a red light and hit me as I was crossing the street. My leg and collar bone were broken. The inside of my mouth was busted and my chin was cut. I had massive abrasions all over my body. I was in the hospital for a week. I was bedridden, then went through the process of using a wheel chair and then crutches. I returned to my fifth grade class on April 26, 1995. My family and I endured so much pain and suffering. My mother says angels were guarding me and thanks all the spirits for letting me live."

— Librado Almanza, Age 11
Austin, Texas

Notes

[2] The methodology for reporting vehicle-pedestrian crashes is also out of date, falling short of adequately describing crash types with respect to roadway conditions and features where they occur.

[3] Source: NHTSA.

[4] Approximately 35 children have been killed by airbags in the last three years.

[5] This does not mean that there were only 3,500 people killed by handguns in 1995. In fact, FBI data indicate that there were almost 18,000 homicides committed with handguns. However, the vast majority (more than 75%)of these homicides are committed by friends, relatives, or other persons known to the victim.

[6] Non-neighborhood roads include Primary Arterials, Freeway/Expressway, and Interstates. We grouped minor arterials in the "residential streets" category because while they facilitate traffic mobility, they typically run through residential areas to provide access to major arterials. (See *Highway Capacity Manual*, op. cit., pp. 11-6 - 11-7.)

[7] For example, the number of fatalities between 1966 and 1995 has decreased from 50,894 to 41,798, though totals have risen in the past few three years. See *Traffic Safety Facts 1995,* US Department of Transportation, National Highway Traffic Safety Administration, September 1996.

[8] Spending on bicycling and walking facilities has risen from $8 million in 1990 to over $220 million in 1995. Source: Rails-to-Trails Conservancy (Tel: 202.797.5400).

[9] This includes funding for dedicated pedestrian projects only, such as installing speed bumps, constructing roundabouts (a form of traffic circle), diverting non-local drivers away from local streets, changing pavement surfaces, and narrowing the roadway. It does not include funds for auto safety projects, like traffic signals, that have an incidental effect on pedestrians.

[10] Furthermore, all of the pedestrian safety projects funded in New York were funded by NYC Department of Transportation.

The Path to Pedestrian Safety

How To Make Our Streets Safe For Pedestrians

We know that we can make our streets safer for pedestrians because some communities are making it happen. The 1991 ISTEA legislation provides communities with important planning tools that help to emphasize safety considerations, require public involvement in decision-making, support alternative modes of transportation such as bicycling, walking, and transit, and provide dedicated funding for transportation safety. While this legislation must be strengthened and improved, some communities are taking advantage of these programs and funds to implement a variety of pedestrian safety measures, including:

- slowing down traffic (known as traffic calming) through the use of speed bumps, roundabouts, changing pavement surfaces, and other features;
- providing separate, protected spaces for walkers;
- designing public spaces to be more pedestrian-friendly (improved crosswalks, sidewalks, handrails for the infirm, special pavements, etc.); and
- increasing public awareness of pedestrian safety issues.

These programs work because they solve the problem at its source: fixing roads that are poorly designed for pedestrians. Instead of blaming the pedestrian for getting in the way, these communities have created streets and neighborhoods that are inherently safer for pedestrians.

Traffic Calming

Growing numbers of communities are trying to make their residential streets safer by forcing motorists to slow down. "Traffic calming" refers to the practice of designing streets to reduce vehicle speeds, ensure that drivers are more careful, or take safer routes. It includes narrowing the roadway, diverting non-local drivers away from local streets, changing pavement surfaces, installing speed humps, constructing roundabouts (a form of traffic circle) and putting up stop signs. These measures improve pedestrian safety, and make public spaces more conducive to pedestrian activity and street life.

Instead of blaming the pedestrian for getting in the way, these communities have created streets and neighborhoods that are inherently safer for pedestrians.

Many communities have also found that a key to safe walking is to create public spaces that attract pedestrians, thereby establishing their presence and causing traffic to slow down.

Traffic calming is being adopted in growing numbers of communities across America.[11] Seattle's traffic calming program involved the installation of traffic circles. It produced a 77 to 91 percent reduction in traffic collisions. Portland, Oregon also constructed traffic circles and experienced a 58 percent reduction in the number of reported crashes (Zein 1997). Other traffic calming projects in communities from Long Beach, California to Fairfax County, Virginia, have reduced the risk to pedestrians in residential neighborhoods.[12]

Even more modest efforts have had noticeable impacts on pedestrian safety. In New York City, for example, streets were painted with chevron stripes to make drivers think they are speeding in an attempt to make them slow down (Perez-Pesa 1996). And one New York City neighborhood group, "Trees Not Trucks," decided to combat neighborhood truck traffic by getting police to ticket offending drivers. The initiative reduced truck traffic on local streets by 90 percent (Pierre-Pierre 1996).

Separate Spaces for Pedestrians

Another method of improving pedestrian safety is to provide walkers with spaces that are protected from vehicular traffic. This may involve building sidewalks or developing walking paths that are completely independent of street patterns. Some communities have built special pedestrian spaces since the creation of ISTEA using Enhancements funding, which includes walking and bicycling among its eligible activities.

Designing Pedestrian-Friendly Neighborhoods

Many communities have also found that a key to safe walking is to create public spaces that attract pedestrians, thereby establishing their presence and causing traffic to slow down. The Los Angeles Neighborhood Initiative (LANI), for example, focused on pedestrian-friendly design to revitalize several commercial and transit corridors. LANI's success was partly due to the availability of ISTEA funds to support downtown revitalization and mixed-use development.[13] Neighborhood groups also developed community work plans that included tree planting, installation of lighting, parks, plazas, community gardens, and benches (DiStefano and Raimi 1996).

Another downtown improvement project in Indianapolis, Indiana used ISTEA funds to help finance its Downtown Corridor Improvements Project. The project's goal is to reduce vehicular traffic and improve sidewalk infrastructure, to produce a "pedestrian friendly" streetscape that enhances the historic integrity of the downtown corridor (DiStefano and Raimi 1996).

Other projects focus more explicitly on pedestrian safety through roadway design. A new

project in Phoenix, Arizona is aimed at creating "safe pedestrian zones" in the low-income Sunnyslope neighborhood. And in one of Phoenix's central city neighborhoods which is home to a high concentration of older persons, city workers have constructed broad center medians to ease street crossings and larger crosswalk signs to aid individuals who have poor eyesight (DiStefano and Raimi 1996).

Public Awareness of Pedestrian Safety Issues

The driving community does not receive enough information about the pedestrians with whom they share the road. Many safety officials and citizens fail to understand that measures designed to increase vehicle speeds often degrade the pedestrian environment. Vice President Gore's National Performance Review found that 58 percent of survey respondents favored public education campaigns to improve pedestrian safety, and a growing number of measures have been established to promote awareness of pedestrian safety issues. For example, the Campaign to Make America Walkable recently launched their dirty dozen campaign (See Sidebar).[14] Unfortunately, the small amount of money devoted to pedestrian safety education is still dwarfed by the billions of dollars spent widening roadways in the name of motorist safety.

Many safety officials and citizens fail to understand that measures designed to increase vehicle speeds often degrade the pedestrian environment.

Notes

[11] Outside the U.S., traffic calming is also successful. The Insurance Corporation of British Colombia (ICBC) reported that traffic calming efforts in the Greater Vancouver area resulted in a 30 to 83 percent reduction in collisions. In York, England, the city implemented a traffic calming plan that yielded a 40 percent decrease in all motor vehicle-related casualties during the periods 1981-1985 and 1990-1994. Pedestrian casualties fell by 36 percent (*Cycletter*, Bicycle Transportation Alliance, January 1997). Other traffic calming efforts in the United Kingdom resulted in a 65-100 percent drop in collisions, while efforts in Denmark, France and Germany were associated with a 60 percent drop. (Zein 1997).

[12] In Long Beach, a traffic circle reduced traffic by 28 percent. Fairfax County used speed humps, narrowed streets, and other measures to reduce traffic.

[13] Transportation Enhancement and Federal Transit Administration Livable Communities funds were used to support LANI.

[14] Vice President Gore knows these issues firsthand. Shortly before he joined then-governor Bill Clinton's presidential campaign, his son Albert was struck by a car while walking outside Baltimore's Camden Yards (home to the Baltimore Orioles). The younger Albert suffered from serious injuries and lay in a coma for several days before making a full recovery.

The Walker's "Dirty Dozen"

The Campaign to Make America Walkable recently launched a public education campaign in which they compiled pedestrian's top complaints about roadway safety and sidewalk design.

1. Missing sections of sidewalk, especially on key walking routes
2. Bad sidewalk surfaces (uneven or broken concrete, uplifted slabs over tree roots)
3. Misuse of sidewalks (e.g. vehicles parked on sidewalk)
4. Bad sidewalk maintenance (overhanging bushes or trees, unshoveled snow on sidewalks)
5. Narrow sidewalks (no room for wheelchairs, or for two people to walk side by side, utility poles in the middle of a sidewalk)
6. Missing curb ramps
7. Poorly designed crossings of major streets, especially near schools or shops
8. Motorists not stopping for people in crosswalks
9. Barriers on potential walking routes
10. High traffic levels and/or high speeds, especially near schools or parks
11. Motorists cutting through neighborhoods to avoid busy arterial streets
12. Locations with a documented history of crashes or near misses.

Source: The Campaign to Make America Walkable

ISTEA Reauthorization: An Opportunity for Safer Streets

Pedestrian safety should be recognized as a national transportation safety priority on par with automobile and railroad safety programs.

Few transportation agencies recognize the importance of pedestrian safety, and fewer still have taken advantage of existing tools to improve conditions. At the federal level, many tools can be found within ISTEA, which was designed to foster a more balanced transportation system that includes mass transit, intercity rail, and bicycle and pedestrian trails and paths, as well as highways. ISTEA also targets funds towards specific national goals, including environmental protection and public safety. But while ISTEA created the safety set-aside program with ample funds for capital improvements, pedestrian safety has not been treated as a federal priority and state and local agencies have invested little effort and few resources to improve pedestrian safety.

Reauthorizing ISTEA - The Nation's Transportation Law

This year, Congress is poised to reauthorize the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). This legislation will provide over $150 billion dollars for states and communities to spend on their transportation systems over the next five years — roads, bridges, public transportation, and trails, pathways, and spaces for those who walk and bike. The highway lobby, known as the "road gang," which includes road contractors, automobile manufacturers, truckers and even some state Departments of Transportation, is lobbying to weaken the legislation, ensuring that they get more money to build highways, while less is spent to make communities safe for walking, and otherwise make America's transportation systems more sustainable.

The Road Lobby's Efforts To Weaken Transportation Law, Making Streets Less Safe For Pedestrians

The "road gang" is pushing hard for legislation they support, such as the Highways Only Transportation Efficiency Act (HOTEA) and STEP 21 — that would make the existing pedestrian safety problem even worse. These proposals would abolish existing environmental and safety programs, as well as the enhancement program (which currently provides funding for bicycle and pedestrian activities), replacing them with a program focused on roadbuilding and maintenance that would

The road lobby consistently argues that money spent on pedestrians and bicycles diverts money from safer roads. Our findings indicate that the opposite is true — that more money spent to protect pedestrians will dramatically decrease the carnage on our roads.

strongly bias transportation spending towards retrograde emphasis on highway construction.

The Clinton Administration Legislation

The Clinton Administration recently released its ISTEA reauthorization package, which was introduced by Senators Chafee and Moynihan as S. 468. This legislation would maintain the basic structure of current law, while increasing overall funding for bicycle and pedestrian projects (via an increase in funding for the Enhancements program), and clean air programs.

Opportunities To Improve Pedestrian Safety

Congress should support and improve ISTEA and make our roads safer for walking. Specifically, Congress should:

(1) Preserve and Strengthen ISTEA's Current Safety Programs to Better Protect Pedestrians

Congress must adequately fund pedestrian safety activities. Specifically, ISTEA's safety programs should be improved with these modifications:

(a) Fund projects that promote pedestrian safety from the federal safety set-aside program at a rate equivalent to their share of fatalities nationwide (i.e. roughly 14 percent).

Pedestrian safety should be recognized as a national transportation safety priority on par with automobile and railroad safety programs. The road lobby consistently argues that money spent on pedestrians and bicycles diverts money from safer roads. Our findings indicate that the opposite is true — that more money spent to protect pedestrians will dramatically decrease the carnage on our roads.

(b) Expand the federal capital safety funding program (ISTEA's "safety set-aside") to enhance opportunities for funding of safety programs for pedestrians, bicyclists, and people with disabilities.

The federal funding program for safety capital projects should:

- add pedestrians to the list of users for whom hazards are identified;
- not fund projects that increase hazards to or inhibit access for pedestrians;
- require public participation in establishing priorities;
- include safety improvements to paved trails as specifically eligible for program funding; and
- use "spot-check" programs for the rapid-response elimination of low-cost hazards.

(c) Allow more local control over where and how federal safety funds are spent.

ISTEA created significantly more local control over transportation programs by requiring the

input of local decision-making agencies, known as metropolitan planning organizations (MPOs). MPOs should be granted project selection authority for federal safety funds programs.

(d) Continue other federal safety programs (sections 402 and 410 of ISTEA) and promote increased public involvement.

Federal ISTEA-funded safety programs that focus on unsafe behavior, such as the Alcohol-Impaired Driving Counter Measures (Section 410) and Highway Safety Grants Programs (Section 402), should be continued. For planning and project selection, each state should establish a public involvement process that includes representatives of senior citizens, pedestrians, bicyclists, motorists, people with disabilities, neighborhood groups, and other stakeholders.

(2) Establish National Goals For Pedestrian Safety

Congress should establish the goals of DOT's National Bicycling and Walking Study — a doubling of the percentage of total trips made by biking and walking, while reducing fatalities by 10% — as national policy. ISTEA should contain an incentive program for transportation safety based on measurable changes in a state's per capita fatality rate. Though these rates vary greatly from state to state, state DOTs control significant resources (funding, technical assistance, design guides, etc.) that can make roads safer for pedestrians, drivers, and passengers alike.[15] Their policy choices make a difference, and these differences can be measured. States should receive funds based on changes in their per capita vehicle-related pedestrian fatality rate compared to a base year. A goal and incentive system of this type will create financial incentives for pedestrian safety through a dedicated fund linked to measurable improvements in reductions in accidents and fatalities.

(3) Ensure that Road-Building Projects Don't Increase Hazards for Pedestrians, including Children, the Elderly and the Disabled.

All ISTEA-funded projects should be required to plan for the safe accommodation of pedestrians as well as other vulnerable users of the roadway (bicyclists, children, elderly and the disabled). All too often, highway safety "improvements" have exactly the opposite effect on pedestrians.

The road lobby consistently argues that bigger, wider, and straighter roads are needed to improve motorist safety, and FHWA data reveal that roughly one-third of all federal roadway funds have been used for road widening since 1991.[16] But road widening provides a classic example of how turning streets into highways makes life more dangerous for pedestrians. Walking across a four-lane highway with a

States should receive funds based on changes in their per capita vehicle-related pedestrian fatality rate compared to a base year.

Pedestrian safety efforts are hindered by the widespread lack of reliable and comprehensive data on walking.

30-foot median and two 8-foot shoulders takes more time than crossing a two-lane road. This increased exposure to traffic dramatically increases risks for pedestrians and discourages the public from walking. At the same time, wider and straighter roads encourage motorists to drive faster, increasing the severity of injury and the likelihood of fatality in pedestrian-motor vehicle collisions. Finally, widening roads often does very little to relieve traffic congestion (another popular justification), as it facilitates low-density sprawling development that makes it nearly impossible to walk anywhere.

(4) Collect More Accurate and Detailed Data on Pedestrians and Walking

Pedestrian safety efforts are hindered by the widespread lack of reliable and comprehensive data on walking. There is no comprehensive information on miles walked, as there is for Vehicle Miles Traveled (VMT). This makes it extraordinarily difficult to place pedestrian safety in a meaningful context. And, little is known about how much people walk, why they walk, what other options they have, and how these factors vary with the age of the pedestrian. In contrast, federal and state agencies spend millions of dollars studying driving habits.

The reauthorization of ISTEA presents an ideal opportunity to fill this information vacuum by requiring that US DOT collect better, more detailed and more accurate data on levels of walking, injury and fatality rates and the relative risks that pedestrians face. Furthermore, an Interagency Working Group should be established between BTS, the U.S. Census Bureau, the U.S. Department of Transportation and other appropriate agencies to coordinate the collection and dissemination of all pedestrian-related data.

Notes

[15] In 1994, levels ranged from below ten fatalities per 100,000 residents (New Jersey, Connecticut, New York, Massachusetts and Rhode Island) to more than 25 fatalities per 100,000 residents (Alabama, New Mexico, Mississippi and Wyoming). These differences have as much to do with the character of communities within a state—rural, urban, etc.—as with the spending decisions made by state DOTs and MPOs.
[16] Ironically, AAA, one of the loudest voices for wider roads, also has a pedestrian safety awards program.

Numbers We Should Know

One of the biggest barriers to people walking more is the fear of traffic. We know that on average 6,000 pedestrians are killed nationally each year in collisions with cars. We have no record of the people who do not walk or do not go out because they are afraid of being hit.

Unfortunately, we also have little idea of the true amount of walking in the United States. No reliable national statistics are kept on how many people walk, how far they walk, and the reasons why they do and do not walk. Consequently, walking is often overlooked and not treated as a real means of transportation. In fact, what little data we do have can be wildly unreliable. In 1991, planners in Boulder, Colorado found three travel surveys for the same area that showed bicycling and walking accounting for as little as one percent and as much as 28 percent of all trips.

The most deadly type of motor vehicle crash involves people on foot. Pedestrians die at a greater rate per crash and suffer more serious injuries than bicyclists or motorists, and the average cost to society of a pedestrian-motor vehicle crash is $312,000 or a total of more than $32 billion each year.

Walking is almost invisible, except when people are killed and injured. By failing to gather walking data, especially for short trips, we focus all our transportation investments on motorized, and generally longer trips. Without accurate data, transportation decisions discriminate against those who have concentrated their destinations to create a healthy, environmentally and economically sound lifestyle.

Source: Campaign to Make America Walkable

Methodology and Data Sources

The Environmental Working Group obtained the data used in this report from several computerized databases. These included:

The **Financial Management Information System (FMIS)**, maintained by the Federal Highway Administration, contains over 550,000 records of every federal highway project since 1992. The database contains basic descriptions of each project, as well as the amount of federal and state money spent on the project. This database was analyzed in a number of different ways, including analyzing total spending, safety spending under the STP safety set-aside programs, and projects that were designed for pedestrian safety.

STP safety projects were identified using codes obtained from FHWA. Pedestrian safety projects were identified in two different ways. All projects that were identified by work-type codes as being pedestrian projects were included. However, a 1996 GAO report found that bicycle and pedestrian projects were frequently miscoded in the database (GAO 1996). Thus, in addition to using codes in the database to identify pedestrian projects, we included any project whose description identified it as being pedestrian-related.

The **Fatal Accident Reporting System (FARS)**, maintained by the National Highway Traffic Safety Administration (NHTSA), contains approximately 2.5 million records of every fatal traffic-related accident in the United States since 1986. These records include detailed descriptions of all persons involved, as well as the location, conditions, and cause of the accident. This FARS information was supplemented with additional data from the General Estimate System, a second NHTSA database that contains statistical information on all (not just fatal) motor vehicle-related accidents in the United States.

Data on the relative number of people walking in each metropolitan area were obtained from commuting data in the 1990 Census. The census provides county by county data on the number of people using a given means of transport (car, bike, subway, train, walking, etc.) to get to

work. Using these data, we determined the percentage of the commuting population in each MSA who walk to work. This was used as a general estimate of the number of people walking in each community. For example, in the metropolitan New York MSA, 9.7 percent of the commuting population walks to work, while in Atlanta, 1.5 percent of the commuting population walks to work. From this data, we estimated that, per capita, New York had 6.5 times as much walking activity as Atlanta. These data were used to estimate the pedestrian fatality index, as described in the text.

Homicide data were obtained from the **FBI Supplementary Homicide Report** data file. These files contain detailed records of every homicide committed in the United States in 1995. For each state we were able to determine the number of homicides committed by strangers with guns, and the percent of homicides for which the assailant was known and was a stranger to the victim.

A Day in the Life

24 Hours of Pedestrian Fatalities in the United States October 21, 1992

1:00 a.m. San Diego County, California
The first pedestrian fatality of the day occurred when a 45-year-old male was struck and killed while walking or standing on a hilly, curved section of roadway. The driver, a 27-year-old male, was rounding the curve at a speed well below the posted limit. He braked and steered in an effort to avoid hitting the pedestrian, but could not. No violations were charged.

2:00 a.m. Los Angeles, California
The second fatal accident of the day resulted in one death and one serious injury. A hit-and-run driver on a main thoroughfare hit and killed a 35-year-old male and severely injured a 36-year-old female.

3:30 a.m. New York City, New York
A male, age 38, walking along a Manhattan street became the day's third pedestrian fatality. A male driver, improperly backing a Mack truck, hit and killed the pedestrian. Police concluded that alcohol was not involved.

6:00 a.m. Panola County, Texas
Foggy conditions may have contributed to the fourth fatal pedestrian crash of the day. A male, age 60, was hit while walking or standing along a high-speed, arterial roadway. The victim and the driver were sober.

7:00 a.m. Stark County, Ohio
An 87 year-old male was killed when he walked into a passenger car operated by a female driver, 24 years old. Officials filed no charges in this fifth pedestrian crash of the day.

7:05 a.m. Horry County, South Carolina
The sixth and youngest pedestrian victim of the day was an 8 year-old boy. The boy was crossing the street to board his school bus when a car illegally passing another struck and killed the youngster. The driver was a 19-year-old male.

9:20 a.m. Dale City, California
A van traveling at a high rate of speed ran off the road, hit a a utility pole and then struck and killed a female, 68-years old. In this seventh fatal crash involving a pedestrian, the driver (male 47) also sustained serious injuries. Alcohol was not involved.

2:25 p.m. Braham, Minnesota
A driver described as inattentive hit and killed a female, age 77, as she crossed at an intersection. The 38-year-old male was driving a pickup truck. Alcohol was not involved in this eighth fatal collision of the day.

5:15 p.m. Milwaukee, Wisconsin
The ninth pedestrian fatal accident occurred when an 80-year-old female was killed. She walked into a travel lane, near an intersection, and was struck by a vehicle driven by a male, age 54.

5:40 p.m. Salt Gum, Kentucky
A 76-year-old male became the tenth pedestrian fatality when he was struck and killed along a 55 mph section of roadway. The driver, an 18-year-old female, was rounding a curve and attempted to steer and brake to avoid the man. Officials filed no charges..

6:55 p.m. Boulder, Colorado
Reckless driving led to the eleventh pedestrian death of the day. A 17-year-old male was charged with reckless driving after he hit and killed an 81-year-old woman along a 30 mph roadway.

7:15 p.m. Portland, Oregon
A 45-year-old woman died when she improperly attempted to cross a 35 mph principal roadway, becoming the day's twelfth pedestrian victim. The 38-year-old female driver involved was not charged in the collision.

7:20 p.m. South Farmingdale, New York
Alcohol played a role in the day's thirteenth pedestrian fatality. A 38-year-old male with a blood alcohol content (BAC) of 0.24 percent was struck and killed along a roadway with a 40 mph speed limit. Policy determined that the driver, a 34-year-old male, was acting properly, and brought no charges.

7:40 p.m. Cupertino, California
A vehicle being driven below the posted speed limit hit and killed an 89-year-old male pedestrian, the fourteenth death of the day. A 50-year-old female drove the vehicle involved. Alcohol was not a factor.

7:45 p.m. North Bellport, New York
The fifteenth pedestrian to die was the victim of a hit-and-run collision.

The 61-year-old female pedestrian died when a vehicle driven by a male, age 39, struck her. The driver was apprehended later, and charged with driving while impaired and leaving the scene of an accident.

8:17 p.m. Independence, Missouri
A 23-year-old male with a BAC of 0.11 percent became the day's sixteenth pedestrian fatality when he tried to cross a roadway at an intersection with no traffic lights. The 32-year-old driver involved was described as swerving to avoid the pedestrian, but may have contributed to the crash by leaving the proper travel lane.

8:25 p.m. St. Louis, Missouri
An early-evening crash produced the seventeenth pedestrian fatality when a 59-year-old male was struck and killed at a signalized intersection. Officials determined that the pedestrian had a BAC of 0.20 percent. The driver, a male, age 44, had his vision obscured by a large vehicle and its load.

9:13 p.m. Phoenix, Arizona
Alcohol influenced the eighteenth and last crash of the day to claim a pedestrian's life. A 59-year-old male was hit and killed by a vehicle driven by a 36-year-old female. The pedestrian's BAC was 0.32 percent. Police indicated the driver also was impaired, but her BAC is unknown. The driver had a previous DWI conviction and license suspension.

—NHTSA/FHWA, 1995, "Development of a National Pedestrian Awareness" (unpublished).

Organizations Involved in Pedestrian Safety Issues

National Transportation Enhancements Clearinghouse (NTEC)
1506 21st Street, NW Suite 210, Washington DC, 20036
888/388-6832 (toll-free), fax: 202/463-0875, e-mail: ntec@transact.org

NTEC provides technical assistance on enhancement program participants, as well as a referral service to other experts and organizations and relevant materials. The NTEC is a source of documents on enhancement activities.

National Bicycle and Pedestrian Clearinghouse (NBPC)
1506 21st Street, NW Suite 210, Washington DC, 20036
800/760-NBPC (toll free), fax: 202/463-6625,
e-mail: nbpc@access.digex.net

NBPC provides technical assistance on bicycle and pedestrian programs and is a source of USDOT bicycle and pedestrian reports.

America Walks
c/o Ellen Vanderslice, co-chair: 503/228-5441, e-mail: ellenv@hevanet.com and Katherine Shriver, Walk Austin, 512/472-3470, e-mail: kshriver@io.com

America Walks is a national pedestrian advocacy coalition of local pedestrian groups dedicated to fostering transportation choices for the public.

Surface Transportation Policy Project (STPP)
1100 17th Street NW, 10th floor, Washington, DC 20036
202/466-2636, fax: 202/466-2247, e-mail: stpp@transact.org,
web page: www.transact.org

National coalition of grassroots and national organizations which advocates for balanced transportation policy. STPP is working for the reauthorization of ISTEA, which maintains funding for alternate modes of transportation, including transit, bikes and walking.

Rails-to-Trails Conservancy (RTC)
1100 17th Street NW, 10th floor, Washington, DC 20036
202/331-9696, fax: 202/331-9680

RTC is committed to the creation of trails and rail trails for recreation and non-motorized transportation. They advocate for trails and enhancements and assist in trail development.

Bicycle Federation of America (BFA)
1506 21st Street, NW Suite 210, Washington DC, 20036
202/463-6622, fax: 202/463-6625, e-mail: bikefed@aol.com

A national bicycle and pedestrian advocacy group. BFA provides technical assistance on bicycle programs and local bicycle advocacy and offers relevant publications, including those on bicycle and pedestrian safety education.

Campaign to Make America Walkable
1506 21st Street, NW Suite 210, Washington DC, 20036
202/463-6622, fax: 202/463-6625, E-mail: walk@transact.org

The Campaign, a project of the Bicycle Federation of America (BFA), advocates designing streets and public spaces to foster walking. The Campaign offers technical assistance for those interested in improving the safety and walkability of their communities.

League of American Bicyclists (LAB)
Noel Weyrich
749 North 26th Street, Philadelphia, PA 19130
215/232-7543, fax: 215/232-2658, e-mail: BikeNoel@aol.com

A national bicycle advocacy organization.

Congress for the New Urbanism
706 Sacramento Street, Box 148, San Francisco, CA 94108
415/291-9804 or fax: 415/291-8116

The Congress for the New Urbanism works to promote the principles and practices of the new urbanism; i.e. more walkable and compact development as an alternative to automobile dominated sprawl.

Institute of Traffic Engineers (ITE)
525 School Street., SW., Suite 410 Washington, DC 20024-2797
202/554-8050, fax: 202/863-5486 web page: www.ite.org

Source of professional and technical documents and information on transporation standards and recommended practices. Offer publications on street design and traffic calming.

Transportation Alternatives (TA)
115 West 30th Street, room 1205, New York, NY 10001
212/629-8080, fax: 212/629-8334 e-mail: transalt@echonyc.com

Local bicycle and sustainable transportation advocacy group. T.A has extensive experience with traffic calming as well as local bicycle and pedestrian advocacy.

Tracy-Williams Consulting
P.O Box 8315, Missoula, MT 59807
406/543-8113, fax: 406/543-8146, e-mail: john@montana.com

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