Public Transportation: Promoting Public Health, the Environment, and Access to Opportunity

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Good morning Chairman Reed and members of the subcommittee. I am speaking on behalf of Environmental Defense, an organization with 300,000 members that seeks to integrate law, science, and economics to find practical solutions to environmental problems.

TEA-21: A Success for Transit. TEA-21 provided vital guarantees for increased transit funding while sustaining important accountability and incentive reforms of the ISTEA law. In response to these reforms and funding, Americans have taken back to public transportation in droves. Since 1995, transit ridership has grown by one-fourth, to over 9.5 billion rides, the highest in more than four decades. Over the last six years transit use has grown faster than the population (8%), highway use (15%), and domestic air travel (13%; 19% prior to 9/11/01).

TEA-21's support for public transportation has promoted economic development, the environment, and public health, offering guaranteed funding and incentives to encourage state and local progress for clean air, smart growth, and equitable access to opportunities. Reauthorization of TEA-21 should build on this success with increased guaranteed funding for transit, greater transparency for how tax funds are spent on transportation, and stronger public accountability for state, regional, and local transportation system performance measured against national, state, and regional objectives, including goals for environmental protection and equity.

America Can Do Better. Thirty-two years after the 1970 Clean Air Act, 140 million Americans – including 70 percent of the people most vulnerable to air pollution - live in areas that exceed the National Ambient Air Quality Standards, exposing them to unhealthful air pollution that leads to premature death, cancer, hospitalization, and impaired life quality. The number of smoggy days increased 18.5 percent between 2000 and 2002 in the 58 percent of U.S. counties with air quality monitors. And recent research in California and Colorado shows that those living close to very high traffic volume highways face unacceptable cancer risks - as high as 1 in 500 - due to exposure to traffic-related toxic air pollutants that will increase if roads are further expanded (South

Coast Air Quality Management District, *Multiple Air Toxics Exposure Study-II*, March 2000). On top of this, the U.S. accounts for vastly disproportionate greenhouse emissions, with 5 percent of the world's people using more than one third of all energy for transportation purposes worldwide. While the transit-related provisions of a reauthorized TEA-21 alone won't solve these problems, they are a critical opportunity to address them.

Some states are making greater use TEA-21's opportunities to develop balanced transportation systems that expand transit choices. But others are making little progress and devote a large share of their attention to the failed strategy of trying to build their way out of congestion. In a third of the states, constitutional restrictions limit states' ability to use their own gas tax for anything other than roads. In many regions transportation planning expends little effort to consider transit and growth management strategies that could provide attractive alternatives to the current plan of business-as-usual road system expansions that accommodate and support sprawl and subsidize driving, while neglecting the needs of pedestrians, bicyclists, and those without cars. Improved data collection and impact analysis tools and stronger planning requirements are needed if state and local agencies are to comprehend, identify, and invest in better system management. By improving integrated performance-oriented planning at the state and regional level, we can address demands to streamline the project review process in a manner that delivers better projects that also protect the environment, public health, and the ability of the public and local officials to know about the effects of major decisions before they are final, a core principal of the National Environmental Policy Act of 1969 (NEPA).

Protecting Public Health with Better Transit. Investment in clean public transportation reduces smog and particulate air pollution that harms the health of children, the elderly, and those with respiratory disease. Increased investment in clean transit can provide vital remediation for these risks by helping to reduce traffic. Riding transit is also far safer than driving, which causes 42,000 U.S. deaths a year and 3 million injuries. Deaths and injuries from motor vehicle crashes are the leading cause of death for persons of every age range from 4 to 33 years old. The National Safety Council estimates that riding the bus is over 170 times safer than car travel. If the nation's roadway users had the same accident rate as buses, 21,000 motorist lives would be saved annually in collision accidents alone. Across all modes of public transportation, accidents per million passenger miles decreased by nearly 28 percent between 1993 and 1999; transit passenger injuries per million passenger miles declined nearly 24 percent.

Atlanta's experience during the Olympic Games in 1996 shows how much transit can cut traffic, boost system efficiency, and protect public health. By leasing 1,000 added buses, enhancing transportation system management, and marketing improved travel choices during the Olympics, Georgia officials cut the number of cars in the morning rush hour by 23%. This reduced traffic led to lower air pollution emissions, with a 28% drop in smog concentrations even as the region accommodated over one million additional visitors. This in turn caused the number of asthma acute care events to decrease 42% during this period. (Freidman, Michael S., Powell, Kenneth E., Hutwagner, Lori, Graham, Leroy M., Teague, W.Gerald; *Journal of the American Medical Association*, February 21, 2001, vol 285, no. 7, pg. 897-901).

Transit Is Vital to Cut Climate Change Emissions. Transit has a key role to play in reducing our nation's growing dependence on oil and highly disproportionate contribution to human-induced climate change. Transportation accounts for about 28 percent – a growing share - of U.S. climate change emissions. Yet the fuel efficiency of a fully occupied rail car is 15 times greater than that of the typical commuter's automobile. Full buses are 6 times more efficient. A bus with as few as seven passengers is more fuel efficient that the average solo commuter car trip.

For every 10,000 solo commuters who leave their cars at home and commute on transit for one year, the nation reduces fuel consumption by 2.7 million gallons. While intercity rail accounts for about 1 percent of all passenger miles traveled by Americans, it accounts for only 0.1 percent of U.S. energy consumption for transportation. In Japan and Germany, where high-speed rail is common, trains consume only a sixth to an eighth as much energy as jet aircraft carrying similar passenger loads. Protecting Amtrak and investing in a modern national intercity high-speed rail system must be part of our national agenda to protect the environment.

Several state studies have illustrated rail's benefits for energy conservation, air pollution and global warming, For example, in California, a recent state study concluded that the state-supported intercity train network will prevent 265 million motor-vehicle-miles from being driven in 2002. While the resulting reduction in gasoline consumption is offset by increased diesel consumption by trains, the state projects a net saving of 7.3 million gallons of gasoline in 2002, helping to reduce both air pollutant emissions and the demand for imported oil (California Department of Transportation*, California State Rail Plan 2001-02 to 2010-11*, 2001, p. 6). A gasoline saving of this magnitude would reduce carbon dioxide emissions by about 140 million pounds, which is the equivalent of taking 12,000 cars off the road for a year. A study done for the Coalition of Northeast Governors in 1990 estimated that the introduction of high-speed rail service

between Boston and New York would save 20 million gallons of jet fuel and 4.5 million gallons of gasoline per year. Although some pollution is generated from the electricity that powers the trains, the net effect of high-speed rail between Boston and New York would be to eliminate almost 2,700 tons of smog-forming pollutants each year.

Public transportation has been estimated to cut gasoline use by more than 1.5 billion gallons a year and to prevent the emission of 63,000 tons of hydrocarbons and 78,000 tons of nitrogen oxides. These numbers don't even consider the much greater indirect energy and environmental benefits of the efficient housing and work environments made possible only by the availability of rich transit networks in places like New York City, San Francisco, and Washington, DC. And vital new economic centers, such as San Jose, Denver, and Portland, Oregon, could not sustain and manage their growth without having invested heavily in transit.

Transit Sustains and Builds Energy-Efficient, Lower-Pollution Communities. To comprehend the true environment and public health benefits produced by America's public transportation systems, we must consider how community patterns of travel, commerce, and urban development are transformed when high quality transit services are consistently developed and sustained over the long-term. A recent study by the National Transit Cooperative Research Program of the National Academy of Sciences found that transit-supported compact developments yield 10-30% less overall community energy use and pollution compared to low density, car-dependent sprawled development, as well as lower total social and infrastructure costs. Many regional and sub regional studies using best practice analysis tools to compare alternative investment strategies and related policies, e.g., in Denver, Portland (OR), Sacramento, and Washington, DC, have found that transit supported strategies can accommodate equivalent amounts of new development with significantly less traffic and pollution while automobile-oriented strategies induce added traffic and pollution.

Indeed, by focusing growth around an expanded transit system, reducing expenditures on roads, and adopting an urban growth boundary and pedestrian-friendly urban design standards, Portland, Oregon has pursued a path different from most other U.S. metropolitan areas. Since the adoption of the 235,000-acre growth boundary in 1979, Portland has urbanized just 39,000 acres. At the same time the population inside the boundary has increased by more than a third. No new road capacity has been added to the downtown for nearly a quarter century although employment has nearly doubled in that time to 109,500. Transit carries the equivalent of two lanes of traffic on every major thoroughfare to downtown. Portland tore out a six-lane expressway to create a

downtown river front park, traded in the money for two new freeways and invested in transit. Between 1990 and 1996, transit ridership grew 20 percent faster than the growth in vehicle miles traveled, 41 percent faster than the growth in transit service and nearly 150 percent faster than the growth in population. Portland's adopted regional plan envisions a 40% increase in population and just a 2% increase in land area by 2017.

The experience of most cities with less consistently transit-focused policies has been that urban land consumed per person has skyrocketed, exacerbating car dependence. Seattle's experience is typical, with a 38% population increase accompanied by an 87% increase in urban land area between 1970 and 1990.

Another region facing sprawl pressures that are being countered with better transit is Denver, which anticipates accommodating a million new residents in the coming 20 years. A recent survey by the Downtown Denver Partnership shows that before the new Southwest light rail line opened, one in four downtown commuters used transit; since the new line opened, one in three do. It is estimated that it would take 175 additional miles of highway in the Denver metro region to carry all the people who use transit today. Recent public transit investments have been very successful; both light rail and the bus and carpool lanes on north I-25 have exceeded projections for ridership. The 14-mile light rail system takes 525 bus trips off city streets each day. One light rail train can replace over 200 single occupant vehicles. More than 33,000 people ride the light rail daily- about 30% above the original ridership projections. New transit investments are not only alleviating traffic congestion and cutting pollution, they are revitalizing communities by serving as infrastructure for creating new town centers and livable, walkable communities. The once dead Englewood mall has been reborn in the past two years as a mixed-use city center with homes, offices, stores, cultural, and civic uses, thanks to Denver's Southwest light rail line that now serves it. And the growth attracted to this center otherwise would likely have taken a much more polluting, car-dependent form at the periphery of the metro area, but for Denver's transit-supportive policies.

The large transportation and energy cost savings produced by transit translate into higher real estate values for neighborhoods with good transit access. Single-family residences in Boston are valued an average of 6.7% higher in neighborhoods with rail stations compared to neighborhoods without them according to a 1994 Transportation Research Board study. In Portland, Oregon, residential properties within 500 meters of light rail station are valued at 10.6% more than comparable properties farther away.

Transit Reduces Water Pollution and Protects Parks and Ecosystems. By supporting more compact development patterns, transit investment can reduce conversion of open space to urban uses, reduce impermeable surface coverage in critical watersheds, and provide access to our nation's parks while protecting them from damage caused by traffic. Surfaces paved to accommodate traffic are responsible for substantial storm-water pollution and water quality degradation in coastal estuaries, streams, lakes, and near-shore ocean environments. In contrast to the space-intensive demands of air and auto travel, which require ever-larger airports and ever more lanes of freeway, rail service can be increased mostly along existing rights of way. Rail stations accommodate many more passengers than airports while taking up far less land. Penn Station in New York, for example, accommodates more travelers every day than the 25 biggest airlines handle at Los Angeles International, Chicago O'Hare and Newark International airports combined.

Accountability: Key to Better Transit, Expedited Project Delivery, and Sustained Public Support for Transportation Funding. Public support for transportation funding will be sustained only if federal, state and local agencies improve transparency about how they spend money and can be held more accountable for the long-term effects of transportation projects, programs, and plans. This requires better integration of transportation, natural resource, and land use plans and transportation project reviews at all levels of government for better coordinated decision-making that supports wise system stewardship, with better consideration of alternatives for impact avoidance and mitigation. Such an approach to improving transportation project delivery could lead to more effective investments with broad public support, with more investment in transit, and better protection of public health and the environment.

Some state DOTs are carrying through on the mandate of TEA-21 to integrate the Major Investment Study requirements into NEPA project reviews and the transportation planning process, despite the absence of DOT regulations, and by doing so are considering smart system management, pricing, partial build scenarios, and smart growth strategies as they consider major new investments. Some states are pursuing stewardship initiatives to change the culture of state DOTs and to foster closer planning and operational partnerships with state resource agencies and key stakeholders. Most states have improved interagency cooperation so that their transportation plans conform with their adopted air pollution control plans. To accomplish this, some regions, like Charlotte, NC, are adopting air pollution control strategies, such as new regional transit, that will

help offset future emission increases from highway transportation. Congress should encourage these best practices.

Other transportation agencies and road builders are trying to scapegoat environmental laws for their own administrative failures which are manifested in a lack of local consensus on proposed projects, insufficient state and local funding match dollars, and stalled reviews due to inadequate consideration of alternatives, inadequate mitigation and avoidance of adverse impacts, and efforts to end-run federal requirements. These interests want to expedite transportation project delivery by weakening Clean Air Act conformity requirements, setting deadlines for project reviews, diminishing consideration of alternatives and indirect impacts, limiting opportunities for stakeholders and resource agencies to influence decisions, and limiting judicial review. Congress should reject these proposals that would undermine core environmental protections, spur greater conflict, erode public support for transportation funding, and make it less likely that communities will consider and implement investments and policies that improve and support transit.

In those few places where transportation and air quality plans in recent years have come into serious conflict, such as Atlanta, transportation conformity lapses have led not to a cut off of federal transportation funds – as road builders often falsely assert. Instead, federal, state, and local funds have been redirected away from major road expansions and into transportation projects that are beneficial or neutral for air quality, including highway safety projects, park-and-ride lots, HOV lanes, sidewalks and bike paths, bridge reconstruction, traffic signalizations, and intersection improvements. During a conformity lapse, funds may also go to major transit projects that have been recognized as transportation control measures in State Implementation Plans (SIPs) for air quality. But many state and local agencies have failed to include their major transit projects in SIPs. This administrative shortcoming puts the funds for these air quality improvement projects at risk if there is a conformity lapse. Having transit project funding held hostage to continued funding for sprawl and traffic-inducing highways serves only the road builders' interests. Congress could remedy this problem by stating that major transit investments should be treated as conformity-exempt and by allowing new transit projects that have not previously been part of a conforming transportation plan and program to be added to non-conforming transportation plans and programs during conformity lapses.

In reauthorizing TEA-21, Congress should reduce the number of segmented project analyses, encouraging fewer, better-coordinated evaluations of alternatives. State and metropolitan areas should develop and periodically update, with public involvement, integrated transportation,

natural resource protection, and growth management plans that consider at least one alternative scenario that considerably reduces traffic growth through better system management. Agencies should annually report on the current and projected performance of their transportation system management, investment, and proposed programs and plans, accounting for cumulative and secondary impacts on growth patterns, public health, greenhouse gas emissions, the achievement of natural resource planning goals for air, water, and habitat protection, and the provision of equal access to jobs and public facilities for all residents, including those without cars, without undue time and cost burdens.

California's recently enacted AB 2140 law provides a model for this, (1) establishing a standardized set of basic transportation performance indicators related to safety, congestion, road repair needs and public transit that each region must begin to track; (2) establishing a standard method of financial reporting to help the public and local officials know what their money's being spent on; and (3) requiring an "alternative planning scenario" in the development of each region's 20 year transportation plan in order to provide a clear alternative to present growth patterns that could minimize future demand on transportation infrastructure while reducing congestion, protecting open space, and saving taxpayers money. Adopting a federal version of AB 2140 in TEA-3 would give the public and local elected officials expanded transportation investment choices including options to better support transit and manage both traffic and land development, supporting an environmentally-sound approach to expediting project delivery.

Assure Integrity to Models and Analysis. A decade after ISTEA, many transportation agencies still use transportation analysis models that reflect the assumptions of the 1970s, ignoring walking, biking, urban design, induced traffic, and the land use impacts of transportation policies. The Federal Travel Model Improvement Program has sought to foster adoption of best practices, but has had only modest effect. While some metropolitan areas, such as Portland, Oregon, and Sacramento, California, have developed more policy-sensitive modeling tools to appraise the traffic, transit, air quality, and equity impacts of various policies, many agencies have done only defensive just-in-time model fixes to produce answers that help justify locally sought projects. The result is the recurrent widespread under-estimation of air pollution from traffic, mis-estimation of travel demand for new transit systems and roads, and poorly supported investment decisions made on the basis of faulty data, models, methods, and forecasts. Recent independent audits of computer travel models in Washington, DC, and other regions have exposed serious flaws in official Metropolitan Planning Organization models that bias their findings strongly against transit

investments and smart growth strategies and strongly in favor of expanded highway investments. Unless improved, these discredited models will be subject to growing challenge from a variety of stakeholders, including resource agencies, civic groups, environmental groups, and urban core development interests that are put at disadvantage by these obsolete and poorly calibrated tools.

American needs a new much stronger national transportation data center to replace the Bureau of Transportation Statistics. This center should help set a core set of uniform standards for travel survey data collection, transportation network coding, spatial data analysis, and evaluation, developing a new generation of scientifically valid methods for local, regional, and national travel behavior analysis to support performance-based funding and decision-making. Local innovation should be encouraged to augment this core set of measurement systems. To improve their validity and performance, regional travel models should be subject to adequately funded independent oversight and critique by impartial experts, with open public access to data and software setups to facilitate public interest audits of assumptions and model performance.

Level the Playing Field Between Roads and Transit on New Starts. The TEA-21 transit New Starts Program sets the rules for funding new transit projects. This successful program has helped spur competition for new projects, encouraged greater local funding, and more efficient design and project selection for system expansion, with far greater demand for funds than available under TEA-21. We support substantially increased funding for transit new starts, as demand for such environmentally sound investments is growing. Scarcity of new starts funds have led to many negotiated federal funding far less than the 80 percent provided for under law, with the program now approaching a 50-50 federal-local funding split.

But even more importantly, new highway projects should be subject to the same rules and competition for local match as new transit projects. This would help assure a wiser use of scarce federal transportation resources, greater private participation, increased reliance on environmentally-sensible and fiscally-prudent motorist user fees to cover project costs, and better overall project selection. If a 50-50 split is adopted for transit new starts, as proposed by some, a similar split should similarly be adopted for all new road projects financed with federal funds. Fiscal prudence in reauthorization would suggest far more attention be paid to completing the job that ISTEA started on leveling the playing field between highways and transit.

Congestion Mitigation Air Quality Funding: Vital For Transit and Public Health. The $8.1 billion 6-year Congestion Mitigation Air Quality Program (CMAQ) has had 44 percent of its funds expended 1992-99 on air quality beneficial transit projects. Funding for CMAQ should be

substantially expanded in TEA-21 reauthorization in recognition of the increased problem of air quality non-attainment. Eligibility for traffic flow enhancement projects under CMAQ should be limited, as there are ample other sources of federal and state funds available for these types of projects. CMAQ should not be opened up to become a general operating assistance program for transit, but should focus on funding innovative air pollution reducing initiatives and a wide array of strategies and programs to reduce or managing travel demand, including incentives for smart growth, revision of local zoning, parking, and design codes, creation of accessory apartments near jobs and transit, freight and goods movement management strategy planning, traffic calming, and much better data collection and analysis to support and evaluate these initiatives before and after implementation. State and local air quality agencies should be given authority to allocate CMAQ funds in consultation with transportation agencies to foster more cost-effective and innovative investments.

U.S. EPA has promulgated new health-standard based National Ambient Air Quality Standards (NAAQS) under the Clean Air Act in recognition that the old NAAQS were insufficiently protective of public health. The Supreme Court has upheld this new standard following an industry challenge, and new designations are now overdue. The national air quality monitoring network shows that more than 166 million people live in counties with monitors showing unhealthful levels of ozone under the new standard, compared to 117 million in areas designated non-attainment under the old standard. When actual designations of new non-attainment areas are made for ozone, including additional proximate counties without monitors, and also for fine particulate matter, it is likely that the population living in non-attainment areas will likely increase by half. Currently only ozone non-attainment area population is recognized in TEA-21's CMAQ obligation formula. It is equitable to recognize fine particulate non-attainment area population as well. Reauthorization apportionments should recognize the expanded scope of funding needs by proportionate expansion of CMAQ funding based on both population and the degree of pollution remediation needed. Otherwise existing non-attainment areas will suffer crippling cut-backs in funds for air pollution reduction programs even while being asked to take additional steps to further cut pollution to protect public health.

Affirm a National Mobility Goal: Equal Access to Opportunities. Congress should assure America lives up to its reputation as a land of opportunity by assuring access for all in TEA-21 reauthorization. Recent U.S. DOT guidance seeks to assure that transportation plans and decisions comply with Title VI of the 1964 Civil Rights Act by considering effects on the distribution

of benefits and burdens related to transportation and assuring adequate public involvement in the planning process. Several recent studies suggest a pattern of declining access to jobs and public facilities for those without cars as more jobs locate in places without transit access. The adopted $35 billion 20-year Atlanta transportation plan, for example, shows that the share of jobs reachable by those without cars declines from 2000 to 2005 and does not get back to 2000 levels until after 2015. A disproportionate share of those without cars in Atlanta and nationally are African Americans and nearly 94% of public assistance recipients do not own cars and rely on public transportation. And by 2020, 40% of the US population will be senior citizens and many will be unable to drive.

Congress should affirm in TEA-3 a national mobility goal to provide equitable access to jobs, health, education, public facilities, and other opportunities for the young, the old, the disabled, and others without cars without undue time and cost burdens. Regional Transportation Plans should be required to demonstrate how this goal will be achieved and short term Transportation Improvement Programs should demonstrate timely progress towards that goal. We can achieve this goal with expanded support for public transportation, better coordinated urban development and transportation, efforts to make neighborhoods safe and attractive places to walk, bike, and use public transportation.

Strengthen Commuter Choice: Boost Employer Support for Transit. Federal and state tax policies are a part of the recent story of transit resurgence. For the vast majority of working Americans, a free parking space at work has for decades been the sole commuter benefit offered by employers because that was until recently the only tax-free commute benefit worth speaking of. So if you drive alone to work you gain the benefit. If you take transit, carpool, walk, or bike, you lose the benefit and likely pay your own daily transit fare. With this kind of incentive, it's no surprise that on any given day nine out of ten American commuters drive to work and nine out of ten of the cars driven to work have one occupant. Yet the 85 million "free" or subsidized employer parking spaces actually cost American business more than $36 billion per year. By spurring more driving, these subsidies exacerbate traffic congestion and air pollution. A congressional study found that "free" parking of all kinds costs our society over $250 billion per year.

In 1998, Congress took steps to make tax policies more equal for all commuters, allowing employers to offer tax-free transit and vanpool benefits of up to $100 a month, with taxable cash-in-lieu-of-parking benefits allowable for the first time. Tax-free benefit limits for employer-provided parking were set at $175 per month – a practice which still leaves solo drivers at an advantage.

Allowing employee-paid pre-tax transit benefits saves transit-using employees over $400 a year while saving employers a smaller amount on withholding. Having employers pay for transit is a bigger incentive for employees. Offering such a benefit to federal executive agency employees in the national capital region induced 11 percent of employees who used to drive to work to switch to transit, taking 12,500 cars off the region's crowded roads every workday. At firms in California and Minnesota offering a $2 a day incentive instead of free parking, one out of eight who used to drive are finding another way to get to work. Such benefits help employers attract and retain employees and provide the greatest help to low and moderate wage workers who spend the largest share of their incomes commuting and often ride transit, carpool, bike, or walk to work.

The cost of such employer provided transit benefit programs to employers is very small and can easily be fit within the scope of ordinary cost-of-living increases offered by most employers to their employees on a periodic basis. State tax credits can make this cost even smaller. For example, in Maryland, if an employer offers an employee a cost of living increase, for each $1 in after-tax cost to the employer, the employee typically receives $0.53 in after-tax income. If that same $1 in after-tax employer expense is instead devoted to an employer-paid qualified transit benefit of $60 a month, the typical Maryland employee who receives it ends up gaining $1.76 in after-tax benefits, thanks to the leveraging effect of federal and state tax provisions.

The savings for employees offered by the federal tax law changes are significant and make a high level of employer and employee participation in the next several years realistic across America. For example, an employee earning $50,000 per year who spends $780 annually on transit ($65/month) could realize a tax savings (at 42%) of $328 as a result of paying their transit cost using pre-tax dollars, exercising one of the new Commuter Choice options, while their employer would gain payroll tax savings (at 7.65%) of $60 per employee (Arthur Andersen). Even if the cost to set up and administer the program equals 2% of the transit benefit, the employer will still enjoy payroll savings of $44. Employers are likely to face new costs to offer transit passes or added cash income in lieu of parking, but these can also translate into substantial cost savings of several types. It is much cheaper for an employer to boost non-taxable employee benefits than to offer added taxable income to retain or attract workers, which is an increasing issue in a tight labor market. If the employer is able to expand employment without adding more parking spaces or to otherwise avoid the cost of building, leasing, or maintaining parking spaces for workers, capital cost savings can amount to $5,000 to $20,000 per avoided space and operating costs can amount to

$750 to $3,000 or more per year per avoided space. Such savings are often significant enough to more than pay for a cash in lieu of parking or transit pass benefit.

Commuter Choice programs have been shown to unite the diverse interests of environmentalists, business, labor and transit and highway advocates. Most realize that Commuter Choice is good for business and for communities. Commuter Choice is a voluntary incentive that boosts travel options and supports more efficient use of the roads and transit we already have. It can provide quick relief to traffic-strained communities and will expand market opportunities for new forms of access to suburban jobs. Low- and moderate-income workers benefit particularly, since commuting costs represent a larger relative burden on them, and they tend to be more reliant on ridesharing and transit. The Alliance for Clean Air and Transportation, a national group representing a diverse array of sectors, including the road builders, automobile industry, environmentalist and health groups, the American Association of State Highway and Transportation Officials, Highway User Federation, American Automobile Association, the National Association of Regional Councils, and the US DOT and EPA, in February 2000 adopted a consensus goal of making Commuter Choice benefit programs a standard part of the American worker benefit program over the next five years.

However, Commuter Choice will have an effect on air pollution only if people know about it and use it, and if the opportunities for cost savings offered by aggressive implementation of these incentives are made evident and available to developers, building owners and tenants, and commuters. Marketing alone has been shown to be inadequate to win widespread adoption of Commuter Choice incentives. There are many strategies that can be taken by states, regional bodies, and local municipalities to foster rapid and widespread adoption of Commuter Choice incentives so these might become available to the average commuter. Additional financial incentives and support by transportation agencies and other government bodies are essential to rapid adoption of Commuter Choice voluntary incentives and can be highly cost-effective in reducing congestion and pollution.

DOT and EPA are promoting Commuter Choice, but Congressional action is needed to further expand efforts to foster widespread adoption of these voluntary incentives. EPA estimates that if half of all U.S. employees were covered under these commuter benefits, traffic and air pollution could be cut by the equivalent of taking 15 million cars off the road every year, saving American workers about $12 billion in fuel costs. For every 10% of U.S. employees participating, commute VMT would be cut by 3.2%, or 20 billion miles, with emission reductions of 54,000 tons

VOC, 480,000 tons CO, 33,600 tons NOx, and 2.36 million tons CO2. In *SIP Development Guidance: Using Emission Reductions from Commuter Choice Programs to Meet Clean Air Act Requirements*, EPA estimates reductions of 26-30% in commute vehicle trips for a full Commuter Choice program. Los Angeles research shows that those who receive free parking at work drive 72 cars per 100 employees, while those who paid for parking at work drove 53 cars per 100 employees, or 26% less (D. Shoup, "An Opportunity to Reduce Minimum Parking Requirements," *Journal of the American Planning Association*, Winter 1995, pp. 14-28.).

Congress should take further steps to encourage employer support for such 'Commuter Choice' initiatives. Congress should support for the following bills that would do this:

- The Commuter Benefits Equity Act of 2001 (H.B.318) would provide equal tax-treatment for parking and transit benefits.
- The Bike Commuter Act (H.R. 1265) would allow employees who bike to work the same financial incentives as transit users.
- The Mass Transit Tax Credit Act of 2001 (H.R. 906) would provide a 25 percent tax credit to employers for the cost of providing transit benefits to their employees. This is modeled after measures adopted by several states – including Maryland, Minnesota, Oregon, Washington, Georgia, New Jersey – that have begun offering tax credits of up to 50 percent and up to $50 per employee per month for employer-paid non-driving commuter benefits.

TEA-3 should also require that local and state officials do more to consider integrating Commuter Choice into their transportation plan and program development. In all non-attainment areas, transportation programs should assure that potential air pollution reduction benefits from Commuter Choice will be realized in a timely manner. These would include provision of these benefits to state and local government employees, aggressive marketing of these benefits to employers and employees, inclusion of Commuter Choice programs in local planning, development review, and other decision-making procedures and favorable local and state tax treatment. Such new travel demand management activities and incentives should be given priority by including them in air quality SIPs as Transportation Control Measures.

This promotion should include marketing, technical and administrative assistance, new transit fare products, such as deep-discount bulk purchase transit and vanpool benefits for 100 percent of an employer's workforce in the region, and new financial incentives for employers and employees that are adjusted annually in an effort to meet stated performance targets. State

Implementation Plans should include targets, timetables, and expanded funding commitments for (a) providing different segments of the labor force with Commuter Choice options of various types and (b) achieving increased levels of use of various Commuter Choice incentives by various portions of the labor force. These targets could be used as the basis for estimating SIP credits if accompanied by commitments to reasonably linked funding and policy commitments that could be anticipated to meet these targets.

Financing Transit With Automated Road Pricing. Another promising option that TEA-21 supports is automated time-of-day tolls and High Occupancy Toll (HOT) lanes, which allow solo drivers to pay to use High Occupancy Vehicle (HOV) lanes, while giving a free ride to buses, vans, and sometimes carpools. These can put to work unused capacity in HOV lanes and help pay for expanded transit services. A network of HOT lanes on existing highways is likely to provide more effective congestion relief than building new roads. New outer beltway toll roads are likely to bring more sprawl and put more jobs out of reach for those without cars, hurting the poor and the environment. Why not instead give time-stressed travelers a way to buy relief from growing congestion delays in existing freeway corridors and finance better transit?

HOT lanes in existing road corridors can expand both travel choices and equity. HOT lane critics unfairly bash them as "Lexus Lanes," serving only the rich. Real-world HOT lanes look more like "Lumina Lanes," used by people of widely varying incomes who occasionally need to bypass traffic delays that disrupt their social, family, or work life. A working class mom who is facing a $1 a minute penalty for picking her kids up late at day care is happy to pay $4 to save 20 minutes by using the HOT lane on those several days a month when she needs it. The typical users in California spend less than $20 a month on HOT lane tolls, using them on days they are in a real rush. If HOT lane revenues fund new bus services, as on San Diego's I-15 HOT lane, everyone wins. Lower income transit users and carpoolers get access to otherwise inaccessible suburban jobs. Drivers benefit from reduced road congestion and better services and choices. If HOT lane revenues help pay for the road, those who drive most are paying more of their fair share, helping all taxpayers win. Road user fees don't nearly cover the full cost of building and operating America's roads, which remain subsidized by broader taxes. And with new accounting rules forcing fuller disclosure of deferred maintenance, transportation providers need new sources of revenue to maintain systems, expand choices, and cope with growing travel demand.

New non-stop electronic toll technology means motorists don't need to slow down to pay tolls. And HOT lane fees -- higher in rush hour and discounted at other times -- keep traffic flowing

without wasting scarce road capacity like HOV lanes do. This makes it possible to contemplate future conversion of some existing general-purpose lanes to HOT lanes, particularly where new capacity is being added to existing roads. HOT lane experience indicates this strategy can garner popular support. On California's Route 91, diversion of traffic onto HOT lanes has reduced congestion on the entire road and increased the number of passengers per car to 1.6, compared to the average of 1.2. Similar incentives have been implemented or are being considered in Texas, Florida, Colorado, Georgia, New Jersey, New York, and other states.

The Port Authority of NY-NJ in March 2001 introduced time-of-day tolls on Hudson River bridges and tunnels and Staten Island bridges, giving discounts for electronic toll payers who avoid rush hours and charging a premium in the time of most concentrated demand, just like movie theaters and many other services. This helps reduce congestion by shifting the time of day of traffic. Toll revenues support better PATH transit and regional transportation infrastructure and services. The NJ Turnpike, NY Thruway Authority, and other tolling agencies have implemented time-of-day tolls to manage traffic.

Congress should encourage states and transportation facility operators to replace obsolete toll booths that cause congestion and pollution with new barrier-free customer-friendly tolling systems using toll transponders and image processing and billing systems. Congress should encourage state motor vehicle agencies to issue toll transponders with motor vehicle registrations to encourage their widespread availability in states where tolls are used. Congress should eliminate restrictions on tolling highways that were constructed with federal aid, which can now only be tolled under limited pilot projects authorized by TEA-21.

Promote Smart Transit Fare Payment Systems for Productivity Gains. Transit can also be made more efficient by better management. There are many things that should be done in this regard, including improving fare collection systems and giving buses and trolleys greater priority in traffic. Enhancing priority for buses and trolleys in traffic can increase average transit travel speeds, schedule adherence, and the number of passenger seat-miles per hour that can be carried by existing transit vehicles. A key part of this strategy involves upgrading traffic signals to support greater priority in traffic for buses, so they can hold a green signal green for a few extra seconds, or advance a red signal to green to avoid an extra stop. The strategy can also include building or configuring bus queue jumper lanes at key traffic bottlenecks to speed bus traffic past congestion, creating dedicated bus lanes, and bus boarding stations. These are often combined to provide "Bus Rapid Transit", which can often provide many of the benefits of fixed guideway rail services quickly at a lower cost.

Across America, buses are slowed by passengers who must file through the vehicle's narrow front door to board and pay an exact cash fare. Encouraging near universal use of pre-paid transit fare instruments and other high efficiency transit payment options, as in Europe and Japan, enhances productivity of existing and new transit services by reducing delays related to fare payment at time of boarding. Instead of having people pay cash on boarding, require that passengers carry a prepaid transit pass, or other fare media that must be validated before or immediately after boarding a transit vehicle, and which at a premium cost could be purchased on board the vehicle. Greater use of daily, weekly, monthly, and annual transit passes helps accomplish this. Fare inspectors roaming transit systems and spot checking to verify that passengers are carrying a valid proof of fare payment or a pass, with large fines for fare evasion assure broad compliance. This enables boarding of buses through both front and rear doors, which boosts transit vehicle productivity.

Provide Safe Routes to Schools and Transit by Foot and Bike. Transit is only as useful when people can get to and from its stops. Thus, a key part of the transit success story is also attributable to TEA-21's increased support for investments in walking and bicycling. TEA-21 reauthorization should take further actions to assure a safe route to schools and transit stops across America, adapting successful strategies from the most bicycle and pedestrian friendly communities. This should include requiring transit agencies to develop least-cost transit access plans that consider and compare walk, bike, and automobile access opportunities to expand the market reach along all their transit lines. It should include accelerated funding to local governments

to enable the build-out of the 20 year bike and pedestrian plans in the next 3 years, planning funds to engage in local area pedestrian and bicycle planning to identify key barriers and safety problems, and delay of some road projects to provide funds to retrofit sidewalks, bike paths, and traffic calming measures within a half-mile of all transit stops and schools.

About 40 percent of Americans own bicycles, and many of these people live one-quarter mile to two miles away from express transit stops. Few of these people now use transit to get to work, in part because of the lack of an inexpensive, convenient, safe, and fast transit access system suited to trips of this distance. In the Silicon Valley of California, 40% of those using bicycle lockers at rail stations leave bicycles in them overnight and use them to get from the station each morning to their nearby schools and employment, just as in the Netherlands.

Another means of reducing traffic is to implement neighborhood traffic calming to reduce motor vehicle speeds on many streets to improve safety for pedestrians, bicyclists, and motorists, and reduce emissions from car travel. Traffic calming has been shown by research to reduce idle times by 15%, gear changing by 12%, brake use by 14%, and gasoline use by 12%, injuries by 60%, fatilities by 53%, and air pollution by 10 to 50%. The majority of all urban and suburban streets and roads are already quite suitable for bicycling, with relatively low traffic speeds and low traffic volumes. However, such residential streets usually lead to bicycle-hostile major roads before reaching major activity centers and schools. Frequently, development of small missing links can make the difference between safe bicycle access and lack of access. Experience shows that high levels of bicycle use only occur where the street system is bicycle-friendly. Where well-connected networks of bicycle friendly streets, bicycle paths, and bicycle lanes have been provided -- such as Davis, Palo Alto, and Santa Barbara, California, Madison, Wisconsin, and Gainesville, Florida -- bicycle mode shares of 10-25% are common. Where such networks are not available, only the hardiest of cyclists take to the roads for purposeful travel, leading to bicycle mode shares of 2% or less. (Michael Replogle, *Bicycle and Pedestrian Policies and Programs in Asia, Australia, and New Zealand,* U.S. Federal Highway Administration, Washington, DC 1993). Marketing, education, and promotion programs are also needed to encourage greater and safer use of bicycles for short utilitarian trips, including transit access, particularly in conjunction with initiatives that reduce the current barriers of theft, security, safety, and legitimacy which impede non-recreational bicycle use in America.

Build Guarded Bike Parking at Major Transit Stops. U.S. metro areas have invested in costly park-and-ride systems that have made transit increasingly dependent on the automobile.

Other regions, especially in Europe but also in some U.S. communities, have been strengthening the potential for people to walk and bicycle to and from transit, boosting ridership at a far lower cost. In much of Europe, the fastest growing and often predominant access mode to suburban express transit services is the bicycle. Bike-and-ride services expand the potential market area of express public transportation at low cost without the very high air pollution emission and energy use rates per VMT, excessive space requirements, and high capital costs of automobile park-and-ride systems. While park-and-ride enables those living in lower density areas to travel from home-to-transit stop, bike-and-ride systems providing secure overnight bicycle parking can facilitate both access and egress to transit, enabling travelers to get from transit stops to nearby workplaces and schools which are otherwise unreachable by transit. Bicycle access can be invaluable in adapting transit to serve 21st century suburban development patterns.

In many U.S. communities, transit access planning looks only at automobile access. Yet many people don't use transit because they can't find affordable or available parking nearby when they want it. It costs $5,000-$20,000 to build a single additional parking space, and $750-3,000 a year to operate a park-and-ride space. Providing bike lockers, bike racks, and guarded bicycle parking at transit stops can free up car parking spaces for those who can't bike or who live too far to bike to transit, while offering a low cost healthy way for those 1/2 mile to 2 miles from the transit station or stop get to and from transit. Guarded bike parking at transit is a predominant part of transit access in European and Japanese suburbs, where it costs 1/10 to 1/100 as much as auto parking at transit to provide and operate. And secure overnight bike parking at transit allows people to get from transit to nearby schools and jobs that are beyond walking distance of the transit stop.

In 1996 the City of Long Beach implemented the nation's first attended bicycle parking facility, or "Bikestation." These facilities provide a range of clean transportation options--including secure, bicycle parking, bicycle repairs and accessory sales, changing and restrooms, and bicycle rentals. Bikestations have sinced opened in the communities of Palo Alto and Berkeley and are under development in San Francisco, Denver, Seattle, Santa Barbara, Los Angeles and Pittsburgh, Pennsylvania. (see www.bikestation.org)

Conclusion. Transit has a vital role to play in solving environmental, public health, and equity problems that must be addressed if we are enjoy sustainable economic development in America's diverse communities and regions. ISTEA and TEA-21 began to better align funding, planning requirements, and incentives with national and local goals for equal access to opportunities, healthful air quality, and efficient mobility. But TEA-3 needs to go farther in providing

funding for transit and encouraging state and local action to get on with key overdue reforms. Accountability for how funds are spent and their impacts is key to getting better travel choices for all Americans and protecting our health and environment.