# \*\*Mass Transit 1ac\*\*

## 1ac – economy advantage

### US transportation policy is “road focused” at the expense of mass transit which makes road congestion inevitable

**Building America’s Future, 11** – a bipartisan coalition of elected officials dedicated to bringing about a new era of U.S. investment in infrastructure that enhances our nation’s prosperity and quality of life. (“Falling Apart and Falling Behind”, Transportation Infrastructure Report, <http://www.bafuture.com/sites/default/files/Report_0.pdf>)

Stunningly, the United States has not made a significant strategic investment in the national transportation network since we finished building the Interstate Highway System decades ago. We have let more than half a century go by without devising a strategic plan on a national scale to update our freight or passenger transportation systems. Instead, the federal government has opted to direct most funding to building highways, to the detriment of the rest of the transportation network; to disperse most funds to projects without imposing accountability and performance standards; and to allow pork-barrel spending on politically convenient rather than economically strategic projects. And the federal government has not significantly supported or catalyzed further private sector investment. Lack of National Vision In stark contrast to our most agile and aggressive foreign competitors, the U.S. stands increasingly alone in our failure to reorient our transportation spending according to a new forward-looking vision that could build a transportation network fit for a 21st-century economy. Without a similarly strategic plan of attack to create a state-of-the-art transportation network, the U.S. will be left far behind. This striking lack of vision is a debilitating problem. Instead of taking a comprehensive look at the current weaknesses in our national network, we are largely following the same policy goals and guidelines announced when Eisenhower was president. As a result, federal transportation policy is skewed toward maintaining and expanding the Interstate Highway System. We’ve put relatively little emphasis on targeting our most economically strategic trade corridors or building new transport systems to meet our 21st-century economic needs. Government transportation spending, at all levels of government, is overwhelmingly directed toward roads. Since 1956, the largest portion of public funding for transportation infrastructure was dedicated to building and maintaining highways. 1 Although a small portion (15%) of the federal gas tax is dedicated to a fund for mass transit, the vast majority of federal gas tax revenue is spent on highways. The same is true for state gas taxes: 30 states are actually constitutionally or statutorily required to spend 100% of their gas tax revenues on roads. The disproportionate channeling of transportation dollars toward highways has encouraged more and more construction of roads, even as the demand rises for other forms of transportation. The last multi-year infrastructure law passed by Congress, the 2005 Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (known as SAFETEA-LU), authorized $286.4 billion of federal spending on surface transportation projects through 2009—nearly 70% of which has been spent on highways, and only 1% of which has been directed to ports, national freight gateways, and trade corridors. After that, the American Recovery and Reinvestment Act of 2009 (ARRA) provided an additional $48 billion in federal stimulus dollars for transportation projects, most of which also went to roads. There is no question that America must continue to provide adequate funding to ensure the efficiency and safety of our highways, roads, and bridges since they will always remain an important component of our transportation network. But despite the emphasis on our road system, we are not meeting the challenge. Congestion still predominates, especially in our metro areas, and the system has serious safety challenges. For example, America currently has more than 69,000 structurally deficient bridges, more than 11% of all the bridges in our country. 2 Meanwhile, underinvestment in airports, in commuter and freight rail, and in ports costs us jobs, economic growth, and access to overseas markets. Compared to the significant sums dedicated to roads, government spending on other modes of transportation is relatively meager. The U.S. Department of Transportation (USDOT) spends about $10.2 billion a year on public transit, or less than a quarter of what it spends on highways. The federal government contributes even less to Amtrak’s operation costs. In contrast to its highway funding programs, USDOT encourages greater state contributions to transit projects. Since the majority of states are constitutionally or statutorily prohibited from using state gas taxes for public transit projects, USDOT’s funding requirements are a tough imposition on states. Unwilling or unable to match federal contributions with general revenue funds, states may be more inclined to seek funding for more road projects than for new transit projects. The problem is that we cannot build enough roads to meet our growing transportation needs. We’ve built enough new roads between 1988 and 2008—an additional 131,723 miles of roads—to circle the globe more than five times. 3 But despite all of the resources expended on new highways, we haven’t fixed the roads and bridges that are falling apart, and we haven’t solved our congestion problems. Merely expanding our already extensive highway system is not a plan for the future. We need a new national vision for building and maintaining an efficient transportation that meets the needs of a 21st-century economy.

### And congestion prevents economic growth and damages US economic competitiveness

**Strauss, 12** - associate director of Renewing America Publications at the Council on Foreign Relations (Rebecca, “Road to Nowhere: Federal Transportation Infrastructure Policy”, June, [http://www.cfr.org/united-states/road-nowhere-federal-transportation-infrastructure-policy/p28419)//DH](http://www.cfr.org/united-states/road-nowhere-federal-transportation-infrastructure-policy/p28419%29//DH)

Concerns over the state of U.S. transportation infrastructure are higher on the federal policy agenda than at any time since President Dwight D. Eisenhower championed the creation of the interstate highway system in the 1950s. A generation of U.S. infrastructure built fifty years ago is reaching the end of its lifecycle, and new construction has not kept pace with population growth. Meanwhile, international competitors, particularly China, are making massive investments in state-of-the-art transportation systems. Moving people and goods efficiently matters for the U.S. economy. The economic cost of traffic congestion alone in wasted time and fuel was estimated at $101 billion, or $713 per commuter, in 2010.1 According to one estimate, the country’s economic growth would have been 0.2 percentage points higher in 2011 if necessary transportation infrastructure maintenance and improvements had been made.2 If current spending levels persist, by 2020 the drag on growth could be 1.2 percentage points. With interest rates remaining at historic lows and unemployment near double-digit highs, an opportunity exists to marry shorter-term job creation with investments that will pay longer-term benefits to U.S. economic competitiveness.

### Additionally, mass transit investment creates jobs, reduces the trade deficit and invigorates US manufacturing – this spills over to other sectors of the economy

Fitzgerald et.al. ’10- professor and director of the graduate program in Law, Policy and Society and a Senior Research Fellow at the Kitty and Michael Kukakis Center for Urban and Regional Policy at Northeastern University (Joan, Granquist, Khatiwada, McLaughlin, Renner, “Reviving the U.S. Rail and Transit Industry: Investments and Job Creation”, WorldWatch Institute, pg 10)//NJ

With the federal transportation bill up for renewal, the United States has an opportunity to invest in public transportation and renew its manufacturing base. This report reveals that the country could gain more than 79,000 jobs in rail and bus manufacturing and related industries under an investment scenario sufficient to double transit ridership in 20 years. If the United States were to invest at even higher levels—similar to those of China—this would yield more than a quarter million jobs. The United States needs urgently to revive its rail and transit industry. The nation’s manufacturing sector accounts for over 10 percent of GDP, but manufacturing has seen job losses in the millions in recent years. And the U.S. trade deficit continues to rise. The country needs new manufacturing jobs now to address the trade deficit and to put unemployed Americans back in well-paying jobs. While the United States has lost its competitive edge in producing many high-tech goods, it is not too late to follow the strategy of European nations and China in building a strong transit vehicle industry. Spain has consistently invested $10 billion per year on average in its high-speed passenger rail system since 1992, and France is rapidly expanding its already well-developed rail transit network, in part to help meet greenhouse gas emissions reduction goals. Both countries have mature rail manufacturing sectors, and one of the world’s largest rail vehicle manufacturers, Bombardier, is a French firm. The lessons of Europe have not been lost on China, which plans to spend nearly $293 billion to meet its 2012 goals for high-speed rail and other rail and transit expansion. In addition to a world-class train network, China is using the initiative as a vehicle to create 6 million jobs and to generate demand for 20 million tons of domestic steel. The United States, for the most part, has abandoned its domestic passenger rail and transit bus industries. The loss of these industries in the 1970s and 80s was largely a function of unstable demand rather than of high labor costs. As domestic demand for transit vehicles waned, U.S. companies did not keep up with state-of-the art transit technologies. To retain some degree of local production, Congress adopted “Buy America” legislation that requires that 60 percent of the value of subcomponents of transit vehicles and equipment be produced domestically, and that final assembly also occur in the country. This stipulation motivated foreign suppliers to enter the U.S. market to supplement the more stable demand for equipment in their own countries. The American Recovery and Reinvestment Act of 2009 (ARRA) has made a down payment on rebuilding the U.S. transit infrastructure. Under ARRA, the federal government committed an initial $1.3 billion for the rail operator Amtrak in addition to the $8 billion for new high-speed rail corridors and intercity passenger rail service. Many cities and states are advocating that the government commit further funds so that they can upgrade and expand their transit systems. However, a much larger investment is needed to create the stable demand for bus and rail vehicles that will motivate U.S. and foreign firms to expand their U.S. manufacturing operations and workforces. If more stimulus funds are directed to rail infrastructure, and if the next federal transportation bill makes a significant investment in public transit, the United States could develop world-class public transportation and create highly needed jobs while helping to reduce urban traffic congestion and greenhouse gas emissions in the nation’s cities. This report uses three scenarios to estimate the job creation potential from increased federal investment in rail and transit. A “Business-as-Usual” scenario would invest $2.7 billion in rail vehicles and $2.8 billion in bus purchases. An “Increased Domestic Investment” scenario would invest $7.2 billion and $4.8 billion, respectively, toward these purchases. And an “International Competitiveness” scenario would invest $24.4 billion and $12.8 billion, respectively—a level that is comparable to China’s investment in rail and bus vehicles. The “Business-as-Usual” scenario yields 34,563 jobs in U.S. rail car and bus manufacturing and their supplier industries. The “Increased Domestic Investment” scenario would support 79,343 jobs, and the “International Competitiveness” scenario would yield 252,213 jobs. The number of jobs would increase significantly if more than the required 60 percent of inputs (as specified by the Buy America provision) were produced domestically. These jobs would stimulate thousands more jobs in other sectors of the economy. Such analysis does not apply just to transit vehicles, but also to other clean-technology industries that will be growing dramatically over the coming decades. If U.S. manufacturing is to experience a serious revival that produces more than fragmented showcase projects and scattered jobs, the federal government needs to take much bolder policy action that creates demand and supports research and development in key industries.

### And government leadership in mass transit is key to save jobs in manufacturing sectors key to economic growth and competitiveness

Fitzgerald et.al. ’10- professor and director of the graduate program in Law, Policy and Society and a Senior Research Fellow at the Kitty and Michael Kukakis Center for Urban and Regional Policy at Northeastern University (Joan, Granquist, Khatiwada, McLaughlin, Renner, “Reviving the U.S. Rail and Transit Industry: Investments and Job Creation”, WorldWatch Institute, pg 11)//AWV

Linking U.S. Manufacturing and Transportation

U.S. manufacturers are not likely to decide to reenter the market and manufacture railcars unless the U.S. Government (like other major Western countries and Japan) assures a stable, predictable, and planned rail equipment market that spreads orders out more or less evenly and in manageable sizes.” 1

—U.S. Congress, Office of Technology Assessment, 1983

In announcing the $8 billion federal investment in high-speed rail in 2008, U.S. President Barack Obama observed: “I don’t want to see the fastest train in the world built halfway around the world in Shanghai. I want to see it built right here in the United States of America.”2\* Unfortunately, the United States lags behind China and many other countries both in maintaining and expanding its public transit infrastructure and in creating the high-paying manufacturing jobs that can go along with this investment. The American Recovery and Reinvestment Act of 2009 (ARRA) made a small start toward putting the country back on track. Under ARRA, the federal government committed an initial $1.3 billion for the rail operator Amtrak in addition to the $8 billion for new high-speed rail corridors and intercity passenger rail service. Many cities and states are advocating that the government commit further funds. U.S. cities are eager to upgrade and expand their transit systems to meet rising public demand for cost-effective, clean, and convenient bus and rail service.‡ Currently, there are proposals for new streetcars in more than 30 cities; some 400 light-rail projects in 78 metropolitan areas in 37 states; and subway expansions in several cities. With the federal transportation bill up for renewal, the United States has an opportunity to invest in public transportation and renew its manufacturing base. Manufacturing is essential to the U.S. economy. In 2008, it accounted for $1.6 trillion, or 12 percent, of gross domestic product (GDP)—more than real estate, finance and insurance, or health care. Manufacturing accounts for 60 percent of U.S. exports and 70 percent of private sector research and development (R&D) funding.3 Yet the U.S. goods deficit in 2008 exceeded $836 billion; the annual trade deficit with China alone that year was $266 billion, about 75 percent of the manufactured goods deficit. The United States cannot prosper with ongoing large trade deficits. Nor can it prosper while losing millions of well-paying manufacturing jobs. In just the past two years, U.S. manufacturing lost 2.1 million jobs. Blue-collar workers accounted for 74 percent of job losses between the onset of the economic recession in September 2008 and November 2009. For experienced production workers, the unemployment rate in 2009 was 14 percent.4 The United States needs to revitalize manufacturing to put people back to work, but also to stem the country’s declining position in the world economic order. Conventional wisdom says that the nation has transitioned from a goods-producing economy to a knowledge- and innovation-based economy. But the two are intricately related. An innovation-based economy relies on R&D that is connected to manufacturing high- technology goods.5 Such goods are typically considered to be products like computers, lithium-ion batteries, and jumbo jets; however, passenger rail cars and buses also rely on high-technology systems. There is significant innovation occurring in both the bus and rail production industries.

### Federal grants for mass transit programs are key to revitalize US infrastructure, stimulate the economy, and create jobs

Sires, 12 – Representative (Democrat) New Jersey, Committee on Transportation and Infrastructure, Subcommittee on Highways and Transit, Subcommittee on Railroads, Pipelines, and Hazardous Materials (Albio, “Protecting the transportation needs in our communities”, The Hill Congress Blog, 2-10-12, http://thehill.com/blogs/congress-blog/economy-a-budget/210003-protecting-the-transportation-needs-in-our-communities)//AWV

With President Obama’s budget scheduled to be released on Monday, I am eager to hear his views of our nation’s priorities. As Congress moves forward with the budget process, it is important to focus on the needs of our communities and constituents. While unemployment has dropped to the lowest rate since 2009, we must create a budget that rides on the coattails of this success by continuing to fuel employment opportunities. There is no better way to create jobs than through infrastructure investment which also improves economic opportunities in surrounding communities. As a member of the House Transportation and Infrastructure Committee, and a representative from the most densely populated state in the nation, I am most concerned about providing adequate funding for transportation and infrastructure expansion. Transportation affects every facet of everyone’s life, and it is important that our nation improve and strengthen the safety, reliability, and efficiency of our transportation system. Next week, the House of Representatives is expected to vote on H.R. 7, the America Energy and Infrastructure Jobs Act. While a multiyear surface transportation authorization bill is sorely needed, H.R. 7 is not the comprehensive solution that our country needs. H.R. 7 blatantly ignores the transportation needs of Americans by cutting funding and eliminating jobs. Sufficient funding for mass transit, Amtrak, and competitive grants such as the Transportation Investment Generating Economic Recovery (TIGER) program are necessary to meet the transportation needs of our constituents. Public transportation in particular helps those without access to cars to travel to work, pick up groceries, go to doctor’s appointments, visit loved ones, and conduct daily activities. In cities large and small, mass transit serves as a vital resource for all of our constituents, and particularly those who are low-income. Transportation is often the second highest household expense, and in addition to working to keep transit costs from rising, we need to ensure that services are not cut. While ridership for public transportation has increased, budget cuts have forced many transit agencies across the country to cut services which forces all of our constituents to find other methods to meet their transportation needs. A solution to this problem is to provide flexibility to transit systems to use federal funding to preserve service and jobs. Unfortunately, an amendment to include this language in H.R. 7 failed during Committee markup. Similarly, Amtrak must receive sufficient funding. In 1970, Congress created Amtrak to provide our nation with intercity passenger railroad service. Despite the recent increase in ridership levels on the Northeast Corridor, funding for Amtrak has consistently been targeted throughout the years. Amtrak plays a vital role in the Northeast Corridor, which includes my communities and the towns and cities between Washington, DC and Boston, MA. This region is fraught with congestion that is a waste of not only time, but money. Amtrak provides another option for commuters while also creating environmental benefits by cutting down on air pollution. Service along the Northeast Corridor illustrates our country’s potential to have true high speed rail service. Competitive grants that are based on their innovation and performance have proven to be successful at taking the politics out of the funding equation. Like many of my colleagues, my district was fortunate to receive Transportation Investment Generating Economic Recovery (TIGER) grants. In 2010, the New Jersey Meadowlands Commission received a grant to use new technologies to ease congestion along highways in Bergen and Hudson counties. Under this grant, modernized signal systems to current traffic conditions and result in reduced delays, and fuel emissions. Also in 2010, the Canal Crossing project was awarded a TIGER grant to transform a 111 acre site that was previously an industrial site. The project will create a transit-oriented development that will connect residents to the light rail, bus, bicycle, and pedestrian walkways. Linking transportation opportunities to affordable housing will allow residents to get to work more easily. Additionally, I believe that a dedicated freight competitive grant program would go a long way in making the goods movement more efficient. With freight expected to double by 2035, our nation’s transportation system must be prepared. The future success of our economy is closely tied to an efficient system of moving goods. Americans must be given the opportunity to get back to work and better our nation. They are waiting for Congress to act. Investing in infrastructure gives us the opportunity to not only create immediate jobs, but to also create a lasting economic impact in communities across the nation.

### US economic competitiveness prevents multiple scenarios for global nuclear conflicts

Friedberg & Schoenfeld 8 (Aaron Friedberg is a professor of politics and international relations at Princeton University's Woodrow Wilson School. Gabriel Schoenfeld, senior editor of Commentary, is a visiting scholar at the Witherspoon Institute in Princeton, N.J., “The Dangers of a Diminished America,” Wall Street Journal, Ocbtober 21, 2008,http://online.wsj.com/article/SB122455074012352571.html]

With the global financial system in serious trouble, is America's geostrategic dominance likely to diminish? If so, what would that mean? One immediate implication of the crisis that began on Wall Street and spread across the world is that the primary instruments of U.S. foreign policy will be crimped. The next president will face an entirely new and adverse fiscal position. Estimates of this year's federal budget deficit already show that it has jumped $237 billion from last year, to $407 billion. With families and businesses hurting, there will be calls for various and expensive domestic relief programs. In the face of this onrushing river of red ink, both Barack Obama and John McCain have been reluctant to lay out what portions of their programmatic wish list they might defer or delete. Only Joe Biden has suggested a possible reduction -- foreign aid. This would be one of the few popular cuts, but in budgetary terms it is a mere grain of sand. Still, Sen. Biden's comment hints at where we may be headed: toward a major reduction in America's world role, and perhaps even a new era of financially-induced isolationism. Pressures to cut defense spending, and to dodge the cost of waging two wars, already intense before this crisis, are likely to mount. Despite the success of the surge, the war in Iraq remains deeply unpopular. Precipitous withdrawal -- attractive to a sizable swath of the electorate before the financial implosion -- might well become even more popular with annual war bills running in the hundreds of billions. Protectionist sentiments are sure to grow stronger as jobs disappear in the coming slowdown. Even before our current woes, calls to save jobs by restricting imports had begun to gather support among many Democrats and some Republicans. In a prolonged recession, gale-force winds of protectionism will blow. Then there are the dolorous consequences of a potential collapse of the world's financial architecture. For decades now, Americans have enjoyed the advantages of being at the center of that system. The worldwide use of the dollar, and the stability of our economy, among other things, made it easier for us to run huge budget deficits, as we counted on foreigners to pick up the tab by buying dollar-denominated assets as a safe haven. Will this be possible in the future? Meanwhile, traditional foreign-policy challenges are multiplying. The threat from al Qaeda and Islamic terrorist affiliates has not been extinguished. Iran and North Korea are continuing on their bellicose paths, while Pakistan and Afghanistan are progressing smartly down the road to chaos. Russia's new militancy and China's seemingly relentless rise also give cause for concern. If America now tries to pull back from the world stage, it will leave a dangerous power vacuum. The stabilizing effects of our presence in Asia, our continuing commitment to Europe, and our position as defender of last resort for Middle East energy sources and supply lines could all be placed at risk. In such a scenario there are shades of the 1930s, when global trade and finance ground nearly to a halt, the peaceful democracies failed to cooperate, and aggressive powers led by the remorseless fanatics who rose up on the crest of economic disaster exploited their divisions. Today we run the risk that rogue states may choose to become ever more reckless with their nuclear toys, just at our moment of maximum vulnerability. The aftershocks of the financial crisis will almost certainly rock our principal strategic competitors even harder than they will rock us. The dramatic free fall of the Russian stock market has demonstrated the fragility of a state whose economic performance hinges on high oil prices, now driven down by the global slowdown. China is perhaps even more fragile, its economic growth depending heavily on foreign investment and access to foreign markets. Both will now be constricted, inflicting economic pain and perhaps even sparking unrest in a country where political legitimacy rests on progress in the long march to prosperity. None of this is good news if the authoritarian leaders of these countries seek to divert attention from internal travails with external adventures. As for our democratic friends, the present crisis comes when many European nations are struggling to deal with decades of anemic growth, sclerotic governance and an impending demographic crisis. Despite its past dynamism, Japan faces similar challenges. India is still in the early stages of its emergence as a world economic and geopolitical power. What does this all mean? There is no substitute for America on the world stage. The choice we have before us is between the potentially disastrous effects of disengagement and the stiff price tag of continued American leadership. Are we up for the task? The American economy has historically demonstrated remarkable resilience. Our market-oriented ideology, entrepreneurial culture, flexible institutions and favorable demographic profile should serve us well in whatever trials lie ahead. The American people, too, have shown reserves of resolve when properly led. But experience after the Cold War era -- poorly articulated and executed policies, divisive domestic debates and rising anti-Americanism in at least some parts of the world -- appear to have left these reserves diminished. A recent survey by the Chicago Council on World Affairs found that 36% of respondents agreed that the U.S. should "stay out of world affairs," the highest number recorded since this question was first asked in 1947. The economic crisis could be the straw that breaks the camel's back.

### Maintaining economic growth, development and technology is the only way to solve emerging crises that risk massive deaths

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The power of technology These historical trends in agriculture, land use, resource consumption, and energy use point to some profound opportunities for the future. There are at least four major ways in which technology has great potential for helping us achieve a sustainable balance in the twenty-first century The first area of opportunity for technology is in the acceleration of productivity growth. In agriculture, for example, corn yields in the world today average only about 4 tons per hectare, while the United States averages 7 tons per hectare and the best Iowa farmer can get 17 tons. Simply bringing the world as a whole up to today's best practices in the United States would boost farm productivity to unprecedented heights, even without considering what the biological and genetic revolutions may hold in store for agriculture in the next century As for the overall productivity growth rate in industry and business, we are finally starting to register an increase after nearly 30 years of subpar performance at around 1% growth per year. Computerization appears to be taking hold in the economy in new and fundamental ways, not just in speeding up traditional practices but in altering the economic structure itself. One historical analogy would be the introduction of electric unit drives just after World War I, setting in motion a complete reorganization of the manufacturing Floor and leading to a surge in industrial productivity during the 1920s. In the twenty-first century, industrial processes will be revolutionized by new electro technologies, including lasers, plasmas, microwaves, and electron beams for materials processing, as well as electrochemical synthesis and electro separation for chemical processing. Manufacturing will be revolutionized by a host of emerging technology platforms--for example, nanotechnology, biotechnology, biomimetics, high-temperature superconductivity, and network technology including the combining of advanced sensors with information technology to create adaptive, intelligent systems and processes. Future industrial facilities using advanced network technologies will be operated in new ways to simultaneously optimize productivity energy use, materials consumption, and plant emissions. Optimization will extend beyond the immediate facility to webs of facilities supporting industrial and urban ecology with the waste of one stream becoming the feedstock of the next. In the aggregate, the penetration of all the emerging technologies into the global economy should make it possible to sustain industrial productivity growth rates above 2% per year for many decades. The same technology platforms will be used to improve the efficiency of land, energy and water use, For example, distributed sensors and controls that enable precision farming can improve crop yields and reduce land and water use. And doubling or even tripling global energy efficiency in the next century is well within our means. Given the inefficiencies that now exist at every stage in the process--from mining and drilling for fuel through the use of energy in automobiles, appliances, and processes--the overall efficiency of the energy chain is only about 5%. From a social standpoint, accelerating productivity is not an option but rather an imperative for the future. It is necessary in order to provide the wealth for environmental sustainability, to support anaging population in the industrialized world, and to provide an economic ladder for developing nations. The second area of opportunity for technology lies in its potential to help stabilize global population at 10-12 billion sometime in the twenty-first century, possibly as early as 2075. The key is economics. Global communications, from television to movies to the Internet, have brought an image of the comfortable life of the developed world into the homes of the poorest people, firing their own aspirations for a better quality of life, either through economic development in their own country or through emigration to other countries. If we in the developed world can make the basic tools of prosperity--infrastructure, health care, education, and law--more accessible and affordable, recent history suggests that the cultural drivers for producing large families will be tempered, relatively quickly and without coercion. But the task is enormous. The physical prerequisites for prosperity in the global economy are electricity and communications. Today, there are more than 2 billion people living without electricity, or commercial energy in any form, in the very countries where some 5 billion people will be added in the next 50 years. If for no other reason than our enlightened self-interest, we should strive for universal access to electricity, communications, and educational opportunity. We have little choice, because the fate of the developed world is inextricably bound up in the economic and demographic fate of the developing world. A third, related opportunity for technology is in decoupling population growth from land use and, more broadly, decoupling economic growth from natural resource consumption through recycling, end-use efficiency, and industrial ecology. Decoupling population from land use is well under way. According to Grubler, from 1700 to 1850 nearly 2 hectares of land (5 acres) were needed to support every child born in North America, while in the more crowded and cultivated regions of Europe and Asia only 0.5 hectare (1.2 acres) and 0.2 hectare (0.5 acre) were needed, respectively. During the past century, the amount of land needed per additional child has been dropping in all areas of the world, with Europe and North America experiencing the fastest decreases. Both crossed the "zero threshold" in the past few decades, meaning that no additional land is needed to support additional children and that land requirements will continue to decrease in the future. One can postulate that the pattern of returning land to nature will continue to spread throughout the world, eventually stemming and then reversing the current onslaught on the great rain forests. Time is critical if vast tracts are to be saved from being laid bare, and success will largely depend on how rapidly economic opportunities expand for those now trapped in subsistence and frontier farming. In concept, the potential for returning land to nature is enormous. Futurist and scholar Jesse Ausubel of the Rockefeller University calculates that if farmers could lift average grain yields around the world just to the level of today's average U.S. corn grower, one-half of current global cropland--an area the size of the Amazon basin--could be spared. If agriculture is a leading indicator, then the continuous drive to produce more from less will prevail in other parts of the economy Certainly with shrinking agricultural land requirements, water distribution and use around the world can be greatly altered, since nearly two-thirds of water now goes for irrigation. Overall, the technologies of the future will, in the words of Ausubel, be "cleaner, leaner, lighter, and drier"--that is, more efficient and less wasteful of materials and water. They will be much more tightly integrated through microprocessor-based control and will therefore use human and natural resources much more efficiently and productively. Energy intensity, land intensity, and water intensity (and, to a lesser extent, materials intensity) for both manufacturing and agriculture are already heading downward. Only in agriculture are they falling fast enough to offset the surge in population, but, optimistically, advances in science and technology should accelerate the downward trends in other sectors, helping to decouple economic development from environmental impact in the coming century. One positive sign is the fact that recycling rates in North America are now approaching 65% for steel, lead, and copper and 30% for aluminum and paper. A second sign is that economic output is shifting away from resource-intensive products toward knowledge-based, immaterial goods and services. As a result, although the U.S. gross domestic product (GDP) increased 200-fold (in real dollars) in the twentieth century, the physical weight of our annual output remains the same as it was in 1900. If anything, this trend will be accelerating. As Kevin Kelly, the editor of Wired magazine, noted, "The creations most in demand from the United States [as exports] have lost 50% of their physical weight per dollar of value in only six years.... Within a generation, two at most, the number of people working in honest-to-goodness manufacturing jobs will be no more than the number of farmers on the land--less than a few percent. Far more than we realize, the network economy is pulling us all in." Even pollution shows clear signs of being decoupled from population and economic growth. Economist Paul Portney notes that, with the exception of greenhouse gases, "in the OECD [Organization for Economic Cooperation and Development] countries, the favorable experience [with pollution control] has been a triumph of technology That is, the ratio of pollution per unit of GDP has fallen fast enough in the developed world to offset the increase in both GDP per capita and the growing number of 'capitas' themselves." The fourth opportunity for science and technology stems from their enormous potential to unlock resources not now available, to reduce human limitations, to create new options for policymakers and businesspeople alike, and to give us new levels of insight into future challenges. Technically resources have little value if we cannot unlock them for practical use. With technology, we are able to bring dormant resources to life. For example, it was only with the development of an electrolytic process late in the nineteenth century that aluminum--the most abundant metal on earth--became commercially available and useful. Chemistry unlocked hydrocarbons. And engineering allowed us to extract and put to diverse use untapped petroleum and gas fields. Over the course of history, technology has made the inaccessible accessible, and resource depletion has been more of a catalyst for change than a longstanding problem. Technology provides us with last-ditch methods (what economists would call substitutions) that allow us to circumvent or leapfrog over crises of our own making. Agricultural technology solved the food crisis of the first half of the nineteenth century. The English "steam crisis" of the 1860s, triggered by the rapid rise of coal-burning steam engines and locomotives, was averted by mechanized mining and the discovery and use of petroleum. The U.S. "timber crisis" that Teddy Roosevelt publicly worried about was circumvented by the use of chemicals that enabled a billion or so railroad ties to last for decades instead of years. The great "manure crisis" of the same era was solved by the automobile, which in a few decades replaced some 25 million horses and freed up 40 million hectares (100 million acres) of farmland, not to mention improving the sanitation and smell of inner cities. Oil discoveries in Texas and then in the Middle East pushed the pending oil crisis of the 1920s into the future. And the energy crisis of the 1970s stimulated the development of new sensing and drilling technology, sparked the advance of non--fossil fuel alternatives, and deepened the penetration of electricity with its fuel flexibility into the global economy Thanks to underground imaging technology, today's known gas resources are an order of magnitude greater than the resources known 20 years ago, and new reserves continue to be discovered. Technology has also greatly extended human limits. It has given each of us a productive capability greater than that of 150 workers in 1800, for example, and has conveniently put the power of hundreds of horses in our garages. In recent decades, it has extended our voice and our reach, allowing us to easily send our words, ideas, images, and money around the world at the speed of light. But global sustainability is not inevitable. In spite of the tremendous promise that technology holds for a sustainable future, there is the potential for all of this to backfire before the job can be done. There are disturbing indications that people sometimes turn in fear and anger on technologies, industries, and institutions that openly foster an ever-faster pace of change. The current opposition to nuclear power genetically altered food, the globalization of the economy and the spread of American culture should give us pause. Technology has always presented a two-edged sword, serving as both cause and effect, solving one problem while creating another that was unintended and often unforeseen. We solved the manure crisis, but automotive smog, congestion, and urban sprawl took its place. We cleaned and transformed the cities with all-electric buildings rising thousands of feet into the sky. But while urban pollution was thereby dramatically reduced, a portion of the pollution was shifted to someone else's sky. Breaking limits "Limits to growth" was a popular theme in the 1970s, and a best-selling book of that name predicted dire consequences for the human race by the end of the century. In fact, we have done much better than those predictions, largely because of a factor the book missed--the potential of new technology to break limits. Repeatedly, human societies have approached seemingly insurmountable barriers only to find the means and tools to break through. This ability has now become a source of optimism, an article of faith, in many parts of the world. Today's perceived limits, however, look and feel different. They are global in nature, multicultural, and larger in scale and complexity than ever before. Nearly 2 billion people in the world are without adequate sanitation, and nearly as many are without access to clean drinking water. AIDS is spreading rapidly in the regions of the world least able to fight it. Atmospheric concentrations of greenhouse gases are more than 30% greater than preindustrial levels and are climbing steadily. Petroleum reserves, expected to be tapped by over a billion automobiles worldwide by 2015, may last only another 50-100 years. And without careful preservation efforts, the biodiversity of the planet could become as threatened in this coming century as it was at the end of the last ice age, when more than 70% of the species of large mammals and other vertebrates in North America disappeared (along with 29% in Europe and 86% in Australia). All these perceived limits require innovation of a scope and intensity surpassing human kind's current commitment. The list of real-world problems that could thwart global sustainability is long and sobering. It includes war, disease, famine, political and religious turmoil, despotism, entrenched poverty, illiteracy, resource depletion, and environmental degradation. Technology can help resolve some of these issues--poverty and disease, resource depletion, and environmental impact, for example--but it offers little recourse for the passions and politics that divide the world. The likelihood is that we will not catch up and overtake the moving target of global sustainability in the coming century, but given the prospects for technology, which have never been brighter, we may come surprisingly close. We should put our technology to work, striving to lift more than 5 billion people out of poverty while preventing irreversible damage to the biosphere and irreversible loss of the earth's natural resources. We cannot see the future of technology any more clearly than our forebears did--and for much the same reason. We are approaching the threshold of profound change, moving at great speed across a wide spectrum of technology, ranging today from the Internet to the Human Genome project. Technology in the twenty-first century will be turning toward biological and ecological analogs, toward microminiature machines, toward the construction of materials atom by atom, and toward the dispersion of microprocessor intelligence into everyday objects subsequently linked into neural networks. Computing power continues to double every 18 months, as postulated in Moore's law, promising to enable us to create much more powerful tools for everyday tasks, optimize business services and processes along new lines, understand complex natural phenomena like the weather and climate, and design technical systems that are self-diagnostic, self-healing, and self-learning. The networked, digital society of the future should be capable o f exponential progress more in tune with biological models of growth than with the incremental progress of industrial societies. If history tells us anything, it is that in the long term we are much more likely to underestimate technology than to overestimate it. We are not unlike the excited crowds that in 1909 tried to imagine the future of flight as they watched Wilbur Wright loop his biplane twice around the Statue of Liberty and head back to Manhattan at the record-breaking speed of 30 miles per hour. As wild as one's imagination and enthusiasm might have been, it would have been inconceivable that exactly 60 years later humans would fly to the moon and back. Electricity's unique role Electricity lies at the heart of the global quest for sustainability for several reasons. It is the prerequisite for the networked world of the future. It will be the enabling foundation of new digital technology and the vehicle on which most future productivity gains in industry, business, and commerce will depend. And to the surprise of many, it will remain the best pathway to resource efficiency, quality of life, and pollution control. In fact, the National Academy of Engineering just voted the "vast network of electrification" the single greatest engineering achievement of the twentieth century by virtue of its ability to improve people's quality of life. It came out ahead of the automobile, the airplane, the computer, and even health care in its impact on society. The electricity grids of North America, Europe, and Japan are said to be the most complex machines ever built. Although they are not yet full networks--that is, not every node is connected to every other node--these networks have been sufficiently interconnected to become the central enabling technology of the global economy. They will have to be even more interconnected and complex to keep pace with the microprocessors and digital networks they power. In the developed world, electricity has become almost a transparent technology lost in the excitement surrounding its latest progeny--electronics, computers, the Internet, and so forth. Still, its role should be as profound in this century as it was in the last. "How and in what form global electrification goes forward in the next 50 years will determine, as much as anything, how we resolve the global 'trilemma' posed by population, poverty and pollution," says Kurt Yeager, president and CEO of EPRI. "This trilemma is destined to become a defining issue of the twenty-first century" Chauncey Starr, EPRI's founder, has captured the strong historical correlation between access to electricity economic prosperity and social choices. A large majority of the world's population is now trapped at a low economic level, where the focus of everyday life is on survival and on acquiring the basics now taken for granted in developed nations. As Starr shows, only after electricity consumption reaches a threshold of approximately 1000 kWh per capita do people turn their attention from the basics of immediate survival to the level of "amenities," including education, the environment, and intergenerational investment. Given the chicken-and-egg nature of the process of social advancement, it is not possible to point to electricity as the initial spark, but it is fair to say that economic development does not happen today without electricity. Electricity has been extended to more than 1.3 billion people over the past 25 years, with leveraged economic impact. In South Africa, for example, 10 to 20 new businesses are started for every 100 homes that are electrified. Electricity frees up human labor--reducing the time people spend in such marginal daily tasks as carrying water and wood--and provides light in the evening for reading and studying. These simple basics can become the stepping stones to a better life and a doorway to the global economy. Because electricity can be effectively produced from a wide variety of local energy sources and because it is so precise at the point of use, it is the ideal energy carrier for economic and social development. Distributed electricity generation can be used to achieve basic rural electrification goals in the developing world, thereby helping to counteract the trend toward massive urbanization. People in rural areas and villages need to have accessto the opportunities and jobs that are now attainable only by migrating to large cities. Electrification should also help with efforts to improve deteriorating urban air quality in the growing megacities of the world. Mortality from respiratory infections may be as much as five times higher in developing countries than in developed countries. The health costs can be debilitating; it is estimated, for example, that the total health cost of air emissions in Cairo alone now exceeds $1 billion per year. How global electrification proceeds--on a large or a small scale, with clean or dirty technology--will influence the planet socially economically and environmentally for centuries. Ultimately our success or failure in this endeavor will bear heavily on whether we can effectively handle the issues of the habitability and biodiversity of the planet. Ironically, electricity may also become the focal point for growing animosity in the coming century, for the simple reason that it is taking on more and more responsibility for society's energy-related pollution. Electricity accounted for only about 25% of the world's energy consumption in 1970. Today in the developed countries, its share of energy consumption is nearly 40%, and by 2050 that figure may reach60-70%. If transportation is fully electrified through fuel cells, hybrids, and the like, electricity's energy share could climb even higher. This growth accentuates the need to ensure that future electricity generation and use are as clean and efficient as possible and that best practices and technologies are available to developing countries as well as affluent ones. Fortunately for the world, electricity has the greatest potential of all the energy forms to deliver in the area of environmental stewardship. Roadmap's call to action The Electricity Technology Roadmap Initiative, which was launched by EPRI in 1998, began by bringing representatives of more than 150 diverse organizations together in a series of workshops and meetings to explore ways to enhance the future value of electricity to society. They staked out some ambitious destinations through time, leading to the ultimate destination of "managing global sustainability." They also established some specific goals to ensure that the tools will be in hand by 2025 to reach various sustainability targets, including universal global electrification, by midcentury. Among these goals are the acceleration of electricity-based innovation and R&D and the benchmarking of our progress toward sustainability. Universal global electrification means bringing everyone in the world to at least the "amenities" level defined by Starr. At this level, it becomes more likely that the rich and poor nations will find common ground for pursuing sustainability policies. The roadmap stakeholders are calling for a bare minimum of 1000 kWh per person per year to be available by 2050. This would raise the average in today's developing countries to around 3000 kWh per person per year in 2050, just above the level in the United States a century earlier, around 1950. Moreover, projections suggest that it will be possible to reduce the energy intensity of economic growth by at least 50% over the next 50 years through universal electrification, with about half the reduction resulting from end-use efficiency improvements. Consequently, the 3000 kWh of 2050 will go much further in powering applications--lighting, space conditioning, industrial processes, computing, communications, and the like--than an equivalent amount of electric energy used in the United States in 1950. Already, for example, the manufacturing and widespread application of compact fluorescent lightbulbs has become a priority in China for reasons of both energy efficiency and export potential. Even with the large efficiency improvements that are anticipated in electricity generation and end use, building enough capacity to supply 9-10 billion people with power will be an enormous challenge. Total global generating capacity requirements for 2050 could reach a daunting 10,000 GW--the equivalent of bringing on-line a 1000-MW power plant somewhere in the world every two days for the next 50 years. This is a tall order, and achieving it affordably and with minimal environmental impacts will require an unusual degree of dedicated R&D, supported through public and private collaboration, to accelerate the current pace of technological development. According to the roadmap stakeholders, reaching the destinations that they have defined calls for at least an additional $4 billion per year in electricity-related R&D by the United States alone. One of the key destinations, resolution of the energy-environment conflict, would in itself require an additional $2 billion per year in U.S. R&D over the next 10 years to speed up the development of clean power generation. This is more than double the nation's current level of funding in this area from both the public and private sectors. The rate of innovation is especially critical to sustainability. The roadmap participants have concluded that a "2% solution" is needed to support a sustainable future. By this, they mean that productivity improvements in a range of areas--including global industrial processes, energy intensity, resource utilization, agricultural yield, emissions reduction, and water consumption--have to occur at a pace of 2% or more per year over the next century. If the advances are distributed on a global basis, this pace should be sufficient to keep the world ahead of growing social and environmental threats. It will also generate the global wealth necessary to progressively eliminate the root cause of these threats and will provide the means to cope with the inevitable surprises that will arise. For example, a 2% annual increase in global electricity supply, if made broadly available in developing countries, would meet the goal of providing 1000 kWh per year to every person in the world in 2050. This means extending the benefits of electricity to 100 million new users every year. Maintaining a 2% pace in productivity improvements for a century will be formidable. It is in line with the cumulative advancement in the United States during the twentieth century, but at least twice the world average over that period. The disparity has been particularly great in the past 25 years, as population growth has outstripped economic development in many parts of the world. The result has been massive borrowing to maintain or enhance short-term standards of living. Staying ahead of population-related challenges is now in the enlightened self-interest of all the world's peoples, and the 2% solution offers a benchmark for success. Sustaining efficiency gains of 2% per year throughout the twenty-first century would allow essential global economic development to continue while sparing the planet. This pace, for example, should help stabilize world population (to the extent that wealth is a primary determinant of population growth), limit atmospheric levels of greenhouse gases to below agreed-upon strategic limits, provide sufficient food for the bulk of the world's people (as well as the wherewithal to buy it), and return significant amounts of land and water to their natural states. Roadmap participants envision technology and the spread of liberal capitalism as powerful agents for the 2% solution in that they can stimulate global development and foster worldwide participation in market economies. However, the participants have also expressed some concern and caution about unbridled globalization overrunning local cultures and societies and creating instability, unrest, and conflict. At its worst, globalization could lock weaker nations into commodity-production dependencies, leading to a survival-of-the-fittest global economy in which the rich get richer and most of the poor stay poor. Establishing greater dialogue and cooperation among developed and developing nations is therefore considered critical to ensuring that globalization delivers on its promise to be a vehicle of worldwide progress that honors the diversity of nations and peoples. Targets of sustainability There is no single measure of sustainability; rather, it will require continued progress in a wide variety of areas that reflect the growing efficiency of resource utilization, broad improvements in the quality of life for today's impoverished people, and acceleration of the historical shift away from resource-intensive economic activity. The roadmap's sustainability R&D targets provide a first-order approximation of what will be required. In many cases, the targets represent a significant stretch beyond today's levels, but they are all technologically achievable. The roadmap sets an optimistic course, certain that with accelerated R&D and a much stronger technological foundation in hand by 2025, the world could be well on a path to economic and environmental sustainability by midcentury. The goals for sustainability are simply too far-reaching to be achieved solely through governmental directives or policy. Rather, they will be reached most readily via a healthy, robust global economy in which accelerated technological innovation in the private sector is strongly encouraged and supported by public policy.

## 1ac – oil advantage

### The current roads focus in transportation policy exacerbates oil dependence

**Sandalow, 7 -** David Sandalow is Energy and Environment Scholar at The Brookings Institution (“Ending Oil Dependence”, 1/22,<http://www.brookings.edu/views/papers/fellows/sandalow20070122.pdf>)

Americans are driving more and enjoying it less. Between 1993 and 2003, vehicle miles traveled in the U.S. increased 26%. Drivers report spending more time in their cars each day – up from 49 minute average in 1990 to 62 minutes today. Traffic congestion is a growing frustration for millions. 32 More sensible growth patterns could help improve quality of life while reducing oil dependence. “Transit-oriented development” – building mixed-use communities around transit stations – is one increasingly popular approach. A recent study found that doubling ridership on mass transit nationally could save 1.4 billion gallons of gasoline per year. 33 Longstanding federal subsidies for urban highway construction have contributed to the current mix of traffic congestion, driver unhappiness and oil consumption. Ironically, repeated experiences in major U.S. cities demonstrate that building more roads fails to solve traffic congestion. One expert summed it up by saying: “Trying to cure traffic congestion by building more roads is like trying to cure obesity by loosening your belt.” 34 The most recent federal highway bill, passed in August 2005, provides four times more funding for highways than mass transit. 35

### **Federal support for mass transit is vital to shifting away from new road construction – it’s vital to substantially decreasing oil dependence**

**Nelder, 9** - Chris Nelder is an energy analyst and consultant who has written about energy and investing for more than a decade (“Is Obama's Infrastructure Plan Built to Last?,” Energy & Capital, 1/14, [http://www.energyandcapital.com/articles/obama-infrastructure-energy/813)//DH](http://www.energyandcapital.com/articles/obama-infrastructure-energy/813%29//DH)

It is abundantly clear to me, as it is to any student of peak oil or anybody who has read my column or my books, that rail is the obvious priority for the future of transportation. Rail is by far the cheapest and most fuel-efficient form of transport, requiring about a third less fuel than air for personal travel, and as little as 3% of the energy for freight. Yet, our current rail system is a joke compared to the rest of the developed world. As James Howard Kunstler has remarked, even Bulgaria would be ashamed of our rail system. Destinations are limited, especially in the West, and most of the trains run on diesel. Our fastest train, Amtrak's Acela, only does about 100 mph on its short run from Boston to D.C., less than half the speed of modern high-speed trains elsewhere. If we really intend to have an infrastructure that survives peak oil, we have to transform it to run on renewably generated electricity. We also have to expand it massively and take millions of cars and transport trucks off the road. Doing so would probably cost trillions of dollars and would be worth every penny. For example, a high-speed rail corridor for the Northeast would run about $32 billion. Laying high-speed rail between the major cities of California would cost north of $40 billion. So far, however, I have seen little suggestion of such an ambitious transformation. The funding package approved in October by Congress would grant a paltry $13 billion to passenger rail over five years, of which three-fourths would go to Amtrak. Another $5 billion is currently proposed by the House transportation and infrastructure committee for intercity rail. That's not transformation spending; that's barely better than maintenance spending. In fact, despite Obama's pledge to devote funds to projects beyond "roads and bridges," it's now looking like the states might hijack those funds and try to pour much of the Obama stimulus package money into roads and cars. According to a report by Bloomberg, Missouri plans to spend $750 million of it on highways and nothing on mass transit. Utah would devote 87% of its share to new roads, and Arizona would spend $869 million on highways. Presumably, other states have similar priorities. I'm not unsympathetic to the plight of the states. Saddled with declining revenues due to the recession and a crumbling road, bridge and airport infrastructure badly in need of repair, they have to do something. In the absence of strong federal leadership into mass transit, they have little choice but to try to maintain what they have. A spokesman for House Transportation and Infrastructure Committee Chairman James Oberstar quoted in the Bloomberg article was blunt: "We like the environmentally friendly way of doing things but the charge we were given was to come up with something that can happen quickly," he said. "We can't lose sight of what the primary goal here is, and that is to put people to work." Not Just Jobs, but the Right Jobs Which brings us to the key point: Instead of seeking "shovel ready" projects that can be started within 180 days to create new jobs ASAP, the Obama team should be looking at the long view on energy and ensuring what we build now is truly built to last. Roads—especially new roads—are definitely not that. According to the director of Washington-based Building America's Future, some $16.5 billion in mass transit projects can be started within a year. (By comparison, tens of billions of dollars have already been committed to high-speed electric rail in Europe and Asia.) Those projects should be our immediate national priority, followed by some deep and serious planning for a long-term transportation infrastructure that will survive $150 oil and declining supply. President Roosevelt created just such a planning board as part of the New Deal, which eventually resulted in the interstate highway system. By planning for it now, we could achieve a somewhat orderly transition away from liquid fuels and toward efficient electric transport. We'll still create millions of new jobs, only they'll be theright jobs. Jobs that won't disappear the next time oil spikes.

### Expanding mass transit facilitates higher density land use – multiple studies prove

**Hodges, 9** - Office of Budget and Policy Federal Transit Administration, U.S. DOT (Tina, “Public Transportation’s Role in Responding to Climate Change”, January, [http://www.fta.dot.gov/documents/PublicTransportationsRoleInRespondingToClimateChange.pdf)//DH](http://www.fta.dot.gov/documents/PublicTransportationsRoleInRespondingToClimateChange.pdf%29//DH)

Public transportation reduces emissions by facilitating higher density development, which conserves land and decreases the distances people need to travel to reach destinations. In many cases, higher density development would be more difficult without the existence of public transportation because more land would need to be devoted to parking and travel lanes. By facilitating higher density development, public transportation can shrink the footprint of an urban area and reduce overall trip lengths. In addition, public transportation supports increased foot traffic, street-level retail, and mixed land uses that enable a shift from driving to walking and biking. Public transportation can also facilitate trip chaining, such as combining dry-cleaning pick-up, shopping, and other errands on the way home from a station. Finally, households living close to public transportation tend to own fewer cars on average, as they may not need a car for commuting and other trips. A reduced number of cars per household tends to lead to reduced car use, and driving may cease to be the habitual choice for every trip.'

Multiple studies have quantified this relationship between public transportation, land use, and reduction in travel. The studies show that for every additional passenger mile traveled on public transportation, auto travel declines by 1.4 to 9 miIes.Â° In other words, in areas served by public transportation, even non-transit users drive less because destinations are closer together. A recent study used modeling to isolate just the effect of public transportation on driving patterns (rather than that effect combined with denser land use creating a need for improved public transportation). That study, conducted by consulting firm ICF and funded through the Transit Cooperative Research Program, found that each mile traveled on U.S. public transportation reduced driving by 1.9 miles. It concluded that public transportation reduces U.S. travel by an estimated 102.2 billion vehicle miles traveled (VMT) each year or 3.4% of annual U.S. VMT A study published by the Urban Land Institute found that within areas of compact development, driving is reduced 20% to 40% compared to average U.S. development patterns."

### Increasing land use density reduces emissions and leads to sustainable travel – a stronger mass transit investment is key

**Puentes, 8** - Fellow and Director, Metropolitan Infrastructure Initiative Brookings Institution (Robert, "Strengthening the Ability of Public Transportation to Reduce Our Dependence on Foreign Oil” Congressional Testimony, 9/9, <http://www.brookings.edu/~/media/research/files/testimony/2008/9/09%20transportation%20puentes/0909_transportation_puentes.pdf>)//DH

The U.S. transportation system today consumes 70 percent of the nation's oil and is almost entirely dependent upon petroleum-based fuels. 2 This demand is contributing, in part, to the global rise in the price of oil and the major hit on Americans' pocketbooks. Yet we do not come close to producing the oil we consume and that figure is declining over time, decreasing 17.0 percent since 2000. 3 Only one-quarter of the crude oil consumed in the U.S. is domestically produced. Twice as much is imported and the majority of that from countries considered to be in danger of "state failure" based on a range of social, economic, and political factors. 4 In addition, the transportation sector is responsible for one-third of the nation's carbon emissions and the U.S. continues to rank first among major world economies in per-capita carbon dioxide emissions, roughly double the rate of the United Kingdom and Germany. 5 A recent Brookings study found that the density of land use patterns in metropolitan areas and transit availability play an important role in determining energy consumption, travel behavior and carbon emissions in our major economic centers. 6 With the right policies in place, denser, walkable, and transit-friendly communities can help reduce vehicle miles traveled (VMT) and therefore help create more affordable and energy-efficient travel options for Americans. Studies show that household VMT varies with residential density and access to public transit. 7 Higher residential and employment densities, mixed land-use, and jobs–housing balance are associated with shorter trips and lower automobile ownership and use. 8 In comparing two households that are similar in all respects except residential density, the household in a neighborhood with 1,000 fewer housing units per square mile drives almost 1,200 miles more and consumes 65 more gallons of fuel per year over its peer household in a higher-density neighborhood. 9 Large metropolitan areas such as Riverside, Nashville, and Harrisburg rank among the highest in terms of their amount of VMT and carbon emissions per capita. New York, Chicago, and Portland, OR rank among the lowest (see Table 1). 10 With the U.S. set to add another 120 million people by 2050 our energy pressures are likely to intensify. As a result of this growth, America will require an additional 213 billion square feet of homes, retail facilities, office buildings, and other built space. 11 How and where we accommodate that growth carries far-reaching implications for our energy security, our economic stability, and the health of our environment—and will go a long way to determining how these places will be able to compete globally in the 21st century. Unfortunately, as a program with its roots in the middle of the last century, the federal surface transportation program is outdated and out-of-step with the energy and environmental constraints of our time. 12 The broader transportation system in the United States is no longer aligned with the way we live or work, nor with the major economic, energy, and environmental challenges facing the country. For example, federal transportation dollars continue to be distributed to its grantees based on archaic funding and distributional formulas. There is no reward for reducing the demand for driving, nor overall spending. In fact at the same time Americans are seeking to drive less due to energy and climate concerns, federal formulas actually reward consumption and penalize conservation. There also continues to be almost no focus on outcomes or performance. So at this moment of transportation crisis, billions and billions of federal transportation dollars are disbursed without meaningful direction or connection to advancing national interests on critical issues such as reducing our dependence on foreign oil. 13

II. CURRENT TRANSPORTATION TRENDS

A healthy national economy depends on healthy metropolitan economies—and enhancing mobility for residents by expanding transit options is a critical component. Therefore, for our transportation system to continue to provide a competitive edge, reducing energy consumption by improving the movement of people by multiple means both within and between metropolitan areas should continue to be an explicit national priority. We are already seeing transformations of dramatic scale and complexity when it comes to our transportation system and how Americans are traveling. We know most people can't stop traveling altogether—nor should they—but some can change how they travel.

### Oil dependence escalates multiple flashpoints globally

Mark Rosen (Deputy General Counsel at the Center for Naval Analyses & Professor of Homeland Security Law and Policy at George Washington University) 2010 “Energy Independence and Climate Change: The Economic and National Security Consequences of Failing to Act” University of Richmond Law Review, Lexis

There is a growing consensus in U.S. national security circles that American dependence on imported oil constitutes a threat to the United States because a substantial portion of those oil reserves are controlled by governments that have historically pursued policies inimical to U.S. interests. For example, Venezuela, which represents eleven percent of U.S. oil imports, "regularly espouses anti-American and anti-Western rhetoric both at home and abroad ... [and] ... promotes ... [an] anti-U.S. influence in parts of Latin and South America ..." 72 that retards the growth of friendly political and economic ties among the United States, Venezuela, and a few other states in Latin and South America. This scenario plays out in many different regions. Russia, for example, has used its oil leverage to exert extreme political pressure upon Ukraine and Belarus. 73 Longstanding Western commercial relations with repressive regimes in the Middle East - i.e., Iran, Sudan, and Saudi Arabia - raise similar issues because of the mixed strategic messages that are being sent. Of course, large wealth [\*989] transfers have allowed the Taliban in Saudi Arabia to bankroll terrorism. 74 A. Chokepoints and Flashpoints For the foreseeable future, the U.S. military will most likely be involved in protecting access to oil supplies - including the political independence of oil producers - and the global movements of using oil to help sustain the smooth functioning of the world economy. The security challenges associated with preserving access to oil are complicated by geographical "chokepoints," through which oil flows or is transported, but which are vulnerable to piracy or closure. 75 "Flashpoints" also exist as a result of political - and sometimes military - competition to secure commercial or sovereign access to oil in the face of disputed maritime and land claims that are associated with oil and gas deposits. Together, these challenges have necessitated that the United States and its allies maintain costly navies and air forces to protect sea lanes, ocean access, and maintain a presence to deter military competition in disputed regions. A selection of today's chokepoints and flashpoints follow. The Strait of Hormuz. This strait is the narrow waterway that allows access from the Indian Ocean into the Persian Gulf. Two-thirds of the world's oil is transported by ocean, and a very large percentage of that trade moves through Hormuz. The northern tip of Oman forms the southern shoreline of the strait. 76 Hormuz is protected by the constant transits of the U.S. Navy and its allies. Even though the strait has not been closed, the Persian Gulf has been the scene of extensive military conflict. 77 On September 22, 1980, Iraq invaded Iran, initiating an eight-year war between the two countries that featured the "War of the Tankers," in which 543 ships, including the USS Stark, were attacked, while the U.S. Navy provided escort services to protect tankers [\*990] that were transiting the Persian Gulf. 78 There have been past threats by Iran to militarily close the strait. 79 Additionally, there are ongoing territorial disputes between the United Arab Emirates and Iran over ownership of three islands that are located in approaches to the strait. 80 Closure of the strait would cause severe disruption in the movements of the world's oil supplies and, at a minimum, cause significant price increases and perhaps supply shortages in many regions for the duration of the closure. 81 During the War of the Tankers, oil prices increased from $ 13 per barrel to $ 31 a barrel due to supply disruptions and other "fear" factors. 82 Bab el-Mandeb. The strait separates Africa (Djibouti and Eritrea) and Asia (Yemen), and it connects the Red Sea to the Indian Ocean via the Gulf of Aden. The strait is an oil transit chokepoint since most of Europe's crude oil from the Middle East passes north through Bab el-Mandeb into the Mediterranean via the Suez Canal. 83 Closure of the strait due to terrorist activities or for political/military reasons, could keep tankers from the Persian Gulf from reaching the Suez Canal and Sumed Pipeline complex, diverting them around the southern tip of Africa (the Cape of Good Hope). 84 This would add greatly to transit time and cost, and would effectively tie-up spare tanker capacity. Closure of the Bab el-Mandeb would effectively block non-oil shipping from using the Suez Canal. 85 In October 2002 the French-flagged tanker Limburg was attacked off the coast of Yemen by terrorists. 86 During the [\*991] Yom Kippur War in 1973, Egypt closed the strait as a means of blockading the southern Israeli port of Eilat. 87 The Turkish Straits and Caspian Oil. The term "Turkish Straits" refers to the two narrow straits in northwestern Turkey, the Bosporus and the Dardanelles, which connect the Sea of Marmara with the Black Sea on one side and the Aegean arm of the Mediterranean Sea on the other. Turkey and Russia have been locked in a longstanding dispute over passage issues involving the Turkish Straits. 88 The 1936 Montreux Convention puts Turkey in charge of regulating traffic through the straits; 89 yet Turkey has been hard pressed to stop an onslaught of Russian, Ukrainian, and Cypriot tankers, which transport Caspian Sea oil to markets in Western Europe. 90 Because of the very heavy shipping traffic and very challenging geography, there have been many collisions and groundings in the past, creating terrible pollution incidents and death. 91 Thus far, none of these incidents have been attributed to state-on-state-conflict or terrorism; 92 however, the confined waterway is an especially attractive target because of the grave economic and environmental damage that would result from a well-timed and well-placed attack on a loaded tanker. The issues surrounding the straits are also a subset of larger problems associated with the exploitation of Caspian oil, including severe pollution of the Caspian Sea as a result of imprudent extraction techniques, as well as the ever-present potential for conflict among the various claimants to the Caspian's hydrocarbon resources due to an inability of the various Caspian littoral states to agree on their maritime boundaries - and their [\*992] legal areas in which to drill. 93 Any one of these problems could become a major flashpoint in the future. China vs. Japan. The Daiyu/Senkaku islands located in the East China Sea have become an increasingly contentious dispute because both claimants have, in the past, used modern military platforms to patrol the areas of their claims in which there are suspected oil and gas deposits in the seabed. 94 In September 2005, for example, China dispatched five warships to disputed waters surrounding its oil and gas platforms, which were spotted by a Japanese maritime patrol aircraft. 95 There have been other similar military-to-military encounters. 96 Given the fact that both countries have modern armed forces and are comparatively energy starved, it is not difficult to envision serious conflict erupting over these disputed areas. The Arctic Super Highway. Traditionalists would probably not include the Arctic as a security

chokepoint. The oil connection is reasonably well known: "22 percent of the world's undiscovered energy reserves are projected to be in the region (including 13 percent of the world's petroleum and 30 percent of natural gas)." 97 However, given the very small margins that transporters earn transporting oil from point A to B, 98 shipping companies are always in search of shorter routes to transport oil to market. As the thawing of the Arctic Ocean continues as a result of climate change, 99 this may create new shipping routes that transporters of [\*993] oil and other goods will use to maximize their profits and minimize their transit times. As supplies of readily exploitable crude oil are reduced, the probability increases that some of this trade will result from exploitation activities in the land and littoral areas adjacent to the Arctic Sea. This development is concerning for a number of reasons: (1) the area is very remote and could provide a safe haven to pirates seeking to hijack cargoes; (2) the environmental sensitivity of the area, and the concomitant difficulty of mounting a cleanup effort, means that an oil spill in that marine environment will be much more persistent than an oil spill in temperate waters; 100 (3) the Arctic presents unique navigational difficulties due to the lack of good charts, navigational aids, and communications towers, as well as the impacts of extreme cold on the operational effectiveness of systems; 101 (4) the unsettled nature of claims by various countries, including the United States, to the seabed continental shelf resources in the littoral areas off their coastlines creates the potential for military competition and conflict over these claims. 102 The International Maritime Organization ("IMO") is now circulating draft guidelines for ships operating in Arctic areas to promote - but not require - ship hardening against an iceberg strike, better crew training, and environmental protection measures. 103 These guidelines are merely advisory and can only be implemented via the flag states. 104 Also, neither IMO nor any of the UN Law of the Sea Institutions have mandatory jurisdiction over any of the flashpoint issues relating [\*994] to competing continental shelf claims in the Arctic, 105 meaning that any disputes will remain unresolved for a long time. The above is only a selected list of potential flashpoints in which oil is the main culprit. Disputes between China and six other nations of the Spratly Islands, and other territories in the South China Sea, remain unresolved. 106 The Spratly Islands could become a flashpoint in the future, involving the United States or its allies, because of the proximity of those areas to the major sea routes to Japan and Korea. 107 The strategic straits of Malacca, Lombok, and Sunda in Southeast Asia are absolutely essential to the movement of raw materials to Japan, Korea, and China. 108 Because of Lombok's depth and strategic location, it is a major transit route for very large crude carriers that move between the Middle East and Asia. 109 Lombok is an undefended waterway that is only eighteen kilometers in width at its southern opening, making it an attractive chokepoint for hijacking or eco-terrorism in which the waters of the environmentally sensitive Indonesian archipelago would be held hostage. 110

### Energy wars risk extinction

Stephen Lendman (Research Associate of the Centre for Research on Globalization) 2007 “Resource Wars - Can We Survive Them” http://www.rense.com/general76/resrouce.htm

With the world's energy supplies finite, the US heavily dependent on imports, and "peak oil" near or approaching, "security" for America means assuring a sustainable supply of what we can't do without. It includes waging wars to get it, protect it, and defend the maritime trade routes over which it travels. That means energy's partnered with predatory New World Order globalization, militarism, wars, ecological recklessness, and now an extremist US administration willing to risk Armageddon for world dominance. Central to its plan is first controlling essential resources everywhere, at any cost, starting with oil and where most of it is located in the Middle East and Central Asia. The New "Great Game" and Perils From It The new "Great Game's" begun, but this time the stakes are greater than ever as explained above. The old one lasted nearly 100 years pitting the British empire against Tsarist Russia when the issue wasn't oil. This time, it's the US with help from Israel, Britain, the West, and satellite states like Japan, South Korea and Taiwan challenging Russia and China with today's weapons and technology on both sides making earlier ones look like toys. At stake is more than oil. It's planet earth with survival of all life on it issue number one twice over. Resources and wars for them means militarism is increasing, peace declining, and the planet's ability to sustain life front and center, if anyone's paying attention. They'd better be because beyond the point of no return, there's no second chance the way Einstein explained after the atom was split. His famous quote on future wars was : "I know not with what weapons World War III will be fought, but World War IV will be fought with sticks and stones." Under a worst case scenario, it's more dire than that. There may be nothing left but resilient beetles and bacteria in the wake of a nuclear holocaust meaning even a new stone age is way in the future, if at all. The threat is real and once nearly happened during the Cuban Missile Crisis in October, 1962. We later learned a miracle saved us at the 40th anniversary October, 2002 summit meeting in Havana attended by the US and Russia along with host country Cuba. For the first time, we were told how close we came to nuclear Armageddon. Devastation was avoided only because Soviet submarine captain Vasily Arkhipov countermanded his order to fire nuclear-tipped torpedos when Russian submarines were attacked by US destroyers near Kennedy's "quarantine" line. Had he done it, only our imagination can speculate what might have followed and whether planet earth, or at least a big part of it, would have survived.

## 1ac – warming advantage

### Warming is real and to some degree inevitable – keeping emissions low is necessary to prevent temperature spikes that cause our impacts

Bull 12 - University Lecturer in Fine Art at Oxford since 1992, and has also been a Getty Scholar, a Clark Fellow, and Andrew W. Mellon Visiting Professor at the Courtauld, (Malcolm, “What is the rational response?” London Review of Books, v34 n10, May 24, 2012, http://www.lrb.co.uk/v34/n10/malcolm-bull/what-is-the-rational-response)//AWV

For the benefit of anyone who has spent the past decade or so on a different planet, the most frequently asked questions about climate change on this one are as follows. Is it getting warmer? Yes, surface temperatures have risen by 0.8°C from pre-industrial levels. Are humans causing it? Almost certainly. The gases produced by industrialisation and agriculture are known to have an insulating effect, and their concentration in the earth’s atmosphere has increased in line with rising temperatures, while natural causes of global warming have remained constant. Will it get warmer still? Very probably, though no one can accurately predict when or by how much. The 2007 Intergovernmental Panel on Climate Change (IPCC) Report offers a range of projections within which its best estimates are for a temperature rise of somewhere between 1.8°C and 4°C over the course of the 21st century, depending on the level of greenhouse emissions. Is there anything we can do about it? Potentially, yes. If we were to keep emissions to the low end of that spectrum, global warming might just be kept at 2°C or below, and its impacts minimised.

### Current federal funding focuses on roads which prevents alternative transit choices that can decrease greenhouse gas emissions

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 970)//AWV

In addition, past funding by the federal government with regard to transportation strongly prefers new road projects over other options.197 For example, when state and MPOs received a choice between getting 80 or 90 percent funding from the federal government versus far less for transit alternatives, the decision makers easily chose the government incentive for new or expanded roads.198 While the Intermodal Surface Transportation Efficiency Act tried to address this inequity by leveling the funding gap between highways and transit choices, the legislation came up short by not making this requirement compulsory.199 As a result, the DOT continues its funding formulas with highways usually receiving 80 percent while transit alternatives seldom achieve the 50 percent level.200 Thus, the current system used to develop and fund transportation on a federal level provides systemic difficulties through the planning process, as well as financial disincentives to consider and utilize transit options as a tool or alternative in reducing greenhouse gas emissions.

### Plan is a credible international signal of the need to reduce warming and is modeled

**Burwell, 10** – Director of the Energy and Climate Program at Carnegie (David, “Transportation—The Leading Cause of Global Warming,” 4/15, [http://carnegieendowment.org/2010/04/15/transportation-leading-cause-of-global-warming/2fr2)//DH](http://carnegieendowment.org/2010/04/15/transportation-leading-cause-of-global-warming/2fr2%29//DH)

How do U.S. efforts to reduce transportation’s impact on atmospheric warming relate to global climate negotiations?

The United States consumes 25 percent of the world’s petroleum and that’s primarily because of the way we travel. Seventy percent of oil consumption in the United States is transportation and that is because we’re spread out, we drive everywhere, and we have over 700 cars per 1,000 people in order to support our driving habits.   The rest of the world is much less dependent on cars and much more efficient consumers of petroleum. If we don’t adopt measures that reduce our need to travel—for our own benefit—we can’t expect the rest of the world not to behave in the same way. By addressing the way we travel, by helping ourselves, by giving ourselves more transportation choices, by connecting transportation to land use development, we are not only helping ourselves, but we are providing a model for the rest of the world of how they can develop in a way that is sustainable, low carbon, and provides more choices for everybody. If the United States passed a climate bill that priced transportation carbon and linked it to a transportation bill that would reinvest the revenues into a green transportation system, the United States would be on track to meet its stated obligation of a 17 to 20 percent absolute decrease in greenhouse gas emissions by 2020. That would give comfort to other countries—particularly China, India, and other emerging economies—that the United States is serious about reducing its transportation carbon and it would contribute to the likelihood of a global climate agreement.

### Federal funding through the FTA is necessary to entice states to green transit

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 944-947)//AWV

Unlike the other two DOT agencies that promulgate regulations over specific aspects of the national transportation system, the FTA only provides assistance and oversight to the government’s spending to promote transit alternatives nationwide.48 The agency completes this mission by increasing the public transportation industry’s knowledge of new and existing solutions for sustainability issues while providing financial and technical help.49 It accomplishes these mandates on many levels and primarily provides an avenue to integrate environmental policy into planning and decision-making.50 For instance, the FTA maintains a repository for transit-related compliance under the National Environmental Protection Act of 1969 and other Executive Orders, regulations, policy statements, and technical manuals concerning the environment and transit.51 At other times, Congress uses the agency to develop a policy pathway, which will entice state and municipal governments to take this route based on financial incentives. For example, the Omnibus Appropriations Act of 2009 instructed the FTA to develop and present an action plan for green transit facilities across the country to Congress.52 Based on its expertise, the agency noted that transit buildings do not expend a large portion of energy in comparison to trains and buses.53 However, the FTA explained that it impacted similar concerns during the 1990s when the agency played an important role in developing and transitioning diesel bus engines to meet the elevated and more rigorous emission requirements under the Clean Air Act.54 Moreover, it also recently made available federal funds to enable the purchase of 4,000 hybrid-electric buses to reduce pollution and energy consumption.55 Similar to the green transit building strategy, the FTA, along with other organizations, gave support to the Urban Land Institute’s Moving Color initiative to objectively study different strategies that will reduce greenhouse gases in transit.56 While other reports focused on transportation and climate change issues separately, this research tried to predict the influence of utilizing different policy tools to affect emissions and travel choices available.57 In joining this initiative, the agency showed that it funds research that will help decision-makers form an unbiased and objective perspective and will bring forth the various trade-offs when making policy decisions. While the FTA does not directly regulate greenhouse gas emissions from mass transit, it does play an important role for end users seeking navigation expertise in the complex area where environmental and transportation goals collide. To this end, the agency’s primary focus in reducing greenhouse gas emissions comes through research and fostering implementation strategies that minimize the carbon footprint in both the construction and operation phases of public transportation.58 Thus, the federal government appears to now utilize a multifaceted approach to the environment in the context of mass transit. While the EPA appears to provide the central regulatory framework for all things causing pollution, the DOT’s agencies also get involved when impacted. As previously illustrated, the EPA will take the lead in situations such as locomotives and work together in others like those of CAFE standards. In contrast, the FTA appears as the agency that offers incentives to state and local authorities by providing financial assistance at the federal level to support those public transportation options that meet the government’s policy objectives, like the reduction of greenhouse gases.

### Left unchecked, warming will cause extinction

Sify 2010 – Sydney newspaper citing Ove Hoegh-Guldberg, professor at University of Queensland and Director of the Global Change Institute, and John Bruno, associate professor of Marine Science at UNC (Sify News, “Could unbridled climate changes lead to human extinction?”, <http://www.sify.com/news/could-unbridled-climate-changes-lead-to-human-extinction-news-international-kgtrOhdaahc.html>

The findings of the comprehensive report: 'The impact of climate change on the world's marine ecosystems' emerged from a synthesis of recent research on the world's oceans, carried out by two of the world's leading marine scientists. One of the authors of the report is Ove Hoegh-Guldberg, professor at The University of Queensland and the director of its Global Change Institute (GCI). 'We may see sudden, unexpected changes that have serious ramifications for the overall well-being of humans, including the capacity of the planet to support people. This is further evidence that we are well on the way to the next great extinction event,' says Hoegh-Guldberg. 'The findings have enormous implications for mankind, particularly if the trend continues. The earth's ocean, which produces half of the oxygen we breathe and absorbs 30 per cent of human-generated carbon dioxide, is equivalent to its heart and lungs. This study shows worrying signs of ill-health. It's as if the earth has been smoking two packs of cigarettes a day!,' he added. 'We are entering a period in which the ocean services upon which humanity depends are undergoing massive change and in some cases beginning to fail', he added. The 'fundamental and comprehensive' changes to marine life identified in the report include rapidly warming and acidifying oceans, changes in water circulation and expansion of dead zones within the ocean depths. These are driving major changes in marine ecosystems: less abundant coral reefs, sea grasses and mangroves (important fish nurseries); fewer, smaller fish; a breakdown in food chains; changes in the distribution of marine life; and more frequent diseases and pests among marine organisms. Study co-author John F Bruno, associate professor in marine science at The University of North Carolina, says greenhouse gas emissions are modifying many physical and geochemical aspects of the planet's oceans, in ways 'unprecedented in nearly a million years'. 'This is causing fundamental and comprehensive changes to the way marine ecosystems function,' Bruno warned, according to a GCI release. These findings were published in Science.

### And warming is real and anthropogenic

Rahmstorf 8 – Professor of Physics of the Oceans at Potsdam University (Richard. Global Warming: Looking Beyond Kyoto. Edited by Ernesto Zedillo. “Anthropogenic Climate Change?” Page 42-49)

It is time to turn to statement B: human activities are altering the climate. This can be broken into two parts. The first is as follows: global climate is warming. This is by now a generally undisputed point (except by novelist Michael Crichton), so we deal with it only briefly. The two leading compilations of data measured with thermometers are shown in figure 3-3, that of the National Aeronautics and Space Administration (NASA) and that of the British Hadley Centre for Climate Change. Although they differ in the details, due to the inclusion of different data sets and use of different spatial averaging and quality control procedures, they both show a consistent picture, with a global mean warming of 0.8°C since the late nineteenth century. Temperatures over the past ten years clearly were the warmest since measured records have been available. The year 1998 sticks out well above the longterm trend due to the occurrence of a major El Nino event that year (the last El Nino so far and one of the strongest on record). These events are examples of the largest natural climate variations on multiyear time scales and, by releasing heat from the ocean, generally cause positive anomalies in global mean temperature. It is remarkable that the year 2005 rivaled the heat of 1998 even though no El Nino event occurred that year. (A bizarre curiosity, perhaps worth mentioning, is that several prominent "climate skeptics" recently used the extreme year 1998 to claim in the media that global warming had ended. In Lindzen's words, "Indeed, the absence of any record breakers during the past seven years is statistical evidence that temperatures are not increasing.")33 In addition to the surface measurements, the more recent portion of the global warming trend (since 1979) is also documented by satellite data. It is not straightforward to derive a reliable surface temperature trend from satellites, as they measure radiation coming from throughout the atmosphere (not just near the surface), including the stratosphere, which has strongly cooled, and the records are not homogeneous' due to the short life span of individual satellites, the problem of orbital decay, observations at different times of day, and drifts in instrument calibration.' Current analyses of these satellite data show trends that are fully consistent with surface measurements and model simulations." If no reliable temperature measurements existed, could we be sure that the climate is warming? The "canaries in the coal mine" of climate change (as glaciologist Lonnie Thompson puts it) ~are mountain glaciers. We know, both from old photographs and from the position of the terminal moraines heaped up by the flowing ice, that mountain glaciers have been in retreat all over the world during the past century. There are precious few exceptions, and they are associated with a strong increase in precipitation or local cooling.36 I have inspected examples of shrinking glaciers myself in field trips to Switzerland, Norway, and New Zealand. As glaciers respond sensitively to temperature changes, data on the extent of glaciers have been used to reconstruct a history of Northern Hemisphere temperature over the past four centuries (see figure 3-4). Cores drilled in tropical glaciers show signs of recent melting that is unprecedented at least throughout the Holocene-the past 10,000 years. Another powerful sign of warming, visible clearly from satellites, is the shrinking Arctic sea ice cover (figure 3-5), which has declined 20 percent since satellite observations began in 1979. While climate clearly became warmer in the twentieth century, much discussion particularly in the popular media has focused on the question of how "unusual" this warming is in a longer-term context. While this is an interesting question, it has often been mixed incorrectly with the question of causation. Scientifically, how unusual recent warming is-say, compared to the past millennium-in itself contains little information about its cause. Even a highly unusual warming could have a natural cause (for example, an exceptional increase in solar activity). And even a warming within the bounds of past natural variations could have a predominantly anthropogenic cause. I come to the question of causation shortly, after briefly visiting the evidence for past natural climate variations. Records from the time before systematic temperature measurements were collected are based on "proxy data," coming from tree rings, ice cores, corals, and other sources. These proxy data are generally linked to local temperatures in some way, but they may be influenced by other parameters as well (for example, precipitation), they may have a seasonal bias (for example, the growth season for tree rings), and high-quality long records are difficult to obtain and therefore few in number and geographic coverage. Therefore, there is still substantial uncertainty in the evolution of past global or hemispheric temperatures. (Comparing only local or regional temperature; as in Europe, is of limited value for our purposes,' as regional variations can be much larger than global ones and can have many regional causes, unrelated to global-scale forcing and climate change.) The first quantitative reconstruction for the Northern Hemisphere temperature of the past millennium, including an error estimation, was presented by Mann, Bradley, and Hughes and rightly highlighted in the 2001 IPCC report as one of the major new findings since its 1995 report; it is shown in figure 3\_6.39 The analysis suggests that, despite the large error bars, twentieth-century warming is indeed highly unusual and probably was unprecedented during the past millennium. This result, presumably because of its symbolic power, has attracted much criticism, to some extent in scientific journals, but even more so in the popular media. The hockey stick-shaped curve became a symbol for the IPCC, .and criticizing this particular data analysis became an avenue for some to question the credibility of the IPCC. Three important things have been overlooked in much of the media coverage. First, even if the scientific critics had been right, this would not have called into question the very cautious conclusion drawn by the IPCC from the reconstruction by Mann, Bradley, and Hughes: "New analyses of proxy data for the Northern Hemisphere indicate that the increase in temperature in the twentieth century is likely to have been the largest of any century during the past 1,000 years." This conclusion has since been supported further by every single one of close to a dozen new reconstructions (two of which are shown in figure 3-6). Second, by far the most serious scientific criticism raised against Mann, Hughes, and Bradley was simply based on a mistake. 40 The prominent paper of von Storch and others, which claimed (based on a model test) that the method of Mann, Bradley, and Hughes systematically underestimated variability, "was [itself] based on incorrect implementation of the reconstruction procedure."41 With correct implementation, climate field reconstruction procedures such as the one used by Mann, Bradley, and Hughes have been shown to perform well in similar model tests. Third, whether their reconstruction is accurate or not has no bearing on policy. If their analysis underestimated past natural climate variability, this would certainly not argue for a smaller climate sensitivity and thus a lesser concern about the consequences of our emissions. Some have argued that, in contrast, it would point to a larger climate sensitivity. While this is a valid point in principle, it does not apply in practice to the climate sensitivity estimates discussed herein or to the range given by IPCC, since these did not use the reconstruction of Mann, Hughes, and Bradley or any other proxy records of the past millennium. Media claims that "a pillar of the Kyoto Protocol" had been called into question were therefore misinformed. As an aside, the protocol was agreed in 1997, before the reconstruction in question even existed. The overheated public debate on this topic has, at least, helped to attract more researchers and funding to this area of paleoclimatology; its methodology has advanced significantly, and a number of new reconstructions have been presented in recent years. While the science has moved forward, the first seminal reconstruction by Mann, Hughes, and Bradley has held up remarkably well, with its main features reproduced by more recent work. Further progress probably will require substantial amounts of new proxy data, rather than further refinement of the statistical techniques pioneered by Mann, Hughes, and Bradley. Developing these data sets will require time and substantial effort. It is time to address the final statement: most of the observed warming over the past fifty years is anthropogenic. A large number of studies exist that have taken different approaches to analyze this issue, which is generally called the "attribution problem." I do not discuss the exact share of the anthropogenic contribution (although this is an interesting question). By "most" I imply mean "more than 50 percent.” The first and crucial piece of evidence is, of course, that the magnitude of the warming is what is expected from the anthropogenic perturbation of the radiation balance, so anthropogenic forcing is able to explain all of the temperature rise. As discussed here, the rise in greenhouse gases alone corresponds to 2.6 W/tn2 of forcing. This by itself, after subtraction of the observed 0'.6 W/m2 of ocean heat uptake, would Cause 1.6°C of warming since preindustrial times for medium climate sensitivity (3"C). With a current "best guess'; aerosol forcing of 1 W/m2, the expected warming is O.8°c. The point here is not that it is possible to obtain the 'exact observed number-this is fortuitous because the amount of aerosol' forcing is still very' uncertain-but that the expected magnitude is roughly right. There can be little doubt that the anthropogenic forcing is large enough to explain most of the warming. Depending on aerosol forcing and climate sensitivity, it could explain a large fraction of the warming, or all of it, or even more warming than has been observed (leaving room for natural processes to counteract some of the warming). The second important piece of evidence is clear: there is no viable alternative explanation. In the scientific literature, no serious alternative hypothesis has been proposed to explain the observed global warming. Other possible causes, such as solar activity, volcanic activity, cosmic rays, or orbital cycles, are well observed, but they do not show trends capable of explaining the observed warming. Since 1978, solar irradiance has been measured directly from satellites and shows the well-known eleven-year solar cycle, but no trend. There are various estimates of solar variability before this time, based on sunspot numbers, solar cycle length, the geomagnetic AA index, neutron monitor data, and, carbon-14 data. These indicate that solar activity probably increased somewhat up to 1940. While there is disagreement about the variation in previous centuries, different authors agree that solar activity did not significantly increase during the last sixty-five years. Therefore, this cannot explain the warming, and neither can any of the other factors mentioned. Models driven by natural factors only, leaving the anthropogenic forcing aside, show a cooling in the second half of the twentieth century (for an example, See figure 2-2, panel a, in chapter 2 of this volume). The trend in the sum of natural forcings is downward. The only way out would be either some as yet undiscovered unknown forcing or a warming trend that arises by chance from an unforced internal variability in the climate system. The latter cannot be completely ruled out, but has to be considered highly unlikely. No evidence in the observed record, proxy data, or current models suggest that such internal variability could cause a sustained trend of global warming of the observed magnitude. As discussed, twentieth century warming is unprecedented over the past 1,000 years (or even 2,000 years, as the few longer reconstructions available now suggest), which does not 'support the idea of large internal fluctuations. Also, those past variations correlate well with past forcing (solar variability, volcanic activity) and thus appear to be largely forced rather than due to unforced internal variability." And indeed, it would be difficult for a large and sustained unforced variability to satisfy the fundamental physical law of energy conservation. Natural internal variability generally shifts heat around different parts of the climate system-for example, the large El Nino event of 1998, which warmed, the atmosphere by releasing heat stored in the ocean. This mechanism implies that the ocean heat content drops as the atmosphere warms. For past decades, as discussed, we observed the atmosphere warming and the ocean heat content increasing, which rules out heat release from the ocean as a cause of surface warming. The heat content of the whole climate system is increasing, and there is no plausible source of this heat other than the heat trapped by greenhouse gases. A completely different approach to attribution is to analyze the spatial patterns of climate change. This is done in so-called fingerprint studies, which associate particular patterns or "fingerprints" with different forcings. It is plausible that the pattern of a solar-forced climate change differs from the pattern of a change caused by greenhouse gases. For example, a characteristic of greenhouse gases is that heat is trapped closer to the Earth's surface and that, unlike solar variability, greenhouse gases tend to warm more in winter, and at night. Such studies have used different data sets and have been performed by different groups of researchers with different statistical methods. They consistently conclude that the observed spatial pattern of warming can only be explained by greenhouse gases.49 Overall, it has to be considered, highly likely' that the observed warming is indeed predominantly due to the human-caused increase in greenhouse gases. ' This paper discussed the evidence for the anthropogenic increase in atmospheric CO2 concentration and the effect of CO2 on climate, finding that this anthropogenic increase is proven beyond reasonable doubt and that a mass of evidence points to a CO2 effect on climate of 3C ± 1.59C global-warming for a doubling of concentration. (This is, the classic IPCC range; my personal assessment is that, in-the light of new studies since the IPCC Third Assessment Report, the uncertainty range can now be narrowed somewhat to 3°C ± 1.0C) This is based on consistent results from theory, models, and data analysis, and, even in the absence-of any computer models, the same result would still hold based on physics and on data from climate history alone. Considering the plethora of consistent evidence, the chance that these conclusions are wrong has to be considered minute. If the preceding is accepted, then it follows logically and incontrovertibly that a further increase in CO2 concentration will lead to further warming. The magnitude of our emissions depends on human behavior, but the climatic response to various emissions scenarios can be computed from the information presented here. The result is the famous range of future global temperature scenarios shown in figure 3\_6.50 Two additional steps are involved in these computations: the consideration of anthropogenic forcings other than CO2 (for example, other greenhouse gases and aerosols) and the computation of concentrations from the emissions. Other gases are not discussed here, although they are important to get quantitatively accurate results. CO2 is the largest and most important forcing. Concerning concentrations, the scenarios shown basically assume that ocean and biosphere take up a similar share of our emitted CO2 as in the past. This could turn out to be an optimistic assumption; some models indicate the possibility of a positive feedback, with the biosphere turning into a carbon source rather than a sink under growing climatic stress. It is clear that even in the more optimistic of the shown (non-mitigation) scenarios, global temperature would rise by 2-3°C above its preindustrial level by the end of this century. Even for a paleoclimatologist like myself, this is an extraordinarily high temperature, which is very likely unprecedented in at least the past 100,000 years. As far as the data show, we would have to go back about 3 million years, to the Pliocene, for comparable temperatures. The rate of this warming (which is important for the ability of ecosystems to cope) is also highly unusual and unprecedented probably for an even longer time. The last major global warming trend occurred when the last great Ice Age ended between 15,000 and 10,000 years ago: this was a warming of about 5°C over 5,000 years, that is, a rate of only 0.1 °C per century. 52 The expected magnitude and rate of planetary warming is highly likely to come with major risk and impacts in terms of sea level rise (Pliocene sea level was 25-35 meters higher than now due to smaller Greenland and Antarctic ice sheets), extreme events (for example, hurricane activity is expected to increase in a warmer climate), and ecosystem loss. The second part of this paper examined the evidence for the current warming of the planet and discussed what is known about its causes. This part showed that global warming is already a measured and-well-established fact, not a theory. Many different lines of evidence consistently show that most of the observed warming of the past fifty years was caused by human activity. Above all, this warming is exactly what would be expected given the anthropogenic rise in greenhouse gases, and no viable alternative explanation for this warming has been proposed in the scientific literature. Taken together., the very strong evidence accumulated from thousands of independent studies, has over the past decades convinced virtually every climatologist around the world (many of whom were initially quite skeptical, including myself) that anthropogenic global warming is a reality with which we need to deal.

## 1ac – urban sprawl advantage

### Road focus and car dependence promotes sprawl which harms the environment

Islam et.al. 8 (Anna Brandon Lynn, and Bridget Maher, “Negative Environmental Impacts of American Suburban Sprawl and the Environmental Argument for New Urbanism”

http://sitemaker.umich.edu/section007group5/home)

The dependency on automobiles for transportation is one of the biggest factors in the environmental impacts of “suburban sprawl” and “urban growth.” Suburban growth as a result of highways being built after WWII made rural areas more accessible for development increasing the reliance on automobiles to get to and from the city for work (Southerland 164). This reliance has been furthermore encouraged through the relative decrease in gasoline prices since the 1970s (Southerland 165). City development in the past has been mainly focused on planning, “…towns and cities at a larger scale with a reliance primarily on automobile travel (Doi 485).” This type of urban growth results in a number of adverse effects on the environment. Growth of this nature requires people to travel larger distances for even basic needs, therefore making automobiles a necessary form of travel. One of the strategies for solving the overwhelming reliance on automobiles has been the construction of “compact cities.” The idea is that “compact cities” offer a closer community, a neighborhood, and a better quality of life that decreases the reliance on automobiles and therefore promotes a more environmentally friendly city. Mass transit and public transportation drastically decreases the amount of air pollution and reliance on oil.

### Urban sprawl is the biggest cause of habitat loss and biodiversity

**Johnson and Klemens ‘05** Director, Metropolitan Conservation Alliance, Wildlife Conservation Society (Elizabeth A. and Michael W., “Nature in Fragments”, 19)//DD

Patterns of development associated with sprawl lead directly to habitat loss and fragmentation, with a concomitant reduction in biodiversity. In addition, sprawl plays a significant role in amplifying other threats to biodiversity. Humans alter the Earth's natural landscape in three main ways: through agriculture, natural-resource extraction, and urban and rural settlement (Vitousek et al. 1997; Marzluff and Hamel 2001). In many areas in the United States, settlement is replacing agriculture and resource extraction as the major land use (Heinz Center 2002). Sprawl and urbanization endanger more species than any other human activity in the United States and are more geographically widespread than all activities except for agriculture (Czech, Krausman, and Devers 2000). According to Meyer and Turner (1992), human dwellings and infrastructure now occupy 2.5 to 6 percent of the Earth, and approximately 10 percent of this area is covered with impervious surfaces.

### Habitat loss and species reduction risks extinction

Richard Tobin, Associate Professor of Political Science at SUNY-Buffalo, 1990, The Expendable Future: U.S. Politics and the Protection of Biological Diversity, p. 13-14

Every time a human contributes to a species’ extinction, a range of choices and opportunities is either eliminated or diminished. The demise of the last pupfish might have appeared inconsequential, but the eradication of other species could mean that an undiscovered cure for some cancers has been carelessly discarded. The extinction of a small bird, an innocent amphibian, or an unappealing plant might disrupt an ecosystem, increased the incidence and areal distribution of a disease, preclude the discovery of new industrial products, prevent the natural recycling of some wastes, or destroy a source of easily grown and readily available food. By way of analogy, the anthropo-genic extinction of a plant or animal can be compared to the senseless destruction of a priceless Renaissance painting or to the burning of an irreplaceable book that has never been opened. In an era when many people believe that limits to development are being tested or even breached, can humans afford to risk an expendable future, to squander the infinite potential that species offer, and to waste nature’s ability and willingness to provide inexpensive solutions to many of humankind’s problems? Many scientists do not believe so, and they are fearful of the consequences of anthropogenic extinctions. These scientists quickly admit their ignorance of the biological consequences of most individual extinctions, but widespread agreement exists that massive anthropogenic extinctions can bring catastrophic results. In fact, when compared to all other environmental problems, human-caused extinctions are likely to be of far greater concern. Extinction is the permanent destruction of unique life forms and the only irreversible ecological change that humans can cause. No matter what the effort or sincerity of intentions, extinct species can never be replaced. “From the standpoint of permanent despoliation of the planet,” Norman Meyers observes, no other form of environmental degradation “is anywhere so significant as the fallout of species.” Harvard biologist Edward O. Wilson is less modest in assessing the relative consequences of human-caused extinctions. To Wilson, the worst thing that will happen to earth is not economic collapse, the depletion of energy supplies, or even nuclear war. As frightful as these events might be, Wilson reasons that they can “be repaired within a few generations. The one process ongoing…that will take millions of years to correct is the loss of genetic and species diversity by destruction of natural habitats.” David Ehrenfeld succinctly summarizes the problem and the need for a solution: “We are masters of extermination, yet creation is beyond our powers… Complacency in the face of this terrible dilemma is inexcusable.” Ehrenfeld wrote these words in the early 1970s. Were he to write today he would likely add a note of dire urgency. If scientists are correct in their assessments of current extinctions and reasonably confident about extinction rates in the near future, then a concerted and effective response to human-caused extinctions is essential. The chapters that follow evaluate that response in the United States.

### Urban sprawl and car dependence drastically increases air pollution

Frumkin, 02-Professor of Environmental and Health sciences at University of Washington (Howard, “Urban Sprawl and Public Health,” 201-204)//I.S.

One of the cardinal features of sprawl is driving, reflecting a well-established, close relationship between lower density development and more automobile travel. For example, in the Atlanta metropolitan area, one of the nation’s leading examples of urban sprawl, the average person travels 34.1 miles in a car each day—an average that includes the entire population, both drivers and non-drivers.17 More densely populated metropolitan areas have far lower per capita daily driving figures than Atlanta, e.g., 16.9 miles for Philadelphia, 19.9 for Chicago, and 21.2 for San Francisco.17 On a neighborhood scale, the same pattern is observed. In the Los Angeles, San Francisco, and Chicago metropolitan areas, vehicle miles traveled increase as neighborhood density decreases. Automobile use offers extraordinary personal mobility and independence. However, it is also associated with health hazards, including air pollution, motor vehicle crashes, and pedestrian injuries and fatalities. Motor vehicles are a leading source of air pollution.20 Even though automobile and truck engines have be- come far cleaner in recent decades, the sheer quantity of vehicle miles driven results in large releases of carbon monoxide, carbon dioxide, particulate matter, nitrogen oxides, and hydrocarbons into the air. Nitrogen oxides and hydrocarbons, in the presence of sunlight, form ozone. Nationwide, “mobile sources” (mostly cars and trucks) account for approximately 30% of emissions of oxides of nitrogen and 30% of hydrocarbon emissions. However, in automobile-dependent metropolitan areas, the proportion may be substantially higher. In the 10-county metropolitan Atlanta area, for ex- ample, on-road cars and trucks account for 58% of emissions of nitrogen oxides and 47% of hydrocarbon emissions, figures that underestimate the full impact of vehicle traffic because they exclude emissions from related sources, such as fuel storage facilities and filling stations. In various combinations, the pollutants that originate from cars and trucks, especially nitrogen oxides, hydrocarbons, ozone, and particulate matter, account for a substantial part of the air pollution burden of American cities. Of note, the highest air pollution levels in a metropolitan area may occur not at the point of formation but downwind, due to regional transport. Thus, air pollution is a problem not only alongside roadways (or in close proximity to other sources) but also on the scale of entire regions. The health hazards of air pollution are well known.24 Ozone is an airways irritant. Higher ozone levels are associated with higher incidence and severity of respiratory symptoms, worse lung function, more emergency room visits and hospitalizations, more medication use, and more absenteeism from school and work. Although healthy people may demonstrate these effects, people with asthma and other respiratory diseases are especially susceptible. Particulate matter is associated with many of the same respiratory effects and, in addition, with elevated mortality. People who are especially susceptible to the effects of air pollution include the elderly, the very young, and those with underlying cardiopulmonary disease. Carbon dioxide is the major greenhouse gas, accounting for approximately 80% of emissions with global warming potential. Motor vehicles are also a major source of other greenhouse gases, including methane, nitrogen oxides, and volatile organic compounds. As a result, automobile traffic is a major contributor to global climate change, accounting for approximately 26% of U.S. greenhouse gas emissions.28 During the decade of the 1990s, greenhouse gases from mobile sources increased 18%, primarily a re- flection of more vehicle miles traveled.28 In turn, global climate change threatens human health in a number of ways, including the direct effects of heat, enhanced formation of some air pollutants, and increased prevalence of some infectious diseases. Thus, the link between sprawl and respiratory health is as follows: Sprawl is associated with high levels of driving, driving contributes to air pollution, and air pollution causes morbidity and mortality. In heavily automobile-dependent cities, air pollution can rise to hazardous levels, and driving can account for a majority of the emissions. Although ongoing research is exploring the pathophysiology of air pollution expo- sure and related issues, there are also important re- search questions that revolve around prevention. Technical issues include such challenges as the development of low-emission vehicles and other clean technologies. Policy research needs to identify approaches to land use and transportation that would reduce the need for motor vehicle travel. Behavioral research needs to identify factors that motivate people to choose less-polluting travel behaviors, such as walking, carpooling, or use of more efficient vehicles. Sprawl and car usage have been linked together, which has in turn been linked to pollution. Stone, 06-(Brian, “Urban sprawl and air quality in large U.S. cities,” 689-690)//I.S. A significant relationship between land use and vehicle travel has been widely documented (Transportation Research Board, 1995; Apogee, 1998). Perhaps the most compelling evidence of this relationship is provided by the handful of studies that has examined readily available measures of land use and travel within a large number of cities. In one of the most widely cited of these studies, Newman and Kenworthy (1989) documented a strong and significant negative relationship between population density and per capita fuel usage within 63 large metropolitan regions around the world (R2 1⁄4 0:86).1 Similar significant relationships have been found to exist between population density and vehicle ownership, vehicle trip generation, and vehicle miles traveled (VMT) in American cities and abroad (Pucher and Lefevre, 1996).

### Air pollution causes extinction

Driesen 3 (David, Associate Professor – Syracuse Univeristy Law, 10 Buff. Envt'l. L.J. 25, Fall/Spring, Lexis)

Air pollution can make life unsustainable by harming the ecosystem upon which all life depends and harming the health of both future and present generations. The Rio Declaration articulates six key principles that are relevant to air pollution. These principles can also be understood as goals, because they describe a state of affairs that is worth achieving. Agenda 21, in turn, states a program of action for realizing those goals. Between them, they aid understanding of sustainable development's meaning for air quality. The first principle is that "human beings. . . are entitled to a healthy and productive life in harmony with nature", because they are "at the center of concerns for sustainable development." 3 While the Rio Declaration refers to human health, its reference to life "in harmony with nature" also reflects a concern about the natural environment. 4 Since air pollution damages both human health and the environment, air quality implicates both of these concerns. 5

### Independently sprawl disrupts photosynthesis which causes extinction

Chandler 00 (Lynn, Goddard Space Flight Center, “Urban Sprawl Reduces Annual Photosynthetic Production”, 2-21, http://earthobservatory.nasa.gov/Newsroom/view.php?id=20890)

According to Imhoff's research, urbanization and industrialization have resulted in the development of mega-cities and urban and suburban sprawl. The environment is altered as a result of replacing land cover with roads, housing, and commercial and industrial structures. "Human survival depends on the ability of the landscape to produce food," said Imhoff. "Food production can be fundamentally linked to primary production or photosynthesis. If the capacity of the landscape to carryout photosynthesis is substantially reduced - then the ability of the planet to support human life must also be diminished." Imhoff said data from the mid-1990's from two different satellite systems were combined with land cover maps and census information on population and housing to study the effect of urbanization on photosynthetic production in the United States. Nighttime images from a Department of Defense satellite, which show a dramatic picture of Earth's city lights, were used to determine which areas and how much land have been converted to urban, suburban, or industrial use. Maps showing urban, peri-urban (suburban), and non-urbanized areas were created from the "city-lights" satellite data. "Using a computer, we combined the city-lights satellite data with another type of satellite data that records a measure of 'greenness' or photosynthetic potential of the landscape over the course of an entire year," Imhoff said. "By merging the satellite data we could examine how urbanization affects the potential of the land surface to carryout photosynthesis by looking at the 'greenness' index inside and outside the urbanized areas for the whole continental United States." Results show that urbanization can have a measurable but variable impact on photosynthetic productivity. Annual photosynthetic productivity can be reduced by as much as 20days in areas where housing and commercial land use is very dense. "However, we also found that in resource limited regions, human activity can increase productivity by altering the environment," he said. "For example, this was the case for arid and semi-arid areas where lawn irrigation and planting changed the ecosystems from shrub lands and desert to deciduous forests." A most interesting finding according to Imhoff was that urbanization seems to elongate the growing season, yet still reduces the overall productivity of the land. "Vegetation greens up earlier in the spring and takes longer to senesce in the fall, but has lower peak season productivity than similar nearby areas that are not urbanized," he said. "This could be demonstrating a profound urban heat island effect and have implications in climate change, especially in the northern Hemisphere where urban development is most intense." Analysis of the data also found clear evidence that human beings definitely tend to locate themselves on the most productive land and that those lands are being transformed into less productive types. "The results of this study should increase our awareness of the importance of land use planning especially in the context of sustainable growth and development," Imhoff stated. "Human survival depends on photosynthesis. If urbanization and industrialization continue, the capacity of the landscape to carry out photosynthesis is substantially reduced. "

#### Mass transit focus is reverse causal – ending road focus leads to high density urban planning and more efficient land use patterns

Giuliano 04 (Genevieve, “The Geography of Urban Transportation: Chapter 9, Land Use Impacts of Transportation Investments”, August 6, 2004)//DD

The ability of transportation investments to shape or influence urban structure is also a widely held conviction. Today many urban geographers and policymakers are advocating higher density, mixed-use development as a means for solving urban congestion and environmental problems. "Smart Growth" proponents see transit-based accessibililty as a key element in fostering higher density development patterns (Bernick & Cervero 1997; Newman & Kenworthy, 1998). Smart growth proponents target expressways as a major cause of urban sprawl, meaning low-density, dispersed land use patterns.

## 1ac – plan

### The United States federal government should substantially increase mass transit investment in the United States.

## 1ac – solvency

### Expanding federal investment will expand mass transit – key to leveraging private sector investment and altering current pro-highway federal incentives

**Puentes, 8** - Fellow and Director, Metropolitan Infrastructure Initiative Brookings Institution (Robert, "Strengthening the Ability of Public Transportation to Reduce Our Dependence on Foreign Oil” Congressional Testimony, 9/9, <http://www.brookings.edu/~/media/research/files/testimony/2008/9/09%20transportation%20puentes/0909_transportation_puentes.pdf>)//DH

2. Yet, most metropolitan areas are beset with limited transit and overall travel options In addition to these struggles, the reality is that the availability and accessibility of public transportation across the country's 100 largest metro areas is seriously lacking. Although nearly every metropolitan area enjoys bus service, more than half is concentrated in just 10 large metros like New York, Miami, and Seattle. Heavy rail—also referred to as subways—exist in only 11 metros like Philadelphia and San Francisco. Commuter rail is in only 14 metropolitan areas, primarily in the Northeast and California. And light rail can be found in only 26, like Salt Lake City, Charlotte, and Denver. Therefore, based simply on the amount of transit infrastructure available, 54 of the 100 largest metros do not have any rail transit service and also have relatively weak bus systems. This includes large metros like Orlando and Indianapolis; fast growing metros like Raleigh and Jacksonville, FL and slow growing metros like Youngstown and Rochester, NY. This lack of metropolitan travel options means tens of millions of Americans are tethered to their cars for their daily travel needs. That is, assuming they can afford the high costs of owning a car. As employment has dispersed throughout metropolitan America, lower income workers are finding themselves increasingly isolated and therefore need to spend higher proportions of their income to reach their jobs. Many simply have no choice but to spend $4 for a gallon of gas. Information drawn from the three most recent years of the American Housing Survey shows that only 55 percent of respondents reported that transit is even available to them. More disturbing is that only one-third of respondents in newly-constructed housing reported that transit was present. Transit was much more readily available in center cities (82 percent) than in suburbs (52 percent). 21 One reason the metropolitan transportation system—which should serve as the connective tissue within and between metropolitan areas—is woefully incomplete, is due to flaws in federal policy. Federal transportation policy has long favored highway building over transit investments. 22 Transit projects are evaluated and funded differently than highways. The pot of available federal transit funding is so small that the federal government oversees a competitive process for new transit funding, requiring multiple hypercompetitive bureaucratic reviews that demonstrate a project's cost-effectiveness. Funding is also subject to annual congressional appropriations. Highways do not undergo the same level of scrutiny or funding uncertainty. Also, while highways typically receive up to 80 percent of federal funds (and 90 percent for improvements and maintenance), new transit projects' federal contribution is often less than half of the project cost. 23 Taken together, these biases ensure that state transportation policy pursued under federal law works against many metropolitan areas' efforts to maintain modern and integrated transportation networks 3. The investments that have been made in transit are not having the effect they could At the convergence of these trends is the realization that a substantial market exists for a new form of walkable, mixed-use urban development around transit stops in real estate markets as diverse as suburban New Jersey, Atlanta, Dallas and Chicago. Overall, transit-oriented developments (TODs) are designed to weave transit stations into the fabric of the surrounding community, and to increase the role of transit in the transportation system, and more generally the day-to-day life of the surrounding area. These transit-oriented developments have the potential to lower household transportation expenses, reduce environmental and energy impacts, and provide real alternatives to traffic congestion. Residents who live in transit-oriented housing typically use transit 2 to 5 times more than other commuters in the region. In addition, those households are twice as likely to not own a car at all, and generally own half as many cars as similar households not living in transit rich neighborhoods. 24 Other research shows the benefit of TOD on household budgets. In just eight cities, more than 100,000 federally assisted housing units sheltering more than 300,000 individuals are located in transit rich neighborhoods. Approximately 65,500 of these units are covered by federal rental assistance contracts expiring before the end of 2012. 25 A recent federal transit administration study shows that families that live in TOD neighborhoods spend just 9 percent of their household budget on transportation, compared to 25 percent for those in automobile-dependent suburbs. 26 While the share of spending on housing is equal, the transportation savings are critically important to low income families for whom transportation eats up a disproportionately large share of their annual income. The benefits of TOD could be bolstered by synergies with other policies, notably policies that encourage urban infilling, such as the rejuvenation of brownfields, the development of urban enterprise zones, locating new federal buildings in promising mixed-use, higher-density commercial areas, and the use of alternative mortgage products such as energy efficient and locationally efficient mortgages. The results will give metropolitan areas more flexibility and the nation expanded options for addressing large-scale challenges. However, many of these benefits are not being realized. Although TOD is now starting to be recognized as a viable type of development, there is still a widespread lack of understanding of its nature, its potential, the challenges it faces, and the tools needed to overcome these challenges. For one, there is no universally accepted premise about exactly what TOD should accomplish, nor are there standard benchmarks for success. For example, some developments are labeled TOD by virtue of their proximity to a transit station, regardless of how well they capitalize on that proximity or capture the increase in land value. In addition, there are multiple actors engaged in TOD projects including the transit agency, riders, neighbors, developers, lenders, and government at all levels. They often bring different goals to the table, pursue strategies that work at cross-purposes to each other, and lack unifying policy objectives. 27 In short, TOD requires synergy among many different uses and functions that is difficult to achieve. As a result, TOD almost always involves more complexity, greater uncertainty, and higher costs than other forms of infill development. We need to make TOD easy and non-leveraged investments hard. In other words, we need to flip the system. The federal government can play a critical role in supporting the planning of such projects and corridors, coordinating with private sector developers and lenders, and promoting metropolitan diversity in project selection. Such considerations would catalyze the nearly $75 billion in public dollars invested in rail transit over the past 11 years and go a long way to reducing energy consumption as an explicit national goal.

### Federal action is key to investor predictability – the private sector won’t lend for transit infrastructure without consistent federal support

**Melaniphy, 12** - President & CEO American Public Transportation Association (Michael, Testimony efore The Subcommittee on Transportation, Housing and Urban Development, and Related Agencies of the Senate Committee on Appropriations, 3/21, <http://www.apta.com/gap/testimony/2012/Pages/120319_SenateTestimony.aspx>)

APTA’s highest priority continues to be the enactment of a well-funded, multi-modal surface transportation authorization bill. We recognize the challenge that the absence of an authorization bill places on the Appropriations Committee, yet we must stress the tremendous needs that persist for public transportation agencies throughout the country, and remind Congress that investment in transportation infrastructure puts Americans to work. Failure to invest will force private sector businesses in the transit industry and other industries to lay off employees and to invest overseas, while increased federal investment addresses the need for much-needed capital investments and the growth of the industry. For the nation’s tens of millions of transit riders, any cuts will mean less service, fewer travel options, higher costs and longer commutes. Americans took 10.4 billion trips on public transportation in 2011, a 2.31% increase from 2010 and the second highest annual ridership total since 1957. Only ridership in 2008, when gas rose to more than $4 a gallon, surpassed last year’s ridership, and today gas prices are continuing to rise.

About APTA

APTA is a nonprofit international association of 1,500 public and private member organizations, including transit systems and high-speed, intercity and commuter rail operators; planning, design, construction, and finance firms; product and service providers; academic institutions; transit associations and state departments of transportation.  Overview of FY 2013 Funding Requests First, let me applaud the Senate for its work on passing the Moving Ahead for Progress in the 21st Century Act (MAP-21), with strong bipartisan support.  It has been more than two years since the expiration of SAFETEA-LU, and we are excited to see progress being made towards a new authorization law.  However, in the absence of a finalized piece of legislation, APTA continues to look towards existing law, appropriations, and current budget proposals for appropriations request guidance. It is important that steady and growing investment continue despite economic or fiscal situations, as demand and long-term planning requirements for transportation investment continue as well.  In the Obama Administration’s FY 2013 Budget Proposal, along with their proposed six-year surface transportation authorization proposal, the President requests $10.8 billion for public transportation programs in FY 2013 and would additionally include $50 billion for a one-time state of good repair investment program, spread across highway and transit programs.  The President’s proposal also requests $2.5 billion for high-speed and intercity passenger rail.  APTA applauds the President’s proposed public transportation budget request. While we recognize the growing pressures that are impacting general fund budget authority allocations, APTA urges Congress to resist efforts to make further cuts to general fund components of the federal transit program, such as Capital Investment Grants and research, as these are important elements of federal surface transportation investment. In particular, many in the transit industry were particularly concerned about cuts in FY 2012 to the Transit Cooperative Research Program (TCRP), an important program that produces basic research that is used by transit agencies nationwide to improve efficiency, safety and technical capacity. Finally, we encourage Congress to fund the Rail Safety Technology Grants program (Section 105) of the Rail Safety Improvement Act (RSIA) at a level significantly higher than the $50 million authorized annually through FY 2013, to assist with the implementation of congressionally mandated positive train control systems.  The federal deadline for implementation of positive train control systems is rapidly approaching, and to date, Congress has not provided the necessary funding to support implementation of this important safety program.

The Need for Federal Transit Investment

In previous testimony to this subcommittee, APTA presented the case for increasing federal investment in public transportation.  The U.S. Department of Transportation estimates that a one-time investment $78 billion is needed to bring currently operating transit infrastructure up to a state of good repair, and this does not include annual costs to maintain, expand or operate the existing system.  Research on transit needs shows that capital investment from all sources - federal, state, and local - should be doubled if we are to prepare for future ridership demands.  APTA’s overall funding recommendation continues to be informed by our recommendations for surface transportation authorization and the estimated federal funding growth required to meet at least 50 percent of the $60 billion in annual transit capital needs.  These levels are intended to support a projected doubling of transit ridership over the next 20 years. It is important to stress that the demand for public transportation and the need for federal leadership will not diminish in the months and years ahead.   As gasoline prices continue to increase, Americans are turning to public transportation in record numbers, just as they did in 2008 when gas reached an average price of $4.11 per gallon.   Public transportation is a vital component of the nation’s total transportation infrastructure picture, and with ridership projected to grow, dependable public transportation systems will be vital to the transportation needs of millions of Americans.  While Congress continues to consider how to proceed on a well-funded, multi-modal surface transportation bill, it remains critically important that annual appropriations bills support both current and growing needs.

Federal Transit Administration Programs

Capital Investment Grants (New Starts) – APTA was pleased to see the Senate continue to support the New Starts program in MAP-21.  The New Starts program is the primary source of federal investment in the construction or expansion of heavy rail, light rail, commuter rail, and bus rapid transit projects.  The success of these major, multi-year capital projects requires predictable support by Congress and the FTA.  Congress established Full Funding Grant Agreements (FFGAs) to provide this predictability.  A continued commitment to federal investment will also influence the willingness of private financial markets to finance public transportation projects and it will help ensure that the bond ratings will remain high and interest rates will remain low. We urge the Congress to recognize the importance of long-term, predictable funding for all highway and transit programs, including New Starts.  APTA believes that the New Starts program should grow at the same rate as the rest of the transit program, as it is essential to enhancing our nation’s mobility, accessibility and economic prosperity, while promoting energy conservation and environmental quality.

### Federal leadership on mass transit is vital to create jobs, decrease oil dependence and reduce warming

Mark, 11 - editor of quarterly environmental magazine [Earth Island Journal](http://www.earthisland.org/journal/) (Jason, “Are We There Yet?”, The American Prospect, July 6th) //AC

"[The transportation-reauthorization bill] is arguably the biggest policy lever that can still be pulled by Congress in a way that helps to reduce oil dependence and reduce pollution due to the combustion of oil," says Deron Lovaas, the transportation policy director for the Natural Resources Defense Council (NRDC), one of the environmental organizations lobbying for a bill that invests more heavily in mass transit. Congress last passed a comprehensive transportation-spending bill in 2003. That law expired in 2009, and for the last two years, the Department of Transportation has been running on temporary extensions. The current one expires on September 30. For policy-makers, the crucial question is whether we will continue spending our money on highways and roads or undergo a long-overdue shift to mass transit that creates bikeable, walkable, and more environmentally friendly communities. For its part, the White House has proposed spending $556 billion over six years on transportation -- almost double what the 2003 legislation appropriated. The new funds will be used to create a "National Infrastructure Bank" to pay for bridge and road repairs, and the bill also provides $119 billion for mass-transit projects. President Barack Obama's proposal makes headway in correcting some of the perversities of transportation policy that have long put mass transit at a disadvantage. The federal government now pays up to 80 percent of the cost of highway construction (state and local governments cover the rest), but only 50 percent of the cost on average for mass transit. Competitive-grant programs -- modeled after the Department of Education's "Race to the Top" system -- would help redirect funds from highways to mass transit. The Federal Railroad Administration would get an extra $8 billion for high-speed rail projects. Republicans -- especially anti-government radicals in the House -- are likely to oppose such an increase. But that doesn't mean the legislation is dead. Transportation has historically been an area of bipartisan collaboration for the obvious reason that transportation spending is one of the surest ways for legislators to draw federal dollars to their districts. Barbara Boxer, a Democrat and chair of the of Senate's Environment and Public Works Committee, and ranking member James Inhofe, a Republican from Oklahoma, couldn't be more at odds when it comes to climate change and oil dependence. Both of them, however, have an interest in delivering federal infrastructure projects to their constituents. For progressives, the trick will be ensuring that a greater proportion of those projects support mass transit instead of the usual highway spending. Environmentalists' interest in the transportation bill is clear. Transportation accounts for more than two-thirds of the nation's oil use and about 25 percent of its carbon-dioxide emissions. Greens' sound bites about breaking our "oil addiction" and "dumping the pump" are useful when preaching to the choir. But the fact is that Americans will be hooked on oil until they have workable alternatives to the automobile. Investing in urban light rail and regional high-speed rail networks; boosting funds for bus systems; constructing bike lanes; and focusing on repairing existing roads instead of building news ones are a first step in changing, at a fundamental level, how we move around. If we want Americans to ditch their cars, that will require giving them choices, and that means creating a mass-transit system that makes the car -- and not the bus -- look like a pain. NRDC's Lovaas estimates that the White House plan would save the United States about 1 million barrels of oil a day by 2030. That would reduce daily greenhouse-gas emission by more than 300,000 metric tons. Improving the transit system would, in turn, open up new opportunities to create denser "new urbanist" communities -- ones that are pedestrian-friendly, with a vibrant mix of retail and housing -- that will further weaken our cars' grip on us. Reducing the reliance on our cars, of course, also serves U.S. national-security interests. "Building walkable, urban places is the number one way we are going to have energy security and not buy as much oil from nasty people and to address climate change," says Christopher Leinberger, a developer who is a visiting fellow at the Brookings Institution. Some labor unions are joining with environmentalists in pushing for a transportation bill that prioritizes transit and road repair over new road construction. According to the Laborers' International Union, a six-year transportation bill that invests substantially in mass transit could create up to 8 million jobs nationwide. Trade unionists also point out that repairing the country's decrepit roads and bridges (the American Society of Civil Engineers rates the country's infrastructure as a D) is essential for sustaining the United States' long-term economic competitiveness. "These are the things that America has to do to maintain its leadership in the 21st century," says David Miller, a spokesperson for the Laborers'. "You look at China, they are spending 10 percent of their GDP on bullet trains and super highways. This is not something we can fall behind on."

# \*\*Inherency\*\*

## Increase Key

### Additional federal investment is necessary to meet future public transportation capital needs

APTA, 12’ (American Public Transportation Association, Potential Impact of Gasoline Price Increases on US Public Transportation Ridership, 2011-2012, March 14 2012 www.apta.com)//AWV

Meeting the additional demands for public transportation service in the short-term as well as the continuing long-term, will require more public transportation choices and an investment in new capacity. A comprehensive 2008 Cambridge Systematics report, “State and National Public Transportation Needs Analysis,” concluded that $59.2 billion annually is needed to address future public transportation capital needs.39 And certain segments of the population will have special needs, as is documented in “Funding the Public Transportation Needs of an Aging Population” which: a) identifies the range of actions that will be needed to expand mobility options for older people, including accessible public transportation services; b) quantifies the demand for these public transportation services; and c) estimates the funding that will be needed to provide them.40 Furthermore, Generation Y, those between 20 and 30, prefer areas that are transit rich. Capturing these preferences will be critical to economic vitality through 2050.41 We must also be prepared to address immediate capacity issues. In 2008, 85 percent of transit agencies reported experiencing capacity constraints on parts of their systems. Of those agencies, 63 percent experienced capacity constraints during peak periods, 49 percent experienced capacity constraints on short segments of high ridership routes, 13 percent on numerous routes, and 8 percent experienced during off-peak hours.42 Over one-half of the systems operated service that was crowded beyond their local service standards, despite 48 percent of agencies adding service. Thirty-nine percent reported that overcrowded conditions were such that they were turning away passengers. Little has been done to correct this situation. Federal funding for public transit has been nearly stable since 2009. In 2011, 71 percent of transit agencies reported flat or decreased local government financial assistance and 83 percent reported flat or decreased state financial assistance.43 During 2011, 54 percent of larger systems and 30 percent of other systems implemented or approved for implementation a transfer of funds from capital to operations to meet their budget needs. Fifty-eight percent of large systems and 38 percent of other systems implemented or approved implementation of the use of reserves to meet budget needs. These are not long-term strategies that prepare agencies to meet ridership demands resulting from increased motor gasoline prices and other forces that are leading Americans to chose public transportation as their travel mode. Congress is currently considering long-term surface transportation authorization bills. The new authorization must recognize that immediate and long-term transportation options are critical, and should provide necessary investments to add immediate capacity to transit to provide greater financial security to Americans.

### Increased investment is key to revitalize public transit

Fitzgerald et.al. ’10- professor and director of the graduate program in Law, Policy and Society and a Senior Research Fellow at the Kitty and Michael Kukakis Center for Urban and Regional Policy at Northeastern University (Joan, Granquist, Khatiwada, McLaughlin, Renner, “Reviving the U.S. Rail and Transit Industry: Investments and Job Creation”, WorldWatch Institute)//AWV

The United States needs to dramatically increase its investment in public transit infrastructure in order to build a system that boosts ridership and thereby helps to reduce congestion in metropolitan areas, lower greenhouse gas emissions, and create much-needed manufacturing jobs. The current level of federal spending—the so-called “Business-as-Usual” scenario—is unlikely to get us there. However, two other investment scenarios over and above current spending can be useful to guide estimates of potential job creation in rail and bus manufacturing. These are: a scenario of increased domestic investment, and a scenario of inter- national competitiveness.

## Ridership Increasing

### Metro areas are increasing in population and economic importance, but mass transit not up to the task

BAF, 2011 Transportation Infrastructure Report 2011 Building America’s Future Falling Apart and Falling

Behind Building America’s Future Educational Fund Building America’s Future Educational Fund (BAF Ed Fund) is a bipartisan coalition of elected officials dedicated to bringing about a new era of U.S. investment in infrastructure www.bafuture.com

And it’s not just business that has changed faster than our infrastructure. America’s transportation network is not set up to accommodate the needs of our 21st-century lives. Passenger travel is expected to rise as the economy recovers and our population grows, with total vehicle-miles traveled likely to increase by 80% in the next 30 years.11 An additional one billion commercial air passengers are expected to fly each year by 2015, a 36% increase from 2006.12 The vast majority of this increased traffic will occur in the urban centers and surrounding suburbs where the U.S. population—and its economic activity—is overwhelmingly concentrated. The 100 largest U.S. metropolitan regions house almost two-thirds of the population and generate nearly three-quarters of our GDP. In 47 states—even those traditionally considered ‘rural,’ like Nebraska, Kansas, and Iowa—the majority of GDP is generated in metropolitan areas.13 And over the next 20 years, 94% of the nation’s economic growth will occur in metropolitan areas.14 Metropolitan areas are already home to the most congested highways, the oldest roads and bridges, and the most overburdened transit systems—and the strains on the transportation system are only bound to get worse. By 2035, an estimated 70 million more people will live in U.S. metropolitan regions. More people bring more commerce and greater transportation demands. Every American accounts for about 40 tons of freight to be hauled each year—so an additional 2.8 billion tons of freight will be moved to and from major metropolitan regions in 2035.15 Our transportation system is simply not up to the task. Our transportation system has also not adapted to the energy realities of the 21st century. Air pollution and carbon emissions—the majority of which in the United States are generated by transportation—threaten the environment. Reliance on foreign oil has imperiled our national security. And fluctuating gas prices are making Americans’ car-dependent lifestyles simply unaffordable. We are increasingly aware that for all these reasons a trans-portation system largely run on gasoline is environmentally and economically unsustainable. In a global economy, businesses need access to manufacturing plants and distribution centers, to international gateways like ports and airports, and to consumers in both metropolitan and rural regions. People need reliable and efficient ways to commute to work and go about their daily lives. We need a modern infrastructure system if we are to meet both needs. And if we don’t create a transportation system that functions reliably and cost-effectively in the 21st century, companies operating in this globalized world can simply choose to do their business elsewhere—taking U.S. jobs and revenues with them.

## Cuts Now

### USFG moving to cut mass transit investments now

Plumer, 12 (Brad, “Five transportation fights to watch in Congress”, The Washington Post, 2-2-12, http://www.washingtonpost.com/blogs/ezra-klein/post/six-highway-bill-fights-to-watch-in-congress/2012/02/02/gIQALawrkQ\_blog.html)//AWV

Mass transit seemed to fare okay in the first draft of the House bill. Historically, transportation spending has been split, with about 80 percent going toward roads and 20 percent toward mass transit. The House bill maintains those shares. Still, the bill does cut Amtrak’s budget by 25 percent and also eliminates funds for the Transportation Department’s TIGER grants, which have awarded some $2.6 billion in competitive grants for 172 projects that have a “significant impact” on a region, like inter-city rail or multi-mzodal access to airports. Even more significantly, some Republicans are planning to introduce an amendment tomorrow that would divert all gas-tax revenue away from mass transit.

### Federal mass transit spending decreasing – the House just gutted mass transit funding

**Building America’s Future, 12** – a bipartisan coalition of elected officials dedicated to bringing about a new era of U.S. investment in infrastructure that enhances our nation’s prosperity and quality of life (“BAF Strongly Opposes House Effort to Slash Mass Transit Funding,” 2/3, <http://www.bafuture.org/news/press-release/baf-strongly-opposes-house-effort-slash-mass-transit-funding>)

 The U.S. House Ways and Means Committee overturned 30 years of bipartisan policy today by removing the certainty of funding for our public transit systems. This change will make it impossible for transit systems to plan for the future and serve their ever growing constituencies.  In response, Building America’s Future co-chairs Mayor Michael Bloomberg (I-NYC) and former Governor Ed Rendell (D-PA) issued the following:  Mayor Bloomberg: "The bill passed by the House Ways and Means Committee today illustrates once again how dysfunctional Congress has become. By removing the gas tax as the method of funding mass transit, House leadership is threatening the future of a program, in place since the Reagan administration that is actually working well. The lifeblood of New York City is our buses, subways and commuter rails. Eight million people take mass transit every day in New York which helps to cut traffic, reduce pollution, spur our economy and improve public health. The bill passed today ignores the needs of cities across the country by relegating transit to an "alternative" transportation with an uncertain funding stream. Our country is being left behind as the world races ahead with 21st century infrastructure investments, this bill would take us even further from our competitors.” Former Governor Rendell: “Transit has had a vital role to play in our nation’s transportation system. At a time when our roads are choking under growing traffic congestion, it makes no sense to take away a dedicated source of funding and force public transportation to compete against education and other important programs for increasingly scarce dollars. A transportation bill without transit is no transportation bill at all. The nation’s millions of transit riders deserve better than this.”

## Access Low Now

### Mass transit limited now – Only half of the US has access to mass transit

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The lack of vision, lack of funding, and lack of accountability have left every mode of transportation in the United States—highways and railroads, airports and seaports— stuck in the last century and ill-equipped for the demands of a fast-paced global economy. Only 30 of the largest 100 metropolitan areas have light rail or subway systems. 9 Only half of Americans have access to public transit. 10 With few mobility options around cities and metropolitan regions, the costs of traffic seem unavoidable.

## Road Focus Now

### Federal government spending is misguided, hasn’t kept up with changes and privileges highways over urban mass transit

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Government transportation spending, at all levels of government, is overwhelmingly directed toward roads. Since 1956, the largest portion of public funding for transpor¬tation infrastructure was dedicated to building and maintaining highways.1 Although a small portion (15%) of the federal gas tax is dedicated to a fund for mass transit, the vast majority of federal gas tax revenue is spent on highways. The same is true for state gas taxes: 30 states are actually constitutionally or statutorily required to spend 100% of their gas tax revenues on roads. The disproportionate channeling of transportation dollars toward highways has encouraged more and more construction of roads, even as the demand rises for other forms of transportation.

### Status quo focused on highways

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In contrast to its highway funding programs, USDOT encourages greater state contribu¬tions to transit projects. Since the majority of states are constitutionally or statutorily prohibited from using state gas taxes for public transit projects, USDOT’s funding requirements are a tough imposition on states. Unwilling or unable to match federal contributions with general revenue funds, states may be more inclined to seek funding for more road projects than for new transit projects. The problem is that we cannot build enough roads to meet our growing transportation needs. We’ve built enough new roads between 1988 and 2008—an additional 131,723 miles of roads—to circle the globe more than five times.3 But despite all of the resources expended on new highways, we haven’t fixed the roads and bridges that are falling apart, and we haven’t solved our congestion problems.

Merely expanding our already extensive highway system is not a plan for the future. We need a new national vision for building and maintaining an efficient transportation that meets the needs of a 21st-century economy.

## A2 ARRA

### ARRA was a step in the right direction but it wasn’t enough

Fitzgerald et.al. ’10- professor and director of the graduate program in Law, Policy and Society and a Senior Research Fellow at the Kitty and Michael Kukakis Center for Urban and Regional Policy at Northeastern University (Joan, Granquist, Khatiwada, McLaughlin, Renner, “Reviving the U.S. Rail and Transit Industry: Investments and Job Creation”, WorldWatch Institute)//AWV

The United States is finally getting serious about public transit, but so far the level of investment pales in comparison to many European and Asian nations.9 The American Recovery and Reinvestment Act of 2009 (ARRA) represents a significant one-time boost to U.S. public transportation funding. For transit and intercity rail programs combined, the act provides a total of $17.7 billion, out of $48.1 billion overall for transportation.10 [IT CONTINUES…] As welcome as ARRA’s funding for high-speed rail is, it provides only a down payment for enormous pent-up demand. Pre-applications filed by 40 states and the District of Columbia for HSR funding under ARRA totaled $102 billion for 278 proposed projects, out- stripping the available sum by a factor of 12. Even after the states subsequently narrowed their requests to $57 billion in the final round of applications, this was still seven times the amount of money available.17 Beyond ARRA, it remains unclear how much in regular annual appropriations will be made available in coming years, and whether the crunch in transit agencies’ operating funds can be relieved. On the capital investment side, available funding vehicles include the Transportation Infrastructure Finance and Innovation Act (TIFIA), the Transportation Innovation Generating Economic Recovery program (TIGER), and the Transportation Investments Generating Greenhouse Gas Emissions Reductions program (TIGGER). Yet these measures are not sufficient to ensure sustained growth in the U.S. bus and rail industries. Passing new comprehensive surface transportation legislation and laying out a strong long-term vision will be essential for creating more manufacturing jobs in these industries.

# \*\*Economy Advantage\*\*

## Economy Uniqueness

### US transportation infrastructure can’t keep pace with rising demand – will cause business flight

**Building America’s Future, 11** – a bipartisan coalition of elected officials dedicated to bringing about a new era of U.S. investment in infrastructure that enhances our nation’s prosperity and quality of life. (“Falling Apart and Falling Behind”, Transportation Infrastructure Report, <http://www.bafuture.com/sites/default/files/Report_0.pdf>)

And it’s not just business that has changed faster than our infrastructure. America’s transportation network is not set up to accommodate the needs of our 21st-century lives. Passenger travel is expected to rise as the economy recovers and our population grows, with total vehicle-miles traveled likely to increase by 80% in the next 30 years. 11 An additional one billion commercial air passengers are expected to fly each year by 2015, a 36% increase from 2006. 12 The vast majority of this increased traffic will occur in the urban centers and surrounding suburbs where the U.S. population—and its economic activity—is overwhelmingly concentrated. The 100 largest U.S. metropolitan regions house almost two-thirds of the population and generate nearly threequarters of our GDP. In 47 states—even those traditionally considered ‘rural,’ like Nebraska, Kansas, and Iowa—the majority of GDP is generated in metropolitan areas. 13 And over the next 20 years, 94% of the nation’s economic growth will occur in metropolitan areas. 14 Metropolitan areas are already home to the most congested highways, the oldest roads and bridges, and the most overburdened transit systems—and the strains on the transportation system are only bound to get worse. By 2035, an estimated 70 million more people will live in U.S. metropolitan regions. More people bring more commerce and greater transportation demands. Every American accounts for about 40 tons of freight to be hauled each year—so an additional 2.8 billion tons of freight will be moved to and from major metropolitan regions in 2035. 15 Our transportation system is simply not up to the task. Our transportation system has also not adapted to the energy realities of the 21st century. Air pollution and carbon emissions—the majority of which in the United States are generated by transportation—threaten the environment. Reliance on foreign oil has imperiled our national security. And fluctuating gas prices are making Americans’ car-dependent lifestyles simply unaffordable. We are increasingly aware that for all these reasons a transportation system largely run on gasoline is environmentally and economically unsustainable. In a global economy, businesses need access to manufacturing plants and distribution centers, to international gateways like ports and airports, and to consumers in both metropolitan and rural regions. People need reliable and efficient ways to commute to work and go about their daily lives. We need a modern infrastructure system if we are to meet both needs. And if we don’t create a transportation system that functions reliably and cost-effectively in the 21st century, companies operating in this globalized world can simply choose to do their business elsewhere—taking U.S. jobs and revenues with them.

## Economy – Competitiveness Links

### Public transit is key to local and national economies – greater mobility and increased productivity

Weisbroad and Reno 9 (Glen, researcher at the Economic Development Research Group, Inc. and Arlee, of Cambridge Systematics, Inc. “Economic Impact of Public Transportation Investment,” http://www.apta.com/resources/reportsandpublications/Documents/economic\_impact\_of\_public\_transportation\_investment.pdf)

In addition to the cost savings described above, a shift from auto to public transportation would facilitate increased productivity and competitiveness within cities (as discussed in Section 4.3). This benefit stems from two factors: (1) reduction in wage premiums paid to attract workers to more-congested areas with higher travel times and costs, and (2) enhancement of access to labor and customer markets, which bring scale and “agglomeration” economies. The “wage premium,” originally discussed in Section 4.2, is a pass-through effect in which employers in highly congested areas absorb some of excess costs of worker commuting (rather than having households bear the full cost) in order to attract and maintain quality workers. Congestion reduction diminishes the need for businesses to pay such a premium, and the cost savings to business is effectively an increase in business productivity (which is defined as the ratio of output/cost ratio for business operations). This impact is assumed to apply to roughly 30% of the congestion cost savings identified in Section 4.5 The effect of “agglomeration economies” comes from the fact that widely available public transportation service can facilitate higher levels of metropolitan population and employment density, which, in turn can allow a metropolitan area’s economy to become more productive. The reasons for this productivity gain are that: • some businesses will have access to a larger and more diverse labor market, providing them with a better capacity to find workers with the desired skills, thereby enhancing labor productivity; • some trade and service sector establishments will be able to access broader customer bases, allowing them to more efficiently arrange locations and resources to serve customers; • specialized knowledge spreads more quickly through social networks, enhancing human capital and labor productivity in technology and skill industries that benefit from such interaction; and • greater diversity in economic activity and labor force skills breeds creativity and innovation. These benefits, while occurring at a metropolitan level, can also translate into greater national level productivity if they take place across a broad spectrum of metropolitan areas. In the context of the present study, the magnitude of this effect is estimated by first by considering the extent to which higher public transportation usage stimulates higher metropolitan density, and then by assessing the extent to which higher effective density translates into economic productivity. Many studies have shown that adding public transportation capacity facilitates higher density development – particularly near public transportation stations, but also in downtown centers (through reduced need for parking). At the metropolitan level, public transportation ridership (as % mode capture) correlates with total metropolitan density such that a 1% change in public transportation’s mode capture translates to a change of roughly 650 people per square mile over the entire city. However, to be conservative, the rest of this section uses the much lower assumption that a 1% change in public transportation mode capture increases metropolitan density by 100 people per square mile. This lower assumption also allows for the fact that correlation runs both ways – i.e., that although public transportation facilitates higher density, higher density requires more public transportation).

### Government investment in mass transit is key to US economic competitiveness

Fitzgerald et.al. ’10- professor and director of the graduate program in Law, Policy and Society and a Senior Research Fellow at the Kitty and Michael Kukakis Center for Urban and Regional Policy at Northeastern University (Joan, Granquist, Khatiwada, McLaughlin, Renner, “Reviving the U.S. Rail and Transit Industry: Investments and Job Creation”, WorldWatch Institute)//AWV

Substantial and sustained investment is needed to support safe transit and manufacturing jobs in the United States. Although bus and railcar manufacturers have welcomed the uptick in orders created by economic stimulus funds, company representatives emphasize that short-term funding will not maintain enough demand to support the industry.24 The same is true for suppliers. The Duke University analysis notes that although bus manufacturers depend heavily on suppliers of key components such as engines and transmissions, the bus industry is of low importance to many suppliers because most of their orders come from other industries. If the increased demand from bus manufacturers is viewed as temporary, suppliers will not increase their capacity to meet it. Similar patterns are evident in the rail industry supply chain. Another challenge for producers of both buses and passenger railcars is that most transit agencies specify customized features on their orders. Customization can increase production costs 20–30 percent, as it requires more engineering work and changes on the assembly line. In both the bus and rail industries, component suppliers typically solicit transit agencies directly to promote their products, and the agencies then request the specific components. This highly customized ordering process results in more expense per unit at all procurement levels; more time needed for funding agencies to review proposals and approve funding; more time needed for manufacturers to produce the items; and increased delivery times. If a transit agency requests an item (such as an electronic component) that is not a proven technology, warranty costs increase as well. The challenges of both over-customization and the unpredictability of demand can be addressed in the context of the U.S. transportation bill now up for review. What the United States needs to decide is whether it has the political will to follow the path of other rail and transit leaders—countries that have realized the relationship between investment in infra- structure, manufacturing, and leading the market in the associated technologies. The failure to make this investment has put the United States behind. But it is not too late to revitalize the nation’s rail and bus manufacturing capacity. If the United States were to dramatically increase its investment in public transit, this would not only spur greater production of rail- cars and buses, but it would also lead to significant job creation in these industries. It is high time for the U.S. government to consider the critical links between manufacturing and transportation nationwide.

### Increased investment necessary to restore US economic competitiveness

Fitzgerald et.al. ’10- professor and director of the graduate program in Law, Policy and Society and a Senior Research Fellow at the Kitty and Michael Kukakis Center for Urban and Regional Policy at Northeastern University (Joan, Granquist, Khatiwada, McLaughlin, Renner, “Reviving the U.S. Rail and Transit Industry: Investments and Job Creation”, WorldWatch Institute)//AWV

The third scenario is highly ambitious and is intended to close the large gap in rail and transit manufacturing between the United States and countries in Europe and Asia that are more competitive internationally in these two industries.22 European countries demonstrate what well-developed rail and transit systems look like and offer important lessons; however, they may not offer the best comparative experience for the United States, since the main challenge for these countries is to maintain mature systems, keep up with ridership, and upgrade where needed. The United States, by contrast, needs to undertake a major expansion of its rail and transit systems. China’s experience therefore comes closer to the U.S. situation. Until recently, China’s rail and transit systems were seriously outdated and overstretched. But the country has committed to a major investment program. China is also more similar to the United States with respect to geographic size and thus the travel distances to be bridged. TheTransportPolitic blogger Yonah Freemark has commented that, “China’s example...demonstrates how an efficient and useful high-speed rail system can be implemented in a very large country such as the United States.”23

## Economy – Jobs Links

### Mass transit investment provides thousands of jobs and boosts urban economies

APTA 12, (American Public Transportation Association, March “Economic Recovery: Promoting Growth”, http://www.apta.com/resources/reportsandpublications/Documents/Economic-Recovery-APTA-White-Paper.pdf)

Throughout the country, public transportation systems provide jobs with good wages that stay in local communities. When those employees make purchases, they help boost their local economies, providing benefits beyond the value of their wages—they buy goods and services that fund more jobs. Noted economists have calculated that for every $1 billion invested in public transportation, more than 36,000 jobs are supported. Investment in public transportation also flows to private-sector transit industry manufacturers and their suppliers. These firms employ many people, which further multiplies the effects of public transportation dollars when these individuals spend their wages in their communities. Approximately 74 percent of government funding for public transportation goes toward supporting hundreds of thousands of private sector jobs. It is estimated that every $1billion of public transportation capital investment creates 24,000 jobs. Every$1 billion spent on public transportation operations supports or creates more than 41,000 jobs. In 2010, the industry spent $37.2 billion on operating costs and $17.9 billion on capital costs, which created and supported nearly 2million jobs.1Estimates of the number of jobs created by public transportation include three levels supported by public transportation spending. The highest level is jobs created directly at public transit systems or by operators and manufacturers of transit equipment, followed by indirect jobs supported by the purchase of products and services by public transportation businesses. The third level takes in other indirect jobs created when public transportation workers spend their earnings in the greater economy. In this way, dollars from public transportation spending effectively travel to many different industries across the country.

### Investment in mass transit would create hundreds of thousands of jobs in the transit industry and spillover to other industries

Fitzgerald et.al. ’10- professor and director of the graduate program in Law, Policy and Society and a Senior Research Fellow at the Kitty and Michael Kukakis Center for Urban and Regional Policy at Northeastern University (Joan, Granquist, Khatiwada, McLaughlin, Renner, “Reviving the U.S. Rail and Transit Industry: Investments and Job Creation”, WorldWatch Institute)//AWV

A substantial increase in U.S. investment in new passenger rail vehicles would primarily affect the railroad rolling stock manufacturing industry (NAICS 3365). Table 11 illustrates the direct and indirect impacts on industry employment under the three investment scenarios described above, using two different estimates of employment.2 The estimate “with current domestic content” does not count the jobs used to make inputs that are imported into the United States. The estimate “with full domestic content,” in contrast, shows the jobs that would be needed to produce all inputs domestically in the United States. Under the Business-as-Usual scenario of $2.7 billion in expenditures, the “current domestic content” estimate yields 21,098 jobs. A slight majority (56 percent) of the jobs are created directly in the railroad rolling stock industry, and another 9,217 are indirect jobs in other industries. About 70 percent of all jobs created by this investment would be in manufacturing. At the two higher levels of investment, the employment estimates increase substantially. The Increased Domestic Investment scenario would support nearly 56,260 jobs, and the International Competitiveness scenario would support more than 190,600 jobs. These estimates would increase even further if the industry were 100-percent domestically produced. Almost all of the additional jobs gained under a 100-percent domestic production scenario would be in firms that supply the railroad rolling stock manufacturing industry. Under the two higher investment scenarios, the United States would gain an additional 10,221 and 34,636 jobs, respectively, if all inputs were domestically produced. The U.S. Bureau of Labor Statistics (BLS) provides an industry-by-industry breakdown of the indirect jobs that would be created from increased sales in the rail- road rolling stock manufacturing industry. Based on these data, Table 12 illustrates the 10 manufacturing industries that would gain the largest number of jobs as a result of increased U.S. expenditures on railcars.3 These 10 industries account for 68 percent of the total direct and indirect jobs supported by each of the three investment scenarios. Other non-manufacturing industries and firms that would gain a substantive share of indirect jobs created are wholesale trade, employment services firms, and professional and technical (engineering, law, and consulting) firms. Since BLS data do not provide estimates for induced job creation, the figures in Table 12 understate the total economic benefit and job creation impact from increased purchases of rail vehicles. The underestimation can be very substantial. Economic models suggest that the industry’s effect on induced job creation is about 60 percent larger than the combined effect on direct and indirect job creation.\* Thus, the total employment impact—direct, indirect, and induced— per year of investment would range from 33,757 jobs at current levels of spending (the Business-as-Usual scenario), to 90,016 jobs under the Increased Domes- tic Investment scenario, to a high of 305,056 jobs under the International Competitiveness scenario. Where would the workers in the U.S. railroad rolling stock manufacturing industry be located? Currently, the distribution of workers varies widely by geographic division. Due to high levels of employment in New York and Pennsylvania, the Mid-Atlantic region had the highest number of workers in 2006–08, followed by the East North Central (or industrial Midwest), West South Central, and South Atlantic divisions.4 (See Table 13.)

### Investment in mass transit provides the most jobs per dollar spent.

Phillips 9 -transportation policy expert for the Environmental Defense Fund (“A stimulating investment - mass transit”, San Francisco Chronicle, November 22, 2009 http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2009/11/21/IN2H1ALLFM.DTL#ixzz1ySjUopPk)

Whether such a bill can be put to the best use for jobs depends on whether Congress and the Obama administration invest in the right type of transportation infrastructure. One good approach would be to focus on repairing existing infrastructure: fill the potholes and refurbish old bridges that cost Americans time, money and wear and tear on vehicles. However, the best approach would be to direct new investment in public mass transit because it creates the most jobs per dollar spent, according to the Surface Transportation Policy Project. It also responds to the growing demand for good transit that began with rising gasoline prices in 2008. In addition, mass transit investment also cuts air and global warming pollution. In fact, a report by the Duke University Center on Globalization, Governance & Competitiveness shows that increasing investment in conventional and green transit bus systems would cut greenhouse gas pollution around the country. It would also create high-quality, long-term manufacturing jobs in nearly every state in the eastern United States as well as Northern California.

### Mass transit investments would create jobs

Phillips 9 -transportation policy expert for the Environmental Defense Fund (“A stimulating investment - mass transit”, San Francisco Chronicle, November 22, 2009 http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2009/11/21/IN2H1ALLFM.DTL#ixzz1ySjUopPk)

In the past two weeks, House Speaker Nancy Pelosi, D-San Francisco, and Pennsylvania Gov. Ed Rendell separately have suggested that reauthorizing a transportation bill soon could be the best way to create jobs. Rep. James Oberstar, D-Minn., chairman of the House Transportation and Infrastructure Committee, has been pushing since last summer for a new federal surface transportation bill that would invest nearly $500 billion in transportation infrastructure. Whether such a bill can be put to the best use for jobs depends on whether Congress and the Obama administration invest in the right type of transportation infrastructure. One good approach would be to focus on repairing existing infrastructure: fill the potholes and refurbish old bridges that cost Americans time, money and wear and tear on vehicles. However, the best approach would be to direct new investment in public mass transit because it creates the most jobs per dollar spent, according to the Surface Transportation Policy Project. It also responds to the growing demand for good transit that began with rising gasoline prices in 2008. In addition, mass transit investment also cuts air and global warming pollution.

### Access to Mass transit increases jobs outside of transportation

Carrion ’10- broadband policy specialist at the Progressive States Network, previously worked for Advanced Communications and Policy Institute (Fabiola, “Public Transit Best Vehicle for Economic Recovery” Progressive States Network)

Transit oriented investment is a comprehensive economic solution that serves as a catalyst for further community development. For example, New Jersey’s Urban Transit Hub Tax Credit Act has attracted businesses and jobs to transit-accessible locations in Newark and Trenton. Also in Denver, Colorado, the light rail transit system has proven to increase business development near rail stations. Critically, public transit development also contributes to the preservation of jobs outside of the transportation sector. Thanks to a more reliable mode of transportation, more commuters, such as non-drivers, can access jobs they would not be able to get to without public transit. Further, public transit increases community livability and improves the health of individuals who cannot go to schools, hospitals, or other needed services by their own means. The economic benefits from public transit more than repay cost investments. For instance, rail transit services are estimated to provide $19.4 billion in annual congestion cost savings, $8.0 billion in roadway cost savings, $12.1 billion in parking cost savings, $22.6 billion in consumer cost savings, and $5.6 billion in traffic accident cost savings. Rail transit also tends to provide economic development benefits, increasing business activity, and tax revenues. The Public Supports Public Transit: Over half of [Americans polled said](http://www.usmayors.org/76thWinterMeeting/release_zogby2_012308.pdf) that they would take mass transit if it were more easily accessible from their homes or where they work. Two in three said the rising price of gasoline makes them more likely to consider using mass transit and 44% would be willing to pay higher taxes if they knew all of the added taxes were being sent on improving or creating public transportation where they live. Ultimately, the public recognizes that public transit is not only an investment for those who work, operate, and maintain the public transit system, but a much needed support for the businesses that surround these areas and for riders who need to commute to their jobs. Given this public support and the disproportionate economic gains, public transit should be receiving more than the one sixth of the federal money apportioned toward highway construction that it currently receives.

### Ensuring access to employment opportunities and job creation are critical to sustaining an economic recovery

Tomer 12- (Adie, Elizabeth Kneebone, Robert Puentes, and Alan Berube, “Missed Opportunity: Transit and Jobs in Metropolitan America”, Brookings Institute, May 2012 http://www.brookings.edu/~/media/research/files/reports/2011/5/12%20jobs%20and%20transit/0512\_jobs\_transit.pdf)

In the post-recession economy, ensuring access to employment should be an explicit focus for policymakers. Private sector employers already make location decisions based on a number of factors including access to labor pools and proximity to consumers and suppliers. Along the way, they consider the role of the metropolitan highway and transit networks in connecting them to workers and markets. Now, however, severe budget constraints and rapidly fluctuating energy prices and transportation costs complicate the route to broader economic recovery. In the short run, transit agencies face real threats of service cuts, delayed investments in both new capital projects and vehicles, and deferred maintenance. Revenue declines are widespread and many agencies are already planning fare increases and operating cuts to close yawning budget gaps. In some cases, these go along with numerous other cuts made in recent years. Only one of 64 transit agencies surveyed recently reported that it has not had to reduce service or increase fares in response to larger fiscal challenges.66 Belt tightening at the state level further exacerbates these agency-level challenges. In Wisconsin, for example, the state’s two major metro areas, Milwaukee and Madison, rank 14thand 15th on our combined score of transit coverage and job accessibility. The average neighborhood in these metros can reach 49 and 58 percent of the metro areas’ jobs, respectively, via transit. Both metro areas rank in the top 20 nationwide for the share of their commuters using public transportation.67 Yet the program cuts proposed statewide are expected to lead to increased fares and the reduction or elimination of certain transit services in these places. One analysis shows that the funding reductions to the Milwaukee County system alone would make 25,000 currently served jobs “in accessible by transit” and would be directly burdensome to low-income workers. This would be on top of the estimated 40,000 jobs made inaccessible in that metro due to transit cuts from 2001 to 2007.68Similar debates are ongoing in metro areas across the country. Given the nation’s economic turmoil, states, metro areas, and local governments will have to make hard choices about their budgets. In several cases, reductions in transit funding are probably inevitable, particularly as federal stimulus dollars run out. But these decisions must be made intelligently. Across-the-board cuts are politically appealing because they spread the pain, but they lack a strategic sense of which existing investments are most important for enhancing job access. As states and regions strive to put Americans back to work, policymakers should be careful not to sever the transportation lifelines between workers and jobs. At the same time, transit agencies and commuters alike are struggling with the budgetary impacts of higher gasoline prices. While most rail service is electrically powered (99 percent of total consumption),America’s bus fleet still largely depends on diesel fuel for its operations (71 percent).69 When gasoline prices spike, as they did in 2008, the effect on transit’s bottom line is significant. In that year, fuel and power made up, on average, about 11 percent of transit agencies’ operating budgets—up from just 6 percent in 2004.70 The U.S. Energy Information Administration predicts average retail gasoline prices of nearly $4 per gallon for summer 2011, further squeezing transit budgets.71

## Economy – Manufacturing Links

### Mass transit helps the US economy by providing jobs, generating tax revenue, expanding exports, reducing trade deficits, and increasing manufacturing

Feldman 9 (Jonathan Michael, “From Mass Transit to New Manufacturing”, American Prospect; April 2009, Vol. 20 Issue 3, pA12-A16, 5p)

A new industrial-policy initiative for domestic production of masstransit products could help the United States overcome multiple economic challenges. It could provide highwage jobs, generate tax revenue, expand exports, and reduce trade deficits. This mass-transit-production strategy requires a new kind of industrial and planning policy to overcome the limits of traditional public works. It’s not enough to lay more tracks and upgrade rail facilities. The government has to support domestic production of trains, signals, and related transit hardware and software. According to the Institute for Supply Management, U.S. manufacturing activity recently fell to its lowest level in 28 years. Manufacturing has also suffered across the globe. But overseas the downturn reflects mainly the recession, while in the U.S. there is a long-term manufacturing decline. Traditional public-works outlays alone won’t restore American manufacturing—but they could supply new demand if we had industrial policies in place. Mass transit could be the incubator for an industrial renaissance, based on new kinds of producers and processes. If public investment is connected to developing new industries, then government spending will not “crowd out” private investment. On the contrary, the public outlay could provide demand for new private investments. But when the market and existing firms fail to make the necessary investments, the government must fill the void.

### Government support of mass transit is key to save American manufacturing

Fitzgerald et.al. ’10- professor and director of the graduate program in Law, Policy and Society and a Senior Research Fellow at the Kitty and Michael Kukakis Center for Urban and Regional Policy at Northeastern University (Joan, Granquist, Khatiwada, McLaughlin, Renner, “Reviving the U.S. Rail and Transit Industry: Investments and Job Creation”, WorldWatch Institute)//AWV

The bottom line is that the United States needs to focus on high-end manufacturing. A strategy for doing so is to link manufacturing to other policy goals. Countries in both Europe and Asia have successfully linked the development of state-of-the-art public transit systems to manufacturing. These countries are now exporting or producing technologically sophisticated transit vehicles around the world. It is time for the United States to become a producer, rather than a consumer, of transit vehicles. But no single industry will save U.S. manufacturing—the country needs a coherent industrial policy. In reports such as this one, the authors are con- strained by the boundaries of current policy debate if they expect to be taken seriously. As a result, even though the above analysis indicates that the level of funding proposed under the International Competitiveness scenario would most forcefully accelerate the development of a strong U.S. transit industry, the less-ambitious Increased Domestic Investment level is recommended here—and even this is an aggressive funding scenario given the current political climate. Nevertheless, the analysis in this report plainly suggests that if U.S. manufacturing is to experience a serious revival that produces more than fragmented show- case projects and scattered jobs, public policy needs to think much bigger and more boldly than it currently does.

### Expansion of mass transit spills over to many manufacturing sectors

Feldman 9 (Jonathan Michael, “From Mass Transit to New Manufacturing,” American Prospect; April 2009, Vol. 20 Issue 3, pA12-A16, 5p)

Our multiple crises suggest that a Green New Deal must mean more than one-shot investments. Support for mass transit and its supply industry can help promote domestically rooted system integrators, manufacturers, employment, and wealth creation. The expansion of domestic production, based on expanded investments in mass transit, could help link recovery plans centered on public works to a more comprehensive reindustrialization program

## Economy – Congestion Links

### Mass transit investments are key to end road congestion that costs the economy billions – small successes spillover

Worthen, 11 – Resource Architect for Sustainability at the American Institute of Architects, (Bill, “Putting the Masses Behind Mass Transit”, Reuters, 3-30-11, <http://www.reuters.com/article/2011/03/30/idUS188765760220110330>)//AWV

But our communities and our economy can't afford to be stuck in this figurative traffic jam for much longer. Rising energy prices, environmental pressures and population growth are taxing our current infrastructure to its limit. Devastating malfunctions, such as the New Orleans levees during Hurricane Katrina and the Minnesota bridge collapse, are a few of the tragic fallouts of less-than-stellar maintenance. And this doesn't include the dozens of small-town stories that will never reach the eyes and ears of the nation, such as major potholes in roads or broken neighborhood dams. Without change, we can surely expect more occurrences like these. Additionally, according to a study commissioned yearly by the Texas Transportation Institute called the Urban Mobility Report (bit.ly/dJl62), traffic congestion caused by problems on our roadways costs our economy an estimated $80 billion per year. This number, along with the aforementioned collapses, will only continue to grow until we fix what's broken. Now, we understand that the road to this transportation utopia is not as simple as investment in projects. We also need a sea change in the way people think about mass transit - particularly those in less populated areas where the use of mass transit is a foreign concept in terms of commuting to/from work or for leisure or business travel. We do, however, see a beginning hunger to get these types of projects off the ground. As previously mentioned, in Florida, the public is keeping a high speed rail project alive despite setbacks from the state government. A proposal to build a high-speed rail line connecting the beaches of Tampa to the tourist haven and theme parks of Orlando (and ultimately include an extension to Miami) was in the works throughout 2010 until Governor Rick Scott rejected a proposal for $2.4 billion in federal funding for the project. Now the leadership of Tampa, with the support of its citizens, is working to draft a proposal to privatize the rail to keep it off the chopping block. (Although it would be great to see state government eventually reinsert itself into the initiative and help bring it to fruition.) A first-of-its-kind rail connecting two major metropolitan areas would signal a big change for the southeastern U.S. Another example is in my hometown of San Francisco, where we've successfully reduced traffic and congestion within the city by making mass transit a better, faster option for connecting its various parts. It's actually faster for a San Francisco resident to get to San Francisco International Airport via the BART system rather than car. This is an incredible incentive for our residents, who then become ambassadors for the public transit efforts when they travel outside the community. The road - no pun intended - is long and there is a tremendous amount of work to be done. We must continue to show why mass transit is worthwhile for all communities, ask the current administration to keep this issue at the forefront and continue to take the steps to make this a reality. It's a road worth traveling.

### Mass transit increases worker productivity and increases jobs

Tomer 12- (Adie, Elizabeth Kneebone, Robert Puentes, and Alan Berube, “Missed Opportunity: Transit and Jobs in Metropolitan America”, Brookings Institute, May 2012 http://www.brookings.edu/~/media/research/files/reports/2011/5/12%20jobs%20and%20transit/0512\_jobs\_transit.pdf)

More immediately, transportation matters for establishing a broad-based economic recovery. Improving transportation connections to jobs enhances the efficiency of labor markets for both workers and employers.3 Years of study, research, and practice have tried to address the vexing logistical problems stemming from lack of access to transportation in major metropolitan areas.4 Today, transportation analysts increasingly consider accessibility to be a better measure of system performance than traditional mobility.5 It is at least as important for metropolitan residents to be able to access a range of activities, such as jobs, via the transportation system, than it is for systems to simply move vehicles faster and reduce travel times.6One important way workers get to work is via public transit. While three out of four commutes occur alone in a car, recent statistics show that the share of Americans commuting to work via public transit grew during the 2000s for the first time in decades.7 Each of the nation’s 100 largest metropolitan areas offers some form of public transit service. Many of the places with the largest recent increases in transit usage, such as New York and Washington, offer extensive rail networks. Other metro areas that recently opened light rail lines such as Charlotte and Phoenix also saw upticks, as did others that rely almost exclusively on buses for transit commuting, such as Colorado Springs and Albuquerque. A high quality public transit network can allow employers to benefit from the clustering and agglomeration of people and businesses, and thereby raise productivity in metro areas. One recent analysis recommends using access to jobs and labor as a measure of the economic benefit of transportation to metropolitan areas.8 Transit also supplies travel choices for workers, and is thus especially important to populations who depend on such service because they are too old or poor, or otherwise choose not to own a car. Metro areas with a high number of transit commuters, such as Los Angeles, Honolulu, and Philadelphia, also stand out for having small per capita carbon emissions due to transportation compared with more car-dependent areas such as Nashville and Oklahoma City.9 In some metropolitan areas, transit can help workers avoid severe rush hour traffic congestion, and reduce the costs of their commutes relative to driving.

### Investment in mass transit helps the economy by reducing congestion and increasing productivity

APTA 12-(American Public Transportation Association), March, “Economic Recovery: Promoting Growth” http://www.apta.com/resources/reportsandpublications/Documents/Economic-Recovery-APTA-White-Paper.pdf)

Investment in public transportation can reduce traffic congestion by shifting people away from their cars. And it can carry many people in a smaller space on the street or along a corridor. For example, a single bus can carry 60 people and a full train car can carry more than 1,600. A high quality rail or bus line can carry as many people as seven lanes of highway or 17 lanes of urban street. By moving more people in a smaller space, public transportation allows cities to increase their economic output while maintaining a smaller footprint at lower cost of transportation infrastructure than would be required without public transit. Cities can, therefore, achieve more growth for less money with high quality public transportation. As previously discussed, public transit availability and density are interconnected. “The locations of downtown office districts—often focused on financial services and related business sectors—usually coincide with the location of greatest public transportation availability and usage.”9For example, in the Washington, DC, metropolitan service area, 28 percent of the area’s tax base is located on 4 percent of the land area that is within one-half mile of a Metrorail station.10 In Portland, OR, developers built 7,248housing units and 4.6 million square feet of office space within two blocks of the Portland Streetcar line between 2001 and 2005. As a report on transit oriented development said of the Portland project: “Properties closest to the streetcar developed at 90 percent of permitted density, compared to 43percent 3 or 4 blocks away.”11All of this development means an improved tax base for communities that invest in public transportation. In fact, investment in public transit generates business expansion and economic growth worth more than the monetary value of the initial investment. APTA estimates that every $1 billion invested in public transportation produces $3.6 billion in added business sales volume, which in turn generates nearly $500 million in federal, state, and local tax revenues. For every $1 invested in public transportation, $4 in economic returns are generated.

### Road focus makes congestion inevitable

Pollard, 4’ – Senior Attorney and Director, Land and Community Program at Southern Environmental Law Center (Trip, “Article: Follow the money: transportation investments for smarter growth,” Temple Environmental Law & Technology Journal, Spring, 2004, 22 Temp. Envtl. L. & Tech. J. 155)//AWV

Transportation policies have succeeded in providing an incredible level of mobility. The number of vehicle miles traveled in the United States has increased substantially in the past few decades. Americans drove over 2.85 trillion miles in 2002, an average of over 7.8 billion miles each day. n9 The mobility gains resulting from transportation infrastructure investments, however, are being undercut by escalating traffic congestion, and it is becoming more difficult to reach desired locations in many areas. A study of 75 metro areas found that the annual number of hours of delay per person due to traffic congestion was almost four times higher in 2001 than in 1982. n10 Congestion is rising despite continued road building. Experience has shown that while new highways can provide temporary traffic relief, for the most part it is not possible to build our way out of congestion. Although it is intuitively appealing to think that increasing the supply of roadways will meet travel demand and relieve congestion, demand does not stay constant. New roads actually generate additional driving, both by opening new areas to development and by leading motorists to change their behavior, such as encouraging people to drive rather than use alternative means of transportation. n11

### Transit reduces traffic congestion

Weyrich and Lind 3 (Paul M. and William S., “How Transit Benefits People Who Do Not Ride It: A Conservative Inquiry”, October, http://www.apta.com/gap/policyresearch/Documents/how\_transit\_benefits.pdf)

Is there generalized evidence of rail transit reducing traffic congestion, as opposed to single examples? Yes. An FTA Policy Paper, “Transit Benefits 2000 Working Papers: A Public Choice Policy Analysis,” looked in great detail at how rail transit reduces hours of delay in the corridors it serves in six different cities. It looked at three kinds of commuters who benefit from rail transit: those who ride it, people who drive to the same destinations served by the rail transit line, and drivers who are driving parallel to the transit line but not necessarily to same destinations. The study found that: In these six corridors, transit passengers saved 17,443 hours daily. By removing these would-be motorists from highway segments with the same destinations as transit, transit saved motorists an additional 21,981 daily hours. Other highways on the local network received spillover savings of 20,691 daily hours.25 In other words, not only does rail transit benefit people who do not ride it, non-riders benefit more than twice as much, in terms of time saved from traffic congestion, as do the people who are riding the trains! The study went on to convert the time savings into dollar savings, at a rate of $15 per hour (somewhat less than the hourly rate of all those lawyers, doctors and accountants caught in traffic, we would guess). It found annual savings of more than $225 million provided by rail transit, with transit riders getting $65 million, people driving to the same destinations $82 million, and drivers in parallel corridors $78 million.26 In dollar terms, people who still drive benefited almost twice as much as the transit riders. If that isn’t an argument why people who don’t ride rail transit should support it anyway, we don’t know what one would be.

### Public transit increases income and jobs, decreases congestion, and lowers consumer costs

United States Department of Transportation, 9’, (“Public Transportation Delivers Public Benefits”, <http://fastlane.dot.gov/2009/06/public-transportation-delivers-public-benefits.html>, 6-2-09)//AWV

President Obama was elected to harness a national will to do things better. One thing I think Americans would like to see improved is how transportation serves the communities in which they live. We love our cars, but sometimes there can be a better way to get to work or to the beach, or simply to the drug store. And providing Americans with those choices can also be good for the economy. In one study done in the San Antonio, each 1% of regional travel shifted from automobile to public transit increased regional income about $2.9 million, resulting in 226 additional regional jobs. Other economic benefits include increased productivity, employment, business activity, investment and redevelopment. Cities with well-established rail system, according to a study produced for APTA, have less traffic congestion, lower traffic death rates, lower consumer expenditures on transportation, significantly higher per capita transit ridership, lower average per capita vehicle mileage, and higher transit service cost recovery than otherwise comparable cities with less or no rail transit service.

### Mass transit comparatively better than alternatives

United States Department of Transportation, 9’, (“Public Transportation Delivers Public Benefits”, <http://fastlane.dot.gov/2009/06/public-transportation-delivers-public-benefits.html>, 6-2-09)//AWV

Rail travel consumes about a fifth of the energy per passenger-mile as automobile travel. Electric powered rail produces minimal air and noise emissions. Many criticisms of rail transit investment are based on inaccurate or incomplete analysis. For example, transit critics often cite operating costs. This overlooks the significant returns that rail transit offers. In 2002, for example, rail transit required about $12.5 billion annually in public subsidy. However, these costs were offset several times over by $19.4 billion in congestion costs savings, $8.0 billion in roadway cost savings, $12.1 billion in parking cost savings, $22.6 billion in consumer cost saving, and $5.6 billion in reduced crash damages. Developing public transportation increases choices, for drivers as well as riders. Developing public transportation makes sense.

## Economy – Real Estate Link

### Mass transit helps the economy by increasing residential property values

Weyrich and Lind 3 (Paul M. and William S., “How Transit Benefits People Who Do Not Ride It: A Conservative Inquiry”, October, http://www.apta.com/gap/policyresearch/Documents/how\_transit\_benefits.pdf)

Do you own a house? If you do, do you find it nice when the value of your property increases? Is the value of your home something you are counting on to provide for your old age? (Sorry to keep harping on that, but it does happen, you know.) In city after city, rail transit has been shown to add substantially to residential property values. ● A study of “gentrification” in Chicago, which looked at the value of residential property served by either CTA (Heavy Rail) or Metra (commuter rail), states that “evidence is found that properties closest to transit stations increased in value much more than those farther away, especially in the period 1985-1991. Properties adjacent to transit stations had a 20% higher increase in value compared to those located a half-mile away . . .”46 ● A look at the impact of San Francisco’s BART Heavy Rail system on residential property values found that “the average Alameda County home is worth about $3,700 less for each mile distant from a BART station. The average Contra Coast County home is worth about $3,200 less for each mile distant from a BART station.”47 ● “A 1993 study of the Eastside Metropolitan Area Express (MAX) light rail transit line reviewed the impacts of rail transit to property values in suburban Portland . . . Portland’s experience is generally consistent with the results of the studies in other areas. Within the 2 years after the 1986 beginning of the operation of the rail line, residential properties in the East Burnside area within 500 meters of the transit were, on average, 10.6% greater in value than homes outside 500 meters.”48 ● A study of properties served by Dallas’s new DART Light Rail system found that “The largest increase in residential property values was seen at the VA Hospital station, where values rose 65 percent.”49 ● In Massachusetts, “An analysis of the data shows that the median price of single-family homes nearly doubled in 19 communities after they gained MBTA [commuter rail] service. Brockton, for example, which got three commuter rail stops, had one of the biggest increases in median family-home price: from $71,503 in 1995 to $194,000 in 2002 – up 171 percent.”50 ● According to the Los Angeles Times, “In less than a decade, ‘you could see 5% to 10% premiums,’ said Larry Kosmont, a Los Angeles-based real estate consultant. ‘If you have access to transportation, it is considered a benefit.’”51 19 Of course, transit, even rail transit, is not a magic wand. If a neighborhood is overrun with crime, split in half by a roaring freeway or downwind from the sewage plant, adding rail transit service is not likely to do much for residential property values. But if a nice neighborhood is given commuter rail or Light Rail, local homeowners will probably benefit, in some cases substantially so. And they never have to ride the train to pocket the money.

## Congestion Internal Link

### Congestion hurts economic growth

Pollard, 4’ – Senior Attorney and Director, Land and Community Program at Southern Environmental Law Center (Trip, “Article: Follow the money: transportation investments for smarter growth,” Temple Environmental Law & Technology Journal, Spring, 2004, 22 Temp. Envtl. L. & Tech. J. 155)//AWV

Current transportation and land use patterns also threaten the long-term health of regional and local economies. Congestion costs were estimated to top $ 69.5 billion in 75 large metropolitan areas in 2001 due to lost time and wasted fuel, hurting both individuals and businesses. n13 A national report found that business leaders "increasingly are concerned that sprawl is making it more difficult to access, attract, and maintain a qualified workforce," and the Metro Atlanta Chamber of Commerce has noted that "growing traffic congestion now threatens the quality of life and economic vitality of the entire region." n14 Although transportation improvements can promote economic development, there is strong evidence that new roads typically shift growth from one area to another rather than create new development. A new bypass, for example, may fuel new construction and development, but at the expense of existing towns, communities and even older suburbs by luring investment, jobs, and residents away from the bypassed community to outlying areas. n15

### Congestion decreases GDP, productivity, and jobs

Lovaas, 11 – Natural Resources Defense Council (Deron, “New Report: Failure to Invest in Transportation Infrastructure Will Cost Jobs, Shrink GDP,” 7/28, <http://switchboard.nrdc.org/blogs/dlovaas/new_report_failure_to_invest_i.html>)//DH

In a [new report](http://www.asce.org/economicstudy/) released this week (covered by [streetsblog](http://dc.streetsblog.org/2011/07/27/1060-the-cost-of-decrepit-infrastructure-for-your-family-last-year/) and the [WashPost](http://www.washingtonpost.com/local/decaying-infrastructure-costing-us-billions-report-says/2011/07/27/gIQAAI0zcI_story.html) among other outlets), the American Society of Civil Engineers (ASCE) takes a closer look at how our deteriorating surface transportation infrastructure – which earned a “D” grade from ASCE in 2009 -- affects American families, businesses, and our national competitiveness. As you might guess, it’s not pretty. ASCE calculates that the impact of deteriorating roads, rails, bridges and transit amounts to 870,000 jobs lost and $3.1 trillion in GDP lost by 2020. Crumbling, congested roads and a lack of transportation options means American families and business are spending more time, using more fuel, and spending more money to get where they need to go. One interesting note for the large amount of traffic on interstate highways in urban areas -- 47 percent of that traffic is on deficient roads, versus only 15 percent of rural interstate traffic. And no matter where you happen to be traveling, the longer we delay infrastructure improvements, the worse it gets. By 2020, ASCE calculates, American businesses will be spending an extra $430 billion on transportation costs, leading to a lag in productivity, a drop in exports, and the loss of hundreds of thousands of jobs. Families would see incomes drop by $7,000 over that 10-year period. Knowledge workers, who have grown into a key part of our advanced economy, would suffer -- by far -- the most. An economist involved with the study tells me that three reasons underpin this finding:

1. Lower business income due to lower productivity and more income diverted to transportation costs requires cutting back on hiring and other productivity-enhancing investments;
2. Less household income means fewer purchases of electronics and professional services; and
3. Commuting difficulties create more workplace inefficiencies, especially in high-wage sectors.

The upshot: We can’t afford NOT to invest in transportation. The costs to our economy, especially in high-wage industries, are simply too high. This report adds to a number of studies which have come to the same conclusion. Even conservatives agree that we need to invest in our national transportation infrastructure, not cut it off at the knees. How, in these fiscally constrained times, do we move forward? We need to design a transportation program with clear, national goals, which includes an oil-savings target and prioritizes critical repairs and maintenance. We need to find new ways to generate revenue for infrastructure projects, through tools such as an oil-security fee and an infrastructure bank. And we need to ensure that our investments are smart, performance-based choices that will make the best use of limited funds.

## Trans Infrastr Key to Econ

### US infrastructure modernization key to economic competitiveness and growth

**Building America’s Future, 11** – a bipartisan coalition of elected officials dedicated to bringing about a new era of U.S. investment in infrastructure that enhances our nation’s prosperity and quality of life. (“Falling Apart and Falling Behind”, Transportation Infrastructure Report, <http://www.bafuture.com/sites/default/files/Report_0.pdf>)

Rebuilding America’s economic foundation is one of the most important missions we face in the 21st century. Our parents and grandparents built America into the world’s leading economic superpower. We have a responsibility to our own children and grandchildren to strengthen—not squander —that inheritance, and to pass on to them a country whose best days are still ahead. Our citizens live in a turbulent, complicated, and competitive world. The worst recession in eighty years cost us trillions in wealth and drove millions of Americans out of their jobs and homes. Even more, it called into question their belief in our system and faith in the way forward. Our infrastructure—and the good policy making that built it—is a key reason America became an economic superpower. But many of the great decisions which put us on that trajectory are now a half-century old. In the last decade, our global economic competitors have led the way in planning and building the transportation networks of the 21st century. Countries around the world have not only started spending more than the United States does today, but they made those financial commitments—of both public and private dollars—on the basis of 21st-century strategies that will equip them to make commanding strides in economic growth over the next 20-25 years. Unless we make significant changes in our course and direction, the foreign competition will pass us by, and a real opportunity to restore America’s economic strength will be lost. The American people deserve better. Falling Apart and Falling Behind lays out the economic challenges posed by our ailing infrastructure, provides a comparative look at the smart investments being made by our international competitors, and suggests a series of recommendations for crafting new innovative transportation policies in the U.S. A Mounting Crisis This report frames the state of our infrastructure in terms of the new economic realities of the 21st-century economy and presents the challenges we currently face. The surge in global trade has realigned America’s business transport needs, complicating supply chains and increasing the need for sophisticated intermodal transportation. Our economically vital gateways and corridors now operate over capacity, imposing costs of $200 billion a year. Our passenger transport system, especially in our major metropolitan regions, is also burdened with costly congestion as passenger travel increases. Largely run on gasoline, our transportation system is environmentally, politically, and economically unsustainable. We have the world’s worst air traffic congestion, in part because we are still using the radar-based air traffic control system developed in the 1950s.

### Substantially expanding investment in transportation infrastructure is key to economic growth

**Ruane, 11 -** President and CEO, American Road & Transportation Builders' Association (Pete, Senate Commerce, Science and Transportation Committee Hearing - "Building American Transportation Infrastructure Through Innovative Funding.", 7/20, Congressional Documents and Publications lexis)//DH

One of the most attractive benefits of major public investments in transportation infrastructure is they create tangible capital assets that are long-lived. In addition to creating jobs and generating tax revenues throughout the economy during the construction cycle, these investments provide infrastructure improvements that foster and facilitate continuing economic growth over many years beyond the initial investment. The greatest long-term economic returns can often be found in strategic investments that facilitate business activity, especially in industries that depend on the transportation network. Infrastructure investments aimed at reducing traffic congestion or providing faster point-to-point travel, for example, can increase productivity by reducing travel time. Given the recent economic recession and the challenges our country continues to face in terms of unemployment, particularly in the construction sector, passing a robust federal surface transportation bill will help sustain and create jobs and support future economic growth. Current transportation infrastructure investments generate over $380 billion in annual economic activity for the nation - which is nearly 3 percent of U.S. Gross Domestic Product. This activity supports nearly 3.4 million jobs throughout the U.S. economy with a payroll of over $159.3 billion. This includes approximately 1.7 million direct jobs for transportation construction workers and supplier firms. As those 1.7 million people spend their wages by going out to restaurants, buying cars or trucks, purchasing groceries or consuming housing, their spending supports an additional 1.7 million jobs in other sectors of the U.S. economy. Unfortunately, the politicization of the American Recovery & Reinvestment Act (ARRA) has led some to question the job creation/sustaining benefits of federal transportation investment. While there have been a great deal of flawed claims that the ARRA's transportation investments did not work, the simple fact is that transportation is virtually the only construction activity that did not suffer a downturn during the recent recession--almost solely because of the Recovery Act. The measure provided a critical one-time injection of federal investment into transportation improvements. In so doing, it preserved thousands of jobs that would otherwise have disappeared and the improvements resulting from the 14,000 Recovery Act construction projects will benefit communities and businesses for years to come. But the full potential of the Act was undermined by the collapse of private sector construction activity and cuts in state and local transportation construction investment over the last two years. In fact, a recent U.S. Government Accountability Office publication references a preliminary U.S. Department of Transportation report that found 21 states did not meet the ARRA's maintenance of effort requirement and reduced dedicated revenues for transportation at the same time the Recovery Act boosted federal transportation investment. But direct employment is only the tip of the iceberg. Even more important are the jobs and economic activity that could not exist without our nation's modern transportation infrastructure. Every manufacturing plant in the U.S., every retail store, every plumber and service worker, every trucker and millions of other jobs depend on highways, airports and railroads for inputs and to deliver products to customers. If we let our transportation system decay, American workers across the economy will be hurt. There are approximately 78.6 million American jobs in just tourism, manufacturing, transportation and warehousing, agriculture, general construction, mining, retailing and wholesaling alone that are dependent on the work done by the U.S. transportation construction industry. These dependent industries provide a total payroll in excess of $2.8 trillion. The U.S. is experiencing intense competition from emerging economies around the world. Our transportation infrastructure is critical to our competitiveness. We have started with a great advantage - the investment America made in the Interstate Highways. But we are losing that advantage as China, India and Europe are all investing more in new capacity than we are because they recognize the importance of transportation infrastructure to their economic competitiveness. In China, infrastructure spending has increased an average of 20 percent each year over the last two decades. China, which is roughly the same size as the continental U.S., has built over 30,000 miles of new expressways in the last 10 years. Their highway system is expected to extend over 53,000 miles by 2020, surpassing the current 47,000 miles of Interstate in the United States. n2 One of the most powerful things Congress can do to support existing jobs, create new jobs and strengthen the foundation of U.S. economic competitiveness is to pass a robust multi-year reauthorization of the federal highway and transit programs in 2011.

### Infrastructure spending creates a short term stimulus

**Building America’s Future, 11** – a bipartisan coalition of elected officials dedicated to bringing about a new era of U.S. investment in infrastructure that enhances our nation’s prosperity and quality of life. (“Falling Apart and Falling Behind”, Transportation Infrastructure Report, <http://www.bafuture.com/sites/default/files/Report_0.pdf>)

This failure to keep pace with the world’s innovators in transportation is already costing us money, jobs, profits, and opportunities in the rich and growing export market, and risks putting us further and further behind in the global economy. To avoid that fate, we must invest in cuttingedge transportation infrastructure in ways that will jump-start job creation in the short-term and stimulate the long-term growth that our economy needs to compete in the 21st century. Infrastructure projects can create jobs the economy needs right now. The Federal Highway Administration estimates that every billion dollars of federal spending creates 27,822 jobs in construction and supporting industries. 1 Federal investment in public transportation generates even more jobs: every billion dollars supports 36,100 jobs. 2 And an investment in transportation projects will generate even more long-term growth. Infrastructure is a smart investment: every $1 spent on infrastructure projects spurs economic activity, raising the level of GDP by about $1.59. 3

### Transportation infrastructure is key to the economy

**Treasury Department, 12** - A REPORT PREPARED BY THE DEPARTMENT OF THE TREASURY WITH THE COUNCIL OF ECONOMIC ADVISERS (“A NEW ECONOMIC ANALYSIS OF INFRASTRUCTURE INVESTMENT”, MARCH 23, 2012, <http://www.treasury.gov/resource-center/economic-policy/Documents/20120323InfrastructureReport.pdf>)

Gallatin spoke in terms of infrastructure shortening distances and easing communications, even when the only means to do so were roads and canals. Every day, Americans use our nation’s transportation infrastructure to commute to work, visit their friends and family, and travel freely around the country. Businesses depend on a well-functioning infrastructure system to obtain their supplies, manage their inventories, and deliver their goods and services to market. This is true for companies whose businesses rely directly on the infrastructure system, such as shippers like UPS and BNSF, as well as others whose businesses indirectly rely on the infrastructure system, such as farmers who use publicly funded infrastructure to ship crops to buyers, and internet companies that send goods purchased online to customers across the world. A modern transportation infrastructure network is necessary for our economy to function, and is a prerequisite for future growth. President Eisenhower’s vision is even more relevant today than it was in 1955, when he said in his State of the Union Address, "A modern, efficient highway system is essential to meet the needs of our growing population, our expanding economy, and our national security." Today, that vision would include making not only our highways, but our nation’s entire infrastructure system more efficient and effective.

Our analysis indicates that further infrastructure investments would be highly beneficial for the U.S. economy in both the short and long term. First, estimates of economically justifiable investment indicate that American transportation infrastructure is not keeping pace with the needs of our economy. Second, because of high unemployment in sectors such as construction that were especially hard hit by the bursting of the housing bubble, there are underutilized resources that can be used to build infrastructure. Moreover, states and municipalities typically fund a significant portion of infrastructure spending, but are currently strapped for cash; the Federal government has a constructive role to play by stepping up to address the anticipated shortfall and providing more efficient financing mechanisms, such as Build America Bonds. The third key finding is that investing in infrastructure benefits the middle class most of all. Finally, there is considerable support for greater infrastructure investment among American consumers and businesses.

### Many studies confirm the link

**Treasury Department, 12** - A REPORT PREPARED BY THE DEPARTMENT OF THE TREASURY WITH THE COUNCIL OF ECONOMIC ADVISERS (“A NEW ECONOMIC ANALYSIS OF INFRASTRUCTURE INVESTMENT”, MARCH 23, 2012, <http://www.treasury.gov/resource-center/economic-policy/Documents/20120323InfrastructureReport.pdf>)

The United States has a rich history of investing in infrastructure and reaping the long-term economic benefits. Influential research by David Aschauer and others has explored the link between public infrastructure investment and economic growth. 2,3,4 Aschauer’s research and numerous other studies have found evidence of large private sector productivity gains from public infrastructure investments, in many cases with higher returns than private capital investment. Since much of the public capital stock is owned by state and local authorities, more recent research has compared the economic benefits of infrastructure investments between regions in the United States, generally finding smaller but economically significant benefits in comparison to Aschauer’s estimates. 5 Investments in infrastructure allow goods and services to be transported more quickly and at lower costs, resulting in both lower prices for consumers and increased profitability for firms. Major transportation infrastructure initiatives include the building of the national railroad system in the 19th century and the creation of the Eisenhower Interstate System in the 1950s and 1960s. Observers have concluded that in both of these cases there was a causal link running from infrastructure investments to subsequent private sector productivity gains. 6 Alternatively, it is possible that infrastructure investments occur when productivity gains are also likely to follow but for unrelated reasons. Determining causality is difficult. A study by John Fernald makes progress on establishing causality by comparing the impact of infrastructure investment on industries that a priori should experience different benefits from infrastructure spending. 7 He finds that the construction of the interstate highway system in the 1950s and 1960s corresponded with a significant increase in the productivity of vehicle-intensive industries (such as transportation and gas utilities), relative to industries that do not depend on vehicles (such as apparel and textiles and industrial machinery). Fernald’s findings suggest that previous investments in infrastructure led to substantial productivity gains, and highlight the potential for further increases in productivity through additional, well-targeted investments.

### Infrastructure is key to the economy

**Building America’s Future, 11** – a bipartisan coalition of elected officials dedicated to bringing about a new era of U.S. investment in infrastructure that enhances our nation’s prosperity and quality of life. (“Falling Apart and Falling Behind”, Transportation Infrastructure Report, <http://www.bafuture.com/sites/default/files/Report_0.pdf>)

Americans see the consequences of inadequate infrastructure everyday: when we get stuck in traffic jams on our way to work; when we get stuck at the airport because our flights are delayed; when mass transit options are too few or too expensive; when our electric grid fails and leaves us in the dark; when our ports are too small to handle modern cargo ships; and when our bridges must be closed or torn down as a result of structural deficiencies. As individual cases, these deficiencies can be daily annoyances. Together, they form a national crisis. The strength of every country’s economy derives from the productivity of its human capital and natural resources. We have an abundance of both. But what these great gifts produce is meaningless unless they find their way to the marketplace. That is what infrastructure does. It increases human mobility and facilitates efficiency. It enables a healthy economy to channel the flow of goods and services around the corner and around the globe. Done right, infrastructure helps us open new markets to goods and services, drops the costs of transportation, speeds deliveries, and lowers prices for consumers. Capital and jobs flow to the most efficient markets, and the most efficient markets are dependent on modern, reliable, high-tech infrastructure. The infrastructure past generations built for us—and the good policy making that built it—is a key reason America became an economic superpower. But many of the great decisions which put us on that trajectory are now a half-century old. In the last several decades, our political system has failed us.

### Increasing transportation infrastructure investment increases export led growth

**Treasury Department, 12** - A REPORT PREPARED BY THE DEPARTMENT OF THE TREASURY WITH THE COUNCIL OF ECONOMIC ADVISERS (“A NEW ECONOMIC ANALYSIS OF INFRASTRUCTURE INVESTMENT”, MARCH 23, 2012, <http://www.treasury.gov/resource-center/economic-policy/Documents/20120323InfrastructureReport.pdf>)

American firms rely on infrastructure to enable efficient supply chain management and the transportation of goods to the point of sale. Investments in transportation infrastructure would allow firms in all 50 states to have the opportunity to benefit from growth in foreign markets. According to an analysis by the Brookings Institution, exports account for 8 percent of total U.S. employment 48 ; smart investments in infrastructure have the potential to create more jobs in export-oriented U.S. companies. The President’s National Export Initiative calls for the “Departments of Commerce and Transportation [to enter] into a Memorandum of Understanding to work together and with stakeholders to develop and implement a comprehensive, competitiveness-focused national freight policy. The resulting policy will foster end-to-end U.S. freight infrastructure improvements that facilitate the movement of goods for export and domestic use.” 49 Moreover, the Department of Transportation “estimates that population growth, economic development, and trade will almost double the demand for rail freight transportation by 2035.” 50 Export growth has been strong during the recovery. In 2011, exports were up over 33 percent from 2009, meaning that America is ahead of schedule in meeting the President’s goal of doubling exports over 2009 levels by the end of 2014.

### Transportation infrastructure is vital to the US economy

**Caldwell, 11** - ASCE President The American Society of Civil Engineers (Kathy, CQ Congressional Testimony, 3/30, lexis)

Surface transportation infrastructure is a critical engine of the nation's economy. It is the thread which knits the nation together. To compete in the global economy, improve our quality of life and raise our standard of living, we must successfully rebuild America's public infrastructure. Faced with that task, the nation must begin with a significantly improved and expanded surface transportation system. A surface transportation authorization must be founded on a new paradigm; instead of focusing on the movement of cars and trucks from place to place, it must be based on moving people, goods, and services across the economy. Beyond simply building new roads or transit systems, an intermodal approach must be taken to create a new vision for the future.

### Transportation investment is key to jobs and economic growth

**Caldwell, 11** - ASCE President The American Society of Civil Engineers (Kathy, CQ Congressional Testimony, 3/30, lexis)

Benefits of Multi-Year Surface Transportation Legislation

Money invested in essential public works can create jobs, provide for economic growth, and ensure public safety through a modern, well-engineered transportation system. By improving the nation's deteriorating surface transportation system both economic and job creation opportunities will be provided, while creating a multi- modal transportation system for the Twenty-First Century. The nation's transportation infrastructure system has an annual output of $120 billion in construction work and contributes $244 billion in total economic activity to the nation's gross domestic product. In addition to the significant economic benefits for the entire nation, the Federal Highway Administration estimates that every $1 billion invested in the nation's highways supports 27,823 jobs, including 9,537 on-site construction jobs, 4,324 jobs in supplier industries, and 13,962 jobs throughout the rest of the economy.

The job creation potential of infrastructure investment is only one contributing factor toward how surface transportation allows for the nation to compete on in the global marketplace. Equally, important are the benefits to the region's long term growth and productivity. A significant challenge to this economic growth is increased congestion, which contributes to the deterioration of the nation's infrastructure, Therefore, the importance of freight movement and the impacts of congestion on the nation's economy must be emphasized.

## Trans Infastr Key to Competitiveness

### Infrastructure investment is key to US competitiveness

**Treasury Department, 12** - A REPORT PREPARED BY THE DEPARTMENT OF THE TREASURY WITH THE COUNCIL OF ECONOMIC ADVISERS (“A NEW ECONOMIC ANALYSIS OF INFRASTRUCTURE INVESTMENT”, MARCH 23, 2012, <http://www.treasury.gov/resource-center/economic-policy/Documents/20120323InfrastructureReport.pdf>)

By most measures, the United States is investing less in infrastructure than other nations. While there are reasons for this disparity, international comparisons can offer a useful benchmark to assess our investment decisions. We spend approximately 2 percent of GDP on infrastructure, a 50 percent decline from 1960. 65,66 China, India and Europe, by contrast, spend close to 9 percent, 8 percent, and 5 percent of GDP on infrastructure, respectively. 67 To be clear, these simple cross-country comparisons do not account for differences in the current public capital stock, differences in demographics and population densities, and different transportation preferences across nations. However, it is clear that persistent neglect of our infrastructure will impact America’s competitive position vis-à-vis the rest of the world. Indeed, the U.S. Chamber of Commerce noted in their Policy Declaration on Transportation Infrastructure that, “Longterm underinvestment in transportation infrastructure is having an increasingly negative effect on the ability of the United States and its industries to compete in the global economy.”

## A2 Resilient

### No resiliency – its try or die now

Nouriel Roubini (professor of economics at New York University's Stern School of Business, is co-founder and chairman of Roubini Global Economics (RGE)) and Michael Moran (RGE's vice president, executive editor, and chief geostrategy analyst) October 11, 2010 “Avoid the Double Dip” http://www.foreignpolicy.com/articles/2010/10/11/avoid\_the\_double\_dip?page=0,0

Roughly three years since the onset of the financial crisis, the U.S. economy increasingly looks vulnerable to falling back into recession. The United States is flirting with "stall speed," an anemic rate of growth that, if it persists, can lead to collapses in spending, consumer confidence, credit, and other crucial engines of growth. Call it a "double dip" or the Great Recession, Round II: Whatever the term, we're talking about a negative feedback loop that would be devilishly hard to break. If Barack Obama wants a realistic shot at a second term, he'll need to act quickly and decisively to prevent this scenario. Near double-digit unemployment is the root of the problem. Without job creation there's a lack of consumer spending, which represents 40 percent of domestic GDP. To date, the U.S. government has responded creatively and massively to the near collapse of the financial system, using a litany of measures, from the bank bailout to stimulus spending to low interest rates. Together, these policies prevented a reprise of the Great Depression. But they also created fiscal and political dilemmas that limit the usefulness of traditional monetary and fiscal tools that policymakers can turn to in a pinch. With interest rates near zero percent already, the Federal Reserve has few bullets left in its holster to boost growth or fend off another slump. This lack of available good options was patently on display in August when Fed Chairman Ben Bernanke spoke with a tinge of resignation about new "quantitative easing" interventions in the mortgage and bond markets -- a highly technical suggestion that, until the recent crisis, amounted to heresy among Fed policymakers. It certainly hasn't helped that the U.S. federal deficit has reached heights that make additional stimulus spending, of the kind that helped kindle the mini-recovery of early 2010, politically impossible.

### No resiliency – now is different

Gary Clyde Hufbauer et al (Reginald Jones Senior Fellow at the Peterson Institute for International Economics in 1998, Previously he was the Marcus Wallenberg Professor of International Financial Diplomacy at Georgetown University, and served in the U.S. Treasury Department from 1974 to1980), Jacob Funk Kirkegaard (Fellow at the Peterson Institute for International Economics), Woan Foong Wong (research analyst at the Peterson Institute) and Jared Woollacott March 2010 “US Protectionist Impulses in the Wake of the Great Recession” http://www.iie.com/publications/papers/hufbauer201003.pdf

The U.S. unemployment rate more than doubled between the onset of the Great Recession in December 2007 and December 2009, and is now hovering just below 10 percent (figure 1). 1 Considering that this discouraging figure likely understates broader deterioration in the U.S. labor market, 2 the absence of sustained Congressional pressure for large‐scale protectionist measures, beyond “Buy American” provisions and several smaller companions (all examined in this report), is in some ways surprising. 3 At least part of the explanation for the restrained political response is the simultaneous large improvement in the U.S. trade balance during 2008 and early 2009. Figure 1 illustrates how the total U.S. deficit in goods and services trade was nearly cut in half during this period, creating a political obstacle to kneejerk protectionism. As we will elaborate in section IV, during recessions an improving external balance (from imports falling faster than exports) often acts an “automatic international economic stabilizer,” which temporarily fulfills an equivalent economic function to a Keynesian government stimulus package. The “external sector” of the U.S. economy during the early quarters of the Great Recession provided an “automatic offset” to sliding U.S. economic activity. This probably caused policymakers to think twice about succumbing to short‐term protectionist instincts However, figure 1 also shows how the improvement in the U.S. trade balance has been only temporary and indeed began to reverse as the U.S. economy exited the Great Recession during the second half of 2009. Crucial for the political threat of protectionism, economic forecasts indicate that the U.S. unemployment rate will probably remain at very high levels over the medium term, despite President Obama’s emphasis on “jobs, jobs, jobs” in his State of the Union Address delivered on January 27 th , 2010. 4 A time lag of at least 12 to 18 months probably separates the point at which the U.S. trade balance showed maximum improvement (spring 2009) and the expected drop in measured unemployment well below 10 percent (fall 2010). Absent the “feel good” factor of an improving trade balance, but facing continuing high unemployment levels, protectionist sentiment in the U.S. Congress may increase in the coming months, especially as the November 2010 midterm election draws near. This is particularly so, as current economic forecasts suggest a more robust U.S. economic recovery in the coming years, relative to other industrial trading partners (table 1). A large and growing deficit in the U.S. external balances will likely persist for some time, while the external balances of other major trading partners could hold steady or even improve. If the United States thus returns to its “pre‐crisis role as the world’s importer/consumer of last resort,” protectionist impulses in the U.S. Congress are destined to escalate. 5 Fresh U.S. protectionist initiatives, at a time when the U.S. economy is growing at a decent pace, will likely invite in‐kind retaliation by America’s trading partners, despite the relatively muted reaction to the original “Buy American” provisions in early 2009 and other protectionist measures implemented since then. No longer facing a newly‐elected U.S. president, who entered office with considerable global appeal in the midst of an unprecedented economic crisis, foreign leaders are unlikely to give the U.S. an easy pass on future new instances of U.S. protectionism

## Impacts – Economic Growth

### Economic growth is necessary to prevent conflict

Mandel 5 (Michael Mandel, Bloomberg Business, “Whats So Good About Growth?,” http://www.businessweek.com/magazine/content/05\_45/b3958122.htm)

The real benefit of growth, Friedman argues, is that it encourages a wide range of social virtues, including dedication to democracy, tolerance of diversity, social mobility, and commitment to fairness. By contrast, he writes, "when living standards stagnate or decline, most societies make little if any progress toward any of these goals, and in all too many instances they plainly retrogress." The book, at almost 600 pages, is too long and quite repetitive in spots. And it doesn't pack the punch of Friedman's influential 1988 book, Day of Reckoning: The Consequences of American Economic Policy Under Reagan and After, which warned that massive budget deficits were going to badly damage the U.S. economy. But in this book Friedman has scored a dead-center hit on the critical question: Why do we value economic growth? The usual argument is that a bigger GDP -- more goods and services -- leads to happier, more satisfied citizens. But that apparently simple proposition turns out to be far more complicated. As Friedman notes, there is plenty of evidence that people judge their well-being by comparing themselves to others. As the average income in a country goes up, so do expectations. As a result, the level of GDP per person in a country, taken alone, doesn't necessarily say much about the level of happiness. The lack of a direct link between personal satisfaction and the level of GDP per person seems to undercut the purely economic arguments in favor of growth. After all, why should we undergo all the turmoil of technological change and economic restructuring if more gadgets and bigger homes aren't going to make us happier in the end? Friedman argues that economic growth has a key additional benefit: As long as people see their own income rising, they worry less about doing better than others. And that in turn creates a more favorable environment for political and social advances. To demonstrate this point, he draws on economic studies and historical examples, both American and global. In the 1700s, he points out, it became accepted that the rise of commercial and trading activity was a force for positive legal and institutional change. Adam Smith, for one, believed that moral progress went hand in hand with economic progress, as voluntary exchange replaced the use of force. Friedman points to the the Ku Klux Klan in the U.S. and the Nazis in Germany as examples of what can happen when growth vanishes. And he worries that "rising intolerance and incivility and the eroding generosity and openness...have been, in significant part, a consequence of the stagnation of American middle class living standards during much of the last quarter of the twentieth century." Friedman is forthright about admitting that the New Deal doesn't fit his argument. He says the hard times of the Great Depression brought forth a virtue: a generous public response. But the New Deal was "exceptional," says Friedman, arguing that rising incomes in general make people more willing to help others. The link between economic growth and democracy also works on a global level. The movement toward civil liberties and open societies, says Friedman, has been most successful in countries with rising incomes: He predicts China will take this same path. This is not a politically biased book -- you would have a hard time telling from it whether Friedman is a Republican or a Democrat. But it does provide a new framework and language for discussing economic growth, one that's useful for economists, politicians, and business leaders alike. The goal is not simply more, but more moral.

### Economic growth leads to interdependence which reduces the risk of war

Yee 99 (Tan Tan, Journal of the Singapore Armed Forces, Jan-Mar, http://www.mindef.gov.sg/safti/pointer/back/journals/1999/Vol25\_1/7.htm)JFS

Like the Democratic Peace Proposition, the notion that increased interdependence reduces the probability of war among nations is not new. For one, economists have long demonstrated that economic interdependence benefits both parties through the process of international trade. The underlying rationale is worth explaining. In a simple model of a two-state-two-product international economy, even if a particular state is more efficient at producing both goods, it would still make more economic sense for each state to specialise in producing one of the goods and thereafter obtain the other through barter exchange. This is because the issue is one of relative rather than absolute efficiency; the more efficient state should optimise its limited resources to focus entirely on producing the goods where it has a relatively greater efficiency. From an economic viewpoint, therefore, international trade represents one of the rare occasions in international affairs that present a win-win situation to both parties.15 Traditionally, theories on the effect of interdependence between states on the risk of war can be divided into two main camps. On the one extreme, liberals argue that economic interdependence lowers the likelihood of war by increasing the value of trading over the alternative of aggression; in other words, states would rather trade than fight.16 To put it simply, trade is mutually beneficial, while war is at best a zero-sum game. At the same time, the increasing lethality of modern weapons has greatly increased the costs and risks of war, thus making the trading option seem even more rational. Four other subsidiary propositions supporting the liberal view are worth mentioning here.17 Firstly, the increased economic activity that accompanies higher trade levels tends to promote domestic prosperity, and in doing so lessens the internal problems that push leaders to war. Secondly, trade may alter the domestic structure of a particular state, giving more influence to groups with a vested interest in the continuation of peaceful trade. Thirdly, a higher level of interdependence inevitably leads to increased interaction between governments and peoples. This enhances understanding and an appreciation of each other's views and perspectives, reducing the misunderstandings and miscalculations that sometimes lead to war. The final argument asserts that trade has the spillover effect of enhancing political ties between trading partners, thus improving the prospects for long-term co-operation. Going by the liberal arguments, there is cause for optimism as long as a high level of interdependence can be maintained among all states. Rosecrance sums up the view rather neatly that high interdependence fosters peace by making trading more profitable than invading.18 Some liberals explain the continuing occurrence of war as a result of the misconception of political leaders caught up in the outmoded belief that war still pays.19 Yet others saw it as the misguided attempts by political leaders to gamble for an outright victory in war, in which case the benefits would be even greater. The contention is that inspite of the pacifist tendencies that interdependence brings about, it may sometimes not be enough to prevent war from happening.

## Impacts – Economic Collapse

### Economic decline causes global escalatory conflicts

Mathew J. Burrows (counselor in the National Intelligence Council (NIC), PhD in European History from Cambridge University) and Jennifer Harris (a member of the NIC’s Long Range Analysis Unit) April 2009 “Revisiting the Future: Geopolitical Effects of the Financial Crisis” http://www.twq.com/09april/docs/09apr\_Burrows.pdf

Of course, the report encompasses more than economics and indeed believes the future is likely to be the result of a number of intersecting and interlocking forces. With so many possible permutations of outcomes, each with ample opportunity for unintended consequences, there is a growing sense of insecurity. Even so, history may be more instructive than ever. While we continue to believe that the Great Depression is not likely to be repeated, the lessons to be drawn from that period include the harmful effects on fledgling democracies and multiethnic societies (think Central Europe in 1920s and 1930s) and on the sustainability of multilateral institutions (think League of Nations in the same period). There is no reason to think that this would not be true in the twenty-first as much as in the twentieth century. For that reason, the ways in which the potential for greater conflict could grow would seem to be even more apt in a constantly volatile economic environment as they would be if change would be steadier. In surveying those risks, the report stressed the likelihood that terrorism and nonproliferation will remain priorities even as resource issues move up on the international agenda. Terrorism’s appeal will decline if economic growth continues in the Middle East and youth unemployment is reduced. For those terrorist groups that remain active in 2025, however, the diffusion of technologies and scientific knowledge will place some of the world’s most dangerous capabilities within their reach. Terrorist groups in 2025 will likely be a combination of descendants of long established groupsinheriting organizational structures, command and control processes, and training procedures necessary to conduct sophisticated attacksand newly emergent collections of the angry and disenfranchised that become self-radicalized, particularly in the absence of economic outlets that would become narrower in an economic downturn. The most dangerous casualty of any economically-induced drawdown of U.S. military presence would almost certainly be the Middle East. Although Iran’s acquisition of nuclear weapons is not inevitable, worries about a nuclear-armed Iran could lead states in the region to develop new security arrangements with external powers, acquire additional weapons, and consider pursuing their own nuclear ambitions. It is not clear that the type of stable deterrent relationship that existed between the great powers for most of the Cold War would emerge naturally in the Middle East with a nuclear Iran. Episodes of low intensity conflict and terrorism taking place under a nuclear umbrella could lead to an unintended escalation and broader conflict if clear red lines between those states involved are not well established. The close proximity of potential nuclear rivals combined with underdeveloped surveillance capabilities and mobile dual-capable Iranian missile systems also will produce inherent difficulties in achieving reliable indications and warning of an impending nuclear attack. The lack of strategic depth in neighboring states like Israel, short warning and missile flight times, and uncertainty of Iranian intentions may place more focus on preemption rather than defense, potentially leading to escalating crises Types of conflict that the world continues to experience, such as over resources, could reemerge, particularly if protectionism grows and there is a resort to neo-mercantilist practices. Perceptions of renewed energy scarcity will drive countries to take actions to assure their future access to energy supplies. In the worst case, this could result in interstate conflicts if government leaders deem assured access to energy resources, for example, to be essential for maintaining domestic stability and the survival of their regime. Even actions short of war, however, will have important geopolitical implications. Maritime security concerns are providing a rationale for naval buildups and modernization efforts, such as China’s and India’s development of blue water naval capabilities. If the fiscal stimulus focus for these countries indeed turns inward, one of the most obvious funding targets may be military. Buildup of regional naval capabilities could lead to increased tensions, rivalries, and counterbalancing moves, but it also will create opportunities for multinational cooperation in protecting critical sea lanes. With water also becoming scarcer in Asia and the Middle East, cooperation to manage changing water resources is likely to be increasingly difficult both within and between states in a more dog-eat-dog world.

### Lowers threshold for conflict – makes multiple nuclear wars inevitable

Michael Panzner (Faculty Member at the New York Institute of Finance, 25-year veteran of the global stock, bond, and currency markets who has worked in New York and London for HSBC, Soros Funds, ABN Amro, Dresdner Bank, and JPMorgan Chase) 2008 Financial Armageddon: Protect Your Future from Economic Collapse, p. 137-138

Rising angst will also wreak havoc with links among markets, financial systems, economies, and countries. Many people could find themselves subject to stricter government controls or even find avenues closed off as a result of attempts to stem contagion effects. The widespread urge to withdraw will feed rising xenophobia, already inflamed by illegal immigration, unfair trade practices, and leaking borders. Playing to populist sentiment, politicians around the country will respond enthusiastically to calls for restrictions on foreigners. This will further feed a brain drain, as scientists, students, and other temporary visa holders are left with little choice but to uproot and go elsewhere, further sapping America’s economic resiliency. Continuing calls for curbs on the flow of finance and trade will inspire the United States and other nations to spew forth protectionist legislation like the notorious Smoot-Hawley bill. Introduced at the start of the Great Depression, it triggered a series of tit-for-tat economic responses, which many commentators believe helped turn a serious economic downturn into a prolonged and devastating global disaster. But if history is any guide, those lessons will have been long forgotten during the next collapse. Eventually, fed by a mood of desperation and growing public anger, restrictions on trade, finance, investment, and immigration will almost certainly intensify. Authorities and ordinary citizens will likely scrutinize the cross-border movement of Americans and outsiders alike, and lawmakers may even call for a general crackdown on nonessential travel. Meanwhile, many nations will make transporting or sending funds to other countries exceedingly difficult. As desperate officials try to limit the fallout from decades of ill-conceived, corrupt, and reckless policies, they will introduce controls on foreign exchange. Foreign individuals and companies seeking to acquire certain American infrastructure assets, or trying to buy property and other assets on the cheap thanks to a rapidly depreciating dollar, will be stymied by limits on investment by noncitizens. Those efforts will cause spasms to ripple across economies and markets, disrupting global payment, settlement, and clearing mechanisms. All of this will, of course, continue to undermine business confidence and consumer spending. In a world of lockouts and lockdowns, any link that transmits systemic financial pressures across markets through arbitrage or portfolio-based risk management, or that allows diseases to be easily spread from one country to the next by tourists and wildlife, or that otherwise facilitates unwelcome exchanges of any kind will be viewed with suspicion and dealt with accordingly. The rise in isolationism and protectionism will bring about ever more heated arguments and dangerous confrontations over shared sources of oil, gas, and other key commodities as well as factors of production that must, out of necessity, be acquired from less-than-friendly nations. Whether involving raw materials used in strategic industries or basic necessities such as food, water, and energy, efforts to secure adequate supplies will take increasing precedence in a world where demand seems constantly out of kilter with supply. Disputes over the misuse, overuse, and pollution of the environment and natural resources will become more commonplace. Around the world, such tensions will give rise to full scale military encounters, often with minimal provocation. In some instances, economic conditions will serve as a convenient pretext for conflicts that stem from cultural and religious differences. Alternatively, nations may look to divert attention away from domestic problems by channeling frustration and populist sentiment toward other countries and cultures. Enabled by cheap technology and the waning threat of American retribution, terrorist groups will likely boost the frequency and scale of their horrifying attacks, bringing the threat of random violence to a whole new level. Turbulent conditions will encourage aggressive saber rattling and interdictions by rogue nations running amok. Age-old clashes will also take on a new, more heated sense of urgency. China will likely assume an increasingly belligerent posture toward Taiwan, while Iran may embark on overt colonization of its neighbors in the Mideast. Israel, for its part, may look to draw a dwindling list of allies from around the world into a growing number of conflicts. Some observers, like John Mearsheimer, a political scientist at the University of Chicago, have even speculated that an “intense confrontation” between the United States and China is “inevitable” at some point. More than a few disputes will turn out to be almost wholly ideological. Growing cultural and religious differences will be transformed from wars of words to battles soaked in blood. Long-simmering resentments could also degenerate quickly, spurring the basest of human instincts and triggering genocidal acts. Terrorists employing biological or nuclear weapons will vie with conventional forces using jets, cruise missiles, and bunker-busting bombs to cause widespread destruction. Many will interpret stepped-up conflicts between Muslims and Western societies as the beginnings of a new world war.

### Interdependence makes the probability of your impacts zero – Only we can access war

Evan E. Hillebrand (Professor of Diplomacy at University of Kentucky and a Senior Economist for the Central Intelligence Agency) 2010 “Deglobalization Scenarios: Who Wins? Who Loses?” Global Economy Journal, Volume 10, Issue 2 2010

A long line of writers from Cruce (1623) to Kant (1797) to Angell (1907) to Gartzke (2003) have theorized that economic interdependence can lower the likelihood of war. Cruce thought that free trade enriched a society in general and so made people more peaceable; Kant thought that trade shifted political power away from the more warlike aristocracy, and Angell thought that economic interdependence shifted cost/benefit calculations in a peace-promoting direction. Gartzke contends that trade relations enhance transparency among nations and thus help avoid bargaining miscalculations. There has also been a tremendous amount of empirical research that mostly supports the idea of an inverse relationship between trade and war. Jack Levy said that, “While there are extensive debates over the proper research designs for investigating this question, and while some empirical studies find that trade is associated with international conflict, most studies conclude that trade is associated with peace, both at the dyadic and systemic levels” (Levy, 2003, p. 127). There is another important line of theoretical and empirical work called Power Transition Theory that focuses on the relative power of states and warns that when rising powers approach the power level of their regional or global leader the chances of war increase (Tammen, Lemke, et al, 2000). Jacek Kugler (2006) warns that the rising power of China relative to the United States greatly increases the chances of great power war some time in the next few decades. The IFs model combines the theoretical and empirical work of the peacethrough trade tradition with the work of the power transition scholars in an attempt to forecast the probability of interstate war. Hughes (2004) explains how he, after consulting with scholars in both camps, particularly Edward Mansfield and Douglas Lemke, estimated the starting probabilities for each dyad based on the historical record, and then forecast future probabilities for dyadic militarized interstate disputes (MIDs) and wars based on the calibrated relationships he derived from the empirical literature. The probability of a MID, much less a war, between any random dyad in any given year is very low, if not zero. Paraguay and Tanzania, for example, have never fought and are very unlikely to do so. But there have been thousands of MIDs in the past and hundreds of wars and many of the 16,653 dyads have nonzero probabilities. In 2005 the mean probability of a country being involved in at least one war was estimated to be 0.8%, with 104 countries having a probability of at least 1 war approaching zero. A dozen countries12, however, have initial probabilities over 3%. model predicts four great power wars in the deglobalization scenario vs. 2 in the globalization scenario.16 The globalization scenario projects that the probability for war will gradually decrease through 2035 for every country—but not every dyad--that had a significant (greater than 0.5% chance of war) in 2005 (Table 6). The decline in prospects for war stems from the scenario’s projections of rising levels of democracy, rising incomes, and rising trade interdependence—all of these factors figure in the algorithm that calculates the probabilities. Not all dyadic war probabilities decrease, however, because of the power transition mechanism that is also included in the IFs model. The probability for war between China and the US, for example rises as China’s power13 rises gradually toward the US level but in these calculations the probability of a China/US war never gets very high.14 Deglobalization raises the risks of war substantially. In a world with much lower average incomes, less democracy, and less trade interdependence, the average probability of a country having at least one war in 2035 rises from 0.6% in the globalization scenario to 3.7% in the deglobalization scenario. Among the top-20 war-prone countries, the average probability rises from 3.9% in the globalization scenario to 7.1% in the deglobalization scenario. The model estimates that in the deglobalization scenario there will be about 10 wars in 2035, vs. only 2 in the globalization scenario15. Over the whole period, 2005-2035, the IV. Winners and Losers Deglobalization in the form of reduced trade interdependence, reduced capital flows, and reduced migration has few positive effects, based on this analysis with the International Futures Model. Economic growth is cut in all but a handful of countries, and is cut more in the non-OECD countries than in the OECD countries. Deglobalization has a mixed impact on equality. In many non-OECD countries, the cut in imports from the rest of the world increases the share of manufacturing and in 61 countries raises the share of income going to the poor. But since average productivity goes down in almost all countries, this gain in equality comes at the expense of reduced incomes and increased poverty in almost all countries. The only winners are a small number of countries that were small and poor and not well integrated in the global economy to begin with—and the gains from deglobalization even for them are very small. Politically, deglobalization makes for less stable domestic politics and a greater likelihood of war. The likelihood of state failure through internal war, projected to diminish through 2035 with increasing globalization, rises in the deglobalization scenario particularly among the non-OECD democracies. Similarly, deglobalization makes for more fractious relations among states and the probability for interstate war rises.

### These endless boom and bust cycles and mercantilism make economic nationalism and war inevitable

Jeffrey E. Garten (Juan Trippe Professor in the Practice of International Trade, Finance and Business at Yale University since July 1, 2005, having served as the Dean of the Yale School of Management since 1995) March 2009 “The Dangers of Turning Inward” http://www.business.illinois.edu/aguilera/Teaching/WSJ09\_Dangers\_of\_Turning\_Inward.pdf

The last time we saw sustained economic nationalism was in the 1930s, when capital flows and trade among countries collapsed, and every country went its own way. World growth went into a ditch, political ties among nations deteriorated, nationalism and populism combined to create fascist governments in Europe and Asia, and a world war took place. It took at least a generation for globalization to get back on track. There have been some bouts of inwardlooking governmental action since then, such as the early 1970s when the U.S. cut the dollar from its gold base and imposed export embargoes on soybeans and steel scrap. However, the economic conditions were not sufficiently bad for the trend to sustain itself. The kind of economic nationalism we are seeing today is not yet extreme. It is also understandable. The political pressures could hardly be worse. Over the last decade, the global economy grew on average about 4% to 5%, and this year it will come to a grinding halt: 0.5% according to the International Monetary Fund, where projections usually err on the optimistic side. World trade, which has grown much faster than global gross domestic product for many years, is projected to decline this year for the first time since 1982. Foreign direct investment last year slumped by 10% from 2007. Most dramatically, capital flows into emerging market nations are projected to drop this year by nearly 80% compared to 2007. The aggregate figures don't tell the story of what is unraveling in individual countries. In the last quarter of 2008, U.S. GDP dropped by 6.2% at an annual rate, the U.K. by 5.9%, Germany by 8.2%, Japan by 12.7% and South Korea by 20.8%. Mexico, Thailand and Singapore and most of Eastern Europe are also in deep trouble. In every case, employment has been plummeting. So far popular demonstrations against government policies have taken place in the U.K., France, Greece, Russia and throughout Eastern Europe. And the governments of Iceland and Latvia have fallen over the crisis. Governments could therefore be forgiven if they are preoccupied above all with the workers and companies within their own borders. Most officials don't know what to do because they haven't seen this level of distress before. They are living from day to day, desperately improvising and trying to hold off political pressure to take severe measures they know could be satisfying right now but cause bigger damage later. Thinking about how their policies might affect other countries is not their main focus, let alone taking the time to try to coordinate them internationally. Besides, whether it's in Washington, Brussels, Paris, Beijing, Brazilia or Tokyo, it is hard to find many top officials who wouldn't say that whatever measures they are taking that may undermine global commerce are strictly temporary. They all profess that when the crisis is over, they will resume their support for globalization. They underestimate, however, how hard it could be to reverse course. Political figures take comfort, too, from the global institutions that were not present in the 1930s -- the IMF, the World Bank and the World Trade Organization, all of which are assumed to be keeping globalization alive. This is a false sense of security, since these institutions are guided by sovereign countries. Government officials often feel that because they are going to endless crisis summit meetings -- the next big one is in London on April 2, when the world's top 20 nations will be assembling -- that some international coordination is actually taking place. This is mostly an illusion. With a few exceptions, such as the so-called Plaza Agreements of 1984 when currencies were realigned, it is difficult to point to a meeting where anything major has been said and subsequently implemented. But as the pressure on politicians mounts, decisions are being made on an incremental and ad hoc basis that amounts to a disturbing trend. Classic trade protectionism is on the rise. In the first half of 2008, the number of investigations in the World Trade Organization relating to antidumping cases -- selling below cost -- was up 30% from the year before. Washington has recently expanded sanctions against European food products in retaliation for Europe's boycott against hormonetreated American beef -- an old dispute, to be sure, but one that is escalating. In the last several months, the E.U. reintroduced export subsidies on butter and cheese. India raised tariffs on steel products, as did Russia on imported cars. Indonesia ingenuously designated that just a few of its ports could be used to import toys, creating a trade-blocking bottleneck. Brazil and Argentina have been pressing for a higher external tariff on imports into a South American bloc of countries called Mercosur. Just this week, the E.U. agreed to levy tariffs on American exports of biodiesel fuel, possibly a first shot in what may become a gigantic trade war fought over different environmental policies -- some based on taxes, some on regulation, some on cap and trade -- being embraced by individual countries. Much bigger problems have arisen in more non-traditional areas and derive from recent direct intervention of governments. The much-publicized "Buy America" provision of the U.S. stimulus package restricts purchases of construction-related goods to many U.S. manufacturers, and although it is riddled with exceptions, it does reveal Washington's state of mind. The bailout of GM and Chrysler is a purely national deal. Such exclusion against foreign firms is a violation of so-called "national treatment" clauses in trade agreements, and the E.U. has already put Washington on notice that it will pursue legal trade remedies if the final bailout package is discriminatory. Uncle Sam is not the only economic nationalist. The Japanese government is offering to help a broad array of its corporations -- but certainly not subsidiaries of foreign companies in Japan -- by purchasing the stock of these firms directly, thereby not just saving them but providing an advantage over competition from non-Japanese sources. The French government has created a sovereign wealth fund to make sure that certain "national champions," such as carparts manufacturer Valeo and aeronautics component maker Daher, aren't bought by foreign investors. Government involvement in financial institutions has taken on an anti-globalization tone. British regulators are pushing their global banks to redirect foreign lending to the U.K. when credit is sorely needed and where it can be monitored. Just this past week, the Royal Bank of Scotland announced it was closing shop in 60 foreign countries. Western European banks that were heavily invested in countries such as Hungary, the Czech Republic and the Baltics have pulled back their credits, causing a devastating deflation throughout Eastern Europe. The Swiss are reportedly considering more lenient accounting policies for loans their banks make domestically as opposed to abroad. This de-globalizing trend could well be amplified by Washington's effort to exercise tight oversight of several big financial institutions. Already AIG's prime Asian asset, American International Assurance Company, is on the block. As the feds take an ever bigger stake in Citigroup, they may well force it to divest itself of many of its prized global holdings, such as Banamex in Mexico and Citi Handlowy in Poland. It appears that new legislation under the Troubled Asset Relief Program will also restrict the employment of foreign nationals in hundreds of American banks in which the government has a stake. Whether or not it goes into bankruptcy, General Motors will be pressed to sell many of its foreign subsidiaries, too. Even Chinese multinationals such as Haier and Lenovo are beating a retreat to their own shores where the risks seem lower than operating in an uncertain global economy. The government in Beijing is never far away from such fundamental strategic decisions. Then there is the currency issue. Economic nationalists are mercantilists. They are willing to keep their currency cheap in order to make their exports more competitive. China is doing just that. A big question is whether other Asian exporters that have been badly hurt from the crisis -- Taiwan, South Korea and Thailand, for example -- will follow suit. Competitive devaluations were a major feature of the 1930s. It's no accident that the European Union has called an emergency summit for this Sunday to consider what to do with rising protectionism of all kinds. There are a number of reasons why economic nationalism could escalate. The recession could last well beyond this year. It is also worrisome that the forces of economic nationalism were gathering even before the crisis hit, and have deeper roots than most people know. Congress denied President Bush authority to negotiate trade agreements two years ago, fearing that America was not benefiting enough from open trade, and an effort to reform immigration was paralyzed for years. Globally, international trade negotiations called the Doha Round collapsed well before Bear Stearns and Lehman Brothers did. Concerns that trade was worsening income distribution were growing in every major industrial nation since the late 1990s. Whenever countries turned inward over the past half-century, Washington was a powerful countervailing force, preaching the gospel of globalization and open markets for goods, services and capital. As the Obama administration works feverishly to fire up America's growth engines, patch up its financial system and keep its housing market from collapsing further, and as its major long-term objectives center on health, education and reducing energy dependence on foreign sources, the country's preoccupations are more purely domestic than at any time since the 1930s. In the past, American business leaders from companies such as IBM, GE, Goldman Sachs and, yes, Citigroup and Merrill Lynch beat the drum for open global markets. As their share prices collapse, some voices are muted, some silenced. It is not easy to find anyone in America who has the stature and courage to press for a more open global economy in the midst of the current economic and political crosswinds. And given that the global rot started in the U.S. with egregiously irresponsible lending, borrowing and regulation, America's brand of capitalism is in serious disrepute around the world. Even if President Obama had the mental bandwidth to become a cheerleader for globalization, America's do-as-I-say-and-not-as-I-do leadership has been badly compromised. If economic nationalism puts a monkey wrench in the wheels of global commerce, the damage could be severe. The U.S. is a good example. It is inconceivable that Uncle Sam could mount a serious recovery without a massive expansion of exports -- the very activity that was responsible for so much of America's economic growth during the middle of this decade. But that won't be possible if other nations block imports. For generations, the deficits that we have run this past decade and the trillions of dollars we are spending now mean we will be highly dependent on foreign loans from China, Japan and other parts of the world. But these will not be forthcoming at prices we can afford without a global financial system built on deep collaboration between debtors and creditors -- including keeping our market open to foreign goods and services. The Obama administration talks about a super-competitive economy, based on high-quality jobs -- which means knowledge-intensive jobs. This won't happen if we are not able to continue to bring in the brightest people from all over the world to work and live here. Silicon Valley, to take one example, would be a pale shadow of itself without Indian, Chinese and Israeli brain power in its midst. More generally, without an open global economy, worldwide industries such as autos, steel, banking and telecommunications cannot be rationalized and restructured efficiently, and we'll be doomed to have excessive capacity and booms and busts forever. The big emerging markets such as China, India, Brazil, Turkey and South Africa will never be fully integrated into the world economy, depriving them and us of future economic growth. The productivity of billions of men and women entering the global workforce will be stunted to everyone's detriment. Of course, no one would say that globalization is without its problems. Trade surges and products made by low-priced labor can lead to job displacement and increasing income inequality. Proud national cultures can be undermined. But these challenges can be met by reasonable regulation and by domestic policies that provide a strong social safety net and the kind of education that helps people acquire new skills for a competitive world. With the right responses of governments, the benefits should far outweigh the disadvantages. For thousands of years, globalization has increased global wealth, individual choice and human freedom. The point is, economic nationalism, with its implicit autarchic and save-yourself character, embodies exactly the wrong spirit and runs in precisely the wrong direction from the global system that will be necessary to create the future we all want. As happened in the 1930s, economic nationalism is also sure to poison geopolitics. Governments under economic pressure have far fewer resources to take care of their citizens and to deal with rising anger and social tensions. Whether or not they are democracies, their tenure can be threatened by popular resentment. The temptation for governments to whip up enthusiasm for something that distracts citizens from their economic woes -- a war or a jihad against unpopular minorities, for example -- is great. That's not all. As an economically enfeebled South Korea withdraws foreign aid from North Korea, could we see an even more irrational activity from Pyongyang? As the Pakistani economy goes into the tank, will the government be more likely to compromise with terrorists to alleviate at least one source of pressure? As Ukraine strains under the weight of an IMF bailout, is a civil war with Cold War overtones between Europe and Russia be in the cards? And beyond all that, how will economically embattled and inward-looking governments be able to deal with the critical issues that need global resolution such as control of nuclear weapons, or a treaty to manage climate change, or help to the hundreds of millions of people who are now falling back into poverty?

# \*\*Oil Dependence Advantage\*\*

## Oil Dependence – Links

### Competitive grants for mass transit include incentives to shift away from oil

Pinkham, 11 (Donna, “Moul Bill Would Provide Grants to Transit Authorities That Convert to Compressed Natural Gas”, RepMoul, 4-6-2011, http://repmoul.com/NewsItemPrint.aspx?NewsID=10989) //AWV

“House Bill 1084 would establish the Keystone Transit Program, which would offer competitive grants to small mass transit companies in Pennsylvania that convert their fleets to compressed natural gas or to offset the incremental cost of purchasing new buses that run on CNG,” said Moul. “Under this legislation, $5 million would be transferred from the Oil and Gas Lease Fund to the state Department of Environmental Protection to fund the grants. No tax dollars will be used to fund this program. “Natural gas burns cleaner than gasoline or diesel,” said Moul. “The use of CNG to fuel transit buses and fleet vehicles not only makes sense from an environmental standpoint, but it also makes sense from an economic standpoint.” Moul’s legislation will create jobs and enhance the development of the infrastructure necessary to encourage widespread use of CNG in the Commonwealth. HB 1084 would require mass transit authorities that receive Keystone Transit Program grants to build, maintain and operate natural gas fueling stations to support the buses that it purchases with the funds. “We are fortunate to have the Marcellus Shale gas reserves covering most of our state,” said Moul. “This good fortune means that, if managed properly, we will have an abundant supply of clean fuel for our public transportation systems, and when the infrastructure is in place, for our personal vehicles as well. It is time to reduce our dependence on foreign oil and to use the resources we have available to us.”

### Road centered transportation makes the US oil dependent

Pollard, 4’ – Senior Attorney and Director, Land and Community Program at Southern Environmental Law Center (Trip, “Article: Follow the money: transportation investments for smarter growth,” Temple Environmental Law & Technology Journal, Spring, 2004, 22 Temp. Envtl. L. & Tech. J. 155)//AWV

Road-centered transportation planning and funding has contributed significantly to escalating and unsustainable levels of energy consumption. The United States is responsible for a quarter of world petroleum consumption, and transportation uses two-thirds of this amount. n29 In 2001, cars and trucks consumed over 167 billion gallons of gasoline, diesel and other fuels. n30 America imports more than half of the petroleum it consumes, and these imports are the largest component of the country's trade deficit. n31 In addition, the heavy reliance on imported oil from unstable countries and regions threatens national security. As a recent report concluded, "America's swelling thirst for oil is one of our leading economic and national security problems." n32

### Improving Mass Transit has a direct correlation with reducing oil dependency and VMT

Securing America’s Future Energy, 11 (“Strengthening Energy Security and Promoting Economic Growth”, Transportation Policies for America’s Future, February, http://www.cfr.org/content/publications/attachments/EnergyTFR.pdf) //AC

Mass transit plays an important role in facilitating oil savings in some U.S. metropolitan areas. Because of the ubiquity of cars and the flexibility they provide drivers, transit is more likely to have a positive return on investment where demand already exists, such as in dense metropolitan areas where people can live close to fixed bus and rail stops. In these locations, effectively expanding transit capacity can improve quality of life and the economy while reducing per capita oil consumption dramatically. A 2008 study by ICF International found that transit reduced VMT by 102 billion miles in 2007, or 3.4 percent of the total. The gasoline equivalent of those annual VMT savings was 1.4 billion gallons. According to ICF, when reduced congestion and changes in land use patterns are also taken into account, 4.2 billion gallons of gasoline per year are saved through transit use.18 Even though more than 80 percent of Americans live in cities, only around 53 percent have access to transit.19 Particularly outside urban areas, the convenience of cars will continue to make them the primary travel mode for many drivers. However, in certain places there are sound reasons for drivers to switch to public transit, including lower costs, reduced commute times, greater personal productivity, improved safety, and increased leisure time. Americans have in the past responded to higher gasoline prices with higher transit demand. During the third quarter of 2008, transit ridership increased 6.5 percent compared to 2007, while VMT dropped 4.6 percent.20 Both 2007 and 2008 saw the highest levels of public transit ridership in more than 50 years (Figure 2.2). According to the American Public Transit Association, over the past three years an increasing number of Americans, motivated by a renewed interest in urban lifestyles, concern for the environment, and rising fuel costs, have begun using public transportation instead of automobiles. Between 1995 and 2008, transit use increased by 32 percent—a faster rate of growth than any other mode of transportation, and indeed faster than the rate of population growth.21 Despite these developments, in certain locations, or at certain times of the day or week, buses and trains are plagued by low load factors (percentage of filled seats). These transit services are both energy- and fiscally-inefficient and can result in higher energy consumption per passenger-mile traveled than traditional automobiles.22

### Mass Transit can cut down almost all the oil imported from Saudi Arabia

Environment Maryland, 09 (“Record Transit Ridership Increases Energy Independence”, Getting On Track, September, http://environmentmarylandcenter.org/sites/environment/files/reports/Getting%20On%20Track%20Record%20Transit%20Ridership%20Increases%20Energy%20Independence.pdf) //AC

An estimated 14 million Americans ride public transportation each weekday, representing about 5 percent of the U.S. working population. If this level doubled to one in 10 working Americans regularly using transit, U.S. reliance on foreign oil could decline by more than 40 percent, or nearly the amount of oil imported from Saudi Arabia each year

### Mass Transit can easily reduce oil dependency and promote development

Vitali, 11 Pennsylvania State Rep (Greg, “PennEnvironment Conference”, Seeking Alpha, May, <http://seekingalpha.com/instablog/21153-sufiy/194495-peak-oil-getting-off-oil-a-50-state-roadmap-for-curbing-our-dependence-on-petroleum>) //AC

State Rep. Greg Vitali today endorsed a report that calls on Pennsylvania and the rest of the country to reduce its dependence on oil. Vitali joined a news conference in the state Capitol where PennEnvironment released the report called "Getting Off Oil." "Pennsylvania produces a full 1 percent of greenhouse gasses in the world through its use of oil and other fossil fuels," said Vitali, D-Delaware. "We have a responsibility to deal with this problem." Vitali said Pennsylvania, which has 11 million vehicles on its roads, can reduce its dependency on oil by properly funding mass transit, promoting development and use of biofuels and promoting the production of electric cars to reduce the use of oil. Vitali said 70 percent of the country's oil comes from foreign countries. "That's caused military entanglements in the Middle East that are costly in terms of lives and money," Vitali said. "Oil dependency is America's Achilles heel." Tim Diehl, a retired Air Force master sergeant who served in Iraq, said America sends $1 billion a day overseas to buy oil and some of that money gets into the hands of terrorists. He said America should take that money and invest it into clean, renewable energy.

### If we improve transit infrastructure, we can double the amount of riders, saving 1.4 billion gallons of gas

Sandalow, 08 Energy & Environment Scholar at Brookings, Served on National Security Council (David, “Ending Oil Dependence: Protecting National Security, the Environment and the Economy”, June, <http://a.abcnews.go.com/images/Politics/PB_Energy_Sandalow.pdf>) //AC

Americans are driving more and enjoying it less. Between 1993 and 2003, U.S. vehicle miles traveled increased 26 percent. Drivers now spend an average of 62 minutes a day in their vehicles, and traffic congestion is a growing frustration for millions. More sensible urban-suburban growth patterns could both improve quality of life and reduce oil dependence. “Transit-oriented development”—building mixed-use communities around transit stations—is one increasingly popular approach. According to a study for the American Public Transportation Association, doubling ridership on mass transit nationally could save 1.4 billion gallons of gasoline per year.

### Mass transit is necessary to keep up with rising oil demands

Arizona PIRG Education Fund, 2009 “a federation of independent, state-based, citizen-funded organizations that advocate for the public interest.”(“Why and How to Fund Public Transportation”, march 2009, [http://www.uspirg.org/sites/pirg/files/reports/Why-and-How-to-Fund-Public-Transportation.pdf)//DD](http://www.uspirg.org/sites/pirg/files/reports/Why-and-How-to-Fund-Public-Transportation.pdf%29//DD)

There are a number of reasons that public transportation will require growing levels of support in the future. 25 One reason transit needs will grow is the many ongoing trends compounding traffic congestion problems. Arizona’s population is expected to reach over 10 million people in 25 years. As Arizona’s population increases, the number of cars on the road will increase and people will drive more miles in their vehicles. Growing areas that face increasing traffic and parking problems will find transit attractive if financing and rights of way can be obtained. Rising gas prices also make transit more attractive because of greater fuel efficiency compared to cars and trucks. Although economic conditions can cause a temporary drop in the price of oil, the long term trend of price increases is expected to continue. Indeed, it appears that the era of “cheap oil” may well be over. Oil prices have increased during the last decade because of increased global demand from countries such as China, Brazil and India. Transportation is the biggest consumer of oil in the U.S., accounting for about twothirds of our petroleum demand and almost 80 percent of growth in recent decades. The world is meanwhile having an increasingly difficult time producing enough oil to satisfy rising demand. Regardless of whether world-wide production of oil “peaks” in the near future, the cost of producing and refining oil will increase as proven reserves are depleted and extraction companies unconventional supplies such as lower-quality crude and tar sands.

### Across the country, people are encouraged to ride public transportation to reduce dependence on foreign oil

[Cervantes](http://www.ktsm.com/user/12087) 12, Online Media Journalist (Bianca, “Dump the Pump Encourages Mass Transit Commutes, June 14, http://www.ktsm.com/news/dump-pump-encourages-mass-transit-commutes) //AC

Sun Metro also will give away 70 day passes to commuters who Park and Ride at the Mission Valley, East Side, Northeast or West Side Transfer Centers. Downtown and Cincinnati commuters also can expand their lunch options by taking advantage of free rides on Route 204 during the lunch hour, from 11 a.m. to 1 p.m. Sponsored by the American Public Transportation Association (APTA), the 2012 National Dump the Pump Day is a day that encourages people to get out of their personal vehicles and ride public transportation to save money, protect the planet, reduce our dependence on foreign oil and improve our quality of life.

### Ridership on public transit has been increasing, and oil dependence has been decreasing, proving that there is a direct correlation between the two

Addison 12 Clean Fleet Report Editor (John, “Record Public Transit Ridership Reduces U.S. Oil Dependency, March 14th, http://www.cleantechblog.com/2012/03/record-public-transit-ridership-reduces-u-s-oil-dependency.html)//AC

The United States is reducing its dependency on oil as we now consuming 18.3 million barrels a day, down from our peak of 21 million barrels a few years ago. Record use of public transit is a major factor – less solo driving in gridlock and we use less oil. Other major factors, of course, include high gasoline prices and more fuel-efficient cars. Since 96 percent of our transportation is from oil refined into gasoline, diesel, and jet fuel, we will take all the help we can get. According to a report released today by the American Public Transportation Association (APTA), Americans took 10.4 billion trips on public transportation in 2011, the second highest annual ridership since 1957. Only ridership in 2008, when gas rose to more than $4 a gallon, surpassed last year’s ridership. With an increase of 2.3 percent over the 2010 ridership, this was the sixth year in a row that more than 10 billion trips were taken on public transportation systems nationwide. During 2011, vehicle miles of travel (VMTs) declined by 1.2 percent. A number of U.S. regions demonstrated leadership in improving bus and rail systems, often doing more with less. The best systems use rail as the backbone of the system integrated with more cost-effective bus. Light rail systems that showed major increases in 2011 include these regions: Seattle, WA up 37.2%, Dallas, TX up 31.2%; Buffalo, NY up 15.6; North San Diego County up 14.8%; Salt Lake City, UT up 14.4%. These rail systems use local electricity, not foreign oil.

### Public Transportation Reduces U.S. Foreign Oil Dependence

**Bailey ,07**- Federal Programs Advisor at the New York City Department of Transportation.(transportation policy analyst <http://www.apta.com/resources/reportsandpublications/Documents/apta_public_transportation_fuel_savings_final_010807.pdf>)

Public Transportation Reduces U.S. Foreign Oil Dependence

Using conservative assumptions, the study found that current public transportation usage reduces U.S. gasoline consumption by 1.4 billion gallons each year. In concrete terms, that means:

* ƒ 108 million fewer cars filling up – almost 300,000 every day.
* ƒ 34 fewer supertankers leaving the Middle East – one every 11 days.
* ƒ Over 140,000 fewer tanker truck deliveries to service stations per year.
* ƒ A savings of 3.9 million gallons of gasoline per day.

These savings result from the efficiency of carrying multiple passengers in each vehicle, the reduction in traffic congestion from fewer automobiles on the roads, and the varied sources of energy for public transportation. Public transportation also saves energy by enabling land use patterns that create shorter travel distances, both for transit riders and drivers. We hope to estimate these savings in future research, but were not able to include them in this report.

### Public Transportation, weans the United States off foreign oil

**Bailey, 07**- Federal Programs Advisor at the New York City Department of Transportation.(transportation policy analyst <http://www.apta.com/resources/reportsandpublications/Documents/apta_public_transportation_fuel_savings_final_010807.pdf>)

The dramatic increase in ridership over the past decade demonstrates Americans’ clear desire for more public transportation options. So what would happen if public transportation services were expanded so that ridership doubled? Total national fuel savings from public transportation would double to 2.8 billion gallons per year, or more if improved coordination between land use plans and public transportation could replace even more car travel.

### Mass transit reduces the gas use and foreign oil dependence.

Sandalow, 8 – Energy & Environment Scholar, National Security Council, White House Council (David B., Freedom from Oil: How the Next President Can End the United States’ Oil Addiction p. 152-153) //AC

Sprawl increases both VMT and gasoline consumption. One study analyzed the impact of moving sample households “from a city with measures of urban form and transit supply identical to those of Atlanta to a city with measures the same as those of Boston.” The result: VMT (Vehicle Miles Traveled) fell by 25%. Another study found that more than 60% of the growth in VMT during the 1980s and 1990s was due to land use factors. Yet another found that, during the same period, gasoline consumption was 50% greater per person in Phoenix and Houston than Chicago or Washington, D.C. One study found 2.3 billion gallons of gasoline wasted due to traffic congestion in 2005. Unhappiness with sprawl is widespread. Bipartisan coalitions have been formed to promote “smart growth” as an alternative. Many cities, including Austin, Texas, Portland, Oregon, and Wichita, Kansas have launched major smart growth initiatives. One popular approach is “transit-oriented development” – building mixed-use communities around transit stations. High-density development within short distances of transit stations can provide many drivers with an alternative to congested traffic and lengthy commutes. Greater investment in transit systems is also a priority. Most major metropolitan areas have new rail or rapid bus systems under development. Land use is historically a state and local function, not a federal one. Much of the advocacy related to smart growth is community-based, focusing on regions and cities. One leading book says “think globally, act locally, but plan regionally” Yet federal policies play a central role. One survey asked urban scholars to identify the most important influences on the American metropolis in the second half of the 20th century. Their answer: “The overwhelming impact of the federal government…especially through policies that intentionally or unintentionally promoted suburbanization and sprawl” The two most important influences, according to these scholars, were the 1956 Interstate Highway Act and Federal Housing Administration mortgages. Quantifying the impact of smart growth policies on oil dependence presents challenges. Policies often take many years to implement, during which time other variables (such as oil prices and characteristics of the vehicle fleet) change substantially. One recent study, based on extensive statistical analyses, concludes that “…programs that alter urban form and transit supply are potentially valuable tools available to policymakers interested in reducing the social cost of driving”. Another recent study found that doubling ridership on mass transit nationally could save 1.4 billion gallons of gasoline per year. This is roughly 1% of U.S. gasoline consumption. Smart growth policies alone cannot end oil dependence. But they can have an impact on growth in VMT, helping reduce oil consumption while at the same time improving quality of life for millions of Americans.

### Mass transit reduces oil dependency and enhances energy security

Deutch and Schlesinger, 06, National Security Task Force Chairs (John, James, “National Security consequences of U.S. oil dependency”) //AC

Many experts note that a shift from cars to mass transit could have a major effect in reducing oil consumption, in addition to other benefits. Where such actions substitute electricity for oil, such as in subways and other electrified trains, these policies may enhance energy security as well. However, expanding electricity-generating capacity and electricity transmission in the United States is not without its challenges.

## Impacts – Conflict Escalation

### Oil conflicts escalate globally

Jim Cabral (teaches international relations and political science in the Social Science Department at Landmark College in Putney, Vt.) August 12, 2010 “Beyond BP: Michael Klare on US Energy Policy” http://www.valleyadvocate.com/article.cfm?aid=12165

The preoccupation of states with securing the reliability of energy through exploration and extraction might seem benign enough (leaving aside for a moment the weighty issues of diminishing and increasingly remote supplies). But understood as a matter of state security, energy procurement is inextricably bound up with military proliferation. Hence Klare's "new geopolitics of energy" is fraught with the potential for conflict, especially given the urgency that state leaders attach to finding new sources of energy. Energy competition among what Klare calls the "energy deficit" states typically involves arms-for-energy tradeoffs with their suppliers, the "energy surplus" states. In the case of oil, arms transfers to the governments of surplus states pave the way for the deficit states' NOCs (and any IOCs headquartered in their countries) both to exploit their hosts' oilfields and to search for new ones. For deficit states, the top priority accorded to "energy security" renders considerations of surplus states' integrity (Do they respect international norms? Do they allow their citizens to exercise civil liberties?) irrelevant, for the most part. Not surprisingly, the accelerating militarization of energy procurement increases the possibilities for armed international conflict. Klare explains how nationalism lends momentum to this process: "The long-term risk of escalation is growing even more potent because major energy importers and exporters regularly appeal to that most dangerous of emotions, nationalism, in making their claim over the management of energy flows. Nationalistic appeals, once they have gripped a populace, almost invariably promote fierce emotion and irrationality. Add to this fact that the leaders of most countries involved in the great energy race have come to view the struggle over hydrocarbon assets as a 'zero-sum' contest—one in which a gain for one country almost always represents a loss for others. A zero-sum mentality leads to a loss of flexibility in crisis situations, while the lens of nationalism turns the pursuit of energy assets into a sacred obligation of senior government officials." The "competitive arms transfers" that represent the militarization of energy procurement also have another disturbing upshot: strengthening and legitimizing repressive, corrupt foreign regimes. In the case of U.S. arms recipients, the list is long and growing. It includes long-time allies in the Persian Gulf region—most notably Saudi Arabia—whose anachronistic social policies effectively reduce women to the status of second-class citizens; corruptible African governments in Nigeria, Chad, and Angola, where—along with off-shore drilling sites along the continent's west coast—U.S.-based oil companies such as Exxon and Chevron currently operate; and more recent allies in the energy-rich Caspian Sea region, including those Klare refers to as the "autocratic regimes" of Kazakhstan, Kyrgyzstan and Uzbekistan. While the governments of the oil-rich Persian Gulf have long been wooed with energy deficit countries' military largess, the emergence of the Caspian Sea region's governments as coveted allies may come as a bit of a surprise to some. Klare soberly sketches out a "three-way struggle for geopolitical advantage" in the Caspian Sea basin, as the U.S., Russia (Caspian states having formerly been Soviet republics) and China funnel arms and other forms of military assistance into the region in competition for influence there. Again stressing the dangers of an escalation of conflict, Klare notes that "This three-way struggle...is militarizing the Caspian basin, inundating the region with advanced arms and an ever-growing corps of military advisers, instructors, technicians, and combat-support personnel. [It will] heighten traditional suspicions and rivalries that have long plagued the region. The Great Powers are not only adding tinder to possible future fires, but also increasing the risk that they will be caught in any conflagration."

### US oil dependence makes resource wars inevitable

Michael Klare, Five College Professor of Peace and World Security Studies at Hampshire, 11/1/2001, Multinational Monitor

MM: Is U.S. entanglement in resource wars inevitable so long as the nation relies so heavily on oil? Klare: I think resource wars are inevitable so long as we rely so heavily on imported oil to make up for the shortfall in our own production and to the degree that we do not engage in some kind of international system of resource allocation that's reasonably equitable. The problem is that we use a vast amount of oil and we also want to engineer local politics in other countries to be friendly to serving that need. We want local governments to be amenable to providing the U.S. with as much energy as we want at low prices. That means we get involved in local politics, and very often we get involved in local politics in areas where there are a lot of pre-existing divisions - religious, ethnic and political. We wind up taking sides and we get enmeshed in conflicts, which is what has happened in Saudi Arabia. The U.S. has also risked getting involved in local conflicts in other countries because of its interest in their petroleum resources. We've been enmeshed in the internal politics of Iran - we were very close to the Shah, and when the Shah was overthrown, there was a backlash against us. Historically, we've been involved in conflicts in Mexico over oil. We're now involved in Colombia in a conflict that's as much about oil as it is about drugs.

### Independence prevents militaristic posturing over supply lines

Benjamin K. Sovacool (an Assistant Professor at the Lee Kuan Yew School of Public Policy at the National University of Singapore. He is also a Research Fellow in the Energy Governance Program at the Centre on Asia and Globalization) 2007 “Oil Independence Possible for U.S. by 2030” http://scitizen.com/authors/Benjamin-K.-Sovacool-a-899\_s\_08b456d033fcee27acbc8caf208135e8.html

Oil independence is possible for the U.S. if comprehensive and aggressive energy policies are implemented aimed at reducing demand for oil, increasing supply, and promoting alternative fuels. default textContrary to what most people might think, oil independence is possible for the United States by 2030. The news is especially important when one considers that, between 1970 and 2000, economists estimate that the costs of American dependence on foreign supplies of oil have ranged between $5 and $13 trillion dollars. That’s more than the cost of all wars fought by the U.S. (adjusted for inflation) going all the way back to the Revolutionary War. The trick is to start by thinking about oil independence a little differently. Oil independence should not be viewed as eliminating all imports of oil or reducing imports from hostile or unstable oil producing states. Instead, it should entail creating a world where the costs of the country’s dependence on oil would be so small that they would have little to no effect on our economic, military, or foreign policy. It means creating a world where the estimated total economic costs of oil dependence would be less than one percent of U.S. gross domestic product by 2030. Conceived in this way (and contrary to much political commentary these days), researchers at the Oak Ridge National Laboratory (ORNL) have calculated that if the country as a whole reduced their demand for oil by 7.22 million barrels per day (MBD) and increased supply by 3 MBD, oil independence would be achieved by 2030 with a 95 percent chance of success. By reducing demand for oil, increasing its price elasticity, and increasing the supply of conventional and unconventional petroleum products, ORNL researchers noted that the country would be virtually immune from oil price shocks and market uncertainty. If large oil producing states were to respond to the U.S. by cutting back production, their initial gains from higher prices would also reduce their market share, in turn further limiting their ability to influence the oil market in the future. So if decreasing American demand for oil by 7.22 MBD and increasing supply by 3 MBD would enable the U.S. to achieve oil independence in 2030, which combination of policies offers an optimal strategy? Policymakers, for instance, could lower demand for oil by making automobiles more efficient (by legislating more stringent fuel economy standards for light and heavy duty vehicles or lowering the interstate speed limit), promoting alternatives in mode choice (such as mass transit, light rail, and carpooling), or establishing telecommuting centers and incentives for commuters to work from home. They could also promote rigorous standards for tire inflation and reduce oil consumption in other sectors of the economy. Alternatively, they could increase alternative domestic supplies of oil, develop better technologies for the extraction of oil shale, mandate the use of advanced oil recovery and extraction techniques, and promote alternatives to oil such as ethanol, bio-diesel, and Fischer-Tropsch fuels. Taken together, such policies could reduce demand for oil by 8.266 to 12.119 MBD and increase American oil supply by 8.939 and 12.119 MBD by 2030—well over the target set by the ORNL study. Thus, to insulate the American economy from the vagaries of the world oil market, policymakers need not focus only geopolitical power structures in oil producing states. Instead, attempts to change the behavior of the country’s automobile drivers, industrial leaders, and homeowners could greatly minimize reliance on foreign supplies of oil. To battle the “oil problem” policymakers need not talk only about sending more troops to Iraq or Saudi Arabia nor drafting new contracts with Nigeria and Russia. They could also focus on curbing American demand for oil and expanding domestic conventional and alternative supplies.

# \*\*Warming Advantage\*\*

## Warming/Emissions Brinks/Threshold

### Emissions are the biggest threat to pushing us past the 2 degree threshold

Birol 12- Chief Economist of the International Energy Agency, (Fatih, “An Influential Global Voice Warns of Runaway Emissions”, Environment 360, Fen Montaigne Interview, <http://e360.yale.edu/feature/fatih_birol_iea_economist_on__risk_of_climate_change/2537/>,) //AWV

The situation today is, I could say, worse than ever. And I have at least three reasons why I believe so. One is I see the political momentum is not there. And climate change is sliding down in the agenda of many governments, including the governments that have been the champions of fighting against climate change and trying to put policies in place. The second reason why I think the situation is not bright at all is that carbon dioxide emissions are increasing each year; in 2011 we saw a 1-gigaton increase, which brings us very close to a lock-in of our energy system situation, and it will be almost impossible to reverse the trends after 2017 because our energy system — power plants, the industry sector, the transportation sector — will be locked into the capital investments in a way that they will use fossil fuel energies. And the third one is that at the end of last year at the United Nations COP meeting in Durban all countries in the world for the first time signed a protocol that they are going to take steps to limit the temperature increase to 2 degrees Celsius. This has been celebrated as a major step. It definitely has political significance, but it was not followed by concrete policy steps. When I look at the investment data, no energy investor changed its behavior as a result of the agreement. So the investments — which would have implications for many years to come in terms of building power plants, industrial facilities, and others — will be with us for many years to come. As a result of these three major reasons, I do not feel very optimistic that we will be able to reach the 2-degree trajectory, but I will be extremely happy if I am wrong.

## Warming – Greenhouse Links

### Investment in mass transit substantially reduces greenhouse gas emissions

Bailey and Mokhtarian 8 -Ph.D. (Linda and Patricia L., “The Broader Connection between

Public Transportation, Energy Conservation and Greenhouse Gas Reduction”, February 2008 Andrew Little ICF International http://www.apta.com/gap/policyresearch/Documents/land\_use.pdf)

The estimated savings in petroleum use from public transportation can also be expressed in terms of greenhouse gas emissions. Carbon dioxide (CO2) is by far the most prevalent greenhouse gas emitted from motor vehicles. Each gallon of gasoline burned releases 8.9 kg of CO2. The total effects of public transit availability reduce CO2 emissions by 37 million metric tonnes annually. We can consider these savings in terms of equivalent acres of forest. Planting new forest is one way to remove CO2 from the atmosphere. Trees sequester carbon as they grow; other effects such as cooling from reduced reflectivity and carbon emissions upon decay are omitted for the purpose of this comparison. Figure 3 below shows how much new forest plantings would be required to absorb the same amount of CO2 that bus and rail transit currently keep out of the atmosphere annually. To match the total effect of public transportation, the U.S. would have to plant 23.2 million acres of new forest. In other words, if the United States had no public transportation systems, it would need a new forest the size of Indiana to absorb the additional CO2 emissions from the transportation system.

### Mass Transit reduces greenhouse gas emission

Dannenberg et.al, 8 – Associate Director for Science in the Division of Emergency and Environmental Health, MD, MPH (Andrew L. Dannenberg, Margalit Younger, Heather R. Morrow-Almeida, Stephen M. Vindigni, Andrew L. Dannenberg, “The Built Environment, Climate Change, and Health”, American Journal of Preventative Medicine, 11/??/08, <http://www.ajpmonline.org/article/S0749-3797%2808%2900682-X/fulltext>, volume 35 issue 5, pages 517-526)//MBW

Transportation infrastructure affects physical activity as well. A study of five pedestrian and bicycling trails in Nebraska found the average cost per user in 2002 was $235, but resulted in medical cost savings of $622 per person from engaging in physical activity.30 Trails offer multiple co-benefits, by improving physical activity levels, providing alternative transportation routes, and preserving green space. Walking, bicycling, and using mass transit (which often includes walking) for commuting purposes can increase physical activity,31, 32 which in turn enhances psychological well-being and reduces risks of mortality, cardiovascular disease, stroke, colon cancer, diabetes mellitus, and depression.33 Less time in automobiles reduces exposure to busy traffic and “road rage”34, 35 and decreases the likelihood of obesity,36 while simultaneously reducing GHG emissions. Communities highly dependent on automobiles pose mobility barriers for children, the elderly, those without vehicles, and people with mobility impairments. Accessible, walkable, and safe neighborhoods with mixed-land use, good connectivity, public transit options, and recreational facilities encourage people with limited mobility or special needs to stay physically active, independent, and involved in community activities.37, 38 Among the elderly, exercise is associated with lower rates of functional decline39 and dementia,40 and may enable seniors to remain independent longer.38 Aspects of the built environment that facilitate physical activity for all populations offer the co-benefit of reducing motor vehicle associated pollution, thereby diminishing both health hazards and the GHG emissions contributing to climate change.

### Mass Transit produces less greenhouse gas than cars do

Merchant, 9 – Writer (Brian, “City Dwellers Emit 70% Less Carbon From Transit Than Urbanites”,Tree Hugger, 6/26/09, http://www.treehugger.com/corporate-responsibility/city-dwellers-emit-70-less-carbon-from-transit-than-suburbanites.html)//MBW

This news might not comes as much of shock, but a new study reveals that people living in urban areas emit 70% less carbon emissions in transit than folks living in the suburbs do. Well obviously, you might think--better [public transit](http://www.treehugger.com/files/2005/10/popularity_of_p.php), less distance to travel--of course you'll have fewer carbon emissions. But 70% less is a pretty staggering number. Here's why the study helps invigorate the case for more [urbanized, sustainable living](http://www.treehugger.com/files/2008/12/dallas-revision-charrette.php). First, the simple transit benefits of living in a city: (from the [Environmental News Service](http://www.ens-newswire.com/ens/jun2009/2009-06-24-091.asp)) ""Cities are more location efficient - meaning key destinations are closer to where people live and work," said Scott Bernstein, president of the Center for Neighborhood Technology. The CNT is the Chicago based nonprofit responsible for the study, which it completed by looking at emissions data across the country [compiled by the EPA](http://www.treehugger.com/files/2009/03/epa-proposes-first-nationwide-greenhouse-gas-reporting-system.php). They make a pretty good--if not exactly trailblazing--case for urban living. "[Cities] require less time, money, fuel and greenhouse gas emissions for residents to meet their everyday travel needs. People can walk, bike, car-share, take public transit," he said. "So residents of cities and compact communities generate less CO2 per household than people who live in more dispersed communities, like many suburbs and outlying areas." What's more, people who live in cities typically spend around 14% of their income on transportation, while those who live in suburban areas spend up to 28% or more on transportation. That's a pretty hefty chunk of your paycheck to spend getting from point A to point B. So if you're looking into a move, consider moving to an urban area--you'll save $5,000 on gas annually, emit less carbon, and spend less time in transit. Cheaper, less environmentally taxing transportation is one of the primary reasons that urban areas are the more sustainable communities--and will be even [more so in the future](http://www.treehugger.com/files/2009/02/urban-edge-agriculture.php).

### Public Transportation makes nearby houses greener

Koch, 11 – Journalist for USA Today (Wendy, “Greenest Homes are Those Near Public Transit”, GreenHouse, 3/3/11, http://content.usatoday.com/communities/greenhouse/post/2011/03/green-suburban-homes-transit-energy-use-/1#.T-YwIKnRe9I)//MBW

Location, location, location -- it's a well-worn mantra in real estate. New research shows yet another reason why it's important: it decides how green a home really is. Housing near public transportation uses less energy than homes in the suburbs, even Energy Star-rated ones. That's the finding of a study released this week by the U.S. Environmental Protection Agency, which supported the data analysis. The EPA says location is vital because buildings and transportation together account for about 70% of U.S. energy use and 62% of its greenhouse gas emissions.

## Warming – Emissions Links

### Mass transit is the single most effective strategy available to reduce the CO2 emissions that are the cause of global warming

Shapiro et al, 2 (Dr. Robert J. Shapiro is Managing Director of Sonecon, LLC, a non-resident Fellow of the Brookings Institution and the Progressive Policy Institute, Dr. Kevin A. Hassett, Dr. Frank S. Arnold, 2002, “Conserving Energy and Preserving the Environment: The Role of Public Transportation” http://archives.eesi.org/briefings/2004/Clean%20Bus/1.15.04%20Public%20Transit/Shapiro%20Study.pdf)

As great as the current advantages are, far greater energy and environmental benefits could be derived through increased use of public transportation. Based on our findings, the study concludes that greater use of public transportation offers the single most effective strategy currently available for achieving significant energy savings and environmental gains, without creating new government programs or imposing new rules on the private sector. If Americans increase their use of public transportation, the study found dramatic benefits in energy conservation and a healthier environment. For example, if Americans used public transportation at the same rate as Europeans -- for roughly ten percent of their daily travel needs -- the United States would: Reduce its dependence on imported oil by more than 40 percent or nearly the amount of oil we import from Saudi Arabia each year; Save more energy every year than all the energy used by the U.S. petrochemical industry and nearly equal the energy used to produce food in the United States. Reduce carbon dioxide emissions by more than 25 percent of those directed under the Kyoto Agreement. Reduce CO pollution by three times the combined levels emitted by four high polluting industries (chemical manufacturing; oil and gas production; metals processing; and industrial use of coal). Reduce smog across the country by cutting NOx emissions by 35 percent of the combined NOx emissions from the four industries cited above, and cut VOC pollution by 84 percent of the combined VOC emissions from these four industries.

### Mass transit is substantially more fuel efficient – will decrease emissions

**Center for Neighborhood Technology, 3** – Report prepared for Transit Cooperative Research Program Transportation Research Board National Research Council (“COMBATING GLOBAL WARMING THROUGH SUSTAINABLE SURFACE TRANSPORTATION POLICY ,” March, <http://www.travelmatters.org/about/final-report.pdf>)//DH

Of the various modes of transportation that generate emissions, by far and away the largest segment consisted of the combined emissions of both automobiles and light trucks; almost 60 percent of transportation-related carbon emissions come from motor fuel consumed by these two classes of vehicle. For year 2000, cars generated 38.6 per cent of the U.S. transportation sector CO2 emissions; light trucks, 20.6 per cent; and buses, 13.7 per cent. The bulk of growth between 1990 and 2000 in transportation emissions was due to growth in the use of light-trucks – vans, pickups, minivans, and sports utility vehicles. 46 From a purely statistical point of view, then, a strategy for reducing global carbon dioxide emissions would do well to reduce emissions originating in the use of automobiles and light trucks in the United States. 47 One way of accomplishing this, (in addition to increasing the fuel efficiency of new vehicles) would be to encourage people who would normally drive on any given occasion to use mass transit, bicycles, or to walk instead. With such a large proportion of greenhouse gas emissions originating in the transportation sector, and the largest proportion of those emissions originating in personal automobiles, improving the competitiveness of transit vis-à-vis the automobile could directly and significantly reduce collective CO2 emissions. The goal of reducing greenhouse gas emissions from the transportation sector overlaps with the aims of a variety of programs in urban planning, public policy, and within federal, state, and municipal transit agencies, all directed towards increasing public use of mass transportation. In the following chapters, various local strategies for encouraging the use of mass transit will be examined, including, most importantly, the land-use practices most supportive of transit use; effective market incentives, and transit agency policies. While the third chapter offers illustrations of the conditions necessary for optimal transit efficiency, the fourth chapter illustrates the concrete economic advantages that new low-emissions technologies can bring to a transit agency itself. The case of alternative transit technologies will illustrate a larger principle on a smaller scale: how multiple ends can be achieved through programs of energy efficiency. Reducing transportation sector greenhouse gas emissions by increasing transit use has the positive consequence of reducing regulated pollutants, and reducing transit agency operating costs.

### **Linking mass transit explicitly to land use decisions solves**

**Center for Neighborhood Technology, 3** – Report prepared for Transit Cooperative Research Program Transportation Research Board National Research Council (“COMBATING GLOBAL WARMING THROUGH SUSTAINABLE SURFACE TRANSPORTATION POLICY ,” March, <http://www.travelmatters.org/about/final-report.pdf>)//DH

Greenhouse gas emissions from the U.S. transportation sector can be significantly lowered by reducing passenger vehicle miles traveled. One of the most immediate and practical ways of reducing this figure is by filling buses and trains with people who would otherwise take their trips by automobile. Effectuating the shift from car to transit, however, is not as straightforward as adapting a comprehensive bus system to urban geographies designed around the automobile. To optimize mass transit’s competitive advantage in terms of speed, convenience, and desirability, urban planning and design are required to support the development of cities defined by frequent use of transit for work trips, and the greater choice of mobility options for personal ones. As travel demand research has demonstrated, the key to an expanded range of mobility options is a higher density of land use that is coupled with a transit and pedestrian friendly environment. In highly transportation efficient locations, auto trips are lower because higher density makes it more economical to make trips on foot, by bicycle, as well as using public transportation. The presence of transit can lower emissions not only from workrelated auto trips, but also from local trips made to meet the everyday needs of city residents. By making transit one of a number of equally desirable options for individual trip planning, automobile use – and emissions – could be greatly reduced.

### Public transportation reduces CO2 emissions

American Public Transportation Association, 7 – Non profit organization (N/A, Public Transportation’s contribution to Greenhouse Gas Reduction, Post Carbon Cities, 12/5/12, http://postcarboncities.net/node/2115)//MBW

In 2005, public transportation reduced CO2 emissions by 6.9 million metric tonnes. If current public transportation riders were to use personal vehicles instead of transit they would generate 16.2 million metric tonnes of CO2. Actual operation of public transit vehicles, however, resulted in only 12.3 million metric tonnes of these emissions. In addition, 340 million gallons of gasoline were saved through transit’s contribution to decreased congestion, which reduced CO2 emissions by another 3.0 million metric tonnes. An additional 400,000 metric tonnes of greenhouse gases (GHG) were also avoided, including sulfur hexafluoride, hydrofluorocarbons (HFC), perfluorocarbons, and chlorofluorocarbons (CFC).

### Their arguments don’t account for the plan’s linkage of mass transit to land use decisions

**Center for Neighborhood Technology, 3** – Report prepared for Transit Cooperative Research Program Transportation Research Board National Research Council (“COMBATING GLOBAL WARMING THROUGH SUSTAINABLE SURFACE TRANSPORTATION POLICY ,” March, <http://www.travelmatters.org/about/final-report.pdf>)//DH

The essence of sustainability is the integration of economic development and environmental improvement. As the Task Force for the President’s Council on Sustainable Development (1997) described it, sustainable communities are those that “flourish because they build a mutually supportive, dynamic balance between social well-being, economic opportunity, and environmental quality.” 22 Of the many aspects of sustainability, transportation is central to the dynamic balance between economies and environments, since varying transportation policies have profoundly different effects on the urban landscape. In particular, the linkage of sustainability with mass transit now informs a range of policies intended to make more efficient use of urbanized land, reduce traffic congestion, cut back vehicle emissions, and improve pedestrian mobility. The examples that follow each illustrate how the use of transit or other nonmotorized transportation options are enhanced when travel demand factors are taken into consideration in the planning, marketing, design, and operation of transit. Aside from the potential economic benefits of reducing the consumption of resources associated with urban sprawl, these examples of transit-supported sustainability provide a solid basis for a range of geographically specific actions to reduce greenhouse gas emissions in America’s large urban centers. Global issues like climate change can be addressed by very local, very concrete actions taken to influence the way people build, and move through, their environment.

### Lifecycle emissions from mass transit are substantially lower than automobiles per passenger mile

**Hodges, 9** - Office of Budget and Policy Federal Transit Administration, U.S. DOT (Tina, “Public Transportation’s Role in Responding to Climate Change”, January, [http://www.fta.dot.gov/documents/PublicTransportationsRoleInRespondingToClimateChange.pdf)//DH](http://www.fta.dot.gov/documents/PublicTransportationsRoleInRespondingToClimateChange.pdf%29//DH)

The more passengers that are riding a bus or train, the lower the emissions per passenger mile. For instance, U.S. bus transit, which has about a quarter of its seats occupied on average, emits an estimated 32% lower greenhouse gas emissions per passenger mile than the average U.S. single occupancy vehicle. The savings increases to 83% for a typical diesel transit bus when it is full with 40 passengers (see fig. 3). When expanding transit service as a greenhouse gas reduction strategy, communities would likely want to ensure that passenger loads are sufficient to achieve efficiencies over the alternative of driving.2 For example, the average 40-passenger diesel bus must carry a minimum of 7 passengers on board to be more efficient than the average single-occupancy vehicle. Similarly, the average heavy rail car would need to have at least 19% of seats full to exceed the efficiency of a automobile carrying an average passenger load. Most rail transit systems are powered by electricity. Those relying on electricity from a low emissions source, such as hydroelectric, not surprisingly, have much lower emissions than those relying on coal power plants. (See Appendix I for emissions factors). Rail vehicles also vary in terms of energy efficiency due to weight and engineering factors. Emissions from bus systems vary due to the use of low carbon fuels, more energy efficient vehicles, and different operating environments (such as frequent stops in denser urban areas). In terms of vehicle efficiency for instance, many transit agencies are replacing older diesel buses with new hybridelectric buses, which consume 15% to 40% less fuel, and consequently produce 15% to 40% fewer carbon dioxide emissions. Taking lifecycle emissions into account also shows emissions savings from transit. Transit-based greenhouse gas emissions per passenger mile are significantly lower than those from driving, even taking into account emissions from construction, manufacture, and maintenance. Life cycle emissions include a full accounting of all emissions generated over the full life of a transportation system. This includes emissions from building the highway or rail system, manufacturing the vehicles, maintaining the infrastructure and vehicles, producing and using the fuel, and eventually disposing of the vehicles and infrastructure. The previous graphs only showed tailpipe emissions, or solely the emissions from burning fuel or generating electricity to move a vehicle.

### **Shifting to electric power reduces overall emissions – greater efficiency and renewable electricity**

**Hodges, 9** - Office of Budget and Policy Federal Transit Administration, U.S. DOT (Tina, “Public Transportation’s Role in Responding to Climate Change”, January, [http://www.fta.dot.gov/documents/PublicTransportationsRoleInRespondingToClimateChange.pdf)//DH](http://www.fta.dot.gov/documents/PublicTransportationsRoleInRespondingToClimateChange.pdf%29//DH)

Most rail transit is powered by electricity, which offers efficiency improvements over internal combustion engines. Rail agencies are looking to further reduce energy consumption by lowering the amount of electricity used in powering vehicles. In Phoenix, for example, the new light rail system uses regenerative braking to lower electricity consumption. As the electric power industry shifts to more renewable sources of energy as being mandated in several states, electric public transportation systems provide even more emissions reduction benefits. When the electricity is generated from a zero emissions source, such as wind, hydroelectric, nuclear, or solar, the public transportation systems that use these power sources are also zero emission.

### Mass transit decreases emissions substantially – Portland empirically proves

**Rivera, 11** – staff writer (Dylan, “Density and mass transit can fight global warming, study says”, The Oregonian, <http://www.oregonlive.com/environment/index.ssf/2009/09/density_and_mass_transit_can_f.html>)

If you want to fight global warming, one good way could be to live in a more compact neighborhood - with more neighbors and jobs close by, and where mass transit, biking and walking are accessible alternatives to the car. That's a main conclusion of a study out this week by the [National Research Council](http://sites.nationalacademies.org/NRC/index.htm), a unit of the authoritative [National Academy of Sciences](http://www.nationalacademies.org/). [The study](http://national-academies.org/morenews/20090901a.html) used Portland as a case study for how denser development coupled with mass transit can reduce gasoline consumption and greenhouse gas emissions. "The evidence indicates that Portland's policies to steer growth into more compact, mixed use development have paid off, not only in revitalizing the downtown and many of its neighborhoods, but also in changing travel behavior, the primary concern of this study," the report says. Portland-area residents drive 17 percent less than the U.S. average, because denser development provides shorter travel distances and higher mass transit use reduces driving. From 1993 to 2003, the region's mass transit ridership grew 55 percent and housing density grew 18 percent, while the population grew 21 percent. The Congressionally mandated report's findings include:

• Making denser residential and employment areas is likely to reduce driving and fuel consumption.

• Doubling residential density across a region could reduce driving by 5 to 12 percent - or as much as 25 percent if accompanied by more employment, mass transit and mixed-use development.

• Obstacles to more mixed use development include reluctance by local governments to zone for it and a lack of state and regional-level involvement in land use planning.

• Americans' preference for low-density suburban homes also challenges the potential for denser neighborhoods.

But how much of a difference could denser development make in the growth of greenhouse gas emissions? A little or a lot? It could cut emissions by 1 to 11 percent by 2050. That depends on whether the next generation of neighborhoods is built more compact than the dominant trend of sprawl across the nation.

## Transit Key Issue

### Transportation is the biggest factor in greenhouse gases

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 942)//AWV

In the notice, the agencies explained that 31.5 percent of all greenhouse gases come from transportation sources, including automobiles, highway heavy-duty trucks, airplanes, railroads, marine vessels and a variety of other sources, which represent the fastest growing sector of emissions.34 These agencies believe that, by working together, the National Program can achieve emissions reductions of “approximately 950 million metric tons of total carbon dioxide equivalent emission reductions and approximately 1.8 billion barrels of oil savings over the lifetime of vehicles sold in model years 2012 through 2016.”35 Thus, the agencies explain that the new regulations will provide a uniform approach to the sale of vehicles that would otherwise require those in the vehicle industry to follow a patchwork of directives from three different regulatory bodies.36

### Reducing transportation emissions is the key

Union of Concerned Scientists 12 (Car Emissions and Global Warming, May 3, 2012, http://www.ucsusa.org/clean\_vehicles/why-clean-cars/global-warming/)

We are driving up the planet’s temperature. Transportation is one of the primary contributors to global warming, generating more than one-third of all U.S. carbon dioxide emissions and 30 percent of America’s total global warming emissions. If we are going to effectively address global warming, we must reduce the emissions our vehicles produce. The Earth is warming and human activity is the primary cause. Climate disruptions caused by global warming put our food and water supply at risk, endanger our health, jeopardize our national security, and threaten other basic human needs. Some impacts—such as record high temperatures, melting glaciers, and severe flooding and droughts—are already increasingly common. More than 60 percent of U.S. transportation emissions come from cars and light trucks. Passenger cars and light trucks represent the lion’s share of U.S. transportation emissions and collectively produce more than one-fifth of the nation’s total global warming pollution. The remaining transportation emissions come from medium and heavy-duty vehicles (primarily freight trucks and buses), plus aircraft, shipping, rail, military, and other uses.

## Warming Impact Calc

### Warming risks extinction, turns every impact

**Cummins and Allen 10** (Ronnie, Int’l. Dir. – Organic Consumers Association, and Will, Policy Advisor – Organic Consumers Association, “Climate Catastrophe: Surviving the 21st Century”, 2-14, http://www.commondreams.org/view/2010/02/14-6)

The hour is late. Leading climate scientists such as James Hansen are literally shouting at the top of their lungs that the world needs to reduce emissions by 20-40% as soon as possible, and 80-90% by the year 2050, if we are to avoid climate chaos, **crop failures, endless wars, melting of the polar icecaps, and a disastrous rise in ocean levels**. Either we radically reduce CO2 and carbon dioxide equivalent (CO2e, which includes all GHGs, not just CO2) pollutants (currently at 390 parts per million and rising 2 ppm per year) to 350 ppm, including agriculture-derived methane and nitrous oxide pollution, or else **survival for the present and future generations is in jeopardy**. As scientists warned at Copenhagen, business as usual and a corresponding 7-8.6 degree Fahrenheit rise in global temperatures means that the carrying capacity of the Earth in 2100 will be reduced to one billion people. **Under this hellish scenario, billions will die** of thirst, cold, heat, disease, war, and starvation. If the U.S. significantly reduces greenhouse gas emissions, other countries will follow. One hopeful sign is the recent EPA announcement that it intends to regulate greenhouse gases as pollutants under the Clean Air Act. Unfortunately we are going to have to put tremendous pressure on elected public officials to force the EPA to crack down on GHG polluters (including industrial farms and food processors). Public pressure is especially critical since "just say no" Congressmen-both Democrats and Republicans-along with agribusiness, real estate developers, the construction industry, and the fossil fuel lobby appear determined to maintain "business as usual."

### Prefer our impact—most likely because it’s scientifically backed

**Sullivan 7** (Gen. Gordon, Chair of CNA Corporation Military Advisory Board and Former Army Chief of Staff, in "National Security and the Threat of Climate Change", http://securityandclimate.cna.org/report/National%20Security%20and%20the%20Threat%20of%20Climate%20Change.pdf)

“We seem to be standing by and, frankly, asking for perfectness in science,” Gen. Sullivan said. “People are saying they want to be convinced, perfectly. They want to know the climate science projections with 100 percent certainty. Well, we know a great deal, and even with that, there is still uncertainty. But the trend line is very clear.” “We never have 100 percent certainty,” he said. “We never have it. If you wait until you have 100 percent certainty, something bad is going to happen on the battlefield. That’s something we know. You have to act with incomplete information. You have to act based on the trend line. You have to act on your intuition sometimes.” In discussing how military leaders manage risk, Gen. Sullivan noted that significant attention is often given to the low probability/high consequence events. These events rarely occur but can have devastating consequences if they do. American families are familiar with these calculations. Serious injury in an auto accident is, for most families, a low probability/high consequence event. It may be unlikely, but we do all we can to avoid it. During the Cold War, much of America’s defense efforts focused on preventing a Soviet missile attack—the very definition of a low probability/high consequence event. Our effort to avoid such an unlikely event was a central organizing principle for our diplomatic and military strategies. When asked to compare the risks of climate change with those of the Cold War, Gen. Sullivan said, “The Cold War was a specter, but climate change is inevitable. If we keep on with business as usual, we will reach a point where some of the worst effects are inevitable.” “If we don’t act, this looks more like a high probability/high consequence scenario,” he added. Gen. Sullivan shifted from risk assessment to risk management. “In the Cold War, there was a concerted effort by all leadership—political and military, national and international—to avoid a potential conflict,” he said. “I think it was well known in military circles that we had to do everything in our power to create an environment where the national command authority—the president and his senior advisers—were not forced to make choices regarding the use of nuclear weapons.

### Even 1% risk outweighs

**Strom 7** (Robert, Prof. Emeritus Planetary Sciences @ U. Arizona and Former Dir. Space Imagery Center of NASA, “Hot House: Global Climate Change and the Human Condition”, Online: SpringerLink, p. 246)

Keep in mind that the current consequences of global warming discussed in previous chapters are the result of a global average temperature increase of only 0.5 'C above the 1951-1980 average, and these consequences are beginning to accelerate. Think about what is in store for us when the average global temperature is 1 °C higher than today. That is already in the pipeline, and there is nothing we can do to prevent it. We can only plan strategies for dealing with the expected consequences, and reduce our greenhouse gas emissions by about 60% as soon as possible to ensure that we don't experience even higher temperatures. There is also the danger of eventually triggering an abrupt climate change that would accelerate global warming to a catastrophic level in a short period of time. If that were to happen we would not stand a chance. Even if that possibility had only a 1% chance of occurring, the consequences are so dire that it would be insane not to act. Clearly we cannot afford to delay taking action by waiting for additional research to more clearly define what awaits us. The time for action is now.

### Makes nuke war inevitable

Campbell et al 2007 [Kurt, “The Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change,” CSIS, November, p. 3, <http://www.csis.org/media/csis/pubs/071105_ageofconsequences.pdf>]

In the case of severe climate change, corresponding to an average increase in global temperature of 2.6°C by 2040, massive non-linear events in the global environment give rise to massive nonlinear societal events. In this scenario, addressed in Chapter IV, nations around the world will be overwhelmed by the scale of change and pernicious challenges, such as pandemic disease. The internal cohesion of nations will be under great stress, including in the United States, both as a result of a dramatic rise in migration and changes in agricultural patterns and water availability. The flooding of coastal communities around the world, especially in the Netherlands, the United States, South Asia, and China, has the potential to challenge regional and even national identities. Armed conflict between nations over resources, such as the Nile and its tributaries, is likely and nuclear war is possible. The social consequences range from increased religious fervor to outright chaos. In this scenario, climate change provokes a permanent shift in the relationship of humankind to nature.

## A2 Warming Not Anthro/Real

### Warming happening now – rising water temperatures prove

**USA Today 11 –** leader in news, the widest circulated print newspaper in the United States(Wendy Koch, 1/29/11, " Arctic waters are warmest in 2000 years: Study ", http://content.usatoday.com/communities/greenhouse/post/2011/01/arctic-waters-warmest-2000-years/1)

Water flowing into the Arctic Ocean from the North Atlantic is now the warmest in at least 2,000 years, reports a new international study that's bad news for climate change as well as polar bears needing sea ice for survival. Waters of the Fram Strait, which runs between Greenland and the Arctic archipelago of Svalbard, have warmed about 3.5 degrees Fahrenheit over the past 100 years, according to the study published in the Jan. 28 issue of the journal *Science*. Temperatures are about 2.5 degrees higher than during the Medieval Warm Period, a time of elevated warmth from A.D. 900 to 1300. "Such a warming of the Atlantic water in the Fram Strait is significantly different from all climate variations in the last 2,000 years," study lead author Robert Spielhagen of the Academy of Sciences, Humanities and Literature in Mainz, Germany, said in announcing the findings. "Cold seawater is critical for the formation of sea ice, which helps to cool the planet by reflecting sunlight back to space," said study co-author Thomas Marchitto, a paleoclimatologist at the University of Colorado at Boulder. The Arctic lost sea ice larger than the state of Alaska between 1979 and 2009 and could become ice-free during the summers within the next several decades, according to UC's National Snow and Ice Data Center.

### Warming is real, anthropogenic and accelerating – prefer reverse biased sources

**Robinson, 11** [10/25/11. Eugene, opinion, Washington Post, Citing extensively Muller a physicist at UC Berkely, “The scientific finding that settles the climate-change debate”, http://www.washingtonpost.com/opinions/the-scientific-finding-that-settles-the-climate-change-debate/2011/03/01/gIQAd6QfDM\_story.html]

For the clueless or cynical diehards who deny global warming, it’s getting awfully cold out there. The latest icy blast of reality comes from an eminent scientist whom the climate-change skeptics once lauded as one of their own. Richard Muller, a respected physicist at the University of California, Berkeley, used to dismiss alarmist climate research as being “polluted by political and activist frenzy.” Frustrated at what he considered shoddy science, Muller launched his own comprehensive study to set the record straight. Instead, the record set *him* straight. 99 percent bogus “Global warming is real,” Muller wrote last week in The Wall Street Journal. Rick Perry, Herman Cain, Michele Bachmann and the rest of the neo-Luddites who are turning the GOP into the anti-science party should pay attention. “When we began our study, we felt that skeptics had raised legitimate issues, and we didn’t know what we’d find,” Muller wrote. “Our results turned out to be close to those published by prior groups. We think that means that those groups had truly been careful in their work, despite their inability to convince some skeptics of that.” In other words, the deniers’ claims about the alleged sloppiness or fraudulence of climate science are wrong. Muller’s team, the Berkeley Earth Surface Temperature project, rigorously explored the specific objections raised by skeptics — and found them groundless. Muller and his fellow researchers examined an enormous data set of observed temperatures from monitoring stations around the world and concluded that the average land temperature has risen 1 degree Celsius — or about 1.8 degrees Fahrenheit — since the mid-1950s. This agrees with the increase estimated by the United Nations-sponsored Intergovernmental Panel on Climate Change. Muller’s figures also conform with the estimates of those British and American researchers whose catty e-mails were the basis for the alleged “Climategate” scandal, which was never a scandal in the first place. The Berkeley group’s research even confirms the infamous “hockey stick” graph — showing a sharp recent temperature rise — that Muller once snarkily called “the poster child of the global warming community.” Muller’s new graph isn’t just similar, it’s identical. Muller found that skeptics are wrong when they claim that a “heat island” effect from urbanization is skewing average temperature readings; monitoring instruments in rural areas show rapid warming, too. He found that skeptics are wrong to base their arguments on the fact that records from some sites seem to indicate a cooling trend, since records from at least twice as many sites clearly indicate warming. And he found that skeptics are wrong to accuse climate scientists of cherry-picking the data, since the readings that are often omitted — because they are judged unreliable — show the same warming trend. Muller and his colleagues examined five times as many temperature readings as did other researchers — a total of 1.6 billion records — and now have put that merged database online. The results have not yet been subjected to peer review, so technically they are still preliminary. But Muller’s plain-spoken admonition that “you should not be a skeptic, at least not any longer” has reduced many deniers to incoherent grumbling or stunned silence. Not so, I predict, with the blowhards such as Perry, Cain and Bachmann, who, out of ignorance or perceived self-interest, are willing to play politics with the Earth’s future. They may concede that warming is taking place, but they call it a natural phenomenon and deny that human activity is the cause. It is true that Muller made no attempt to ascertain “how much of the warming is due to humans.” Still, the Berkeley group’s work should help lead all but the dimmest policymakers to the overwhelmingly probable answer. We know that the rise in temperatures over the past five decades is abrupt and very large. We know it is consistent with models developed by other climate researchers that posit greenhouse gas emissions — the burning of fossil fuels by humans — as the cause. And now we know, thanks to Muller, that those other scientists have been both careful and honorable in their work. Nobody’s fudging the numbers. Nobody’s manipulating data to win research grants, as Perry claims, or making an undue fuss over a “naturally occurring” warm-up, as Bachmann alleges. Contrary to what Cain says, the science is real. It is the know-nothing politicians — not scientists — who are committing an unforgivable fraud.

### Warming is real – prefer recent and rigorous scientific study

**Muller, 11** [OCTOBER 21, 2011 “The Case Against Global-Warming Skepticism There were good reasons for doubt, until now.”, Mr. Muller is a professor of physics at the University of California, Berkeley, and the author of "Physics for Future Presidents" (W.W. Norton & Co., 2008)., <http://online.wsj.com/article/SB10001424052970204422404576594872796327348.html>]

As many as 757 stations in the United States recorded net surface-temperature cooling over the past century. Many are concentrated in the southeast, where some people attribute tornadoes and hurricanes to warming. The temperature-station quality is largely awful. The most important stations in the U.S. are included in the Department of Energy's Historical Climatology Network. A careful survey of these stations by a team led by meteorologist Anthony Watts showed that 70% of these stations have such poor siting that, by the U.S. government's own measure, they result in temperature uncertainties of between two and five degrees Celsius or more. We do not know how much worse are the stations in the developing world. Using data from all these poor stations, the U.N.'s Intergovernmental Panel on Climate Change estimates an average global 0.64ºC temperature rise in the past 50 years, "most" of which the IPCC says is due to humans. Yet the margin of error for the stations is at least three times larger than the estimated warming. We know that cities show anomalous warming, caused by energy use and building materials; asphalt, for instance, absorbs more sunlight than do trees. Tokyo's temperature rose about 2ºC in the last 50 years. Could that rise, and increases in other urban areas, have been unreasonably included in the global estimates? That warming may be real, but it has nothing to do with the greenhouse effect and can't be addressed by carbon dioxide reduction. Moreover, the three major temperature analysis groups (the U.S.'s NASA and National Oceanic and Atmospheric Administration, and the U.K.'s Met Office and Climatic Research Unit) analyze only a small fraction of the available data, primarily from stations that have long records. There's a logic to that practice, but it could lead to selection bias. For instance, older stations were often built outside of cities but today are surrounded by buildings. These groups today use data from about 2,000 stations, down from roughly 6,000 in 1970, raising even more questions about their selections. Enlarge Image On top of that, stations have moved, instruments have changed and local environments have evolved. Analysis groups try to compensate for all this by homogenizing the data, though there are plenty of arguments to be had over how best to homogenize long-running data taken from around the world in varying conditions. These adjustments often result in corrections of several tenths of one degree Celsius, significant fractions of the warming attributed to humans. And that's just the surface-temperature record. What about the rest? The number of named hurricanes has been on the rise for years, but that's in part a result of better detection technologies (satellites and buoys) that find storms in remote regions. The number of hurricanes hitting the U.S., even more intense Category 4 and 5 storms, has been gradually decreasing since 1850. The number of detected tornadoes has been increasing, possibly because radar technology has improved, but the number that touch down and cause damage has been decreasing. Meanwhile, the short-term variability in U.S. surface temperatures has been decreasing since 1800, suggesting a more stable climate. Without good answers to all these complaints, global-warming skepticism seems sensible. But now let me explain why you should not be a skeptic, at least not any longer. Over the last two years, the Berkeley Earth Surface Temperature Project has looked deeply at all the issues raised above. I chaired our group, which just submitted four detailed papers on our results to peer-reviewed journals. We have now posted these papers online at www.BerkeleyEarth.org to solicit even more scrutiny. Our work covers only land temperature—not the oceans—but that's where warming appears to be the greatest. Robert Rohde, our chief scientist, obtained more than 1.6 billion measurements from more than 39,000 temperature stations around the world. Many of the records were short in duration, and to use them Mr. Rohde and a team of esteemed scientists and statisticians developed a new analytical approach that let us incorporate fragments of records. By using data from virtually all the available stations, we avoided data-selection bias. Rather than try to correct for the discontinuities in the records, we simply sliced the records where the data cut off, thereby creating two records from one. We discovered that about one-third of the world's temperature stations have recorded cooling temperatures, and about two-thirds have recorded warming. The two-to-one ratio reflects global warming. The changes at the locations that showed warming were typically between 1-2ºC, much greater than the IPCC's average of 0.64ºC. To study urban-heating bias in temperature records, we used satellite determinations that subdivided the world into urban and rural areas. We then conducted a temperature analysis based solely on "very rural" locations, distant from urban ones. The result showed a temperature increase similar to that found by other groups. Only 0.5% of the globe is urbanized, so it makes sense that even a 2ºC rise in urban regions would contribute negligibly to the global average. What about poor station quality? Again, our statistical methods allowed us to analyze the U.S. temperature record separately for stations with good or acceptable rankings, and those with poor rankings (the U.S. is the only place in the world that ranks its temperature stations). Remarkably, the poorly ranked stations showed no greater temperature increases than the better ones. The mostly likely explanation is that while low-quality stations may give incorrect absolute temperatures, they still accurately track temperature changes. When we began our study, we felt that skeptics had raised legitimate issues, and we didn't know what we'd find. Our results turned out to be close to those published by prior groups. We think that means that those groups had truly been very careful in their work, despite their inability to convince some skeptics of that. They managed to avoid bias in their data selection, homogenization and other corrections. Global warming is real. Perhaps our results will help cool this portion of the climate debate. How much of the warming is due to humans and what will be the likely effects? We made no independent assessment of that.

### Feedbacks are net positive—must act now to prevent runaway warming

**Hansen, 8** – head of NASA Goddard Institute and professor of Environmental Sciences, Columbia University (James E. Hanson. Head of the NASA Goddard Institute for Space Studies in New York City and adjunct professor in the Department of Earth and Environmental Science at Columbia University. Al Gore’s science advisor. Introductory chapter for the book State of the Wild. “Tipping point: Perspective of a Scientist.” April. http://www.columbia.edu/~jeh1/2008/StateOfWild\_20080428.pdf)

Fast feedbacks—changes that occur quickly in response to temperature change—amplify the initial temperature change, begetting additional warming. As the planet warms, fast feedbacks include more water vapor, which traps additional heat, and less snow and sea ice, which exposes dark surfaces that absorb more sunlight. Slower feedbacks also exist. Due to warming, forests and shrubs are moving poleward into tundra regions. Expanding vegetation, darker than tundra, absorbs sunlight and warms the environment. Another slow feedback is increasing wetness (i.e., darkness) of the Greenland and West Antarctica ice sheets in the warm season. Finally, as tundra melts, methane, a powerful greenhouse gas, is bubbling out. Paleoclimatic records confirm that the long-lived greenhouse gases— methane, carbon dioxide, and nitrous oxide—all increase with the warming of oceans and land. These positive feedbacks amplify climate change over decades, centuries, and longer. The predominance of positive feedbacks explains why Earth’s climate has historically undergone large swings: feedbacks work in both directions, amplifying cooling, as well as warming, forcings. In the past, feedbacks have caused Earth to be whipsawed between colder and warmer climates, even in response to weak forcings, such as slight changes in the tilt of Earth’s axis.2 The second fundamental property of Earth’s climate system, partnering with feedbacks, is the great inertia of oceans and ice sheets. Given the oceans’ capacity to absorb heat, when a climate forcing (such as increased greenhouse gases) impacts global temperature, even after two or three decades, only about half of the eventual surface warming has occurred. Ice sheets also change slowly, although accumulating evidence shows that they can disintegrate within centuries or perhaps even decades. The upshot of the combination of inertia and feedbacks is that additional climate change is already “in the pipeline”: even if we stop increasing greenhouse gases today, more warming will occur. This is sobering when one considers the present status of Earth’s climate. Human civilization developed during the Holocene (the past 12,000 years). It has been warm enough to keep ice sheets off North America and Europe, but cool enough for ice sheets to remain on Greenland and Antarctica. With rapid warming of 0.6°C in the past 30 years, global temperature is at its warmest level in the Holocene.3 The warming that has already occurred, the positive feedbacks that have been set in motion, and the additional warming in the pipeline together have brought us to the precipice of a planetary tipping point. We are at the tipping point because the climate state includes large, ready positive feedbacks provided by the Arctic sea ice, the West Antarctic ice sheet, and much of Greenland’s ice. Little additional forcing is needed to trigger these feedbacks and magnify global warming. If we go over the edge, we will transition to an environment far outside the range that has been experienced by humanity, and there will be no return within any foreseeable future generation. Casualties would include more than the loss of indigenous ways of life in the Arctic and swamping of coastal cities. An intensified hydrologic cycle will produce both greater floods and greater droughts. In the US, the semiarid states from central Texas through Oklahoma and both Dakotas would become more drought-prone and ill suited for agriculture, people, and current wildlife. Africa would see a great expansion of dry areas, particularly southern Africa. Large populations in Asia and South America would lose their primary dry season freshwater source as glaciers disappear. A major casualty in all this will be wildlife.

### The peer reviewed studies corroborating our warming claims are best—prefer them over hackery cloaked as skepticism

**Davies 8** – 6/11, Author and Geophysicist at the Australian National University

[Dr. Geoff Davies, June 11 2008, Science Alert, “Why listen to scientists?”, <http://www.sciencealert.com.au/opinions/20081106-17474.html>]

Professor Don Aitkin’s recent promotion (PDF 258KB) of the “sceptical” view of global warming and the ensuing heated debates on several web sites bring to the fore the question of what authority attaches to the published conclusions and judgments of climate scientists. Professor Aitkin, who is not a scientist, is in no doubt himself that the more outspoken climate scientists have a “quasi-religious” attitude. That is the mild end of the spectrum of opinions of sceptics/denialists/contrarians. Most of the media and many politicians seem to have the view that scientists are just another interest group, and that scientists’ opinions are just opinions, to be heard or discarded like any others. The Australian government seems to credit only the very conservative end of climate scientists’ warnings, because it is acting as though we have many decades in which to adjust, and many years before anything serious needs to be under way. The big difference between scientists’ professional conclusions and those of others is that science has a pervasive and well-developed quality-control process. The first stage is called peer review. Any paper that is published in a reputable scientific journal must be given the OK by several other scientists in the same field. Furthermore, after publication a paper will be read critically by many more scientists, and it is not uncommon for conclusions to be challenged in subsequent publications. For a paper to become widely acknowledged it must survive such scrutiny for a reasonable period, typically several years. All of this is on top of the fact that a scientific paper is based on observations of the world and on a large accumulation of well-tested regularities, such as the “laws” of physics. Few other groups have any comparable process. Certainly the media, politicians and **climate sceptics have no such process.** Most of the studies referred to by sceptics have either **not been published in a relevant peer-reviewed scientific journal** or have subsequently been challenged and found wanting in other peer-reviewed studies. The peer-review process is far from perfect, but it yields a product distinctly less unreliable than all the other opinions flying around. The process of the Intergovernmental Panel on Climate Change (IPCC) adds another layer of caution. Basically the IPCC gets a large number of relevant scientists to step back from the front-line disputes and ask “What can most of us agree on?”. Sceptics who dismiss all of the science because there are many disputes miss or obfuscate this basic aspect of IPCC assessments. There is a degree of judgment involved in the IPCC process, and in virtually any public summary by a climate scientist. Some would claim judgment is not the job of scientists; it is the job of politicians and others. But scientists are the best placed to judge the state of knowledge in their field. If their conclusions are potentially of great import, then they have a responsibility to state their best professional judgment. The claim by Professor Aitkin and many other sceptics that climate scientists don’t discuss the uncertainties in their conclusions and judgments simply misrepresents or misperceives the abundant information on uncertainties. Even the IPCC’s most terse summary statements clearly acknowledge uncertainty when they say, for example, “Most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations” [emphasis in original]. The term “very likely” is specifically defined in the IPCC summaries to mean the “assessed likelihood, using expert judgment”, is greater than 90 per cent. Clive Hamilton contrasts the scientific and IPCC processes with those of many sceptics (see Atkin’s response here). He traces connections from relatively naïve people like Professor Aitkin back to people and web sites funded by ExxonMobil and others. Sceptics love to question the motives of climate scientists, but rarely mention the motives of the very powerful multi-trillion-dollar fossil fuel industry, parts of which are actively promoting doubt and disinformation in exactly the manner used by the tobacco industry for many years. Observations from the past two or three years, too recent to have been included in the 2007 IPCC Reports, show disturbing signs that the Earth’s response to our activities is happening much faster than expected. The most dramatic sign is a sudden acceleration of the rate of shrinkage of Arctic sea ice. Prominent NASA climate scientist Dr James Hansen is perhaps the most vocal, but far from alone, in arguing that the Earth may be very close to a tipping point beyond which large, unstoppable and irreversible climate change could occur. Scientific issues are not settled by appeals to authority, nor by a vote. That is not the issue here. The issue is whether scientists’ professional judgments have weight. Those in strategic positions in our society, like politicians and journalists, who treat scientists’ collective professional judgments as no better than any other opinion are being seriously irresponsible. You can ignore the IPCC if you want, but you should realise that its most recent assessment may have seriously understated the global warming problem. You can ignore James Hansen if you want, but you should know that his judgments from two or three decades ago are being broadly vindicated.

# \*\*Urban Sprawl Advantage\*\*

## Mass Transit Sprawl Links

### Road focus leads to sprawl – transit investments reduces car dependence

Pollard, 4’ – Senior Attorney and Director, Land and Community Program at Southern Environmental Law Center (Trip, “Article: Follow the money: transportation investments for smarter growth,” Temple Environmental Law & Technology Journal, Spring, 2004, 22 Temp. Envtl. L. & Tech. J. 155)//AWV

Greater analysis and scrutiny should be given to numerous aspects of transportation infrastructure decisions in order to better understand the likely impacts of these decisions on land development and transportation patterns and to identify opportunities to promote smarter growth. As noted above, the amount and comparative level of investment in various transportation modes is an important influence on land development and transportation patterns. Heavy spending on highways and other roads has spurred sprawl and provided few meaningful alternatives to motor vehicle use. Investments in transit, on the other hand, tend to foster more compact development patterns and to reduce driving. However, this is a very broad generalization and investments in road projects need not be antithetical to smarter growth and more sustainable transportation. The location, type, and scale of project selected for investment within a particular mode are additional factors influencing the impacts of transportation funding decisions. For example, the impacts of funding a massive new highway through the countryside are very different than the impacts of extending and upgrading a network of smaller streets in an existing community. Another significant feature of infrastructure funding decisions is the degree of connectivity a project provides to other transportation facilities. Funding a system of cul-de-sac streets that funnels all drivers in a suburban residential area onto a large collector road to go to work or to a store, for example, is likely to result in longer driving distances, more traffic congestion and less walking or bicycling than funding a connected grid of streets that provides alternative routes for drivers to reach any particular destination and more direct routes for pedestrians and cyclists.

### Mass transit allows for more efficient land use

Arizona PIRG Education Fund, 2009 “a federation of independent, state-based, citizen-funded organizations that advocate for the public interest.”(“Why and How to Fund Public Transportation”, march 2009, http://www.uspirg.org/sites/pirg/files/reports/Why-and-How-to-Fund-Public-Transportation.pdf)//DD

Transportation and land-use problems are tightly connected. On the one side, light rail, commuter rail and rapid bus systems allow development of more walkable communities where using a car is an option rather than a requirement. For example, communities that are more compact save money because smaller networks can be constructed for driving, sewage, electricity and parking. Many central cities thrive as physical “hubs” for business activity, many doubling their population during the work day. Such massive influxes of people would be impossible if everyone drove long distances and required parking.

### Increased mass transit options will lead to a shift away from car dependence and end sprawl

**White 1999** Attorney, (S Mark, “Zoning and Real Estatae Implications of Transit-Oriented Development”, Transit Cooperative Research Program, Federal Transit Administration, http://www.reconnectingamerica.org/assets/Uploads/zoningrealestateimplicationstod\_1999.pdf)//DD

While suburban sprawl continues, professional planners believe that there is deep-seated dissatisfaction with twentieth century urban sprawl and have championed a return to mixed-use villages and centers that promote pedestrian and transit travel. The so-called "new urbanists"9 are challenging cities and developers to employ a concept known as "transit-oriented development" (TOD) (also known as pedestrian-oriented development) as an alternative to urban sprawl.10 This form of development has five major characteristics. First, a TOD has sufficient density to encourage the use of public transit. Second residences, jobs, and retail destinations are located close to public transit facilities. Third, a TOD consists of mixed uses, with retail and employment sites located within walking distance of residential areas. Fourth, the TOD is built on a grid transportation network, which is not divided into the arterial-collector-local road classification system found in most suburban areas. Finally, most TODs contain urban design guidelines and design features that encourage a more pedestrian orientation, which theoretically encourages its residents to eschew the automobile in favor of more communal forms of transportation.

### Mass transit solves urban sprawl

Dzurik, 99 - Danuta Leszczynska and Angela Brenner National Urban Transport Institute (Andrew, “Mass Transit and Sustainable Urban Environments,” 1999, <http://www.urbanicity.org/Site/Articles/Dzurik.aspx>)//AX

“There is no question that urban sprawl is closely linked to the use of the private automobile and to a variety of environmental and social problems. In contrast to sprawl, many people throughout the world have viewed land as a scarce commodity to be protected and used wisely. Increased mass transit use and controlled or decreased automobile use can help to alleviate many of the problems of sprawl, particularly environmental, health and social effects (Kenworthy, 1996). Most developing countries have yet to reach a high level of automobile ownership, although they are experiencing rapid urban growth. As economies develop, however, there is a tendency for more private automobiles. Thus, investment in effective urban mass transit systems can be an important tool in making wise use of the land in the face of increasing urbanization.”

## Sprawl – Air Pollution Links

### Sprawl contributes to massive air and water pollution

Nored, 11-(Ashley, “Urban sprawl: a contributing factor to increased vehicle miles travelled and greenhouse gas emissions,” 2-3)//I.S.

Suburban America relies heavily on cars for their transport, and this is strongly coupled with a reliance on petroleum. Historical evidence of oil dependence beginning in the mid-­‐ 20th century is confirmed by Gonzalez, “between 1946 and 1953...U.S. gasoline usage went from 30 million gallons annually to 49 billion” (2006, p. 523). Rather than curb urban sprawl during the oil crisis of the 1970s, the U.S. responded with military and diplomatic force “to ensure the ample flow of petroleum” (Gonzalez, 2006, p. 516). Despite the oil crisis, automobile drivers consumed 7.1 million barrels of petroleum per day in 1970. Suburban sprawl patterns continued and in 2001, oil consumption increased to 10.1 million barrels per day (Gonzalez, 2006, p. 525). Americans are spending so much time on the road and in their cars that “each year, traffic congestion wastes more than 2 million gallons of fuel” (Hudnut, 2008, p. 75). Additionally, Calthorpe notes that America’s transportation industry “burns up 69% of the nation’s oil” (1993, p. 20). This kind of oil consumption is not without implications. In a 2008 study of transportation and the prevention of urban sprawl, Michael Maya states that, “the most egregious costs of sprawl include...severe air and water pollution and the loss of open green spaces” (2008, p. 2). The most pressing effect of sprawl is pollution due to vehicular emissions. The transportation sector is “showing the steepest increase in greenhouse gas emissions” as vehicles paint the landscapes, parking lots and garages of suburbia (Naess, 2006, p. 3) These emissions contribute to fossil fuel depletion and increased CO2 levels that play a role in climate change (Hudnut, 2008, p. 129). Carbon monoxide (CO2) is a green house gas that depletes the ozone layer, causing the sun’s rays to overheat the earth and result in disastrous climate phenomenon. The majority of “green house gases are generated Nored 2 by the burning of carbon-­‐based fuels” leaving the car as the primary suspect (Hudnut, 2008, p. 132).Sprawl has resulted in the U.S. being the “highest global absolute and per capita emitter of...carbon dioxide,” with the transportation sector accounting for one third of all emissions (Gonzalez, 2006, p. 526). Calthorpe relates air quality to driving when he says that “air quality is directly related to the number of times a car is started,” and with 12 trips a day per each household, this is a significant number (1993, p. 47). Calculations from Naess indicate that cars emit 133 kilometers of CO2 per person compared to 67 kilometers for a bus (2006, p. 236). Each year we emit 7 billion tons of carbon with 14 billion tons estimated by 2050 (Hudnut, 2008, p. 130). Even the manufacturing and disposal of vehicles emit CO2. From its birth to its death, a car emits a total of 66 tons of carbon dioxide, creating serious problems for the ozone (Kay, 1997, p. 93). A 13-­‐year study completed in 2006 from the College of Architecture at Georgia Institute of Technology found that in the U.S., “the most sprawling cities...experienced over 60% more high ozone days than the most compact cities” (Stone, 2006, p. 689). This study also supported that “lower density patterns of development are associated with a greater magnitude of vehicle emissions” (Stone, 2006, p. 689). Several sprawling cities include Los Angeles, Dallas/Fort Worth, Cincinnati and Atlanta. Atlanta is “one of the nation’s worst violators of...ground-­‐level ozone, with most...caused by motor vehicle emissions” (Duany, 2000, p. 89). Notorious and daunting is the smog that surrounds cities such as Los Angeles and Denver. Regional alerts are given for “high smog” days but suburbanites continue to drive. The home and car are interdependent in suburbia—Americans own 604 automobiles per 1,000 people (Gonzalez, 2006, p. 527). Walking or biking are simply not options due to safety, lack of direct access and geographic separation. Low-­‐density developments and dispersed neighborhoods that “do not support public transportation” cause the suburbanite of any age to be automobile reliant (Maya, 2008, p. 2). Excluding the children, poor and elderly, owning a car is the only mode of transportation. Since grocery stores, offices and elementary schools are not easily accessible by foot in suburbia, “residents of sprawling areas drive greater distances ” than their more densely packed city counterparts found Maya (2008, p. 3). Increased driving results in greater vehicular pollution and green house gas (GHG) emissions.

### Road focused transportation hurts the environment, water quality, and air quality

Pollard, 4’ – Senior Attorney and Director, Land and Community Program at Southern Environmental Law Center (Trip, “Article: Follow the money: transportation investments for smarter growth,” Temple Environmental Law & Technology Journal, Spring, 2004, 22 Temp. Envtl. L. & Tech. J. 155)//AWV

Extensive road building and motor vehicle use, as well as the sprawl spurred by current transportation approaches, are linked to virtually every pressing environmental problem and to serious public health concerns. One of the most dramatic impacts of current development and transportation patterns is the rapid loss of open space. Over 25 million acres were developed nationwide between 1982 and 1997, and the rate of land consumption is accelerating. n16 This phenomenal growth has caused a massive loss of productive farmland and forests, wetlands, wildlife habitat, and other precious resources. Rapid growth spurred by transportation investments also impacts both water quality and quantity. Roads, parking lots, and buildings are replacing millions of acres of forests, farms, and wetlands that would otherwise filter water. The rise in the amount of impervious surfaces increases the volume of pollutant runoff, increases erosion, and slows groundwater replenishment, thus depleting water supplies. n17 In addition, land bulldozed for roads and development is a major source of silt in rivers and streams, and road use and maintenance introduces herbicides, pesticides, antifreeze, and other pollutants into the water. n18 Road-centered transportation investment policies have had severe air pollution impacts as well. Motor vehicles are a major source of pollutants such as carbon monoxide and smog-causing nitrogen oxides and volatile organic compounds; trucks, diesel buses, and road building equipment also emit soot, particulate matter, and other pollutants. Among other things, these emissions can cause premature death, lung tissue damage, asthma attacks, visibility impairment, and forest damage. The American Lung Association estimates that 137 million Americans live in areas violating ozone health standards. n19 The Clean Air Act and technological advances have sharply curtailed the amount of pollution released per mile from driving; however, this progress has been offset by the dramatic increase in the amount of miles driven. n20 [\*162] Vehicle emissions also are a major source of greenhouse gases, which could have catastrophic environmental, health, and economic impacts by causing global climate change. The average vehicle emits more than one pound of carbon dioxide per mile, n21 and transportation is the largest source of carbon dioxide emissions in the United States. n22 There is growing evidence linking automobile dependence and sprawling settlement patterns to a number of other serious public health problems. n23 The federal Centers for Disease Control (CDC) found that by increasing the distances between activities, and thereby discouraging walking, sprawl increases obesity. n24 Physical inactivity also contributes significantly to health problems such as diabetes, cardiovascular disease, and certain forms of cancer. Moreover, traffic crashes claimed the lives of almost 43,000 people annually in recent years, and more sprawling metropolitan areas tend to have higher rates of traffic fatalities. n25

### Road focus and cars are largest source of air pollution

WCN 6 (“CAR CULTURE AND THE LANDSCAPE OF SUBTRACTION” http://www.worldcarfree.net/resources/freesources/CarCult.htm)

The environmental problem most apparent to the public is air pollution. Within urban areas, cars are the single largest source of air pollution, and create 13% of worldwide carbon dioxide emissions, 28% of Chlorofluorocarbons, and between 30-40% of nitrogen oxides, the primary chemical responsible for acid rain, according to the Marland Energy Magazine in 1983. The E.P.A. reports that automobile air conditioners are the single largest source of ozone depleting chemical. Despite the fact that these days cars produce 1/2 as much carbon monoxide as they did twenty years ago, this has only had beneficial results within the purlieus of urban smog quantity. At the same time, the amount of carbon dioxide released from cars is the same and will always be the same, for it is the inevitable byproduct of fossil fuel consumption. The invisible and odorless CO2 cannot be reduced no matter the filter or cat. converter on the newest, most aerodynamic car, and it is this insidious CO2 gas which is contributing greatly to the greenhouse effect. (22) Air pollution also accelerates the deterioration of a city's infrastructure and buildings, especially those of historic value. Buildings in many cities have been severely discolored due to polluted air, and those lying on busy streets and thoroughfares need facade renovation much more frequently than those on calmer streets. Some structures even experience structural damage due to heavy, rumbling trucks. Cleopatra’s Needle, an Egyptian obelisk in New York’s Central Park, a weekday speedway, has degenerated more in the 35 years since its been in Manhattan, than in the previous 3500 years in the harsh desert climate of Egypt.

### Urban sprawl pollutes water and air, and destroys farmland

Nored, 11-(Ashley, “Urban sprawl: a contributing factor to increased vehicle miles travelled and greenhouse gas emissions,” 1)//I.S.

The automobile, an iconic image of American freedom and mobility transports its proud citizens from suburb to suburb. Is this freedom when we are stuck behind the wheel, inhaling polluted air and witnessing sprawl being built on our way to work? “The U.S. is home to the most sprawled urban areas on the globe” (Gonzalez, 2005, p. 345). Urban sprawl is defined as “new development on the fringes of existing urban and suburban areas”, characterized by low-­‐density neighborhoods and a strong reliance on automobiles (Cafaro, 2009, p. 293). Brian Stone Jr. also describes suburbs as comprised of four distinct parts: “low density development, segregation of distinct land use types, growth in the absence of definable centers, and a lack of physical connectivity between new areas of growth” (2006, p. 690). Since the late 19th century, “the landscape in the United States has come under considerable alteration through the rapid expansion of housing developments,” paved roads and vehicle ownership (Dolney, 2009, p. 52). As urban boundaries grow and suburban sprawl increases, water and air pollution become a concern, as demonstrated by Cafaro, “sprawl development destroys 2.2 million acres of wild and agricultural lands each year; over 1300 plant and animals species remain on the endangered species list; and U.S. carbon emission continue to rise” (2009, p. 293). The implications of urban sprawl auto-­‐reliant America are questioned.

### Urban sprawl drastically increases air pollution and smog

Clean Water Action Council, 2002 – Wisconsin environmental organization (N/A, “Land Use & Urban Sprawl,” Clean Water Action Council, 2002, http://www.cwac.net/landuse/index.html)//AX

**“4. Increased Air Pollution** --- Sprawl increases car and truck traffic, leading to major increases in air pollution and smog. Vehicles are the #1 cause of air pollution in many urban areas, and a threat to public and wildlife health. **5. Increased Water Use and Pollution** --- Sprawl increases air pollution, which falls out to become water pollution. In addition, urban activities create water pollution directly, through land run-off of construction site erosion, fuel spills, oil leaks, paint spills, lawn chemicals, pet wastes, etc. Sprawled, low-density development produces more than its share of this runoff. [See Non-Point Pollution] In addition, more water is consumed for lawn watering and other landscape activities, straining local water supply systems. **6. Increased Energy Consumption** --- At a time when we desperately need to reduce our energy use, sprawled developments increase our energy consumption per person, for increased gasoline, home heating, and electricity use.”

### Urban sprawl increases carbon emissions

Suzuki, 2008 – environmentalist (David, “Discourage Urban Sprawl,” The David Suzuki Foundation, 2008, <http://www.davidsuzuki.org/what-you-can-do/reduce-your-carbon-footprint/discourage-urban-sprawl/> ) //AX

“Canadians must really like each other. Although we live in one of the world's largest countries with an endless horizon of space, we choose to live right next to each other in our cities. Over 80% of us now live in urban areas. As our cities grow bigger, urban sprawl is beginning to affect our quality of life. The most obvious problem is that sprawl leads to a car-dependent culture—and driving is stressful for drivers and for nature. More traffic, more carbon emissions, more smog! But sprawl isn't inevitable. It is often the result of poor planning and short-sightedness.”

## Sprawl – Air Pollution Impacts

#### Air pollution kills 70,000 people in the U.S. every year—the impact is linear.

Bernie Fischlowitz-Roberts, Analyst at the Earth Policy Institute, 2002 (“Air Pollution Fatalities Now Exceed Traffic Fatalities by 3 to 1,” Earth Policy Institute, September 17th, http://www.earth-policy.org/plan\_b\_updates/2002/update17

The World Health Organization reports that 3 million people now die each year from the effects of air pollution. This is three times the 1 million who die each year in automobile accidents. A study published in The Lancet in 2000 concluded that air pollution in France, Austria, and Switzerland is responsible for more than 40,000 deaths annually in those three countries. About half of these deaths can be traced to air pollution from vehicle emissions.

In the United States, traffic fatalities total just over 40,000 per year, while air pollution claims 70,000 lives annually. U.S. air pollution deaths are equal to deaths from breast cancer and prostate cancer combined. This scourge of cities in industrial and developing countries alike threatens the health of billions of people.

Governments go to great lengths to reduce traffic accidents by fining those who drive at dangerous speeds, arresting those who drive under the influence of alcohol, and even sometimes revoking drivers' licenses. But they pay much less attention to the deaths people cause by simply driving the cars. While deaths from heart disease and respiratory illness from breathing polluted air may lack the drama of deaths from an automobile crash, with flashing lights and sirens, they are no less real.

Air pollutants include carbon monoxide, ozone, sulfur dioxide, nitrogen oxides, and particulates. These pollutants come primarily from the combustion of fossil fuels, principally coal-fired power plants and gasoline-powered automobiles. Nitrogen oxides can lead to the formation of ground-level ozone. Particulates are emitted from a variety of sources, primarily diesel engines. "Smog"-a hybrid word used to describe the mixture of smoke and fog that blankets some cities-is primarily composed of ozone and particulates.

#### Every reduction in air pollution saves thousands of lives – and will continue to.

Brad Plumer, Reporter focusing on energy and environmental issues for the Washington Post, previously served as Associate Editor at The New Republic, 2012 (“What’s going to kill us in 2050? Air pollution — and lots of it,” WONKblog—a Washington Post blog, March 15th, Available Online at <http://www.washingtonpost.com/blogs/ezra-klein/post/whats-going-to-kill-us-in-2050-air-pollution--and-lots-of-it/2012/03/15/gIQAgiDgES_blog.html>

Air pollution tends to get wildly underrated as a public health concern. Everyone knows malaria is deadly. Or that access to clean water is a problem. And yet, in the next few decades, air pollution will kill far more people than both of those things combined, according to a new report. On Wednesday, the OECD released its “Environmental Outlook to 2050,” which contained a few spots of cheery news. Humanity is making steady progress against malaria. Worldwide, the number of deaths from the disease are expected to fall by half by 2050. And fewer people will die from unsafe drinking water and poor sanitation in the future. But the number of deaths caused by air pollution — which includes ground-level ozone, particulate matter, and “indoor pollution” — are expected to skyrocket, killing more than 6 million people per year by mid-century. Here’s the chart: [graphic chart omitted] (OECD Environmental Outlook 2050) The situation is particularly acute in India. In 2010, about 90 people out of every million died prematurely from ground-level ozone, which is formed when emissions from power plants, vehicles and factories react with sunlight. The resulting pollution can “trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma.” And by 2050, according to the OECD, about 130 Indians out of every million are likely to die prematurely from exposure. Wealthy countries aren’t immune, either, especially as places like the United States and Europe age, given that the elderly are especially sensitive to ozone pollution. While it’s technically feasible to reduce ground-level ozone, these control measures tend to be pricey and controversial — the Obama White House nixed stricter ozone standards last September for this very reason. Other pollutants, however, could prove much easier to tackle. Take particulate pollution, which the OECD expects will kill 3.6 million people per year by 2050. A lot of lung-damaging particulate matter comes from the burning of fossil fuels. And actions to curb them can prove quite cost-effective. The EPA’s new regulations on mercury, for instance, will reduce U.S. particulate pollution, as coal plants install new scrubbers. That, the agency estimates, will save an estimated 11,000 lives per year by 2016 and deliver between $36 billion to $89 billion per year in health benefits. And all for a cost of $9.6 billion per year.

## Sprawl – Biodiversity Links

### Urban sprawl causes habitat fragmentation and harms animal life

**Johnson and Klemens ‘05** Director, Metropolitan Conservation Alliance, Wildlife Conservation Society (Elizabeth A. and Michael W., “Nature in Fragments”, 22)//DD

Habitat fragmentation occurs when natural or human processes break large, contiguous areas into smaller, isolated patches. Although fragmentation is often associated with humans, it is also a natural process. Landscapes are fragmented over time by geologic forces, such as erosion and glaciation, and also by the workings of natural features such as rivers and mountains. Natural patchiness creates heterogeneous landscapes that support complex biological systems. However, fragmentation by human activities, a key charactaristic of sprawling development, usually creates more simplified landscapes that interfere with ecosystems processes, disrupt species movement, and remove critical habitats. Road construction is often the first stage of the human-caused fragmentation process. According to Forman and colleagues, "The road system ties the land together for us, yet slices nature into pieces" (2003:xiii). Roads divide natural landscapes, increase access, and open the way for further development. Today it is estimated that roads ecologically affect 15 to 20 percent of the land area in the United States (Formand and Deblinger 2000) by associated pollution, noise, and other disturbances (for a detailed discussion, see the box "Effects of Roads and Power Lines"). Although the rate of increase in road density has slowed overall in this country, the road network in suburban areas is still rapidly expanding. People are driving more, and the total miles traveled per year are increasing, mostly as a result of increased commuting in sprawled development. As driving miles increase, road construction and improvements lead to changed traffic patterns and new bypasses. The new roads being built in sprawled areas are wider, of greater density, and better connected to larger highways, resulting in even greater traffic volume (Forman et al. 2003). Once roads are established, habitat fragmentation accelerates with land clearing for agriculture or the construction of isolated vacation homes or large-lot subdivisions scattered here and there in otherwise undeveloped wild lands. This "early-stage" fragmentation, where a number of small developed areas are set within a larger natural ecosystem, is called a perforated landscape (Forman 1995). As development proceeds and intensifies over time these remaining natural-habitat patches are built on, broken up, and divided even further. Ultimately, fragmentation irreversibly changes the larger landscape into a human-dominated matrix of impervious pavement, strip malls, and housing developments with only scattered patches of natural vegetation (figure 2.1).

HABITAT DEGRADATION

Sprawl also causes habitat degradation. Habitat degradation is the alteration of a species's habitat such that it reduces the habitat's ability to meet that species's needs. A degraded environment, although harmful to many species, may benefit others that are more tolerant (DeStefano and Johnson, chapter 10, this volume). Pollution and the introduction of invasive species to a landscape, two threats that also degrade habitats, are addressed later in this chapter.

### Urban sprawl threatens biodiversity

Lee, 2010 – environmental journalist, San Diego Union Tribune (Mike, “Study shows urban sprawl threatens genetic diversity,” San Diego Union Tribune, 09/22/10, http://www.utsandiego.com/news/2010/sep/22/urbanization-threatens-genetic-diversity-species/)//AX

“Urban sprawl in Southern California is limiting the genetic diversity of animal populations and possibly making them more prone to extinction, according to new research by federal biologists. Their study, released this week, was billed as one of the first concrete pieces of evidence that show significant genetic changes in populations caused by habitat fragmentation. Researchers assessed four species -- three lizards and a bird -- in the Santa Monica Mountains near Thousand Oaks. Co-author Robert Fisher at the U.S. Geological Survey in San Diego said a similar study recently was started in San Diego County to see what has happened to genetic diversity in a region where habitat "connectivity" and conservation planning goes back several years. His work in the Santa Monica Mountains suggests "habitat islands" are forming where animals are unlikely to be related to the same species in neighboring areas. In addition, animals within smaller and more-isolated habitat patches are closely related to one another. Research showed that when animals are unable to cross roads and other urban barriers they begin to inbreed and lose their genetic diversity. Decreased genetic diversity may increase a species’ chances of extinction because it limits their ability to adapt to environmental changes.”

### Habitat fragmentation leads to loss of native species in isolated patches of land

**Johnson and Klemens ‘05** Director, Metropolitan Conservation Alliance, Wildlife Conservation Society (Elizabeth A. and Michael W., “Nature in Fragments”, 25)//DD

As natural-habitat patches decrease in size and area because of sprawling development, they initally appear to support a greater number of species and individuals, alls seeking refuge in the remaining undeveloped habitat patch (Collinge and Forman 1998). Over time, however, these smaller fragments support fewer and fewer species. Loss of species is nonrandom, with large predators that require extensive areas of habitat typically disappearing first from a landscape (Ray, chapter 9, this volume)

### Urban environments drastically change natural environments

Johnson and Klemens ‘05 Director, Metropolitan Conservation Alliance, Wildlife Conservation Society (Elizabeth A. and Michael W., “Nature in Fragments”, 21)//DD

The physical environments in developed and undeveloped land often differ dramatically, and the biodiversity found in each place reflects these differences. Urban environments typically have more polluted water and air, compacted soils that empede root growth, increased artificial lighting, and increased disturbance by humans and their vehicles (Adams 1994). Cities are dominated by permanent structures, such as buildings and impervious pavement. These hardened surfaces alter the movement of water through the city, increasing runoff and channelizing stream flows (L'vovich and White 1990; Adams 1994). They also affect the city's climate. Most buildings amd pavent absorb more of the sun's heat during the day than nonurban, vegetated land, making cities on average warmer than surrounding areas (Landsberg 1956; Berry 1990). Sprawl-dominated environments fall somewhere along the gradient from wild to urban in terms of environmental characteristics.

### Urban sprawl disrupts natural habitats

Forys & Allen, 2005– teacher, Eckerd College, professor, University of Nebraska-Lincoln (Elizabeth & Craig, “The Impacts of Sprawl on Biodiversity: the Ant Fauna of the Lower Florida Keys,” University of Nebraska-Lincoln, 08/01/05, [http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1007&context=usgsstaffpub) //AX](http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1007&context=usgsstaffpub)%20%20//AX)

“Habitat destruction is the primary cause behind the extinction of most terrestrial species (Baillie and Groombridge 1996), but the impact of human development or roads may be far greater than the immediate area of the habitat loss (Forman 2002). **The reason why sprawl is such a threat to** **biodiversity is not simply because of the amount of habitat that is directly converted to a road or a building, but the effects these human disturbances have on the larger landscape.** Many animals simply avoid areas with evenmoderate human densities or activity levels. Forexample, deer may avoid areas as far as 1.6 km awayfrom developed areas (Vogel 1989). Decreasedhabitat quality caused by sprawl also may excludeanimals. This is documented for aquatic organisms(Kemp and Spotila 1997), where the mechanismsbehind decreased habitat quality include greatervariation in stream flows, hypoxia (Limburg andSchmidt 1990) and siltation (Chapman 1988).Animal activity patterns reflect an evolvedadaptation to ecological pattern and structure.Animal activity patterns can be altered with changesin land use associated with sprawl. For example,coyote (Canis latrans) movement activity patternsshift in suburban areas, becoming more nocturnal —“an external modification of internally derived diel patterns;” as well, in suburban areas, the amplitude of coyote circadian rhythms may increase (McClennen et al. 2000).”’

### Urban sprawl causes biodiversity loss

MSNBC 5 (1/11, http://www.msnbc.msn.com/id/6814251/)

WASHINGTON - Urban sprawl is gobbling up open spaces in fast-growing metropolitan areas so quickly that it could spell extinction for nearly 1,200 species of plants and animals, environmental groups say. The National Wildlife Federation, Smart Growth America and NatureServe projected that over the next 25 years, more than 22,000 acres of natural resources and habitat will be lost to development in 35 of the largest and most rapidly growing metropolitan areas. According to the groups, as many as 553 of the nearly 1,200 at-risk species are found only in those areas. “The bottom line is that these species are at risk of extinction due to habitat destruction,” said John Kostyack, a National Wildlife Federation attorney and report co-author. “And in these metro areas, the leading cause of habitat destruction is sprawl — development of homes and office buildings and roads in outlying forests and farm fields.”

## Sprawl – Forests Add-On

### Sprawl kills forests and leads to forest fragmentation preventing sustainable forest management

USDA Forest Service, 2004 – USDA Forest Service (Unknown, “Forestry Threatens Sprawl,” USDA Forest Service, January 2004, <http://www.na.fs.fed.us/ss/03/stew_fragmentation.pdf>) //AX

“Why do Americans flee urban areas for more rural settings? We seek the American Dream, a better quality of life, natural surroundings with greater space and privacy, and the lower cost of living in suburban and exurban areas. Achieving the dream accelerates sprawl, which often degrades community character, environmental integrity, and economies that depend on sustainably managed forests. **America loses 1.2 million forested acres each year to development and other land conversion. Sprawl begets forest fragmentation and forest parcelization to form a harmful trinity, with environmental, economic, and social consequences. It devours open spaces…**”

### Independently forest management is key to prevent extinction

Linda Sauter, University of Washington Astrobiology Program, 4-17-06, “This Easter Island Earth”, <http://www.astrobio.net/index.php?option=com_retrospection&task=detail&id=1930>, ACC: 4.8.12, p. online

From the perspective of Astrobiology, it is interesting to look at the causes for collapse in terms of the whole planet over the longest possible timescale. For ultimately, the Earth is Easter Island. Diamond breaks down the collapse factors into several categories. The first several factors include deforestation, habitat destruction, soil erosion and fertility loss, and freshwater loss and contamination. Trees seem to be an intrinsically renewable resource. But forest destruction, in conjunction with soil erosion and water loss, makes the loss of forest habitat an accelerating and potentially irreversible problem on this planet. Trees cannot grow back in places where the soil is lost, and soil regenerates at a much slower pace than that at which it is lost. Therefore, deforestation can be considered a global collapse factor for our modern civilization. The size and timescale of this factor is less certain, but could become critical within a century or two at current rates.

### US forests contain species vital to global diversity

Dr. Faith Thompson Campbell, Head of the Invasive Species Program for American Lands Alliance, and Scott E. Schlarbaum, James R. Cox Professor of Forest Genetics in the Department of Forestry, Wildlife and Fisheries at the Institute of Agriculture @ the University of Tennessee, Leader of the University of Tennessee's Tree Improvement Program, 2003, “Fading Forests II: Taking Away North America’s Natural Heritage”, http://fwf.ag.utk.edu/Schlarbaum/FadingForestsII.pdf, ACC: 2.9.06, p. 14

Forests cover approximately one-third of the land area in the United States: 1.15 million square miles (USDA APHIS and Forest Service, 2000). These forests are comprised of approximately 500 species of trees plus thousands of identified species of terrestrial and aquatic animals and non-woody plants (USDA APHIS and Forest Service 2000) and likely thousands of undescribed species (http://www.discoverlife.org). Representatives of almost every type of vegetation that occurs worldwide can be found within the United States or its protectorates (cf.USDA APHIS and Forest Service, 2000). Additionally, many exotic plant species are grown for horticulture, Christmas trees, and other uses. Approximately 4,000 exotic plants are established outside cultivation in the United States [Kartesz, 1999; United States Geological Survey (USDI USGS), 1998]. This combination of native and exotic species across the United States provides ample opportunities for imported pests to find suitable hosts (USDA APHIS and Forest Service, 2000; Niemala and Mattson, 1996). The more than 400 exotic insects and pathogens that are permanently established in North American forests and woodlands demonstrate the vulnerability of these forests to exotic organisms (Mattson et al., 1994; Liebhold et al., 1995; USDA APHIS, 2000). Forest ecosystems vary in their susceptibility to exotic pests. Forests comprised of relatively few trees, e.g., forests dominated by Douglas-fir in the Pacific Northwest, would be more easily damaged by a species-specific pest than eastern forests, which have more diversity. Conversely, eastern forests provide greater opportunities for exotic pests to find suitable hosts. Damage to host species may range from negligible to potential extinction. The impact of some exotic pests is noticeable in a relatively short period after introduction, e.g., Asian longhorned beetle, or can be delayed as with Asiatic oak weevil (Triplehorn, 1955; Roling, 1979; Stanton, 1994). Changes in host preference also can occur. Pear thrips were introduced to the country in 1900 and were spread throughout the country by the orchard industry. Only in the latter portion of the 20 century was pear thrips damage noted in a variety of forest tree species. Although some generalizations can be made, there is an uncertainty about how an exotic species will react in a new environment, what impact it will have on host species, and when it will be recognized as a problem species (USDA APHIS and Forest Service, 2000). [IT CONTINUES…] Phytosanitary agencies are more likely to identify pests that threaten major crops, such as citrus or wheat, that are grown around the world. Identification of potential forest pests would be much more difficult, as only a few United States species, e.g., Monterey pine, loblolly pine, slash pine, or northern red oak are grown widely in other countries. The United States has a myriad of forest species and types reaching from boreal to tropical ecosystems. The number of potential invasive organisms that could affect the diverse forest ecosystems in this country is virtually incalculable. According to Wallner, “ . . . forest ecosystems are highly complex, and most forest pests are not thoroughly understood. As a result, the answers to the key questions often represent little more than speculation” (Wallner, In press). Not surprisingly, some risk assessments have concluded that a species represented a low risk, only to have that prediction subsequently proved incorrect. An example is the small Japanese cedar longhorned beetle (see Box 1).

## Sprawl – Wetlands Add-On

### Urban sprawl kills wetlands

EPA, 2003 - Environmental Protection Agency (EPA, “Urban Sprawl,” PolicyAlmanac, 2003, <http://www.policyalmanac.org/environment/archive/urban_sprawl.shtml> ) //AX

“ Population growth is the most significant factor effecting urban sprawl in the Mid-Atlantic region. As population size increases, so does the amount of land required for residential and commercial needs. In the Chesapeake Basin alone, between the years of 1950-1980, the percent of land used for residential and commercial purposes increased nearly 180% while population increased about 50%. Based upon current trends in Maryland, in a recent six-month period, approximately 5,000 people left Baltimore City; 3,000 septic permits were issued; and nearly 10,000 acres of forests and farmlands were lost. If these trends continue, Maryland could use as much land for development in the next 25 years as it has used in the entire history of the state. Likewise, in Northern Virginia, development is expanding beyond the current service areas of public water supplies provided by the Potomac River. Specifically, Northern Virginia's Loudoun County's population has increased by nearly 150 percent from 57,000 in 1980 to nearly 140,000 today, with the landscape changing from rural to suburban. Ground water is being utilized to support the uncontrolled growth. Yet, no assessment has been conducted on groundwater availability and how aquifers are being impacted by suburban sprawl. In its path, sprawl consumes thousands of acres of forests and farmland, woodlands and wetlands. It requires government to spend millions extra to build new schools, streets and water and sewer lines. In its wake, sprawl leaves boarded up houses, vacant storefronts, closed businesses, abandoned and often contaminated industrial sites, and traffic congestion stretching miles from urban centers. There are over 700,000 kilometers of [roads](http://www.epa.gov/maia/html/road.html) connecting urban areas within the Mid-Atlantic region! As a result, we suffer from increased traffic congestion, longer commutes, increased dependence on fossil fuels, crowded schools, worsening air and water pollution, threatened surface and ground water supplies, lost open space and wetlands, increased flooding, destroyed wildlife habitat, higher taxes, and dying city centers.”

### Wetlands are key to the hydro-cycle – the impact is extinction

Ramsar Convention, 96, “Ramsar Convention on Wetlands, Wetlands and Biodiversity, Executive Summary”, http://www.ramsar.org/about/about\_biodiversity.htm, ACC: 12.20.08, p. online

Wetlands - including (inter alia) rivers, lakes, marshes, estuaries, lagoons, mangroves, seagrass beds, and peatlands - are among the most precious natural resources on Earth. These highly varied ecosystems are natural areas where water accumulates for at least part of the year. Driven by the hydrological cycle, water is continuously being recycled through the land, sea and atmosphere in a process which ensures the maintenance of ecological functions. Wetlands support high levels of biological diversity: they are, after tropical rainforests, amongst the richest ecosystems on this planet, providing essential life support for much of humanity, as well as for other species. Coastal wetlands, which may include estuaries, seagrass beds and mangroves, are among the most productive, while coral reefs contain some of the highest known levels of biodiversity (nearly one-third of all known fish species live on coral reefs). Other wetlands also offer sanctuary to a wide variety of plants, invertebrates, fishes, amphibians, reptiles and mammals, as well as to millions of both migratory and sedentary waterbirds. Wetlands are not only sites of exceptional biodiversity, they are also of enormous social and economic value, in both traditional and contemporary societies. Since ancient times, people have lived along water courses, benefiting from the wide range of goods and services available from wetlands. The development of many of the great civilisations was largely based on their access to, and management of, wetland resources. Wetlands are an integral part of the hydrological cycle, playing a key role in the provision and maintenance of water quality and quantity as the basis of all life on earth. They are often interconnected with other wetlands, and they frequently constitute rich and diverse transition zones between aquatic ecosystems and terrestrial ecosystems such as forests and grasslands.

## Sprawl – Wetlands Links

### Urban sprawl devastates key forest habitats like wetlands

Clean Water Action Council, 2002 – Wisconsin environmental organization (N/A, “Land Use & Urban Sprawl,” Clean Water Action Council, 2002, http://www.cwac.net/landuse/index.html)//AX

“Land Use & Urban Sprawl Land use and urban sprawl are major environmental concerns affecting us in a variety of ways. We must adopt sustainable patterns of development which are not self-destructive. What is Urban Sprawl? "Sprawl" is the increased use of urbanized land by fewer people than in the past. Traditional cities were compact and efficient, but over the past 30-50 years, the density of land used per person has declined drastically. Although the U.S. population grew by 17 percent from 1982 to 1997, urbanized land increased by 47 percent during the same 15 year period. The developed acreage per person has nearly doubled in the past 20 years, and housing lots larger than 10 acres have accounted for 55 percent of land developed since 1994, according to the American Farmland Trust. Land use and urban sprawl are major environmental concerns affecting us in a variety of ways. We must adopt sustainable patterns of development which are not self-destructive. Impacts of Sprawl Land Use and Urban Sprawl Between 1950 and 2002, the number of acres of farmland in Wisconsin dropped by 32.6%, from 23.6 million acres down to 15.9 million. 1. Loss of Farmland --- We're chewing up farms at an alarming rate across the U.S., to create new highways, fringe industrial parks and sprawled housing developments. This loss reduces our ability to grow food, fiber and timber. In many areas, urban development pressure and increased property taxes are forcing farmers out of business. They often sell their farms for housing developments, to provide financial security for their retirement. \* Wisconsin Farms - In 1950, Wisconsin had 23.6 million acres of farmland, but 32.6% of this farmland has disappeared, leaving us with only 15.9 million acres in 2002, according to the Wisconsin Agricultural Statistics Service. The number of Wisconsin farms has dropped from 178,000 down to 77,000, from 1910 to 2002. [Some of this farm loss is due to consolidation into much larger farms. \* Nationwide - More than 13.7 million acres of farmland in the U.S. were converted to non-farm use just between 1992 and 1997, according to United States Department of Agriculture. This figure is 51% higher than between 1982 and 1992. 2. Loss of Wildlife Habitat --- Wild forests, meadows, and wetlands are also disappearing, replaced by pavement, buildings and sterile urban landscaping. [See Wildlife] The remaining habitat is smaller, degraded and more fragmented, making survival of certain wildlife species very difficult as they try to reach breeding ponds, hibernation sites, feeding locations, or to establish viable nesting areas. According to the Wisconsin Department of Natural Resources, important habitat types are disappearing. For example: \* Grasslands - Wisconsin has only .5% (13,000 acres) of its original grassland ecosystem remaining in a relatively intact condition, but much of this remnant acreage has been degraded to some degree \* Oak Savannas - Intact examples of oak savanna vegetation are now so rare that less than 500 acres are listed in the Natural Heritage Inventory as having a plant assemblage similar to the original oak savanna. This is less than 0.01% of the original 5.5 million acres. \* Oak and Pine Barrens - Less than 1% of the pre-settlement oak and pine barren habitat remains \* Shorelands - Degradation of near-shore and shoreline wildlife habitat is increasing with the pace of development, particularly in northern Wisconsin where, since 1960, two thirds of the larger lakes have been developed, the number of home sites has doubled, and the annual number of permits for sea wall construction has tripled. The DNR now reviews and processes over 10,000 permits for piers, near shore ponds, and structures each year. \* Wetlands - More than 50% of Wisconsin's original wetlands have been lost. On the lower Bay of Green Bay, more than 90% of the wetlands are gone.”

## Sprawl – Oceans Add-On

### Sprawl uniquely kills marine life—Chesapeake bay proves

Miller 5 (Mitchell, WTOP Radio, “Sprawl Damages Chesapeake Bay”, October 12, 2005, http://www.wtopnews.com/index.php?nid=453&pid=0&sid=590970&page=1)

Sprawl is doing much more than contributing to your crawl to work -- it's damaging the Chesapeake Bay. "The amount of traffic and the sprawl is the factor that is going to a very large extent control the health of the bay over the next several generations," says Doug Siglin, federal affairs director for the Chesapeake Bay Foundation. He says there's almost a constant urban corridor now from Philadelphia to Richmond and down to Newport News, Va. and Norfolk, Va. "Everyone of us who's in that urban corridor creates pollution for the Bay, and it's only going to get worse. We don't see it stopping any time soon." The foundation estimates that Maryland alone loses 30,000 acres of land to sprawl each year. And throughout the Chesapeake Bay watershed, the overall loss of land each year is estimated at 150,000 acres -- or nearly 50 square miles. All of that land being paved over is creating more storm runoff that pollutes rivers and waterways. The Chesapeake Bay Foundation says that sprawl creates five to seven times as much sediment and phosphorous as a forest. But it's not just the sprawl -- the crawl of commuting also is undermining the health of the bay. "Cars pollute and one of the main effects of cars on the Bay is that the exhaust that cars put out has a lot of nitrogen in it, and nitrogen is the biggest factor right now in the health of the Bay," Siglin says. The buildup of nitrogen has contributed to a lack of oxygen in the bay, creating massive "dead zones" that can't support marine life.

### Ocean destruction causes planetary extinction

Craig 3- associate professor of law at Indiana University School of Law, (Robin Kundis, Winter 2003, McGeorge Law Review, 34 McGeorge L. Rev. 155, p. 265-266)//AWV

Biodiversity and ecosystem function arguments for conserving marine ecosystems also exist, just as they do for terrestrial ecosystems, but these arguments have thus far rarely been raised in political debates. For example, besides significant tourism values - the most economically valuable ecosystem service coral reefs provide, worldwide - coral reefs protect against storms and dampen other environmental fluctuations, services worth more than ten times the reefs’ value for food production. Waste treatment is another significant, non-extractive ecosystem function that intact coral reef ecosystems provide. More generally, “ocean ecosystems play a major role in the global geochemical cycling of all the elements that represent the basic building blocks of living organisms, carbon, nitrogen, oxygen, phosphorus, and sulfur, as well as other less abundant but necessary elements.” In a very real and direct sense, therefore, human degradation of marine ecosystems impairs the planet’s ability to support life. Maintaining biodiversity is often critical to maintaining the functions of marine ecosystems. Current evidence shows that, in general, an ecosystem’s ability to keep functioning in the face of disturbance is strongly dependent on its biodiversity, “indicating that more diverse ecosystems are more stable.” Coral reef ecosystems are particularly dependent on their biodiversity. Most ecologists agree that the complexity of interactions and degree of interrelatedness among component species is higher on coral reefs than in any other marine environment. This implies that the ecosystem functioning that produces the most highly valued components is also complex and that many otherwise insignificant species have strong effects on sustaining the rest of the reef system. Thus, maintaining and restoring the biodiversity of marine ecosystems is critical to maintaining and restoring the ecosystem services that they provide. Non-use biodiversity values for marine ecosystems have been calculated in the wake of marine disasters, like the Exxon Valdez oil spill in Alaska. Similar calculations could derive preservation values for marine wilderness. However, economic value, or economic value equivalents, should not be “the sole or even primary justification for conservation of ocean ecosystems. Ethical arguments also have considerable force and merit.” At the forefront of such arguments should be a recognition of how little we know about the sea - and about the actual effect of human activities on marine ecosystems. The United States has traditionally failed to protect marine ecosystems because it was difficult to detect anthropogenic harm to the oceans, but we now know that such harm is occurring - even though we are not completely sure about causation or about how to fix every problem. Ecosystems like the NWHI coral reef ecosystem should inspire lawmakers and policymakers to admit that most of the time we really do not know what we are doing to the sea and hence should be preserving marine wilderness whenever we can - especially when the United States has within its territory relatively pristine marine ecosystems that may be unique in the world. We may not know much about the sea, but we do know this much: if we kill the ocean we kill ourselves, and we will take most of the biosphere with us. The Black Sea is almost dead, its once-complex and productive ecosystem almost entirely replaced by a monoculture of comb jellies, “starving out fish and dolphins, emptying fishermen’s nets, and converting the web of life into brainless, wraith-like blobs of jelly.” More importantly, the Black Sea is not necessarily unique. The Black Sea is a microcosm of what is happening to the ocean systems at large. The stresses piled up: overfishing, oil spills, industrial discharges, nutrient pollution, wetlands destruction, the introduction of an alien species. The sea weakened, slowly at first, then collapsed with shocking suddenness. The lessons of this tragedy should not be lost to the rest of us, because much of what happened here is being repeated all over the world. The ecological stresses imposed on the Black Sea were not unique to communism. Nor, sadly, was the failure of governments to respond to the emerging crisis. Oxygen-starved “dead zones” appear with increasing frequency off the coasts of major cities and major rivers, forcing marine animals to flee and killing all that cannot. Ethics as well as enlightened self-interest thus suggest that the United States should protect fully-functioning marine ecosystems wherever possible - even if a few fishers go out of business as a result.

## Sprawl – Obesity Add-On

### Expanding mass transit substantially decreases obesity and health care costs

**Treasury Department, 12** - A REPORT PREPARED BY THE DEPARTMENT OF THE TREASURY WITH THE COUNCIL OF ECONOMIC ADVISERS (“A NEW ECONOMIC ANALYSIS OF INFRASTRUCTURE INVESTMENT”, MARCH 23, 2012, <http://www.treasury.gov/resource-center/economic-policy/Documents/20120323InfrastructureReport.pdf>)

If improved infrastructure changed the way Americans live and work, there would be significant benefits to health and wellness. For example, MacDonald et al. find that improving neighborhood environments and increasing the public’s use of light rail transit would benefit health to the extent it causes increased physical activity, a reduction in the incidence of obesity (body mass index greater than 30), and a reduction in the odds of becoming obese.44

Using data on individuals before (July 2006 to February 2007) and after (March 2008 to July 2008) the completion of a light rail system in Charlotte, North Carolina, they find that the use of light rail to commute to work is associated with a nearly 1.2 point reduction in body mass index as well as an 81 percent reduction in the odds of becoming obese. Moreover, improved perceptions of neighborhoods as a result of the availability of light rail were associated with 15 percent lower odds of obesity as well as higher odds of meeting weekly recommended physical activity levels for walking and vigorous exercise (9 percent and 11 percent, respectively).

In addition to all of the personal benefits associated with a healthier life style, overall costs on our health care system are substantially reduced when obesity rates are lowered, given that health care costs for the obese are almost twice the rate for normal weight individuals. Finkelstein et al. find that between 1998 and 2006, the prevalence of obesity in the United States increased by 37 percent, adding $40 billion dollars to health care costs. 45

### Obesity kills millions – outweighs war and pandemics

**Lalasz, 5** – Senior Editor at Population Reference Bureau [May 2005, Robert, “Will Rising Childhood Obesity Decrease U.S. Life Expectancy?” http://www.prb.org/Articles/2005/WillRisingChildhoodObesityDecreaseUSLifeExpectancy.aspx?p=1)

(May 2005) A new study contends that rising childhood obesity rates will cut average U.S. life expectancy from birth by two to five years in the coming decades—a magnitude of decline last seen in the United States during the Great Depression. The study, published in the March 18 issue of the New England Journal of Medicine, contradicts recent government projections that U.S. life expectancy will reach at least the mid-80s by the year 2080.1 Such forecasts, write lead author S. Jay Olshansky and his nine co-authors, are a "simple but unrealistic extrapolation of past trends in life expectancy into the future." In turn, other demographers have characterized the Olshansky team's analysis as largely unsupported by evidence, and the article has spotlighted a long-standing debate about whether there are biological limits to an individual human lifespan—all amidst a recent flurry of contradictory research about how obesity effects morbidity and mortality rates. One new study from the Centers of Disease Control and Prevention (CDC) even argues that being overweight has a positive effect on life expectancy.2 But Olshansky, a professor of epidemiology and biostatistics at the University of Illinois-Chicago, remains convinced by his team's conclusions. "If anything, we're being conservative in our estimates," he says. "We're assuming no change in obesity levels from 2000 levels, and actually, they've gotten worse."

Obesity and the Future of Medicine

Projecting life expectancy is more than an academic exercise. Many U.S. government agencies—including the Social Security Administration, Congress, and the military—use such forecasts to guide policymaking on issues from tax rates to the solvency of age-based entitlement programs. And almost all these projections assume that U.S. life expectancy will continue to rise as steadily as it has since the 1930s, spurred by new medical approaches and technology as well as behavioral shifts towards healthier lifestyles. But Olshansky and his co-authors question whether medicine and public health interventions can counter the rapid increases in U.S. obesity rates over the last two decades, especially among children. The incidence of obesity—which researchers have linked to an elevated risk of type-2 diabetes, coronary heart disease, cancer, and other health complications—rose approximately 50 percent in the United States in both the 1980s and 1990s. Two-thirds of all U.S. adults are now classified as overweight or obese, as are 20 percent to 30 percent of all children under age 15. And Olshansky argues that this rapid rise in obesity rates will cause a "pulse event" of mortality in the United States—akin to the large number of deaths caused by an influenza pandemic or a war, but spread out over the next four or five decades. "Any time there's an increase in early-age mortality [deaths before age 50], it has an effect on overall life expectancy," says Olshansky. "And when these children reach their 20s, 30s, 40s, and 50s, they'll face a higher risk of death. It's roughly equivalent to discovering that a large segment of our young people who never smoked suddenly decided to smoke."

The Surprising Impact of Obesity Today

To demonstrate the future effects of rising obesity levels, Olshansky and his co-authors first calculated how current rates of adult obesity are diminishing overall U.S. life expectancy. Using studies that argue being obese reduces your life expectancy by nearly 13 years, the researchers estimated by how much overall rates of death would fall if every obese person in the United States lost enough weight to reach the optimal Body Mass Index (BMI) of 24. (Obesity is generally defined as having a BMI of 30 or above.) "In other words, to find out the effects of obesity, we statistically wiped out obesity," says Olshansky. They found that obesity now slices one-third to three-quarters of a year off overall life expectancy, depending on one's race and gender (see figure). These figures don't sound like much, says Olshansky, until you put them into context. "They are larger than the negative effect of all accidental deaths as well as homicides and suicides," he says. "If you wiped out cancer, that would only add 3.5 years to overall U.S. life expectancy." And the effect of obesity will only grow, write Olshansky and his co-authors, as its prevalence further rises and children and young adults "carry and express obesity-related risks for more of their lifetime than previous generations have done." Even eliminating a major disease such as cancer, they conclude, would not counter the negative consequences for life expectancy caused by this wave of deaths. "They will overwhelm the positive influences of technology," says Olshansky.

### Obesity causes 300,000 deaths a year

**Besharov, 3** (Douglas Besharov, American Enterprises Institute, 2003, Testimony before Committee on Agriculture, April 3, http://www.aei.org/publications/pubID.16861,filter.all/pub\_detail.asp)

Being overweight is not simply a matter of aesthetics. The growing girth of Americans is a major health catastrophe. Overweight people are three times more likely to have coronary artery disease.[5] two to six times more likely to develop high blood pressure, [6] more than three times as likely to develop type 2 diabetes, [7] and twice as likely to develop gallstones than normal weight people.[8] Obesity, of course, is more serious, causing an estimated 50 to 100 percent increase in premature deaths (estimated to be 300,000 deaths per year).[9]

## Sprawl – Obesity Link Extn

### Urban sprawl causes multiple health problems like obesity

Fackelmann, 2003 – writer, USA Today (Kathleen, “Studies tie urban sprawl to health risks, road danger,” USA Today, 08/28/03, http://www.usatoday.com/news/nation/2003-08-28-sprawl-usat\_x.htm)//AX

“People living in sprawling American neighborhoods walk less, weigh more and are more likely to be hit by a car if they do venture out on foot or bicycle, suggests a series of studies out Friday. The studies are among the first reports to link shopping centers, a lack of sidewalks and bike trails and other features of urban sprawl to deadly health problems. The studies appear in the September issues of *The American Journal of Health Promotion* and the *American Journal of Public Health*. These reports come as more and more Americans are moving out to the suburbs — and walking less and less. Studies by the Federal Highway Administration show that Americans make fewer than 6% of daily trips on foot. In the first report, Reid Ewing, a researcher at the University of Maryland, and his colleagues studied more than 200,000 Americans living in 448 counties in major metropolitan areas. The team assessed the degree of sprawl in each county and then looked at some key health characteristics. Team members found that people who lived in sprawling neighborhoods walked less and had less chance to stay fit. These neighborhoods were built to accommodate cars and SUVs, not walkers, says Richard Jackson of the Centers for Disease Control and Prevention in Atlanta. People living in urban sprawl often can't walk because the shops are miles away, often in strip malls accessible only by high-speed roadways, he says. Ewing's study shows that such everyday driving trips to the store or to the corner bus stop can add up: People in sprawling neighborhoods weighed about 6 pounds more on average than the folks living in compact neighborhoods where sidewalks are plentiful and stores and shops are close to residential areas. The report also shows that people living in sprawling urban areas were more likely to suffer from obesity, which can put people at higher risk of cancer, diabetes and a host of other diseases. Urban sprawl also put residents at a slightly higher risk of developing high blood pressure.”

### Reliance on cars – instead of mass transit – leads to health issues

HDMT, 2000 – Census data (Unknown, “Indicator HH.1g Residential Density,” San Francisco’s Healthy Development Measurement Tool, <<no date provided>>, <http://www.thehdmt.org/indicators/view/199> ) //AX

 “Urban sprawl is a term that has been used to describe a “pattern of uncontrolled development around the periphery of a city.” **Urban sprawl development is generally characterized by the reliance on automobiles to get from one place to the next and historically has not been suitable for more active transportation options such as walking, biking or mass transit.** Negative health implications have been associated with urban sprawl. **Research has found that people living in counties with sprawling development are less likely to walk, weigh more and are more likely to suffer from high blood pressure than those living in more compact counties.** Walking for utilitarian purposes, such as going to work, shopping, and school, is more prevalent in dense, mixed-use neighborhoods which supports a more active lifestyle for residents, thereby helping to prevent obesity, cardiovascular disease and other chronic illnesses associated with physical inactivity. Additionally, metropolitan areas with lower degrees of urban sprawl have been found to have an increased prevalence of cycling.”

## Sprawl – Food Production

### Urban sprawl drastically decreases food production

CNN, 2000 (“Satellite images show effects of urban sprawl,” CNN, 02/21/00, <http://archives.cnn.com/2000/NATURE/02/21/sprawl.space.01/index.html> )//AX

“WASHINGTON (CNN) -- New images from Earth-observing satellites are documenting the effects of urban sprawl on the landscape, hinting at adverse long-term consequences related to the rapid growth of cities. NASA on Monday released satellite image sequences of [Atlanta](http://archives.cnn.com/2000/NATURE/02/21/sprawl.space.01/atlanta.ga.map.jpg); [Washington](http://archives.cnn.com/2000/NATURE/02/21/sprawl.space.01/washington.dc.jpg); [Portland, Oregon](http://archives.cnn.com/2000/NATURE/02/21/sprawl.space.01/oregon.portland.lg.jpg); and [Shenzhen, China](http://archives.cnn.com/2000/NATURE/02/21/sprawl.space.01/china.shenzhen.jpg). Each provides a time-lapsed view of how the landscape in and around these cities has changed as a result of development. The pictures show suburban Atlanta and Washington undergoing rapid deforestation as trees are cut down and roads, businesses, and houses are built. In contrast, Portland, with tight zoning laws intended to control growth, remained relatively free of the deforestation associated with sprawl. According to NASA, 50 percent of the world's population now lives in cities -- an increase of more than 1 billion people in the last 50 years. According to Research Atlanta Inc., the population of the Atlanta metropolitan area increased 27 percent between 1970 and 1980, and 33 percent between 1980 and 1990. Urbanization has lead to increased traffic jams and air pollution in many cities. According to the Partnership for a Smog-Free Georgia, Atlanta experienced 68 "smog-alert" days in 1999 -- days in which the area exceeded federal guidelines for ground level ozone. Additionally, scientists have documented a "heat island effect" in areas where vast tracts of trees have been cut down to be replaced with roads and buildings. During the hot summer months, green vegetation is no long present in these areas to absorb the heat -- which instead bakes into black asphalt and rooftops, raising temperatures as much as 5 to 10 degrees Fahrenheit. Other research shows crop productivity can decline significantly when urbanization and industrialization occur on an uncontrolled basis. "Human survival depends on the ability of the landscape to produce food," NASA Goddard Space Flight Center researcher March Imhoff said in a statement. "Food production can be fundamentally linked to primary production or photosynthesis. If the capacity of the landscape to carry out photosynthesis is substantially reduced, then the ability of the planet to support human life must also be diminished," the statement said.”

### Urban sprawl decreases food production

CNN, 2000 – “Nature Urban Sprawl curbs food production, study shows,” CNN, 2000, <http://articles.cnn.com/2000-02-28/nature/sprawl.enn_1_urban-sprawl-arable-land-ecosystems?_s=PM:NATURE> ) //AX

“Nature Urban sprawl curbs food production, study shows SATELLITE February 28, 2000 Humans tend to congregate where the best resources are, said Marc Imhoff, a researcher at the Goddard Space Flight Center in Greenbelt, Maryland. Is it wise to take the best soils and turn them into parking lots To find out, Imhoff and his colleagues took satellite imagery of city lights, which serve as a measure of urban sprawl, and combined it with data from another satellite that records the photosynthetic potential of the landscape. By merging the satellite data we could examine how urbanization affects the potential of the land surface to carry out photosynthesis by looking at the greenness index inside and outside the urbanized area, he said. It turns out that urban sprawl can reduce the photosynthetic ability of land by as much as 20 days in areas where construction is particularly dense. Put another way, said Imhoff, the effect is like turning out the lights in a greenhouse for 20 days. With only 3 percent of the land in the United States covered by urban development and ample arable land yet untapped, urban sprawl does not yet pose a significant threat to the nations food supply. In countries like Egypt, where there is not much arable land and all the urbanization is taking place along the Nile River, in terms of local food supply it is a serious issue, said Imhoff. However, the study also showed that human activity could increase productivity by altering the environment. For example, this was the case for arid and semiarid areas where lawn irrigation and planting changed the ecosystems from shrub lands and desert to deciduous forests, said Imhoff. Since human survival depends on photosynthesis, the researchers hope urban planners will find the study useful. Imhoff suggests that cities should be built on poorer soils, even though construction costs might be bit higher. As population increases we are going to have to rely on our soil resources more and more, said Imhoff. Because of their style of consumption, in Europe the amount of land needed to support urban areas is 100 times larger than the urban area itself.”

### Urban sprawl results in fewer crops harvested successfully

NASA, 2000 – space organization (“Urban Sprawl Curbs Food Production,” NASA, 2000, <http://earthobservatory.nasa.gov/Newsroom/view.php?id=20901> )//AX

“Urban sprawl limits the amount of carbon dioxide the land can convert to biomass, which could lead to a significant decrease in crop yields. Marc Imhoff at NASA's Goddard Space Flight Center says currently 3 percent of the United States is covered by urban development and urban sprawl does not yet pose a threat to the nation's food supply. Imhoff suggests that cities should be built on poorer soils so that urbanization won't influence crop production.

### Urban sprawl reduces photosynthetic productive, this leads to loss in food production

Klaes, 00 - President of the Nation l space society (Larry, http://eugen.leitl.org/tt/msg01715.html)

A study of the impact of urbanization and industrialization over the past seven years using satellites shows that annual photosynthetic productivity can be reduced by as much as 20 days in some areas where urbanization is intense, not unlike turning the lights off in a greenhouse during the growing season. The study also reveals that urbanization may be creating vast heat islands that can actually lengthen the growing season, but do not improve the productivity of the land. NASA Goddard Space Flight Center (Greenbelt, Md.) researcher Dr. Marc L. Imhoff presents his findings during a news media briefing at the 2000 American Association for the Advancement of Science (AAAS) Annual Meeting at the Marriott Wardman Park Hotel (Washington, D.C.) on Monday, Feb. 21 at 3 p.m. in the Wilson Room. According to Imhoff's research, urbanization and industrialization have resulted in the development of mega-cities and urban and suburban sprawl. The environment is altered as a result of replacing land cover with roads, housing, and commercial and industrial structures. "Human survival depends on the ability of the landscape to produce food," said Imhoff. "Food production can be fundamentally linked to primary production or photosynthesis. If the capacity of the landscape to carryout photosynthesis is substantially reduced -- then the ability of the planet to support human life must also be diminished."Imhoff said data from the mid-1990's from two different satellite systems were combined with land cover maps and census information on population and housing to study the effect of urbanization on photosynthetic production in the United States. Nighttime images from a Department of Defense satellite, which show a dramatic picture of Earth's city lights, were used to determine which areas and how much land have been converted to urban, suburban, or industrial use. Maps showing urban, peri-urban (suburban), and non-urbanized areas were created from the "city-lights" satellite data. "Using a computer, we combined the city-lights satellite data with another type of satellite data that records a measure of 'greenness' or photosynthetic potential of the landscape over the course of an entire year," Imhoff said. "By merging the satellite data we could examine how urbanization affects the potential of the land surface to carryout photosynthesis by looking at the 'greenness' index inside and outside the urbanized areas for the whole continental United States." Results show that urbanization can have a measurable but variable impact on photosynthetic productivity. Annual photosynthetic productivity can be reduced by as much as 20 days in areas where housing and commercial land use is very dense. "However, we also found that in resource limited regions, human activity can increase productivity by altering the environment," he said. "For example, this was the case for arid and semi-arid areas where lawn irrigation and planting changed the ecosystems from shrub lands and desert to deciduous forests." A most interesting finding according to Imhoff was that urbanization seems to elongate the growing season, yet still reduces the overall productivity of the land. "Vegetation greens up earlier in the spring and takes longer to senesce in the fall, but has lower peak season productivity than similar nearby areas that are not urbanized," he said. "This could be demonstrating a profound urban heat island effect and have implications in climate change, especially in the northern Hemisphere where urban development is most intense." Analysis of the data also found clear evidence that human beings definitely tend to locate themselves on the most productive land and that those lands are being transformed into less productive types. "The results of this study should increase our awareness of the importance of land use planning especially in the context of sustainable growth and development," Imhoff stated. "Human survival depends on photosynthesis. If urbanization and industrialization continue, the capacity of the landscape to carry out photosynthesis is substantially reduced. "

## Sprawl – Civic Engagement Add-On

### Urban sprawl decreases civic engagement

Reed, 2005 – professor, University of Georgia (Daniel, “THE IMPACT OF URBAN SPRAWL AND SUBURBANIZATION ON CIVIC PARTICIPATION: GROWING UP IN A FRAGMENTED COMMUNITY,” University of Georgia, 2005, <http://dcreed.myweb.uga.edu/SPRAWL.pdf> ) //AX

“As this research shows, **people who grow up in a sprawl environment (that is deprived of some of the components of traditional communities) are less likely to be civically active in later life. This is due to the lack of positive, civically-oriented stimuli in these areas.** In contrast to traditional communities, suburbs and urban sprawl create the appearance of an urbanized metropolitan area, without many of the more traditional components of a functional and civically active community (such as public parks, pedestrian-oriented city centers, and other public spaces). Traditional communities have established forums for social and civic interaction, which are often located near where the participants live. These places include public squares and parks, community recreation centers, “meeting halls” of various sorts, churches (or other religious congregations), and locally owned and located stores and businesses, which is an often overlooked community gathering place (Putnam 2000). Without these kinds of outlets for interpersonal interaction, individuals in an urban sprawl environment are effectively isolated from other citizens. This can reduce their desire to become involved in the social and civic life of their communities.”

### Civic disengagement prevents informed citizenship and risks totalitarianism

Lakeland 93 -Professor of Religious Studies at Fairfield University, (Paul “Preserving The Lifeworld, Restoring the Public Sphere, Renewing Higher Education,” Cross Currents, Winter, 43.4, p488, <http://www.crosscurrents.org/lakeland2>)

How did we get from a democratic society in which the citizens--no matter how small a minority of the total community they constituted--truly felt they owned it, to one in which so many are alienated from the political process? One reason is that in the earlier years the expansion of citizenship and the subsequent increase in educational opportunities did not lead to the admission of these newly educated classes into the dialogue. Educational reform and improvement in the standard of living took place within European societies whose class, gender, and race-based social constraints underwent no serious change; a little learning did not a gentleman make. Another, more recent reason is that democratization was accompanied by capitalization, so that the passive consumption of culture and commodities with its attendant apolitical sociability was the path preferred by, or at least open to, the vast majority. In other words, there are just a lot more citizens; but many of these citizens are the victims of structural oppression, and all are lured by the blandishments of material ease. Again, to return to Habermas's forms of expression, all this amounts to the progressive colonization of the lifeworld by the system. If, in the past two hundred years, the public sphere has so completely failed to fulfill its promise as a market-place for the discourse of a free society, the project must be to restore it through the revival of true communicative action, that is, to persuade people to talk to one another with respect, to listen fairly, to argue cleanly, and to move towards consensus on norms for action. That way lies a democratic future. Any other way leads to one or another form of totalitarianism, including the totalitarianism of mass consumption culture whose victims are so easily persuaded to pursue its spurious salvation and ersatz heaven. However, the character of our modern world requires that steps taken to transform the public sphere respect and reflect the complexity of modern society. We are not just so many individuals sorted into different social classes. We are rather members of a number of sub-groups, perhaps defined by race, class, gender or religion, as well as members of the larger body politic. What will be needed is a confluence of these autonomous publics or distinct interest groups coming together in common concern for the preservation of democratic life. The public sphere will have to include many more voices than it did in the time of Samuel Johnson, and the consensus on social goods may seem even more elusive; but the dynamics of the process, so argues Habermas, will help ensure the preservation of a human society. This late twentieth-century world possesses further characteristics that distinguish it from Athens, or Dr. Johnson's London. It is, as we have already noted, profoundly multicultural, and monocultural societies can be restored only by acts of violence. Second, in such a world societies have a tendency to understand themselves primarily as systems, and to apply systems-theory to the elucidation of their concerns and the solution of their problems. Thus they assert instrumental action as paradigmatic, consigning the specifically human communicative action to a secondary role. Third, societies show an extraordinary degree of professionalization (which some see as fragmentation) of social life. Fourth, they seem to prize technical expertise over moral influence. Finally, they put their faith in science and technology, rather than in some less tangible medium of meaning. The multicultural complexion of the modern world is a fact that could not be undone, even if it were desirable to do so. But the other four characteristics are much less firmly entrenched. This flexibility is fortunate, since the preservation of democracy in our world is going to require some adjustment in the degree to which the world is seen as system. In addition to calling for a new kind of harmony carved out of a wider participation of autonomous publics (racial, gender-based, sexual orientation-based, and so on), we need to redress the balance between expertise and influence and to look beyond the scientism of the machine age. Without these changes, the world will incline to making the human person an instrument of society. When that happens, the distinctively human activities of caring, thinking, and creating are either marginalized, relegated to some domestic privacy, or put to the service of the system. Is it not the case that today the vast majority of our citizens find their true human fulfillment at those times when they are not engaged as "productive members of society"? (Ask a group of students some time what they are really fascinated by, and then ask them what they expect to be their career directions, and note the wide discrepancies.) If so, can we not trace a connection between this unfortunate fact and the decline of "civic virtue," the rise of a taboo-morality ("If I don't get caught, it's OK") that seems increasingly to govern public life, and the combination of apathy and cynicism which most Americans reserve for reflection upon the political process?

### We need involved citizenship to prevent extinction

Bauman 99 - Professor of Sociology at Leeds (Zygmunt, In Search of Politics, p 169-171)

Throughout the history of the modern state, the ‘catchment area’ of nation and republic tended to overlap. This circumstance was a constant source of potential conflict, but also offered a chance of mutual correction, of each partner/competitor protecting the other from the dire consequences of going to the extreme and assuaging or balancing off the adverse effects each partner on its own might have on the plight of the individuals. The republic offers an avenue of escape into freedom when the loving yet insidious and domineering embrace of the nation becomes too tight for comfort. The nation offers escape from freedom: the situation when public space feels too cold and impersonal for self-assurance, and the responsibilities that republican life demands seem too onerous to carry. It is all changing now, though. The republic is, so to speak ‘emigrating’ from the nation-state which for a few recent centuries it shared with the nation. Not that contemporary states tend to become less democratic, and hence less in line with the essentials of the republican model; but democracy as practiced within the increasingly toothless and impotent to guard or adjust the conditions vital for the life of the citizens. Having lost much of their past sovereignty and no longer able to balance the books on their own or to lend authority to the type of social order of their condition of a viable republic: the ability of the citizens to negotiate and jointly decide ‘the public good’, and so to shape a society which they would be prepared to call their own and to which they would gladly give their oath of unswerving allegiance. It is because the republic in the nation-state is fast losing most of its welfare-defining and welfare-promoting potency, that the territory of the nation-state is turning increasingly into the private estate of the nation. The republic has little power left to ensure the long-term security of the nation and so to cure or mitigate its ‘besieged fortress’ complex and to defuse or reduce its pugnacity and intolerance. The nation no longer seems to be securely settled, its future no longer seems assured and in safe keeping – and so the failure of the republic ushers in the times of born-again, vigorous, rampant and unbridled nationalism. The most decisive parameters of the human condition are now shaped in the areas the institutions of the nation-state cannot reach. The powers which preside over preservation and change of those conditions are increasingly globalized, while the instruments of the citizen’s control and influence, however potent they might be, remain locally confined. Globalization of capital, finances and information means first and foremost their exemption from local, and above all nation-state, control and administration. In the space in which they operate there are no institutions reminiscent of the vehicles which the republican state has developed for citizen participation and effective political action. And where there are no republican institutions, there is no ‘citizenship’ either. The concept of ‘global powers’ captures the emerging, but already tough, resilient and apparently indomitable reality, while the concept of ‘global citizenship’ thus far strays empty, representing a postulate at best, but in most contexts not much more than wishful thinking. Being buffeted by the powerful tides, drawn by stormy winds blowing from distant places and arriving without warning, is a condition exactly the opposite to that of citizenship. The sudden upheavals and downfalls in collective fortunes today acquire an eerie likeness to natural catastrophes, though even this comparison looks increasingly like an understatement: as it happens, we have these days better means to anticipate the imminent earthquake or approaching hurricane than to predict the next stock-exchange crash or collapse and the evaporation of apparently secure places of mass employment. In a recent essay Jacques Attali explained the phenomenal popularity of the film Titanic by the remarkable resonance the viewers felt to exist between that parabolic case of human conceit floundering upon the iceberg which, due to the captains arrogance and his staff’s docility, was not (nor could be) taken seriously enough and spotted in time – and their own present day plight: “Titanic is us, our triumphalist, self-congratulating, blind, hypocritical society, merciless towards it poor – a society in which everything is predicted except the means of predicting…[W]e all guess that there is an iceberg waiting for us, hidden somewhere in the misty future, which we will hit and then go down to the sounds of music.” There are, Attali suggests, not one by several icebergs ahead, each one rougher and more treacherous than the last. There is the financial iceberg of unbridled currency speculation, profits shooting sky-high and shamelessly overvalued stocks. There is the nuclear iceberg, with about thirty countries, each of them embroiled in its own network of contentions and animosities, expected to be capable of launching a nuclear attack twenty years from now. There is an ecological iceberg, with the volume of carbon dioxide in the atmosphere and the global temperatures unstoppably rising and the dozens of atomic installations which – as all the experts agree – must sooner or later explode, causing a catastrophe of global proportions. Last but not least, there is the social iceberg, with three billions of men and women expected to be made redundant – devoid of economic function – during the life-span of the present generation. The difference between each one of these icebergs and the iceberg which sank the Titanic, Attali bitterly comments, is that when its turn to hit the ship comes, there will be no one left to make the film of the event or to write epic or lyrical verses about the mayhem that ensued. All of these icebergs (and perhaps certain other which thus far we cannot even name) float outside the territorial waters of any electoral constituency of any of the ‘world’s greats’; no wonder, therefore, that people operating political controls are placid or lukewarm about the magnitude of danger. But there is a still more potent reason for doing nothing than equanimity arising from lack of interest: ‘The politicians are no more in command of the ship launched to sail at full speed.’ Even if they wished, there would be little for them to do.

## Sprawl – Civic Engagement Links

### Urban sprawl results in a lack of a sense of community.

Clean Water Action Council, 2002 – Wisconsin environmental organization (N/A, “Land Use & Urban Sprawl,” Clean Water Action Council, 2002, http://www.cwac.net/landuse/index.html)//AX

“7. Social Fragmentation --- Old-fashioned neighborhoods with compact housing, front porches, a corner store, and a school two blocks away were much more conducive to social interactions. It was possible to feel a sense of belonging and community. Now, in sprawled generic housing tracts, many people never meet their neighbors as they pass them in their cars. It's rare for neighborhood events to occur. Families are more isolated and those living alone are marooned in a hostile environment.”

## Sprawl – Racial Justice Add-On

### Sprawl disproportionately impacts minority groups with the negative effects of environmental destruction – entrenches racial difference

**Frumkin** **‘1** (Howard, M.D., Dr.P.H. Department of Environmental and Occupational Health Rollins School of Public Health of Emory University, “Urban Sprawl and Public Health”,  *Public Health Reports*;Volume 117, JD)

Environmental Justice Considerations Research over the last 15 years has suggested that poor people and members of minority groups are disproportionately exposed to environmental hazards. 141,142,143 Could any adverse health consequences of sprawl disproportionately affect these same populations? In general, the pattern of urban development of which sprawl is a part may deprive the poor of economic opportunity. When jobs, stores, good schools, and other resources migrate outward from the core city, poverty is concentrated in the neighborhoods that are left behind. 144,145,146,147,148 A full discussion of the impact of urban poverty on health is beyond the scope of this paper, but a large literature explores this relationship. 149,150,151,152,153 To the extent that sprawl aggravates poverty, at least for selected groups of people, it may contribute to the burden of disease and mortality. More specifically, there is evidence that several of the specific health threats discussed above affect minority populations disproportionately. Air pollution is one example. Poor people and people of color are disproportionately impacted by air pollution for at least two reasons: disproportionate exposure, and higher prevalence of underlying diseases that increase susceptibility. Members of minority groups are relatively more exposed to air pollutants than whites, independent of income and urbanization. 154,155 Environmental Protection Agency (EPA) data show that blacks and Hispanics are more likely than whites to live in air pollution nonattainment areas (Figure 4). And as asthma continues to increase, asthma prevalence and mortality remain higher in minority group members than in whites. 156 The cumulative Page 23 prevalence of asthma is 122 per 1000 in blacks and 104 per 1000 in whites, and asthma mortality is approximately three times higher in blacks than in whites. 157 Similarly, asthma prevalence is more than tree times higher among Puerto Rican children than among non-Hispanic children. 158 Among Medicaid patients, black children are 93% more likely, and Latino children 34% more likely, than white children to have multiple hospitalizations for asthma. 159 While some of this excess is related to poverty, the excess persists after controlling for income. 160 Asthma prevalence and mortality are especially high, and rising, in inner cities, where minority populations are concentrated. 161,162 Both exposure to air pollution, and susceptibility to its effects, appear to be concentrated disproportionately among the poor and persons of color. Heat-related morbidity and mortality also disproportionately affect poor people and members of minority groups. In the 1995 Chicago heat wave, blacks had a 50 per cent higher heat-related mortality rate than whites. 163 Similar findings have emerged following heat waves in Texas, 164 Memphis, 165 St. Louis, and Kansas City, 166 and in nationwide statistics. 167 Of special interest in the context of urban sprawl, one heat wave study considered transportation as a risk factor, and found that poor access to transportation, a correlate of poverty and non-white race, 168 was associated with a 70 per cent increase in the rate of heat-related death. 169 Are minority populations disproportionately affected by lack of physical activity and its health consequences? People of color are more likely to be overweight, 170,171 and more likely to lead sedentary lifestyles, 172,173 than white people. 174,175,176,177 In the Third National Health and Nutrition Examination Survey (NHANES-III), for example, 40 per cent of Mexican-Americans and 35 per cent of blacks reported no leisure time physical activity, compared to 18 per cent of Page 24 whites. 178 In this same survey, the mean body mass index was 29.2 among blacks, 28.6 among Mexican-Americans, and 26.3 among whites. 179 However, the relationships among race, social class, the environment, diet, physical activity, and body weight are complex. There is no evidence that sprawl disproportionately affects people of color with regard to exercise. In fact, it is possible that poorer people are less likely to own cars, and are therefore more likely to walk. Further data on these relationships are needed. There are significant racial differences in motor vehicle fatality rates. Results from the National Health Interview Survey revealed motor vehicle fatality rates (per 100,000 person-years) of 32.5 among black men, 10.2 among Hispanic men, and 19.5 among white men. Among women, the rates were 11.6 (blacks), 9.1 (Hispanics), and 8.5 (whites). Much of this difference was apparently attributable to social class differences; 180 variations in automobile quality, road quality, and behavioral factors may also help explain these differences. Pedestrian fatalities disproportionately affect members of minority groups and those at the bottom of the economic ladder. In Atlanta, for instance, pedestrian fatality rates during 19941998 were 9.74 per 100,000 for Hispanics, 3.85 for blacks, and 1.64 for whites. 181 In suburban Orange County, California, Latinos comprise 28 per cent of the population but account for 43 per cent of pedestrian fatalities. 182 In the Virginia suburbs of Washington, Hispanics comprise eight per cent of the population but account for 21% of pedestrian fatalities. 183 The reasons for this disproportionate impact are complex, and may involve the probability of being a pedestrian (perhaps related to low access to automobiles and public transportation), road design in areas Page 25 where members of minority groups walk, and behavioral and cultural factors such as being unaccustomed to high speed traffic. There is no evidence that sprawl-related threats to the water supply disproportionately affect poor people or members of minority groups. Similarly, there is no evidence that the mental health consequences of sprawl, such as road rage, affect different racial groups differently. In the survey data cited above, there were no racial differences in self-reported aggressive behavior, and while blacks were slightly less likely to be the victims of aggression than whites or members of other races, this difference was not statistically significant. 184

### Systematic environmental racism ensures global environmental collapse and the total destruction of humanity

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Although the post-World War II economy was designed when environmental consideration was not a problem, today this is no longer the case; we must be concerned enough about environmental protection to make it a part of our economic design. Today, temporal and spatial relations of pollution have drastically changed within the last 100 years or so. A hundred years ago we polluted a small spatial area and it took the earth a short time to heal itself. Today we pollute large areas of the earth – as evidenced by the international problems of acid rain, the depletion of the ozone layer, global warming, nuclear meltdowns, and the difficulties in the safe storage of spent fuels from nuclear power plants. Perhaps we have embarked upon an era of pollution so toxic and persistent that it will take the earth in some areas thousands of years to heal itself.

To curtail environmental pollutants, we must build new institutions to prevent widespread destruction from pollutants that know no geopolitical boundaries. We need to do this because pollutants are not respectful of international boundaries; it does little good if one country practices sound environmental protection while its neighbors fail to do so. Countries of the world are intricately linked together in ways not clear 50 years ago; they find themselves victims of environmental destruction even though the causes of that destruction originated in another part of the world. Acid rain, global warming, depletion of the ozone layer, nuclear accidents like the one at Chernobyl, make all countries vulnerable to environmental destruction.

The cooperative relations forged after World War II are now obsolete. New cooperative relations need to be agreed upon – cooperative relations that show that pollution prevention and species preservation are inseparably linked to economic development and survival of planet earth. Economic development is linked to pollution prevention even though the market fails to include the true cost of pollution in its pricing of products and services; it fails to place a value on the destruction of plant and animal species. To date, most industrialized nations, the high polluters, have had an incentive to pollute because they did not incur the cost of producing goods and services in a nonpolluting manner. The world will have to pay for the true cost of production and to practice prudent stewardship of our natural resources if we are to sustain ourselves on this planet. We cannot expect Third World countries to participate in debt-for-nature swaps as a means for saving the rainforest or as a means for the reduction of greenhouse gases, while a considerable amount of such gases come from industrial nations and from fossil fuel consumption.

Like disease, population growth is politically, economically, and structurally determined. Due to inadequate income maintenance programs and social security, families in developing countries are more apt to have large families not only to ensure the survival of children within the first five years, but to work the fields and care for the elderly. As development increases, so do education, health, and birth control. In his chapter, Buttel states that ecological development and substantial debt forgiveness would be more significant in alleviating Third World environmental degradation (or population problems) than ratification of any UNCED biodiversity or forest conventions.

Because population control programs fail to address the structural characteristics of poverty, such programs for developing countries have been for the most part dismal failures. Growth and development along ecological lines have a better chance of controlling population growth in developing countries than the best population control programs to date. Although population control is important, we often focus a considerable amount of our attention on population problems of developing countries. Yet there are more people per square mile in Western Europe than in most developing countries. “During his/her lifetime an American child causes 35 times the environmental damage of an Indian child and 280 times that of a Haitian child (Boggs, 1993: 1). The addiction to consumerism of highly industrialized countries has to be seen as a major culprit, and thus must be balanced against the benefits of population control in Third World countries.

Worldwide environmental protection is only one part of the complex problems we face today. We cannot ignore world poverty; it is intricately linked to environmental protection. If this is the case, then how do we deal with world poverty? How do we bring about lasting peace in the world? Clearly we can no longer afford a South Africa as it was once organized, or ethnic cleansing by Serbian nationalists. These types of conflicts bankrupt us morally and destroy our connectedness with one another as a world community. Yet, we may be headed on a course where the politically induced famine, poverty, and chaos of Somalia today will become commonplace and world peace more difficult, particularly if the European Common Market, Japan, and the United States trade primarily among themselves, leaving Third World countries to fend for themselves. Growing poverty will lead only to more world disequilibrium to wars and famine – as countries become more aggressive and cross international borders for resources to ward off widespread hunger and rampant unemployment. To tackle these problems requires a quantum leap in global cooperation and commitment of the highest magnitude; it requires development of an international tax, levied through the United nations or some other international body, so that the world community can become more involved in helping to deal with issues of environmental protection, poverty, and peace.

Since the market system has been bold and flexible enough to meet changing conditions, so too must public institutions. They must, indeed, be able to respond to the rapid changes that reverberate throughout the world. If they fail to change, then we will surely meet the fate of the dinosaur. The Soviet Union gave up a system that was unworkable in exchange for another one. Although it has not been easy, individual countries of the former Soviet Union have the potential of reemerging looking very different and stronger. Or they could emerge looking very different and weaker. They could become societies

that are both socially and environmentally destructive or they can become societies where people have decent jobs, places to live, educational opportunities for all citizens, and sustainable social structures that are safe and nurturing. Although North Americans are experiencing economic and social discomforts, we too will have to change, or we may find ourselves engulfed by political and economic forces beyond our control. In 1994, the out-sweeping of Democrats from national offices may be symptomatic of deeper and more fundamental problems. If the mean-spirited behavior that characterized the 1994 election is carried over into the governance of the country, this may only fan the flames of discontent. We may be embarking upon a long struggle over ideology, culture, and the very heart and soul of the country. But despite all the political turmoil, we must take risks and try out new ideas – ideas never dreamed of before and ideas we thought were impossible to implement. To implement these ideas we must overcome institutional inertia in order to enhance intentional change. We need to give up tradition and “business as usual.” To view the future as a challenge and as an opportunity to make the world a better place, we must be willing to take political and economic risks.

The question is not growth, but what kind of growth, and where it will take place. For example, we can maintain current levels of productivity or become even more productive if we farm organically. Because of ideological conflicts, it is hard for us to view the Cuban experience with an unjaundiced eye; but we ask you to place political differences aside and pay attention to the lyrics of organic farming and not to the music of Communism. In other words, we must get beyond political differences and ideological conflicts; we must find success stories of healing the planet no matter where they exist – be they in Communist or non-Communist countries, developed or underdeveloped countries. We must ascertain what lessons can be learned from them, and examine how they would benefit the world community. In most instances, we will have to chart a new course. Continued use of certain technologies and chemicals that are incompatible with the ecosystem will take us down the road of no return. We are already witnessing the catastrophic destruction of our environment and disproportionate impacts of environmental insults on communities of color and low-income groups. If such destruction continues, it will undoubtedly deal harmful blows to our social, economic, and political institutions.

As a nation, we find ourselves in a house divided, where the cleavages between the races are in fact getting worse. We find ourselves in a house divided where the gap between the rich and the poor has increased. We find ourselves in a house divided where the gap between the young and the old has widened. During the 1980s, there were few visions of healing the country. In the 1990s, despite the catastrophic economic and environmental results of the 1980s, and despite the conservative takeover of both houses of Congress, we must look for glimmers of hope. We must stand by what we think is right and defend our position with passion. And at times we need to slow down and reflect and do a lot of soul searching in order to redirect ourselves, if need be. We must chart out a new course of defining who we are as a people, by redefining our relationship with government, with nature, with one another, and where we want to be as a nation. We need to find a way of expressing this definition of ourselves to one another. Undeniably we are a nation of different ethnic groups and races, and of multiple interest groups, and if we cannot live in peace and in harmony with ourselves and with nature it bodes ominously for future world relations.

Because economic institutions are based upon the growth paradigm of extracting and processing natural resources, we will surely perish if we use them to foul the global nest. But it does not have to be this way. Although sound environmental policies can be compatible with good business practices and quality of life, we may have to jettison the moral argument of environmental protection in favor of the self-interest argument, thereby demonstrating that the survival of business enterprises is intricately tied to good stewardship of natural resources and environmental protection. Too often we forget that short-sightedness can propel us down a narrow path, where we are unable to see the long-term effects of our actions.

The ideas and policies discussed in this book are ways of getting ourselves back on track. The ideas presented here will hopefully provide substantive material for discourse. These policies are not carved in stone, nor are they meant to be for every city, suburb, or rural area. Municipalities or rural areas should have flexibility in dealing with their site-specific problems. Yet we need to extend our concern about local sustainability beyond geopolitical boundaries, because dumping in Third World countries or in the atmosphere today will surely haunt the world tomorrow. Ideas presented here may irritate some and dismay others, but we need to make some drastic changes in our lifestyles and institutions in order to foster environmental justice.

Many of the policy ideas mentioned in this book have been around for some time, but they have not been implemented. The struggle for environmental justice emerging from the people of color and low-income communities may provide the necessary political impulse to make these policies a reality. Environmental justice provides opportunities for those most affected by environmental degradation and poverty to make policies to save not only themselves from differential impact of environmental hazards, but to save those responsible for the lion’s share of the planet’s destruction. This struggle emerging from the environmental experience of oppressed people brings forth a new consciousness – a new consciousness shaped by immediate demands for certainty and solution. It is a struggle to make a true connection between humanity and nature. This struggle to resolve environmental problems may force the nation to alter its priorities; it may force the nation to address issues of environmental justice and, by doing so, it may ultimately result in a cleaner and healthier environment for all of us. Although we may never eliminate all toxic materials from the production cycle, we should at least have that as a goal.

## Sprawl – Racial Justice Links

### Mass Transit Inherently Racist; By Increasing Mass Transit the Aff Increases Oppression of Minorities

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Follow the transportation dollars and one can tell who is important and who is not. While many barriers to equitable transportation for low-income and people of color have been removed, much more needs to be done. Transportation spending programs do not benefit all populations equally. The lion's share of transportation dollars is spent on roads, while urban transit systems are often left in disrepair. Nationally, 80 percent of all surface transportation funds is earmarked for highways and 20 percent for public transportation. Generally, states spend less than 20 percent of federal transportation funding on transit.[1] Some 30 states even restrict the use of the gas tax revenue—the single largest source of transportation funding—to funding highway programs only.[2] In the real world, all transit is not created equal. In general, most transit systems tend to take their low-income “captive riders” for granted and concentrate their fare and service policies on attracting middle-class and affluent riders.[3] Hence, transit subsidies disproportionately favor suburban transit and expensive new commuter bus and rail lines that serve wealthier “discretionary riders.” What We Pay On average, Americans spend 19 cents out of every dollar earned on transportation—an expense second only to housing. Transportation costs range from 17.1 percent in the Northeast to 20.8 percent in the South, and eat up more than 40 percent of the takehome pay of the nation’s poorest. This is an especially significant statistic for African American households, which typically earn 35 percent less than the average white household.[4] How We Get Around The private automobile is still the most dominant mode of transportation for every segment of the American population and provides enormous employment access advantages to its owner. Automobile ownership is almost universal in the United States with 91.7 percent of households owning at least one vehicle. According to the 2001 National Household Travel Survey (NHTS) released in 2003, 87.6 percent of white people, 83.1 percent of Asians and Hispanics, and 78.9 percent of African Americans rely on the private car to get around.[5] Clearly then, a lack of car ownership—especially among low-income people of color— combined with an inadequate public transit service in many central cities and metropolitan regions only serve to exacerbate social, economic, and racial isolation. Living near a seven-lane freeway is not much of a benefit for someone who does not have access to a car. Nationally, only seven percent of white households do not own a car, compared to 24 percent of African American households, 17 percent of Latino households, and 13 percent of Asian American households. African Americans are almost six times as likely as whites to use transit to get around. In urban areas, African Americans and Latinos comprise over 54 percent of transit users (62 percent of bus riders, 35 percent of subway riders, and 29 percent of commuter rail riders). How Race Defines Space In 2000, population in the U.S. was 69 percent European American, 12 percent African American, 12.5 percent Hispanic, and 3.6 percent Asian American. In the nation's 100 largest cities, people of color comprise nearly half of the population. In the major metropolitan areas where most African Americans, Latinos, and Asians live, segregation levels changed little between 1990 and 2000. Black-White segregation is still significantly higher than segregation levels for other ethnic groups. The average white American lived in a neighborhood that was 80 percent white, eight percent Hispanic, seven percent Black, and four percent Asian. Similarly, the typical African American lived in a neighborhood that was 51 percent Black, 33 percent white, 12 percent Hispanic, and three percent Asian.[6] Three-fifths of all Blacks live in ten states—New York, California, Texas, Florida, Georgia, Illinois, North Carolina, Maryland, Michigan, and Louisiana—and nearly 55 percent of them live in the South. The Northeast and Midwest each had 19 percent of the Black population in 2000, and the West had about 10 percent. Over 88 percent of Blacks live in metropolitan areas and 53.1 percent live inside central cities. For the nation’s 36.4 million African Americans,[7] race clearly underlies and intersects with other factors in explaining the socio-spatial layout of most of our cities, suburbs, and metropolitan regions, and a host of other quality-of-life indicators, such as the location of job centers, housing patterns and land use, the quality of air, transportation, and schools, streets and highway configuration, commercial and business development, and access to health care. When Jobs Go Suburban Central cities contain 20 percent of all workers and account for 69 percent of all transit use. On the other hand, suburbs account for half of all workers but generate only 29 percent of all transit trips. Nationwide, nearly 60 percent of transit riders are served by the ten largest urban transit systems and the remaining 40 percent by the other 5,000 transit systems. In recent years, many jobs have shifted to the suburbs and communities where public transportation is inadequate or nonexistent. The exodus of lowskilled jobs to the suburbs disproportionately affects central city residents, particularly people of color, who often face a more limited choice of housing location and transportation in growing areas. Between 1990 and 1997, jobs on the fringe of metropolitan areas grew by 19 percent versus four percent in core areas. The suburban share of the metropolitan office space is 69.5 percent in Detroit, 65.8 percent in Atlanta, 57.7, percent in Washington DC, 57.4 percent in Miami, and 55.2 percent in Philadelphia. Getting to these suburban jobs without a car is next to impossible. It is no accident that Detroit leads in suburban “office sprawl.” Detroit is also the most segregated big city in the United States and the only major metropolitan area without a regional transit system. Only about 2.4 percent of metropolitan Detroiters use transit to get to work. The Worst Polluters of All Transportation-related sources account for over 30 percent of the primary smog-forming pollutants emitted and 28 percent of the fine particulates. Vehicle emissions are the main reason why 121 Air Quality Districts in the U.S. are in noncompliance with the 1970 Clean Air Act's National Ambient Air Quality Standards. Over 140 million Americans, 25 percent of them children, live, work, and play in areas where air quality does not meet national standards.[8] Emissions from cars, trucks, and buses cause 25 to 51 percent of the air pollution in the nation's non-attainment areas. Transportation related emissions also generate more than a quarter of the greenhouse gases.[9] Improvements in transportation investments and air quality are of special significance to low-income persons and people of color who are more likely to live in areas with reduced air quality. National Argonne Laboratory researchers discovered that 57 percent of whites, 65 percent of African Americans, and 80 percent of Latinos lived in the 437 counties that failed to meet at least one of the EPA ambient air quality standards.[10] A 2000 study from the American Lung Association shows that children of color are disproportionately represented in areas with high ozone levels.[11] Additionally, 61.3 percent of Black children, 69.2 percent of Hispanic children, and 67.7 percent of Asian American children live in areas that exceed the 0.08 parts per million ozone standard, while only 50.8 percent of white children live in such areas. Asthma—The Price of Pollution Air pollution from vehicle emissions causes significant amounts of illness, hospitalization, and premature deaths. A 2002 study published in The Lancet shows a strong causal link between ozone and asthma.[12] Ground-level ozone may exacerbate health problems such as asthma, nasal congestion, throat irritation, respiratory tract inflammation, reduced resistance to infection, changes in cell function, loss of lung elasticity, chest pains, lung scarring, formation of lesions within the lungs, and premature aging of lung tissues.[13] Air pollution claims 70,000 lives a year, nearly twice the number killed in traffic accidents.[14] A 2001 Center for Disease Control report, “Creating a Healthy Environment: The Impact of the Built Environment on Health,” points a finger at transportation and sprawl as major health threats.[15] Although it is difficult to put a single price tag on the cost of air pollution, estimates range from $10 billion to $200 billion a year.[16] Asthma is the number one reason for childhood emergency room visits in most major cities in the country. The hospitalization rate for African Americans is three to four times the rate for whites and they are three times more likely than whites to die from asthma.[17] Moreover, Blacks and Hispanics now comprise 52.6 percent of the 43 million Americans without health insurance. Nearly one-half of working-age Hispanics (46 percent) lacked health insurance for all or part of the year prior to the survey, as did one-third of African Americans (30 percent). In comparison, one-fifth of whites and Asian Americans (21 and 20 percent, respectively) in the 18 to 64 age group lacked coverage for all or part of the year.[18] Energy Security or ‘War for Oil’? Today, transportation accounts for about half of the world oil demand, and road vehicles are responsible for over 70 percent of transportation energy consumption. In addition to the health and environmental reasons for moving beyond oil to more secure and sustainable alternative fuels, there are compelling energy security and economic strength reasons to invest in clean fuels technology. The United States accounts for almost one-third of the world’s vehicles, with over 217 million cars, buses, and trucks that consume 67 percent of the nation’s oil. Transportation-related oil consumption in the U.S. has risen 43 percent since 1975. With just five percent of the world’s population, Americans consume more than 25 percent of the oil produced worldwide.[19] More importantly, with almost 60 percent of our oil coming from foreign sources, ‘war for oil’ looms as a constant scenario, with the burdens of war falling heaviest on the poor, the working class, and the people of color who make up a disproportionately large share of the all-volunteer military. (Although African Americans represent only 13 percent of the U.S. population, they make up 20 percent of the war dead in the current conflict with Iraq.)[20] Seeking an End to Transportation Racism Discrimination still places an extra “tax” on poor people and people of color who need safe, affordable, and accessible transportation. Many of the nation’s transportation-related disparities have accumulated over a century, and it will likely take years, great effort, and plenty of resources to dismantle the deeply ingrained legacy of transportation racism. The effort has begun with grassroots leaders from New York City to Los Angeles demanding an end to transportation racism. They are spreading the word that transportation dollars are aiding and abetting the flight of people, jobs, and development to the suburban fringe. They are fighting for affordable fares, representation on transportation boards and commissions, and their fair share of transit services, bus shelters, handicapped accessible vehicles, and other transit-related amenities. Some groups are waging grassroots campaigns to get “dirty diesel” buses and bus depots out of their neighborhoods. Others are struggling to get public transit systems linked to job and economic activity centers, and to get workers a livable wage so that they, too, can have transportation options. Robert D. Bullard is the Ware Distinguished Professor of Sociology and Director of the Environmental Justice Resource Center at Clark Atlanta University. He is the author of fourteen books, his most recent work being Highway Robbery: Transportation Racism and New Routes to Equity (South End Press, 2004).

## Sprawl – Poverty Add-On

### Public transit helps strengthen local economies and reduces poverty by helping those without transportation obtain jobs that were previously out of reach

Fleischfresser 11 (Channtal Fleischfresser Worked for The Economist, WNET/Channel 13, Al Jazeera English, Wall Street Journal and Associated Press, September 6, 2011 “Better public transit could help economic recovery”)

As the U.S.’ unemployment numbers stagnate around 9 percent, policymakers from the president downwards are struggling to find ways to get people back to work. Those promoting public policy might consider improving public transportation as a way to strengthen local economies. The Obama administration has made recent investments in high-speed rail and other national-level infrastructure initiatives. But the solution could be more localized. If a recent study by the Brookings Institution’s Metropolitan Policy Program is any indication, cities with more effective public transportation programs may be better able to recover from economic slumps than those with poor public transit options. According to the study’s writers, around 700,000 homes in the 100 largest metropolitan areas lack access to personal vehicles or public transportation. This means that people without cars who live out of walking or biking range of a potential job are likely to be excluded from a work opportunity in an inaccessible part of town. In cities with better public transit, people who do not have a personal vehicle and are looking for work have a much wider range of jobs open to them. The fact that public transportation can be in itself a barrier to access to employment and education has led groups like the Leadership Conference Education Fund to see transportation as a civil rights issue. Poor public transit creates economic problems beyond job availability: it also reduces property values, which can create further problems for a community struggling economically. It’s no surprise that the Obama administration has recently poured money into national infrastructure projects. But local solutions might go a long way towards facilitating economic recovery for struggling communities. Not only would these investments generate construction and manufacturing jobs, and increase property values, but people without a car might have access to jobs that were previously out of reach, at least geographically speaking.

### Poverty is the worst form of violence –systemic violence outweighs any imaginable war

Gilligan 2000 (James Gilligan, Department of Psychiatry at Harvard Medical School, Violence: Reflections on Our Deadliest Epidemic, p. 195-196)

You cannot work for one day with the violent people who fill our prisons and mental hospitals for the criminally insane without being forcibly and constantly reminded of the extreme poverty and discrimination that characterize their lives. Hearing about their lives, and about their families and friends, you are forced to recognize the truth in Gandhi’s observation that **the deadliest form of violence is poverty**. Not a day goes by without realizing that trying to understand them and their virulent behavior in purely individual terms is impossible and wrong-headed. Any theory of violence, especially a psychological theory, that evolves from the experience of men in maximum security prisons and hospitals for the criminally insane must begin with the recognition that these institutions are only microcosms. They are not where the major violence of our society takes place, and the perpetrators who fill them are far from being the main causes of most violent deaths. Any approach to a theory of violence needs to begin with a look at the structural violence of this country. Focusing merely on those relatively few men who commit what we define as murder could distract us from examining and learning from those structural causes of violent death that are far more significant from a numerical or public health, or human, standpoint By “structural violence” I mean the increased rates of death and disability suffered by those who occupy the bottom rungs of society, as contrasted with the relatively lower death rates experienced by those who are above them. Those excess deaths (or at least a demonstratably large portion of them) are a function of class structure; and that structure is itself a product of society’s collective human choices, concerning how to distribute the collective wealth of the society. These are not acts of God. I am contrasting “structural” with “behavioral violence,” by which I mean the non-natural deaths and injuries that are caused by specific behavioral actions of individuals against individuals, such as the deaths we attribute to homicide, suicide, soldiers in warfare, capital punishment, and so on. Structural violence differs from behavioral violence in at least three major respects **The lethal effects of structural violence operate continuously rather than sporadically**, whereas murders, suicides, executions, wars, and other forms of behavioral violence occur one at a time. Structural violence operates more or less independently of individual acs; independent of individuals and groups (politicians, political parties, voters) whose decisions may nevertheless have lethal consequences for others.

<Continues, page 195> The 14 to 18 million deaths a year caused by structural violence compare with about 100,000 deaths per year from armed conflict. Comparing this frequency of deaths from structural violence to the frequency of those caused by major military and political violence, such as World War II (an estimated 49 million military and civilian deaths, including those caused by genocide---or about eight million per year, 1939-1945), the Indonesian massacre of 1965-66 (perhaps 575,000 deaths), the Vietnam war (possibly two million, 1954-1973), and even a hypothetical nuclear exchange between the U.S. and the U.S.S.R. (232 million), it was clear that even war cannot begin to compare with structural violence, which continues year after year. In other words, **every fifteen years**, on the average, **as many people die because of** relative **poverty as would be killed in a nuclear war** that caused 232 deaths, and **every single year, two to three times as many people die from poverty throughout** the world **as were killed by the Nazi genocide** of the Jews over a six-year period**. This is,** in effect**, the equivalent of an ongoing**, unending, in **fact accelerating, thermonuclear war, or genocide,** perpetuated on the week and poor every year of every decade**, throughout the world**. Structural violence is also the main cause of behavioral violence on a socially and epidemiologically significant scale (from homicide and suicide to war and genocide). The question as to which of the two forms of violence—structural or behavioral—is more important, dangerous, or lethal is moot, for they are inextricably related to each other, as cause to effect.

## Sprawl – Rich-Poor Gap

### Mass transit unites communities and reduces the rich-poor gap

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 6, 3-23-11)//AWV

In addition to these economic and convenience considerations, urban mass transit also has health and safety benefits, and environmental and energy benefits.1 Moreover, it can help strengthen communities. As Metropolitan Atlanta Rapid Transit Authority (MARTA) General Manager Dr. Beverly Scott noted about the importance of urban mass transit: “It’s what the transit is doing in communities and doing in terms of helping people build their lives...It is about what it enables people and communities to be able to do.”2 By serving lower income areas, urban mass transit provides an important service to major cities by creating a link between these areas and other parts of the city, where the lower-income residents can find employment. Many of the poorer urban areas cannot provide jobs for the residents, while other urban areas do not have residents nearby to fill the demand for lower- income jobs. There is a simple employment mismatch here that requires some form of transportation for lower-income residents to commute to work. Many of the jobs available lie beyond walking distance, and the lower incomes limit transportation options. Urban mass transit fills this void by offering transportation at relatively low fares. However, addressing this equity concern requires the public systems to keep fares low enough for these citizens.

### Urban sprawl accentuates income disparities

Su 2006 doctorate from the University of South Florida, College of Business Administration, Department of Economics(Qing “The Effect of Transportation Subsidies on Urban Sprawl”, USF graduate school theses and dissertations, http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=3715&context=etd)//DD

Urban sprawl has several consequences that are widely criticized by economists. Generally speaking, so-called scattered, untimely, and unplanned urban development often occurs in urban fringe and rural areas, invading lands important to the environment for its open space and rich in natural resources (Nelson and Foster 1999, Brueckner 2000). Other consequences of urban sprawl are the dominance of the private automobiles for transportation and the large income disparities between city and suburbs (Downs 1999, Brueckner 2000). Additionally, unfettered urban growth contributes to the decay of downtown areas, for it lowers developers’ incentive to redevelop land closer to the central cities and lowers the tax base of central cities.

## Sprawl – Car Accidents Add-On

### Mass transit reduces the number of accidents significantly

Arizona PIRG Education Fund, 2009 “a federation of independent, state-based, citizen-funded organizations that advocate for the public interest.”(“Why and How to Fund Public Transportation”, march 2009, http://www.uspirg.org/sites/pirg/files/reports/Why-and-How-to-Fund-Public-Transportation.pdf)//DD

The Bureau of Transportation Statistics estimates that motor vehicles cause over 40,000 accidental deaths and almost 3 million injuries each year.11 By contrast, less than 300 deaths annually take place on public transit.12 Using conservative estimates to quantify these costs in financial terms, the National Highway Traffic Safety Administration in 2002 estimated an average social cost from accidents totally 15.8 cents per vehicle mile or 4.3 percent of GDP.13 Substituting driving with public transit tends to reduce death and injuries because transit is safer.14 Rail and buses have lower crash risk per-passenger-trip because professional drivers tend to have lower crash rates and total vehicle traffic is reduced. Bus passengers have about one-tenth the per-mile crash fatality rate as automobile passengers. Rail passengers have a rate of risk about one-quarter that of drivers — higher than bus because of generally higher speeds. More compact communities have far lower crash and fatality rates than less compact communities.

### Auto accidents are a significant cause of death kill more per year than war

Grescoe 12 - writer, frequent contributor to the NYT, the Independent, and National Geographic, (Taras, Straphanger: Saving our Cities and Ourselves from the Automobile)

You would be hard pressed to track down the name of the latest victim: in the last minute alone, two humans somewhere on the planet have had their lives cut short by cars. Year in, year out, automobiles kill 1.2 million people around the world, and injure 20 million. It is a hecatomb equivalent to a dozen fully loaded jumbo jets crashing every day, with no survivors, yet one so routine the majority of fatalities go unreported—as though being crushed by glass and metal had become just another of death’s “natural causes”. War, in comparison, is an inefficient scourge of the human race: among people aged ten to twenty four, the automobile long ago beat out armed conflict as the leading cause of death.

## Sprawl – Car Accidents Impacts

### Cars cause accidents, pollution deaths, social isolation

Grescoe 12 - writer, frequent contributor to the NYT, the Independent, and National Geographic, (Taras, Straphanger: Saving our Cities and Ourselves from the Automobile)

A case against the automobile can be built purely on the grounds of public health. In spite of improvements in emissions standards, pollution from automobiles still kills 30,000 Americans a year. Car ownership has been proven to make you fat and lazy; a survey of drivers in Atlanta found that each additional hour spent in a car per day was associated with a 6 percent increase in obesity. (In 1969, when half of American children got to school by foot or bicycle, childhood obesity rates sat at 14 percent. Today, when 84 percent of children are driven to school, 45 percent of American kids are considered overweight or obese.) Time spent in a car is also robustly correlated with social isolution: evry ten minutes spent in daily commuting cuts involvement in community affairs by 10 percent. Americans spend so much time in their cars that drivers have significantly higher rates of skill cancer on the left side of their bodies.

### Pedestrian deaths account for 12% of all traffic fatalities

Governors Highway Safety Association, 11-(“New Study: Progress in Reducing Pedestrian Deaths Lags in 2010”, 1/20/11, http://www.ghsa.org/html/media/pressreleases/2011/20110120\_ped.html)//LP

WASHINGTON, D.C.—A report released today by the Governors Highway Safety Association (GHSA) reveals that pedestrian fatalities increased during the first six months of 2010. While the increase is small – 0.4 percent – it is notable because overall traffic fatalities during this period were significantly down, and this comes on the heels of four straight years of steady declines in pedestrian deaths. The new report – Spotlight on Safety: Pedestrian Traffic Fatalities by State – is the first state-by-state look at pedestrian fatalities for 2010 and was completed by Dr. James Hedlund, an independent researcher, formerly with the National Highway Traffic Safety Administration (NHTSA). Dr. Hedlund surveyed GHSA members, who reported preliminary fatality numbers for every state. For the first six months of 2010, pedestrian fatalities increased by seven, from 1,884 to 1,891. If the second six months of 2010 also show no significant change, this will be the first year of increase or no progress after four years of decline. Pedestrian traffic fatalities dropped from 4,892 in 2005 to 4,091 in 2009, an average decline of 200 each year. While the slight increase may not seem particularly alarming, it is a concern given that during this same period overall traffic fatalities declined eight percent, according to the preliminary estimate from the NHTSA. A growing national focus on walkable communities and “get moving” health and fitness efforts may cause pedestrian exposure, and thus risk, to increase. GHSA Chairman Vernon F. Betkey Jr. notes, “Nationally, pedestrian fatalities account for about 12 percent of overall traffic deaths, a small but significant portion. Given that we have made so much progress in this area, GHSA is concerned to see this reversal. One factor may be the increased distractions for both pedestrians and drivers. Anyone who travels in a busy city has seen countless pedestrians engrossed in conversation or listening to music while crossing a busy street. Just as drivers need to focus on driving safely, pedestrians need to focus on walking safely – without distractions.”

### Extreme Physical and Emotional Effects Due to Car Accidents

Proner ’09- (Mitchell, “The Effects of A Car Crash”, Proner and Proner, 1/08/09 <http://www.prolaw1.com/blog/2009/01/08/the-effects-of-a-car-accident-46922>)//sp

As the leading cause of death of individuals under the age of 34, car accidents account for over 40,000 deaths annually and costs 150 billion dollars a year. However, there is a not so hidden cost to the tragedy of an auto accident that cannot be weighed on any financial scale. The cost is the burden that comes from trying to pick up the pieces in the aftermath of an auto collision. Victims suffer After a car accident a person who has been grievously injured has to adjust to a life of pain and rehabilitation as they progress towards normalcy. Some sufferers may never be able to return to their former way of life or even work again. These facts can create a tremendous drain on the psyche of the individual who is suffering from damage to both their body and spirit. Typically, the primary fallout reaction to a debilitating car accident affects several areas of an accident victim’s life the main ones being: Financially – the cost of medical care and associated therapy can put a large dent in a lifetime of savings. This is especially true of brain or spinal cord damage occurred, as long term care can be required to get victims back to self sufficiency. In many cases, this cannot be achieved and the victim of the collision may require a lifetime of medical assistance. Emotionally – With victims of TBI (Traumatic Brain Injury) emotional instability can be triggered by brain malfunctions. However, anyone who has been through a horrifying auto wreck will experience a wide range of emotions, from sadness to anger. Mood swings are common among those whose lives have been senselessly altered after an auto accident. Psychologically – this can lead to psychological problems that reach into various aspects of the accident victims lives. Usually this can cause a great disruption within their interpersonal relationships. Some individuals have been fired or even obtained a divorce shortly after their collisions due to mental issues that are hard to work through. Physically – of course, the greatest change can be physical, especially if the person had to amputate a limb or was paralyzed due to the wreck. For those who are brain dead and bed ridden, their limbs could wither and atrophy over the years. Individuals who are aware of their changed state may find themselves depressed and even suicidal.

### Lifetime costs of crash-related deaths and injuries amount to $70 billion.

Centers for Disease Control and Prevention, 11-(“Motor Vehicle Safety”, Injury Prevention and Control, 10/4/11, http://www.cdc.gov/motorvehiclesafety/index.html)//LP

 Motor vehicle crashes are the leading cause of death among those age 5-34 in the U.S.1 More than 2.3 million adult drivers and passengers were treated in emergency departments as the result of being injured in motor vehicle crashes in 2009.2 The economic impact is also notable: the lifetime costs of crash-related deaths and injuries among drivers and passengers were $70 billion in 2005.3 CDC's research and prevention efforts target this serious public health problem. We focus on improving car and booster seat and seat belt use and reducing impaired driving, and helping groups at risk: child passengers, teen drivers, and older adult drivers. CDC also works to prevent pedestrian and bicycle injuries.

### Distracted driving is responsible for thousands of deaths

Centers for Disease Control and Prevention, 11-(“Distracted Driving”, Vehicle Safety, 7/14/11, http://www.cdc.gov/Motorvehiclesafety/Distracted\_Driving/index.html)//LP

Each day, more than 15 people are killed and more than 1,200 people are injured in crashes that were reported to involve a distracted driver.1 Distracted driving is driving while doing another activity that takes your attention away from driving; these activities can increase the chance of a motor vehicle crash. There are three main types of distraction: •Visual—taking your eyes off the road; •Manual—taking your hands off the wheel; and •Cognitive—taking your mind off what you are doing.2 Distracted driving activities include things like using a cell phone, texting, and eating. Using in-vehicle technologies (such as navigation systems) can also be sources of distraction. While any of these distractions can endanger the driver and others, texting while driving is especially dangerous because it combines all three types of distraction.2 How big is the problem? •In 2009, more than 5,400 people died in crashes that were reported to involve a distracted driver and about 448,000 people were injured.1 •Among those killed or injured in these crashes, nearly 1,000 deaths and 24,000 injuries included cell phone use as the major distraction.1 •The proportion of drivers reportedly distracted at the time of a fatal crash has increased from 7 percent in 2005 to 11 percent in 2009.1 •When asked whether driving feels safer, less safe, or about the same as it did five years ago, more than 1 in 3 drivers say driving feels less safe today. Distracted driving—cited by 3 out of 10 of these drivers—was the single most common reason given for feeling less safe today.3 •A recent CDC analysis examined the frequency of two major distractions—cell phone use and texting—among drivers in the United States and seven European countries (Belgium, France, Germany, the Netherlands, Portugal, Spain, and the United Kingdom). Results of the analysis included the following findings:7

## Sprawl – Group Interaction

### Mass transit creates a public space in which different groups can interact

Arizona PIRG Education Fund, 2009 “a federation of independent, state-based, citizen-funded organizations that advocate for the public interest.”(“Why and How to Fund Public Transportation”, march 2009, http://www.uspirg.org/sites/pirg/files/reports/Why-and-How-to-Fund-Public-Transportation.pdf)//DD

One virtue sometimes extolled by transit advocates is the benefits of public transit in providing public spaces for citizens to interact with one another instead of being isolated in their cars or homes. Trains, buses and their stations can ideally create spaces where people become familiar with citizens of other races, income groups, and backgrounds than themselves.

### Road focus denies agency to many groups who cannot drive everywhere

Pollard, 4’ – Senior Attorney and Director, Land and Community Program at Southern Environmental Law Center (Trip, “Article: Follow the money: transportation investments for smarter growth,” Temple Environmental Law & Technology Journal, Spring, 2004, 22 Temp. Envtl. L. & Tech. J. 155)//AWV

Many communities have been harmed as a result of transportation projects. Highways have demolished and divided neighborhoods, and made them less livable by generating noise, pollution, and pedestrian hazards. Road projects also have reduced the cost of living on the fringes of developed areas, drawing residents and businesses away from cities, towns, and older suburbs. There also are serious inequities in transportation infrastructure funding patterns. The majority of highway spending typically has gone to wealthier suburban areas, the "favored quarter" of metropolitan regions. n26 These skewed investment patterns have helped certain suburbs attract a larger share of the jobs and wealth in a region, feeding economic polarization among different areas and making it increasingly difficult and costly for low income [\*163] individuals residing in the central city to find and to reach work. n27 Further, when transportation systems are planned on the mistaken assumption that everyone can drive everywhere, the activities of children, the elderly, disabled individuals, and others unable to drive are limited. n28 In addition, time spent commuting and stuck in traffic can reduce time spent in family and community activities.

# \*\*Solvency\*\*

## USFG Key – General

### Federal funding key to save mass transit systems and change road focus

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 10, 3-23-11)//AWV

The federal government must apportion a significant amount of resources to help sustain urban mass transit systems. Yet according to Transportation for America, only 18% of the federal transportation budget goes to public mass transportation, while the government gives the other 82% to roads.13 This serves as a clear reminder of how the American public utilizes automobile transportation significantly more than urban mass transit. Often, the federal government simply gives money to fix roads in disrepair, but many public transit systems find themselves in a state of disrepair and do not receive similar funding.14 As former MBTA General Manager Dan Grabauskas noted, “Mass transit and public transportation has been held to a much higher standard to demonstrate value. We don’t do the same thing if a new road is built or paved and say what is the ridership benefit?”15 The federal government disproportionately favors auto transportation over urban mass transit in this sense. An increased emphasis on urban mass transit could certainly shift these apportionments in its favor. This could in turn reduce deficits and even increase the service and functionality of urban mass transit systems, which could then increase ridership and decrease auto congestion. A decrease in federal funding for roads could become a concern in the automobile-dependent American society, but this would simply encourage greater usage of urban mass transit or force the government to increase tolls to reflect the true values of road usage.

### Federal funding for capital expenditures for mass transit is best

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 47, 3-23-11)//AWV

First of all, a correlations test determines that local operating sources are not correlated with total expenses. This result may imply that it does not matter how the local government raises funds to give to urban mass transit operations. As such, this study lumps local operating sources back into a single category of total local funding for operating expenses. Similarly, it keeps total funding for capital expenses, since federal governments may be more equipped to give capital assistance while state governments give operating assistance.

### Federal funding key to capital expenditures for mass transit – matching state funds through grants is the best solution

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 52-53, 3-23-11)//AWV

The federal government should continue to fund capital projects. After all, state and local governments would have trouble raising funds to entirely fund larger capital investments. Although state and local governments raise funds more effectively for operating expenses, there is little difference if any between the effectiveness of different levels of government in raising funds for capital expenses.150 Federal funds are important to the urban mass transit industry, and appear to be best suited for capital purposes. Currently, federal funds do focus on capital projects; however, it is worth considering changing the structure of federal funding. Since local and state governments are more effective giving operating funding, it may be worthwhile to create a matching program between state or local government funding and federal funding. Often, federal funding does require matching funding; however, a permanent percentage for any project is one strategy to consider. For example, the federal government could fund x% of any capital project, with state and local governments and the agencies themselves contributing the rest. This would leave decision making closer to the projects, and this could improve the system finances according to the Theory of Clubs and this study’s regressions. The x% could vary annually to fit the federal budget, but should stay within a relatively small range for planning purposes. Future research can determine what an appropriate range would be. This x% must be large enough for the federal government to assume a substantial portion of capital costs, but small enough so that agencies do not undertake unnecessary projects simply because the federal government will pay for them. There must be some accountability for the agencies and the state and local governments.

### Federal funding for mass transit streamlines US transportation infrastructure

Whitehouse.gov, 12 (“Winning the Future for Cities and Metropolitan Areas”, www.whitehouse.gov/sites/default/files/.../2012CitiesFactSheet.pdf)//AWV

Modernize Urban Mass Transit. In order to spur job creation and lay a foundation for future economic growth through greater and safer transportation choices for Americans and increased business development in communities, the Budget proposes an additional upfront boost of $50 billion in transportation infrastructure investment, as part of its 6-year proposal for surface transportation reauthorization. More than 20 percent of this funding will go to supplement urban mass transit programs, traditionally funded by surface transportation authorization legislation. Consistent with the Administration’s commitment to mass transit, the Budget includes increases in several Department of Transportation (DOT) grant programs dedicated to mass transit investment, including Transit Formula Grants, Bus and Rail State of Good Repair Grants, Transit New Starts Capital Grants, and Greenhouse Gas/Energy Reduction Grants. These investments will increase transportation options, cut commuting time, ease congestion, reduce oil consumption, lower greenhouse gas emissions, and expand access to job opportunities and housing that’s affordable. In addition, the Administration’s reauthorization proposal will adopt a ―Fix-It-First‖ approach, to emphasize the importance of preserving and improving the condition of existing transportation infrastructure.

### Empirically federal competitive grants can successfully revitalize mass transit infrastructure

SEPTA, 11 (Southeastern Pennsylvania Transportation Authority, “With Much Fanfare, SEPTA Moves Forward on Long-Needed Improvements”, <http://www.septa.org/media/short/2011/05-02.html>, 5-2-11)//AWV

With the assistance of two competitive grants from the Federal Transit Adminstration, SEPTA is moving forward with renovations to the Wayne Junction Station and a new location and facility for the Parkside Bus Loop. "If we're going to hold onto riders and attract new riders, we need to reinvest in our core assets," FTA Administrator Peter M. Rogoff said during an April 28, 2011 visit to Wayne Junction Station. Rogoff stopped by to present SEPTA with a $3.98 FTA competitive livability grant for the station renovation project. The 110-year-old station - a candidate for inclusion on the National Register of Historic Places - is a critical part of the transit system, and a centerpiece of the Germantown/Nicetown community. Unfortunately, it has fallen into a state of disrepair, and SEPTA's renovation plans have been delayed due to funding cuts. Now, however, thanks in part to help from the FTA, this transit hub will be restored to its former glory - with the addition of modern customer amenities - under an extensive $30 million overhaul project. "It is a happy day!" said Pennsylvania State Senator Shirley Kitchen, whose district includes Wayne Junction Station. U.S. Rep. Chaka Fattah noted the project's importance to the community: "This project is smart use of our federal dollars for infrastructure, job creation and improving mass transit that is so critical to Philadelphia and our other major urban areas." SEPTA General Manager Joseph M. Casey expressed a similar vision for the new Wayne Junction Station. "We hope that the project will serve as a catalyst for further community revitalization in the area surrounding Wayne Junction Station," Casey said. Fattah also joined SEPTA on April 26, 2011 to break ground on the Parkside Bus Loop Relocation Project. Like Wayne Junction Station, the Parkside Loop initiative is moving forward with help from the FTA. SEPTA received a $2.2 million competitive FTA grant for the loop project, which will result in a new, state-of-the-art facility on North 50th Street. While only a short distance from the current facility, the new loop's location represents a major step forward for SEPTA and the community. It will be located near the heart of recent development, including the Park West Town Center, and will bring safety enhancements by improving traffic flow around the loop, which serves bus routes 40, 43, 64 and 52.

## USFG Key – Warming

### Expanding mass transit investments solves energy dependence and warming

**Puentes, 8** - Fellow and Director, Metropolitan Infrastructure Initiative Brookings Institution (Robert, "Strengthening the Ability of Public Transportation to Reduce Our Dependence on Foreign Oil” Congressional Testimony, 9/9, <http://www.brookings.edu/~/media/research/files/testimony/2008/9/09%20transportation%20puentes/0909_transportation_puentes.pdf>)//DH

III. POLICY RECOMMENDATIONS

Federal policy can and should play a powerful role in helping metropolitan areas—and so the nation—reduce energy consumption through targeted and prioritized investments in public transit and support of transitoriented development. The cross-boundary challenges justify a more decisive federal policy that helps metropolitan areas promote energy- and location-efficient development. Mr. Chairman, to do that I believe we need a systemic change in the way we think about, design, and implement transportation policies. This means the development of a three-pronged strategy to lead, empower, and maximize performance across the nation. First, the federal government must LEAD and develop a coherent national vision for transportation, and focus on specific areas of national importance such as reducing our dependence on foreign oil. Second, the federal government should EMPOWER states and metropolitan areas to grow in energy-efficient and sustainable ways. Third, the federal government should OPTIMIZE Washington's own performance and that of its partners in order to spend taxpayer dollars better and implement the vision. In the short term, the proposed transit provisions of the substitute energy bill are consistent with this overriding frame. Emergency transit funding to accelerate capital investments is needed to accommodate ridership increases and provide adequate service to the vast reaches of the country without it. Additional formula funding is needed is avoid service cuts at the precise moment that Americans try riding the bus or train for the first time and evaluate their options. The program to boost the energy efficiency of transit systems—thereby cutting operating costs and helping curb dependence on foreign oil—is also a critically important component. The proposed Transit-Oriented Development Corridors grant program also provides an empowering model through a competitive process to metropolitan actors with proposals for growing differently. The considerations for evaluating grant recipients are, I believe, the right ones: clear justification and outcome orientation that includes reducing energy consumption; ensuring a metropolitan-wide perspective on choosing the location of the project; coordinating with all actors and promoting public/private partnerships; mixing uses and housing types; and harmonizing transportation with other policy areas such as housing, economic development, and land use. Over the long term, the upcoming reconsideration of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU) provides the perfect opportunity for reenvisioning how transportation policy should help solve the nation's energy and climate challenges. The federal government should take the lead and establish a clear vision for transportation that includes energy and climate change concerns, and levels the playing field between the modes so energy-efficient investments can become more feasible. A National Infrastructure Bank, which has been championed by this committee, is an important window through which the federal government can partner with states, metropolitan areas, and localities to implement this national vision.

### Federal action to shift focus from roads to mass transit is a vital step toward reducing greenhouse gases – states don’t have the money

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 935-936)//AWV

In a swift change in public policy and to comply with a United States Supreme Court mandate,2 the Obama Administration altered the course of the federal government by addressing climate change and greenhouse gas emissions quickly after taking office. In looking to the transportation sector to return meaningful and rapid results, one of the components that could create a dual impact arises out of dependable, affordable, and convenient public transit alternatives. By encouraging the public to reduce their driving habits and to switch modes for their various transportation needs, the government could accomplish many different goals, such as reducing greenhouse gases, reducing congestion, and improving our national security by depending less on foreign oil. Transportation agencies across the country, however, are sharply cutting services in the face of harsh fiscal constraints from all levels.3 These measures are the latest sign of the fiscal woes in many state and local agencies across the country that threaten to derail the Obama Administration’s policy change.4 At the same time, decades-old policies that create vicious cycles for more highways and greenhouse gas emissions require revamping to meet the new paradigm of today’s reality.5 Much of our current transportation policy originates from decisions made over a half century ago.6 Congress revisits and adjusts these plans every six years, but the current policy fails to account for modern environmental issues like global warming and neglects many parts of the country that need assistance in reducing greenhouse gas emissions.

### Department of Transportation is key to work with the EPA on changing public transit policy to prevent greenhouse gases

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 941)//AWV

The DOT will undoubtedly become involved in the newly broadened scope of the EPA’s transportation-related limits on greenhouse gases. Within the DOT, the National Highway Traffic Safety Administration (NHTSA), the Federal Transit Administration (FTA), and the Federal Railroad Administration (FRA) each affect public policy with regard to greenhouse gases and transit options. The NHTSA already provides the principle administrative oversight for vehicle fuel efficiency and safety standards across the country,28 and the FRA regulates passenger rail service. Such regulation entails promoting national railroad transportation policy and safety enforcement.29 Alternatively, the FTA’s mission directly involves public transit assistance through financial support by the federal government.30 While each may have its own distinct statutory framework to administrate with regard to transportation issues, they are all interconnected when considering approaches to reducing greenhouse gases from transportation and will most likely work in collaboration with the EPA on setting standards.

### Federal action comparatively better to address transit and greenhouse – state patchwork and magnitude of federal funds

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 957)//AWV

In the context of this examination, the effect of technology on greenhouse gas emissions remains largely a federal one and mainly affects transit indirectly. States have two options with regard to vehicle emissions. Should the State of California satisfy its special exception requirements under the Clean Air Act,127 other states may choose between adopting the baseline federal level or the more stringent California one. Recently, many states began selecting the California approach with sixteen states already announcing adoption of the California approach or the intention to proceed in that direction.128 Interestingly, the federal government also agreed to match the California standards by 2017,129 which makes the state regulatory aspect a nonfactor. From a fuels perspective, many states have adopted different standards to limit carbon content, which will reduce greenhouse gas emissions on a per-mile-driven basis.130 Correspondingly, thirty-eight different states decided to encourage the use and production of this alternative through tax exemptions, credits, or grants.131 Taking this approach to a higher level, thirteen states created a unique blend of fuel for its jurisdiction.132 While the different fuel standards will lower greenhouse gas pollution, their greatest impact will occur with emissions emanating from automobiles and light duty trucks. Furthermore, the blends will affect some forms of transit, like buses, but will have essentially no direct effect on the delivery of transit options from a state regulatory aspect.

### Federal action key to reallocate and refocus transportation policy toward mass transit and green transit

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 976-977)//AWV

In addition to and as mentioned previously,222 federal funding tends to reward established systems that already satisfy an existing need, but fail to address parts of the country experiencing growth.223 Some attribute this phenomenon to the manner in which Congress doles out the funding on a state-by-state basis whereby some jurisdictions become donors and others recipients.224 While this produces a national equity issue, the funding for each state also goes through another level of prioritizing because the money flows directly to it from the federal government and then gets passed out to the localities based on the second stage of designations.225 Hence, these multiple levels of assigning priorities with the limited funds generate a patchwork of goals across the country that in turn fashion an approach that lacks cohesion. With this in mind, we strongly advocate the need to redirect the funding directly to the MPOs, and for the federal government to get serious and launch an overhaul to the passenger rail system across the country. By directly funding MPOs for specific projects, the federal government would eliminate the involvement of state legislatures or their Departments of Transportation (as well as their conflicting motivations) while providing a more direct distribution based on congressional intent. As a result, the federal government could more directly target regions with the most need that could provide the greatest amount of greenhouse gas reductions based on the best value for the assistance. For example, when many of the transportation decisions occurred in the 1950s, the national planners determined that “the Intermountain West would have little need for direct linkages from city to city or for metropolitan beltways.”226 Yet the subsequent updates failed to address the rapid growth and needs of the region.227 As a result, intercity passenger rail service in the Intermountain West connects to its neighbors in the East and West, but, unlike in other parts of the country, the railways provide few transportation alternatives within the region.228 Furthermore, a strengthened and renewed national passenger rail service would provide an opportunity to reinvigorate local mass transit options on a regional basis where needed. Currently, one third of all flights out of Phoenix, Arizona’s Sky Harbor International Airport fly to Southern California and similar numbers occur out of Las Vegas, Nevada.229 Shifting these intraregional commuting trips as well as long-distance ones from auto and air to high- speed rail will also lead to a net reduction in greenhouse gases. As a result, new and expanded regional transit hubs combined with high-speed rail service and increased local connections will also expand the geographical reach of “high- quality transit corridors” while providing opportunities for “transit priority” housing projects that reduce regional VMT and greenhouse gas emissions. Thus, our proposed strategy could alleviate past transportation inequities across the country by promoting transit alternatives in needed locations while revamping our nation’s passenger rail service to reflect current technology. In doing so, this strategy will help achieve the coequal goal of reducing greenhouse gas emissions.

### Non-road transportation already following strict emissions guidelines and coordinating with the EPA

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 943-944)//AWV

While the EPA and NHTSA are working collaboratively on vehicle emission standards, the FRA yields to the EPA in setting the pollution standards for non-road engines, such as locomotives.40 The EPA’s Office of Transportation and Air Quality put into place a two-pronged strategy to reduce emissions from the fuel aspect as well as by the engines used in locomotives.41 In June 2004, the EPA adopted the “Control of Emissions of Air Pollution From Nonroad Diesel Engines and Fuel,” which virtually eliminated the sulfur content in the fuels used by locomotive engines starting in the middle of 2007.42 This was followed by another regulation aimed at the engines themselves that came out in June 2008.43 In this regulatory action, the EPA tightened emission standards on existing engines that are remanufactured while setting new standards for engines manufactured in the near term and those in later years that can take advantage of “high- efficiency catalytic aftertreatment technology.”44 Based on this approach, the EPA believes that by 2030 the reduction in Nitrous Oxide and Particulate Matter will be approximately 800,000 and 27,000 tons, respectively.45 Following these EPA actions, the Administrator of the FRA published the Preliminary National Rail Plan in which he repeatedly explained that, when compared on a relative cost, reduction of vehicle congestion, and emissions basis, rail will provide a net reduction in greenhouse gases.46 Moreover, the administrator also testified before a congressional subcommittee explaining that, through the latest high-speed rail initiatives, implementing this mode of transportation will also “[r]einforce efforts to foster energy independence and renewable energy, and reduce pollutants and greenhouse gas emissions.”47 Thus, while the FRA may not primarily regulate emissions created by locomotives on the existing rail system, the agency plays a central role in fostering and bringing to fruition alternatives like high-speed rail, which can supplant traditional passenger service without the same greenhouse gas issues.

## USFG Key – Urban Sprawl

### Federal grants key to expand intercity mass transit

Whitehouse.gov, 12 (“Winning the Future for Cities and Metropolitan Areas”, www.whitehouse.gov/sites/default/files/.../2012CitiesFactSheet.pdf)//AWV

Expand Access to Rail. The Budget proposes to invest $53 billion over six years in passenger rail, from a new dedicated rail account of the expanded Transportation Trust Fund. This program will provide competitive grants to fund the development of a robust intercity passenger rail network comprised of core express (over 125 mph), regional (90 to 125), and emerging (up to 90 mph) corridors. These investments will support the President’s goal of providing 80 percent of Americans with convenient access to a passenger rail system within 25 years. The Budget also proposes to merge Federal support for Amtrak into the larger rail program, so that the Federal government takes a coordinated approach to rail issues.

## USFG Key – Roads

### Federal investment in mass transit will substantially decrease road use

**Building America’s Future, 11** – a bipartisan coalition of elected officials dedicated to bringing about a new era of U.S. investment in infrastructure that enhances our nation’s prosperity and quality of life. (“Falling Apart and Falling Behind”, Transportation Infrastructure Report, <http://www.bafuture.com/sites/default/files/Report_0.pdf>)

Investing more in mass transit. Two-thirds of the U.S. population lives in our largest metropolitan areas, and this number is expected to grow—a recent survey shows that 77% of Americans under 30 intend to live in an urban core for most of their lives. Yet only 30 of the largest 100 metropolitan regions in the U.S. have light rail or subway systems. Only half of Americans have access to mass transit, and surveys show that most Americans want more local transport options. But cities and states need more federal support to build the mass transit alternatives our metropolitan regions need. The federal government should shift more attention and funding toward building more mass transit alternatives. Spurring investment in mass transit is a smart use of federal dollars: new light rail or commuter rail lines can accommodate 8 or 9 times the number of passengers as a new lane of highway, and they can be built at a fraction of the cost.

## Solvency – Road Focus

### Mass transit solves road focus

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 5, 3-23-11)//AWV

Urban mass transit serves two significant purposes to the general population: promoting equity and increasing convenience. Some people cannot afford to drive or live close to where they work and thus rely on public mass transit to earn income. Meanwhile, the convenience of urban mass transit derives from the decrease in reliance on the automobile. Urban mass transit decreases congestion considerably, which in turn increases the utility of commuters who use the urban road infrastructure. Additionally, many urban dwellers rely on urban mass transit to reduce commute times and the strains of either walking everywhere or finding limited parking.

## Solvency – Transit Capital Assistance Program

### Transit capital assistance program key to fund improvements in mass transit

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 11, 3-23-11)//AWV

One program, the Transit Capital Assistance Program, used $6.9 billion to support capital needs of public transit systems, such as purchasing vehicles, constructing or fixing track and stations, and purchasing new equipment.17 ARRA split the remaining $1.5 billion of funding between two programs: the Fixed Guideway Infrastructure Program, which funds capital improvements to existing fixed guideway systems,18 and the Capital Investment Grants Program, which funds the construction of new fixed guideway systems or extensions of existing ones.19 ARRA has thus given much-needed funds to urban mass transit systems, but it remains unclear what will happen after the two-year period ends. If ARRA is a one-time program, then the systems may need additional capital assistance in the future.

## A2 Roads Good

### Laundry list of benefits prove mass transit better than road transit

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 4-5, 3-23-11)//AWV

Public transportation in the United States is at a critical juncture as many systems enter the post-recession period with large deficits and debts, and limited funding at their disposal. Urban mass transit systems across the country provide critical services to their cities and the inhabitants of those cities. Nearly every major American city relies on some form of urban mass transit, including bus and rail systems. Many of these transit systems have used funds from the 2009 American Recovery and Reinvestment Act (ARRA) for capital improvements, yet struggle to cover rising operating costs. As urban populations continue to grow and roads become more congested, efficient urban mass transit will become even more important. Many different people rely on the public services of urban mass transit, including the elderly and the poor, who use it to commute to work. In addition to its other benefits, urban mass transit reduces congestion by taking cars off the road, which also improves public health and the environment by reducing pollution. But because systems must provide below-market fares to remain accessible to everybody and keep ridership high, fares alone cannot cover system costs. Instead, many systems utilize federal, state, and local subsidies to provide the difference.

## A2 People won’t use MT

### Increased government support of mass transit resolves the main reasons people don’t use mass transit

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 971-972)//AWV

Within the context of transit (and depending on the consumer’s location), the ability to select between viable substitutes becomes an issue where policy makers wish to use transit options as part of an overall greenhouse gas reduction program. Personal freedom and cost play a large role in guiding the consumer’s preferences, but those preferences begin to change when certain population densities and price points make mass transit more competitive with other readily available alternatives.204 In achieving the proper price point for mass transit, the expense of constructing the project and the on-going operational costs can overburden these options, making them unaffordable choices in the consumer’s eyes when other important factors, such as population density, weigh against them.205 However, in these situations, the government can strategically provide financial incentives that can level the opportunity costs and give consumers viable alternatives, despite the drawbacks from other important aspects.206 Thus, a variety of market factors like personal freedom, population density, and cost must reach critical levels whereby consumers are willing to consider meaningful substitute modes; but the financial model for the entity providing the service needs to be viable, with adequate funding from all of its sources.

### The plan will stimulate ridership

Bailey, 07- Federal Programs Advisor at the New York City Department of Transportation.(transportation policy analyst <http://www.apta.com/resources/reportsandpublications/Documents/apta_public_transportation_fuel_savings_final_010807.pdf>)

A final analysis was completed to estimate the effect of an expansion of public transportation service and use. Total ridership, as measured in unlinked trips, was doubled. Growth in public transportation use was assigned to two major sources: improvements to an existing route or system, and extensions and new routes. By conducting an analysis of growth on public transportation systems from 1999 to 2004, the research team found that approximately one-third of ridership growth is associated with improvements to existing routes, while two-thirds has resulted from new routes and modal extensions. The necessary growth in route miles and modal extensions was estimated using recent improvements to public transportation systems in the U.S., using the average increase in ridership relative to the route miles built. Figures from several recent rail and high-quality bus projects were collected directly from public transportation agencies. Most major improvements and extensions to public transportation systems currently operate either light rail, commuter rail, or high-quality bus systems. For households, an increase in the number of route miles served by high-quality public transportation service would increase the total number of households with the option to use public transportation, as well as the total number of employment sites served by public transportation networks. The number of households that would have improved or new public transportation service is estimated using some basic assumptions about the distribution of residences:

• Residential density is assumed to be the average for urbanized areas across the U.S. Current urbanized areas were defined by the 2000 Census, and generally represent cities and suburbs that have a combined population of over 50,000 people. This is a conservative estimate because public transportation alignments are generally targeted to areas that have been zoned and built up at a higher density than other areas in the city.

• The area served by new routes are assumed to overlap with areas served by parallel or nearby routes by 25 percent. Existing public transportation availability was estimated using the NHTS 2001 data. NHTS 2001 staff provided a special data set to the research team that uses the geographic location of each respondent and a 1994 database of bus lines and rail stops to calculate the distance between each respondent and public transportation services. Relative increases in total public transportation route mileage is based on existing services from 2004.

### **Ridership already increasing because of high gas prices**

Williams, 12 – Director of National Public Relations at AAA National Office (Mantill, “Volatile Gas Prices Point to Increased Use of Public Transportation”, Media Center, 5/15/12, [http://www.apta.com/mediacenter/pressreleases/2012/Pages/121505.aspx)//MBW](http://www.apta.com/mediacenter/pressreleases/2012/Pages/121505.aspx%29//MBW)

The American Public Transportation Association (APTA) and Building America’s Future (BAF) today released a study predicting that record numbers of Americans will turn to public transportation as a cost-cutting measure in the face of volatile gas prices. To meet this impending surge in demand, APTA and BAF are calling on Congress to pass a multi-year, fully funded surface transportation bill as the Senate and House begin Conference Committee negotiations. For example, as gas prices approached an average of $4 a gallon nationally this year, the analysis predicted an additional 290 million passenger trips could be expected on average for the year, resulting in more than 10.7 billion trips per year. Even as gas prices drop to $3.75, the analysis predicted there would still be an additional 240 million passenger trips because of the volatile up and down nature of fuel prices. These behaviors show that Americans are looking for a long-term, sustainable alternative to driving.

### Mass transit use is increasing

Puentes, 8 - Fellow and Director, Metropolitan Infrastructure Initiative Brookings Institution (Robert, "Strengthening the Ability of Public Transportation to Reduce Our Dependence on Foreign Oil” Congressional Testimony, 9/9, <http://www.brookings.edu/~/media/research/files/testimony/2008/9/09%20transportation%20puentes/0909_transportation_puentes.pdf>)//DH

1. High gas prices are driving Americans to transit

After years and years of steady increases, the total amount of driving in the U.S. has slowed down dramatically. In fact, monthly dispatches from the federal highway administration illustrate clearly that as a nation we are driving much less. Cumulative travel for 2008 has decreased by 42.1 billion vehicle miles, the largest drop in driving that this nation has ever seen. 14 Without a doubt some of this decrease is attributable to skyrocketing gas prices which, although they have fallen in the last two months, are still one dollar per gallon higher than this time last year. Americans now consume 31 million fewer gallons of gasoline each day in 2008 than they did in 2005. 15 Partly as a result, transit ridership is booming, increasing by 74 million trips from March 2005 to March 2008–a gain of nearly nine percent. 16 A recent survey found that 92 percent of transit agencies reported increases in ridership and 91 percent of those attribute at least part of the increase to the increased fuel costs to American drivers. 17 Amtrak's ridership this past July was its highest in any single month in its history. 18 There is no doubt that these trends are positive for our national quest for energy independence and climate protection. It is also consistent with recent research showing the significant contributions public transportation makes to reducing overall oil and gasoline consumption. 19 Unfortunately, we also know that transit agencies are not immune from the increases in fuel costs and at the same time are struggling to cope with this increased demand. Perversely, one in five transit agencies are considering cuts in service as a result of the increased costs of energy. 20 So at the time when the nation needs functioning, reliable, mass transit we are finding many agencies in severe distress.

### Ridership is high and explicit regional planning for land use can increase it

Center for Neighborhood Technology, 3 – Report prepared for Transit Cooperative Research Program Transportation Research Board National Research Council (“COMBATING GLOBAL WARMING THROUGH SUSTAINABLE SURFACE TRANSPORTATION POLICY ,” March, <http://www.travelmatters.org/about/final-report.pdf>)//DH

Interest in transit and urban sustainability has grown together with public transit use: the 1990’s were a record decade for transit, with ridership figures growing by 21 percent nationwide from 1995 to 2000, approaching levels not reached since the early 1960’s. 23 With more people using transit, a strong rationale exists for capitalizing on this trend as a key strategy in the effort to reduce U.S. greenhouse gas emissions from the transportation sector. Looking beyond the success of already-existing transit systems, however, many municipal planners, transportation scholars, and sustainability advocates have come to realize that new systems are not guaranteed the high level of ridership enjoyed by their forerunners early in the 20 th century. In an environment in which transit competes with automobiles, new transit systems will be effective only when assisted by policy and planning measures designed to make transit use a feasible and desirable mobility option for urban residents. Planning for transit-supportive land use, reducing the provision of parking spaces near transit stations, providing workplace transit incentives for public and private sector employees, and designing transit stops and transit area neighborhoods to be as accessible by foot or bicycle as by car, are a few of the tools available to stitch transit together with the modern urban fabric. Taken together, these tools amount to models of urban design that differ fundamentally from the auto-oriented development predominant since WWII.

### Successful mass transit is reliable, sustainable, and cheap for riders

Arizona PIRG Education Fund, 2009 “a federation of independent, state-based, citizen-funded organizations that advocate for the public interest.”(“Why and How to Fund Public Transportation”, march 2009, http://www.uspirg.org/sites/pirg/files/reports/Why-and-How-to-Fund-Public-Transportation.pdf)//DD

2. Low Collection Costs The costs incurred by collecting, monitoring and enforcing taxes are a drain that should be minimized. Taxes and fees that are easier and cheaper to collect are preferable to those that require elaborate and costly mechanisms to implement. 3. Reliability Transportation planners need to be sure they can cover costs in the future. Projects should have adequate operating expenses to keep systems running well. Transit riders who make long-term decisions about purchasing vehicles or where to live based on transit options will be particularly harmed by unexpected reductions in service or fare increases. 4. Capacity for Growth Securing future funding is particularly important in the case of expanding transit systems because they often take on debt for capital investments in new or improved transit infrastructure. Banks and bond traders who extend credit to transit agencies will be willing to do so at lower interest rates if the agency has a more certain revenue stream. Over time, these lower interest rates can mean large cost savings. Due to federal rules, individual agencies without reliable revenue sources may also have to forego federal monies for transit capital projects. 5. Fairness New fees or levies should not place disproportionate burdens on those that use transit. Those who drive regularly do not fully pay the social costs of driving, so to increase the funding burden on transit users is counterproductive because these riders create fewer social costs than if they drove. In addition, drivers benefit from the social goods produced by transit users.

### People will ride mass transit – becoming increasingly popular, especially with new generations

Grescoe 12 - writer, frequent contributor to the NYT, the Independent, and National Geographic, (Taras, Straphanger: Saving our Cities and Ourselves from the Automobile)

If you credit the demographers, this transit trend has legs. The “Millenials”, who reached adulthood around the turn of the century and now outnumber baby boomers, tend to favor cities over suburbs, and are far more willing than their parents to ride buses and subways. Part of the reason is their ease with iPads, MP3 players, Kindles, and smartphones: you can get some serious texting done when you are not driving, and earbuds offer effective insulation from all but the most extreme commuting annoyances. Even though there are more teenagers in the country than ever, only ten million have a driver’s license (versus twelve million a generation ago). Baby boomers may have been raised in Leave it to Beaver suburbs, but as they retire, a significant contingent is favoring older cities and compact towns where they have the option of walking and riding bikes. Seniors, too are more likely to use transit, and by 2025 there will be 64 million Americans over the age of 65. Already, dwellings in older neighborhoods in Washington, D.C., Atlanta, and Denver, especially those near light rail or subway stations, are commanding enormous price premiums over suburban homes. The experience of European and Asian cities shows that if you make buses, subways, and trains convenient, comfortable, fast, and safe, a surprisingly large percentage of citizens will opt to ride rather than drive.

### Use of public transit is currently on the rise

Bello 12 -National Reporter at USA TODAY (Marisol, “Use of public transit is soaring in 2012” USA Today, 6-4-12)

Use of public transit is soaring. Transit agencies had record or near-record ridership in the first three months of the year, thanks to high gas prices, a mild winter and, in one city, theSuper Bowl. At least a dozen communities set records for the number of people riding buses, trains and light rail, even though some cut service because of tight budgets, according to the American Public Transportation Association. More people returning to work helped, says Michael Melaniphy, the association's president and CEO. He says ridership on what's called heavy rail — subways and elevated trains — increased in 14 of the 15 systems that have such transit. Use of light rail — streetcars and trolleys — rose in 25 of the 27 cities that have it. And 34 of 37 large cities saw increases in bus ridership. "It's nationwide," Melaniphy says. The result: fuller trains and buses straining the capacity of systems. In Indianapolis, ridership on IndyGo's 30 bus routes was up 20% in the first three months of this year compared with that period last year, from 2.1 million rides to 2.5 million. Thousands of visitors for the Super Bowl in February, combined with a mild winter that made it easier for people to wait outside for a bus, contributed to the increase, says Bryan Luellen, an IndyGo spokesman. But the agency has a tight budget, he says, and as more riders fill the buses, there is little room to expand. "There are definitely loads where you can't handle demand, such as during rush hour," he says. Many riders don't have a car or take the bus because it is cheaper than driving. San Diego's Metropolitan Transit System saw a record first quarter: 21.8 million rides on its three light-rail lines and 89 bus routes. The previous first-quarter record was 21.4 million in 2009. Passengers such as Milt Phegley, 60, are one reason. Phegley calls himself a "choice rider," someone who could drive to work but chooses to ride the light rail and bus. He says he became a daily rider because of rising gas prices, which averaged $4.35 a gallon in May in California. He said a 40% discount from his employer on the $72 monthly transit pass didn't hurt. Every month, Phegley says, he sees more riders. "If you can be flexible and adjust your schedule, it may work for you," he says. "But you need to look at things differently. There may be delays sometimes, and you may not get a seat sometimes."

### Mass transit use rises as gas prices soar

Hargreaves 12 -CNNMoney (Steve, http://money.cnn.com/2012/03/12/news/economy/mass-transit/index.htm, 3-12-12)

Ridership on the nation's trains and buses hit one of the highest levels in decades, with officials crediting high gas prices, a stronger economy and new technology that makes riding public transit easier. In 2011, Americans took 10.4 billion trips on mass transit, which includes buses, trains, street cars and ferries, according to the American Public Transportation Association. That's a 2.3% increase over 2010 and just shy of the number of trips in 2008, when gasoline spiked to a record national average of $4.11 a gallon. "As people get jobs and go back to work, they get on mass transit more," said Michael Melaniphy, president of APTA. "And then when people look at gas prices, they really get on transit more."Melaniphy said gas prices near $4 a gallon tends to be the tipping point that pushes more people onto mass transit.

### Rising gas prices and a recovering econ cause an increase in ridership

Johnson 12 - projects and breaking news reporter for msnbc (M. Alex, “Public transit ridership rising sharply, advocacy group reports” MSNBC, 6-4-12)

Rising gas prices apparently helped drive a 5 percent increase in public transit ridership in the first three months of 2012, the biggest first-quarter increase in 13 years, transit figures show. The American Public Transportation Association reported Monday that Americans took almost 125 million more rides on public transit in January, February and March than they did in the same period last year — an increase of 4.98 percent, the largest since the first quarter of 1999. Ridership fell sharply after the terrorist attacks of Sept. 11, 2001, and had remained relatively stagnant until last year, according to the organization's tallies, which go back to 1996. But in the first quarter of last year, the number of rides on trains, light and commuter rail, buses and streetcars began rising year over year — beginning about the time U.S. retail gas prices began their steep climb from an average of $3.10 a gallon in January 2011 to $3.96 a gallon three months later. "More people are choosing to save money by taking public transportation when gas prices are high," said Michael Melaniphy, president and chief executive of the APTA, a Washington policy group that is lobbying Congress for new surface transportation legislation that would increase spending on public transit. Karen Friend, manager of Cascades East Transit of central Oregon, said her agency's ridership has increased by 23 percent in the past year. Saying the increase is probably "due to gas prices," Friend told NBC station KTVZ-TV of Bend, Ore., that "it was to be expected — it definitely was."But gas prices aren't the only reason for the growth, Melaniphy said in a statement analyzing the APTA figures. With local economies rebounding, more people are commuting to new jobs, some of them on public transportation, he said. "As we look for positive signs that the economy is recovering, it's great to see that we are having record ridership at public transit systems throughout the country," he said. One of those systems is the Quincy Transit service in Quincy, Ill., which is racing to build more bus infrastructure to meet record demand. Its ridership jumped from about 400,000 in 2010 to about 500,000 last year, the city reported late last month. There are some cautions about the APTA figures, however. For one thing, passengers are counted each time they board a vehicle, meaning each segment of a trip with transfers — from one bus to another, for example, or from a train to a bus at a transit station — is counted as a separate trip. And not all transit systems are included in the collation, especially rail systems. For those systems, the organization assumes the same percentage growth it finds for the reporting agencies. Still, for many people, public options remain vital, said Catherine Hayden of Quincy, Ill. "If you don't have a car and you have to go someplace and you have to be there — even people that work — they're very dependent on it," Hayden told NBC station WGEM-TV. "I take the bus to the doctor. I take the bus shopping — anything that I need to do."

### Transit ridership is shooting up; and will continue to increase

Ross 9 - president of the Action Committee for Transit, a Maryland advocacy group, and writes frequently in *Dissent* (Benjamin, Dissent, 7-1-09)

Beneath the policy stasis of the last sixteen years, deep-rooted changes in transportation preferences have altered the landscape. The American love affair with the automobile is over. The trend toward more and more driving slowed in the nineties, reversed with the spike in gasoline prices of 2006-2008, and has not resumed despite the fall in gas prices. When we do drive—and we still drive a lot—it’s a way to get where we want to go, not something we value for its own sake. Transit ridership, meanwhile, is shooting up. In Washington, D.C., where the most successful of the Great Society transit projects has become the country’s second-busiest subway system, the trend goes back a dozen years. Rail ridership started to go up in 1998 and now is growing at breakneck speed. Average weekday ridership rose 42 percent in ten years, far outpacing population growth. Despite a worsening economy and falling gas prices, recent months have seen ridership continuing to increase. Similar trends are seen in other cities. The trend toward transit is a qualitative change, not just a quantitative increase. The newer transit systems, built largely to bring suburban commuters downtown, are altering land use and living habits so that people no longer need to organize their lives around the automobile. Nonwork use of these systems is rising much faster than commuting. Between 1999 and 2007, the number of people entering the Washington Metro during the morning rush hour—a good measure of travel to jobs—increased 33.5 percent. But ridership increased 47 percent on Saturdays and 57 percent on Sundays.

### Mass transit is becoming more popular – gas prices and environment

Newswanger 11 - Senior Writer for Inside Business (Philip, “More people using public transportation” Inside Business, 10-7-11)

If the most recent numbers are a sign of a trend, public transportation is becoming popular.

The organization behind the quarterly report, the American Public Transportation Association, said this is proof of public support for mass transit and now is the time to invest in the country's public transportation system. Increased use of public transportation can be attributed to a number of factors, including gas prices and more attention to protecting the environment, according to the APTA report.

### Reason that people don’t use public transportation is because it is not available – plan could resolve this

Weyrich and Lind 3 (Paul M. and William S., “How Transit Benefits People Who Do Not Ride It: A Conservative Inquiry”, October, http://www.apta.com/gap/policyresearch/Documents/how\_transit\_benefits.pdf)

A major reason why Americans do not use public transportation at the same rate as Europeans

is that good public transportation is not available. As we noted in an earlier study, only about

one-half of all Americans have any public transit service, and only about one-quarter have

service they call “satisfactory.”34 In most cases, high quality transit – transit good enough to

draw riders from choice – means rail transit. That, in turn, usually means electrified railways,

if the rail transit system is carrying lots of passengers.

### People would use mass transit if it were more available

Weyrich and Lind 3 (Paul M. and William S., “How Transit Benefits People Who Do Not Ride It: A Conservative Inquiry”, October, http://www.apta.com/gap/policyresearch/Documents/how\_transit\_benefits.pdf)

A major reason why Americans do not use public transportation at the same rate as Europeans is that good public transportation is not available. As we noted in an earlier study, only about one-half of all Americans have any public transit service, and only about one-quarter have service they call “satisfactory.”34 In most cases, high quality transit – transit good enough to draw riders from choice – means rail transit. That, in turn, usually means electrified railways, if the rail transit system is carrying lots of passengers. How do electric railways – Light Rail and Heavy Rail – stack up in terms of energy efficiency and reduced pollution? The answer is, “very well.” Automobiles use about 6,350 BTUs of energy per passenger mile. Public transit as a whole uses about 2,740 BTUs per passenger mile. Light Rail uses less than half of that – about 1,150 BTUs per passenger mile – and Heavy Rail only about 900. In other words, electric railways are about six times as energy efficient as automobiles.35 The pollution story is similar. Electric railways have the further advantage that the electricity that runs them can be generated by non-polluting sources, such as hydropower, wind power (the Light Rail system in Calgary, Canada, now gets all the electricity used to power its trains from wind mills), or nuclear power. And even if coal is used to generate the electricity, the power plant can be located well away from the metropolitan center where air pollution (mostly from cars) is already bad.

### Mass transit popular, record breaking number of trips prove

Hargreaves, 12 - Steve Hargreaves is a staff writer for CNNMoney.com, where he focuses on the energy industry. Previously, Hargreaves lived and worked in Bangkok and Istanbul, freelance writing and teaching English, and has been published in the Village Voice and the Australian Financial Review. He has also worked as a municipal beat reporter at a daily newspaper in Brunswick, Me., and as a freelancer for Portland's alternative weekly covering city politics. Hargreaves holds a B.A. in environmental studies from St. Lawrence University. (Steve, “Mass transit use jumps amid high gas prices”, 6/4/12, CNN Money, http://money.cnn.com/2012/06/04/news/economy/mass-transit-gas-prices/index.htm)//JA

NEW YORK (CNNMoney) -- Mass transit use jumped 5% in the first quarter of 2012, as high gas prices and a rebounding economy put more people on the bus and train. Over 2.65 billion trips were made using trains, buses, ferries or street cars in the first quarter of 2012, according to the American Public Transportation Association. That's up from 2.5 billion trips in the same period last year. The increase was one of the largest quarterly jumps on record, and comes on the heels of a [2011 ridership rate](http://money.cnn.com/2012/03/12/news/economy/mass-transit/index.htm?iid=EL) that was the second highest since 1957 -- when widespread use of the car and suburbanization began to turn many people away from mass transit. Of course, high gasoline prices were a defining theme at the [start](http://money.cnn.com/2012/06/04/news/economy/mass-transit-gas-prices/index.htm) of 2012. Gas rose to nearly $4 a gallon -- its highest level ever for that time of year -- as an expanding economy and fears over Iran drove up the price of oil. Now it's a different story. Gas prices are down to $3.61 a gallon, and will likely head lower in the coming weeks. [Crude prices](http://money.cnn.com/data/commodities/?iid=EL) hit a 7-month low last week as the [mess in Europe](http://money.cnn.com/2012/06/01/news/economy/europe-unemployment-jobs/index.htm?iid=Lead) continued to spiral. So the question for mass transit is: Will people still ride as gas prices fall? Yes, says APTA President Michael Melaniphy."Once people try transit, they tend to stay," says Melaniphy, noting ridership rates didn't fall nearly as much as gas prices did following the financial crisis of 2008. People like the ability to read a book, check e-mail or just take a nap, he says, while cleaner stations and vehicles and more predictable schedules help entice commutes back to public transit.

### Plan Popular

**Caramenico, 8** - Web Producer/Multimedia Intern, Edweek.org at Editorial Projects in Education Publications Intern at RiskMetrics Group Communications and Marketing Intern at Sync Agency Intern at The Times Herald (Alicia, “Mass Transit Popular, Funding Needed”, 12/4/8, American Observer, http://inews6.americanobserver.net/articles/mass-transit-popular-funding-needed)//JA

Commuters use public transit more now than in the last 50 years. But lurking in the background are funding issues. Last year, [American](http://inews6.americanobserver.net/articles/mass-transit-popular-funding-needed) University student Kristopher Kagan could barely nab a seat on the Metrorail during his daily commute from Tenleytown to the Archives/Navy Memorial/Penn Quarter stop. This year, “I went from barely managing to get a seat, to barely managing to get on,” he said. More and more transit riders are cramming into the nation’s public transportation systems following a record-rise in gas prices earlier this year. But public transit systems now face severe budget constraints due to this year’s high fuel costs and are struggling to handle the influx of riders. The American Public Transit Association, which lobbies Congress and local governments for public transportation improvements and funding, found that last year's public transit ridership reached 10.3 billion trips nationwide -- its highest level in 50 years. Public transit has seen increased ridership nationwide. In Maryland, the number of rides totaled 97 million, according to the Maryland Transit Administration. The Washington Metropolitan Area Transit Authority recorded an increase of 400,000 riders between October 2007 and October 2008, WMATA spokesman Steven Taubenkibel said. And preliminary data show that the rail ridership continued to increase in November, senior planner Jim Hughes told The Washington Post. And just as high oil prices spared no region, increased public transportation use wasn’t confined to the D.C. area. In Orange County, Calif., the county’s Transportation Authority recorded the highest number of bus boardings in October. And in Philadelphia, Ron Wagenmann, a member of the Pennsylvania State Transportation Advisory Committee, said bus ridership in that city's transportation system increased 5 percent, while regional rail use rose 20 percent. Rob Henry, executive director of the Greater Valley Forge Transportation Management Association, which addresses transportation issues in the Philadelphia suburbs, said “increased ridership is widespread across the U.S., and it's primarily commuters.”

### Millions Rely on Mass Transit; Want Further Funding

**Laskow, 12** - Laskow is a New York-based writer, reporter, and editor. She writes about sustainability and the environment, politics, New York City, and more. (Sarah, “Americans Took 10.4 Billion Trips on Public Transit in 2011” ,3/14/12, Good Environment, http://www.good.is/post/americans-took-10-4-billion-trips-on-public-transit-in-2011/)//JA

Last year, Americans climbed onto buses, swiped through turnstiles, and boarded trains [10.4 billion times](http://www.apta.com/mediacenter/pressreleases/2012/Pages/120312_2011Ridership.aspx). That’s not a record number of public transit rides, but it’s close—the second-largest number of public transit rides in the United States since 1957, according to the American Public Transportation Association. In the 1950s, public transit use hadn’t hit its nadir yet, but had dropped dramatically from the highs of World War II. Americans were abandoning cities for the suburbs and, with gas rationing over and car prices dropping, they were choosing to drive more. Public transit ridership dropped until the 1970s, when it started slowly rising again. Over the past few years, ridership numbers have dipped with the economy. Even so, Americans are in the middle of a serious flirtation with public transit. Each year over the past 10 has ranked among the top years for transit rides in decades. Cars are still our first love, of course, but we’re growing disenchanted with the baggage they bring to the relationship: high ownership costs and a dependence on costly gas. Check out the last 16 years of public transit rides, as measured by APTA: It’d be interesting to see the number of rides as a proportion of all trips or pegged to the population of the areas that public transit serves. But even the number of trips alone shows that Americans are warming up to public transit, because for so many years that number cascaded downwards.

# \*\*2ac Answers\*\*

## A2 States CP – Generic

### Federal Government is key to investment- reliability of funding crucial

Freemark 12 (Yonah, “Clearing it Up on Federal Transportation Expenditures”, the Transport Politic, 2/16/2012, http://www.thetransportpolitic.com/2012/02/16/clearing-it-up-on-federal-transportation-expenditures/)//DD

Now, even if we were to recognize the high level of devolution of power and funds that currently does exist in the U.S., some might still argue that the federal government exercises too much power. Its distribution formula for fuel tax revenues results in certain states getting more money than their drivers contributed (“donor” states) and certain states getting less (“donee” states). Why not simply allow states to collect their own revenues and spend money as they wish? Why should Washington be engaged in this discussion at all? For one, as I have noted above, states and municipalities have no clear record of choosing to invest in better projects when they are fully in charge of collecting the revenues to do so. States have too often proven a complete disregard for public transportation investments when they’re left fully in charge — see state infrastructure banks as evidence for that fact. While federal investments in transportation have been far from perfect, they have nonetheless provided for the significant expansion in transit offerings we’re now seeing. From the 1980s on, the Congress has maintained a steady stream of funding for transit from the fuel tax revenues it collects. How many states, which collect a huge amount of fuel tax revenues themselves, can say the same? But the most important role of the federal government in transportation financing is to ensure that funding is maintained during economic downturns. The Obama Administration actually increased spending on roads and transit projects following the 2008 recession, despite a decline in federal fuel tax revenues, because it was able to use its power of deficit spending (an authority state and local governments do not have\*\*) to maintain investments when the country needed them. Devolution is overrated.

## A2 States CP – Preemption

### Federal action is inevitable – without the plan, it will conflict with and preempt the CP

**Prum and Catz, 11** - \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, lexis)

While the federal government appears as a late participant, many states have taken leadership positions to forge ahead towards a solution. The approaches taken by Florida and California to force local governments to directly evaluate and determine environmental impacts from transportation sources that require reductions in VMTs demonstrate that the dual goals are compatible. California takes these requirements a step further by monitoring compliance against identifiable targets. The approaches of both Florida and California show regulatory actions can start the process of identifying the best opportunities for mass transit alternatives and reducing greenhouse gas emissions. Likewise, the regional "cap-and-trade" initiatives demonstrate the willingness across international borders and amongst states to work collectively to affect climate change. While the current targets for decreasing greenhouse gas emissions mainly focus on electricity generators, the indirect benefit for some mass transit alternatives, such as fixed guideway systems, will also contribute. Meanwhile, the federal government still holds all of the cards from a legal perspective. Upon considering the constitutional aspects, Congress could easily render the actions taken by states meaningless by passing its own  [\*987]  legislation and then enforcing it by either the commerce clause or preemption. Likewise, many of the federal agencies may do the same through their regulatory functions and by setting policies that conflict with aggressive actions taken by the states.

### Congress can end state efforts

**Prum and Catz, 11** - \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, lexis)

In the struggle to combat greenhouse gas emissions and climate change, the dark cloud of Congress forever looms over state actions. Congress can immediately overturn a state's actions by merely inserting language into legislation asserting its superior authority through the Commerce Clause or invoking its preemption powers.[n156](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n156)

i. Commerce Clause
Under its enumerated powers, Congress may, "regulate Commerce with foreign Nations, and among the several States ... ." [n157](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n157) From its numerous interpretations of this clause, the Supreme Court created definitions from two different perspectives: federal regulation of state and local commerce, and state and local regulation of interstate commerce. [n158](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n158) Consequently, the Supreme Court has struggled to define "interstate commerce" over the years; [n159](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n159) however, in recent opinions on the subject, the Court repeated its present viewpoint that "where economic activity  [\*964]  substantially affects interstate commerce, legislation regulating that activity will be sustained." [n160](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n160) As applied to the area of environmental law, three cases directly impact Congress's authority to rightfully enact legislation via the commerce clause. [n161](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n161) While Congress actively passed ecologically friendly legislation during the 1970s and 1980s, [n162](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n162) the main case to test Congress's authority for the plethora of subsequent regulations associated with all of the environmental laws was Chevron v. Natural Resources Defense Council. [n163](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n163) Known mainly for its administrative law implications, this case instructs a court first to ascertain the ambiguity of a statute. [n164](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n164) Should this inquiry reveal that the statute is unambiguous, the inquiry ceases and the regulation obtains the effect and intent given by Congress. [n165](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n165) Otherwise, the court must give deference to the regulations unless "they are arbitrary, capricious, or manifestly contrary to the statute." [n166](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n166) As a result, Chevron lessened the number of administrative reversals and became a primary means for upholding regulations that interpret environmental legislation where the Commerce Clause provided the main basis for authority. [n167](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n167) More recently, the Supreme Court revisited this area in a case examining the Migratory Bird Rule of The Clean Water Act. [n168](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n168) In SWANCC, the Court held that "where an otherwise acceptable construction of a statute would raise serious constitutional problems, the Court will construe the statute to avoid such problems unless such construction is plainly contrary to the intent of Congress." [n169](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n169)  [\*965]  Following this approach, the EPA declined to regulate greenhouse gases until ordered to do so based on the lack of an explicit directive from Congress. [n170](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n170)Nonetheless, the Supreme Court determined that Congress gave the EPA statutory authority to regulate the emissions from vehicles under The Clean Air Act to address global warming, and that the agency must comply with its legislative mandate. [n171](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n171) From this Court directive, new efforts from the EPA to regulate greenhouse gas emissions with regard to all forms of transportation becomes a logical progression. The EPA already began lowering emission standards on locomotives and could easily fill the gap between its current proposal for the automobile/light trucks category and heavy-duty trucks/buses group. This type of movement will further the EPA's approach in targeting individual emitters, but lacks a comprehensive solution to a complex national issue. Nevertheless, Congress and the EPA will need to look for a more comprehensive approach, which will undoubtedly affect interstate commerce. With this in mind, Congress could pass legislation to create its own unique solution given that greenhouse gas emissions correlate very strongly to interstate commerce. For example, a national "cap-and-trade" program would create uniformity across the country because the regulatory environment of the Bush Administration encouraged the development of a patchwork of regional initiatives. Another option is that the federal government could adopt the California model with AB 32 and SB 375 on a national basis. [n172](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n172) The federal government already sets regional clean air standards and requires Regional Transportation Plans (RTPs) from the Metropolitan Planning Organizations (MPOs), so an additional document explaining how to meet greenhouse gas emission targets appears as a logical step within the constructs of the current regulatory structure. Therefore, by virtue of the directive from the Supreme Court relating to greenhouse gas emissions, followed by the  [\*966]  EPA's recent determination, Congress and the EPA's authority under the commerce clause will provide an avenue to directly regulate all types of transportation emissions and give the agency the wherewithal to overturn any state actions contrary to the direction the federal government wishes to proceed.

ii. Preemption
Another constitutional obstacle in tackling these issues includes the Preemption Doctrine, which creates complications for state and local regulation. [n173](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n173) This doctrine traces its roots to the Supremacy Clause in Article VI of the Constitution that makes the federal law the "supreme law of the land." [n174](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n174) Congress may preempt state legislation in three different ways, [n175](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n175) and the executive branch of the government may trigger preemption while conducting foreign affairs. The first and most direct approach occurs when Congress chooses to insert language into a statute that directly and expressly preempts state laws concerning a specific area of regulation. [n176](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n176) Another type of preemption may occur if Congress passes all-encompassing legislation that leaves no room for additional regulations, such that a court will find that the federal government exclusively occupies the field. [n177](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n177) Lastly, preemption may take place when a conflict occurs between federal and state laws that makes it impossible to comply with both. [n178](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n178) In such circumstances, the Supreme  [\*967]  Court explains that the state laws "stand[] as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." [n179](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n179) Notwithstanding any type of congressional engagement, preemption may also occur in the context of foreign affairs by the executive branch. The Supreme Court explained that in the scope of traditional areas of foreign policy, a state must yield to the valid "exercise of the federal executive authority ... where ... there is evidence of clear conflict between the policies adopted by the two." [n180](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n180) Accordingly, the state and local governments must enact laws with stronger requirements or apply them in a broader manner while not disturbing the existing federal legislation that was set as a base level to avoid the effects of the preemption doctrine. [n181](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n181) Recognizing these possible threats, and in conformity with these requirements, many states enacted legislation to protect their economies and natural environments. [n182](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n182) However, given the recent finding by the EPA that greenhouse gases pose an endangerment to the public health and welfare, [n183](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n183) the EPA could effortlessly invoke the preemption doctrine through regulations that make state compliance an obstacle to complying federally, or by asserting the preemption doctrine through the Clean Air Act. As the lead agency in this area, the EPA could expand the endangerment finding very easily into many different aspects of industry and daily life. While unintended consequences will occur in other areas, the epicenter will start with the transportation sector because the original finding began with the emissions of greenhouse gases from vehicles. Moreover, as Congress continues to evaluate the priority for creating a national "cap-and-trade" system for dealing  [\*968]  with greenhouse gas emissions, [n184](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n184) a countrywide mandate could easily force a different solution upon the states and supplant any system already in place through preemption. Any of the three preemption approaches in direct legislation would most likely withstand constitutional muster, but it could also allow an agency to occupy the entire field or create regulations that turn the state approaches into an obstacle to accomplishing the federal goal. Because the current battleground against climate change appears to be developing on a state and regional level, each part of these programs will undoubtedly address an area's own unique economic and physical characteristics, which may contain meaningful differences. [n185](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n185) With this in mind, a uniform approach may provide the nation with a better solution than patchwork regulations and could upend the systems that individual states and regions have implemented to reduce greenhouse gas emissions. Furthermore, many of the regional initiatives also include provinces in Canada and states in Mexico. [n186](http://www.lexisnexis.com.proxy.lib.umich.edu/lnacui2api/frame.do?reloadEntirePage=true&rand=1339880025932&returnToKey=20_T14937333431&parent=docview&target=results_DocumentContent&tokenKey=rsh-20.366000.48832838703" \l "n186) In the absence of a foreign policy regarding greenhouse gas reduction with our North American neighbors, these regional initiatives comply with the preemption doctrine. However, as foreign policy evolves with these two nations and others with regard to environmental issues on global warming, preemption may occur and prevail over the regional compacts and force a change. Thus, an act of Congress, a program put forward by an agency like the EPA to create a uniform national approach to benefit the entire country, or a change in foreign policy by the president each could easily terminate most, if not all, of the state and regional initiatives previously described.

## A2 States – Perm Solves

### States fail – the permutation is best

**Corless, 12 -** Campaign Director, Transportation for America (James, “Local Voters Need a Partner,” National Journal’s Experts Blog, 5/23, <http://transportation.nationaljournal.com/2012/05/not-waiting-for-the-feds.php#comments>)
Absent strong federal leadership, states, cities and local communities are indeed stepping out on their own, raising funds from innovative sources, and doing what they can to make it happen. But left to shoulder the burden entirely alone, these communities’ noble efforts won’t be enough to meet the challenges we’re facing. These communities are stepping forward, but in the hopes that the federal government will take the next step with them and support them along the way. The role for the federal government in transportation is indeed changing, evolving from being the driving factor that it was during the interstate era to being more of a partner in helping localities meet their changing needs. And their needs are a national concern, because they bear on whether Americans have a safe, reliable way to get to work, and whether goods can get to market. No developed nation in the world leaves these matters of basic infrastructure entirely to chance. But there seems little doubt that, for the foreseeable future, federal resources will be constrained, and that makes it more imperative than ever that we set goals for the investment, and measure progress toward those goals. That’s why provisions to do that in the Senate’s bipartisan transportation bill, MAP-21 bill are so important.  It’s time we figure out what matters most, and what will get the best bang for the buck. Local communities raising money for transportation are following a tried-and-true blueprint that rewards accountability and specificity: When they know what transportation dollars are going to buy — this new transit line, that new busway, this new bridge project — and who is accountable for implementation, measures to fund those projects pass close to 70 percent of the time. Such was the case with the transit-funding Measure R in Los Angeles, which earned a two-thirds majority vote. Having passed the tax, Los Angeles is now seeking federal help with low-cost loans that can build 30 years worth of projects in 10. Local bootstraps are great for getting off the ground, but they only get you so far up the ladder if the federal rung is missing.

## States Spending Disad

### State budget shortfalls will cause spending cuts

**McNichol, 12** - Senior Fellow specializing in state fiscal issues including the economy’s impact on state budgets and long-term structural reform of state budget and tax systems at the Center for Budget and Policy Priorities (Elizabeth, “States Continue to Feel Recession’s Impact,” 5/24,

<http://www.cbpp.org/cms/index.cfm?fa=view&id=711>)

State budget estimates for the upcoming fiscal year continue to show that states face a long and uncertain recovery. For fiscal year 2013, the fiscal year that begins July 1, 2012, 30 states have addressed or have projected shortfalls totaling $54 billion. The Great Recession that started in 2007 caused the largest collapse in state revenues on record. Since bottoming out in 2010, revenues have begun to grow again, but states are still far from fully recovered. As of the fourth quarter of 2011, state revenues remained 7 percent below pre-recession levels, and are not growing fast enough to recover fully soon. Meanwhile, states' education and health care obligations continue to grow. Next year, states expect to educate 350,000 more K-12 students and 1.7 million more public college and university students in the upcoming school year than in 2007-08.[[2]](http://www.cbpp.org/cms/index.cfm?fa=view&id=711" \l "_ftn2" \o ") And some 5.6 million more people are projected to be eligible for subsidized health insurance through Medicaid in 2012 than were enrolled in 2008, as employers have cancelled their coverage and people have lost jobs and wages.[[3]](http://www.cbpp.org/cms/index.cfm?fa=view&id=711" \l "_ftn3" \o ") Consequently, even though the revenue outlook is trending upward, states have addressed large budget shortfalls by historical standards as they considered budgets for the upcoming year. As the start of the new fiscal year draws near in most states, many of these shortfalls have been closed through spending cuts and other measures scheduled to take effect in the next fiscal year. Other states will soon close these shortfalls in order to meet balanced-budget requirements. To the extent these shortfalls are being closed with budget cuts, they are occurring on top of past years' deep cuts in critical public services like education, health care, and human services. The additional cuts mean that state budgets are poised to continue to be a drag on the national economy, threatening hundreds of thousands of private- and public-sector jobs, reducing the job creation that otherwise would be expected to occur. Potential strategies for lessening the impact of deep spending cuts include more use of state reserve funds in states that have reserves, more revenue through tax-law changes, and a greater role for the federal government. Our survey of state fiscal conditions shows that: States continue to face a major fiscal challenge. Thirty states have projected (and in many cases have already closed) budget gaps totaling $54 billion for fiscal year 2013. (See Figure 1.) These shortfalls are all the more daunting because states' options for addressing them are fewer and more difficult than in recent years. Temporary aid to states enacted in early 2009 as part of the federal Recovery Act was enormously helpful in allowing states to avert some of the most harmful potential budget cuts in the 2009, 2010 and 2011 fiscal years. But the federal government allowed that aid to largely expire at the end of fiscal year 2011, leading to some of the deepest cuts to state services since the start of the recession. Far from providing additional assistance to states, the federal government is now moving ahead with spending cuts that will very likely make states' fiscal situation even worse.

### States don’t have the resources to fund mass transit changes

Prum and Catz, 11- \* Assistant Professor, The Florida State University AND \*\* Director, Center for Urban Infrastructure; Research Associate, Institute of Transportation Studies, University of California, Irvine (Darren and Sarah, “GREENHOUSE GAS EMISSION TARGETS AND MASS TRANSIT: CAN THE GOVERNMENT SUCCESSFULLY ACCOMPLISH BOTH WITHOUT A CONFLICT?” 51 Santa Clara L. Rev. 935, 978)//AWV

Accordingly, the federal government needs to revisit its decades-old policy that funds capital requests, but leaves financing of operations to local agencies. While this federal policy aims to prevent state and local governments from becoming reliant on continual subsidies, it also creates situations where an agency may obtain new or more environmentally friendly equipment despite not having sufficient backing to operate them. With the recent economic situation, many state and local governments face daunting budget shortfalls, rising operational costs, a historically high unemployment rate, and the inability to generate revenue to operate capital improvements. Such circumstances put transit officials into decision-making circumstances that can be avoided by allowing flexibility with the funding contingencies. As a result, many of the opportunities to promote transit alternatives whereby the transportation sector could reduce traffic and help decrease greenhouse gas emissions are squandered by an arcane and inflexible policy set forth by Congress. Moreover, we urge that federal funding should provide for a direct one-for-one regional correspondence between the generation of transportation funds and their distribution. No jurisdiction should be considered a donor state and asked to foot the bill of another’s transportation needs on a federal basis.

### This will collapse the economy – federal spending is key

**Pollack, 9** – Economic Policy Institute (Ethan, “Dire States: State and Local Budget Relief Need to Prevent Job Losses and Ensure a Robust Recovery”, EPI Briefing Paper, 11/19 <http://epi.3cdn.net/1e7013bc0e4ca00724_0ym6b5yq5.pdf>

Widening state and local budget shortfalls present a ticking time bomb for the economy. If they are not addressed, state and local governments will be forced to accelerate layoffs, reduce pay, reduce services, and raise taxes and fees. These moves create a drag on the economy, weaken the recovery, and result in the loss of millions of public and private-sector jobs. To prevent or reduce job losses induced by cutbacks at the state and local level and to ensure a robust recovery, Congress must both extend the state and local budget relief offered in the recovery act through state fiscal year 2011 and raise the funding levels. This should be viewed not as a new recovery act, but rather as an extension of the first one, necessary because the budget relief originally provided is inadequate to address shortfalls that continue to grow even after the recovery has begun. Between the mid-year shortfalls in 2010 and the full shortfalls in 2011, state and local governments will raise taxes and cut spending by $204 billion.9 Not all of that can be mitigated—no distribution formula perfectly targets needy state and local governments, meaning that if the full amount was provided some recipients would get too much and others would still face shortfalls. While finding an exact number needed is difficult, at least $150 billion in budget relief should be provided. Without it, between 1.1 and 1.4 million jobs will be lost. Congress must act before it’s too late.

## Uniqueness Extn – Budget Tight

### Federal action key – state budgets tight now

**Treasury Department, 12** - A REPORT PREPARED BY THE DEPARTMENT OF THE TREASURY WITH THE COUNCIL OF ECONOMIC ADVISERS (“A NEW ECONOMIC ANALYSIS OF INFRASTRUCTURE INVESTMENT”, MARCH 23, 2012, <http://www.treasury.gov/resource-center/economic-policy/Documents/20120323InfrastructureReport.pdf>)

Finally, it is important to consider the economic situation facing state and local governments who are significant partners in funding public infrastructure. During recessions, it is common for state and local governments to cut back on capital projects – such as building schools, roads, and parks – in order to meet balanced budget requirements. At the beginning of the most recent recession, tax receipts at the state and local level contracted for four straight quarters; receipts are still below pre-recession levels. Past research has found that expenditures on capital projects are more than four times as sensitive to year-to-year fluctuations in state income as is state spending in general. 30 However, the need for improved and expanded infrastructure is just as great during a downturn as it is during a boom. Providing immediate additional federal support for transportation infrastructure investment would be prudent given the ongoing budgetary constraints facing state and local governments, the upcoming reduction in federal infrastructure investment as Recovery Act funds are depleted, and the strong benefits associated with public investment.

### States facing a budget shortfall

Dilger 11, -Senior Specialist in American National Government (Robert Jay, “Federalism Issues in Surface Transportation Policy: Past and Present”, 1-5-11, Congressional Research Service)

An analysis completed by the Government Accountability Office in 2004 found that “state and local governments have used roughly half of the increases in federal highway grants since 1982 to substitute for funding they would otherwise have spent from their own resources. In addition, our model estimated that the rate of grant substitution increased significantly over the past two decades, rising from about 18 cents on the dollar during the early 1980s to roughly 60 cents on the dollar during the 1990s.”111 Because state revenue growth has declined in recent years, it could be argued that states facing a budgetary shortfall are not likely to substitute federal funds received from the economic recovery plan for existing state funds. Instead, it could be argued that at least some states, particularly those facing budgetary shortfalls, might have a difficult time finding state revenue to maintain their previous spending levels. In either case, state MOE requirements may become an issue during SAFETEA’s reauthorization and will be the subject of congressional interest and oversight during the implementation of the American Recovery and Reinvestment Act of 2009.

## Link Extn – States No $

### Mass transit programs are losing State and Local funding because States can’t afford it

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 12, 3-23-11)//AWV

Federal funds also often require agencies to spend on specific items. For example, ARRA funds capital improvements, even though many systems cannot cover their operating costs. This is especially true during the recent recession – many agencies have cut service, laid off employees, and raised fares in an attempt to cover operating costs. It may make more sense in these cases for government subsidization to target operating losses instead of capital improvements.22 However, funding does not appear to be increasing in the wake of the recession. Only 10% of public transportation agencies expected an increase in local/regional funding in 2010, while 66% expected a decrease. Meanwhile, only 11% expected an increase in state funding while 56% expected a decrease.23 As a result, 69% of urban transit agencies expected budget shortfalls in 2011, indicating that these systems do not expect the current combinations of funding to adequately cover their costs.24

## Impact Extn – State $ kills Econ

### States will have to cut overall spending and it will collapse the economy

**McNichol, 12** - Senior Fellow specializing in state fiscal issues including the economy’s impact on state budgets and long-term structural reform of state budget and tax systems at the Center for Budget and Policy Priorities (Elizabeth, “States Continue to Feel Recession’s Impact,” 5/24,

<http://www.cbpp.org/cms/index.cfm?fa=view&id=711>)

The Consequences of Shortfalls

In states facing budget gaps, the consequences are severe in many cases — for residents as well as the economy.  To date, budget difficulties have led at least 46 states to reduce services for their residents, including some of their most vulnerable families and individuals.[[4]](http://www.cbpp.org/cms/index.cfm?fa=view&id=711" \l "_ftn4" \o ") More than 30 states have raised taxes to at least some degree, in some cases quite significantly. If revenues remain depressed, as is expected in many states, additional spending and service cuts are likely.  Indeed, a number of states have already made substantial cuts to balance their budgets for fiscal year 2013.  Budget cuts often are more severe later in a state fiscal crisis, after largely depleted reserves are no longer an option for closing deficits.[[5]](http://www.cbpp.org/cms/index.cfm?fa=view&id=711#_ftn5)  Spending cuts are problematic during an economic downturn because they reduce overall demand and can make the downturn deeper.  When states cut spending, they lay off employees, cancel contracts with vendors, eliminate or lower payments to businesses and nonprofit organizations that provide direct services, and cut benefit payments to individuals.  In all of these circumstances, the companies and organizations that would have received government payments have less money to spend on salaries and supplies, and individuals who would have received salaries or benefits have less money for consumption.  This directly removes demand from the economy.  Tax increases also remove demand from the economy by reducing the amount of money people have to spend.  However, to the extent these increases are on upper-income residents, that effect is minimized.  This is because these residents tend to save a larger share of their income, and thus much of the money generated by a tax increase on upper income residents comes from savings and so does not diminish economic activity.  At the state level, a balanced approach to closing deficits — raising taxes along with enacting budget cuts — is needed to close state budget gaps in order to maintain important services while minimizing harmful effects on the economy. Ultimately, the actions needed to address state budget shortfalls place a considerable number of jobs at risk. The roughly $54 billion shortfall that states are facing for fiscal year 2013 equals about 0.35 percent of GDP.  Assuming that economic activity declines by one dollar for every dollar that states cut spending or raise taxes, and based on a rule of thumb that a one percentage point loss of GDP costs the economy 1 million jobs, the state shortfalls projected to date could prevent the creation of 350,000 public- and private-sector jobs next year.   The Role of the Federal Government Federal assistance lessened the extent to which states needed to take actions that further harmed the economy.  The American Recovery and Reinvestment Act (ARRA), enacted in February 2009, included substantial assistance for states.  The amount in ARRA to help states maintain current activities was about $135 billion to $140 billion over a roughly 2½-year period — or between 30 percent and 40 percent of projected state shortfalls for fiscal years 2009, 2010, and 2011.  Most of this money was in the form of increased Medicaid funding and a "State Fiscal Stabilization Fund."  (There were also other streams of funding in the Recovery Act flowing through states to local governments or individuals, but these will not address state budget shortfalls.)  This money reduced the extent of state spending cuts and state tax and fee increases.  In addition, H.R. 1586 — the August 2010 jobs bill — extended enhanced Medicaid funding for six months, through June 2011, and added $10 billion to the State Fiscal Stabilization Fund.  Even with this extension, federal assistance largely ended before state budget gaps had fully abated.  The Medicaid funds expired in June 2011, the end of the 2011 fiscal year in most states,[[6]](http://www.cbpp.org/cms/index.cfm?fa=view&id=711" \l "_ftn6" \o ")and states had drawn down most of their State Fiscal Stabilization Fund allocations by then as well.  So even though significant budget gaps remained in 2012, there was little federal money available to close them.  Partially as a result, states' final 2012 budgets contain some of the deepest spending cuts since the start of the recession. One way to avert these kinds of cuts, as well as additional tax increases, would have been for the federal government to reduce state budget gaps by extending the Medicaid funds for as long as state fiscal conditions are expected to be problematic.  But far from extending this aid, federal policymakers are moving ahead with plans to cut ongoing federal funding for states and localities, thereby making state fiscal conditions even worse.  The federal government has already cut non-defense discretionary spending by nine percent in real terms since 2010. Discretionary spending caps established in the federal debt limit deal this past summer will result in an additional six percent cut by the end of the next decade. The additional cut by the end of the next decade would grow to 11 percent if sequestration — the automatic, across-the-board cuts also established in the debt limit deal — is allowed to take effect. Fully one-third of non-defense discretionary spending flows through state and local governments in the form of funding for education, health care, human services, law enforcement, infrastructure, and other services that states and localities administer.  Large cuts in federal funding to states and localities would worsen state budget problems, deepen the size of cuts in spending, increase state taxes and fees, and thus slow economic recovery even further than is already likely to occur.

### State spending cuts or tax increases will cripple the economy

**Mishel, 10** – president of the Economic Policy Institute (Lawrence, Congressional Documents and Publications, 1/21, Testimony before Senate Appropriations Subcommittee on Labor, Health, and Human Services, Education, and Related Agencies, lexis)

Second, Congress should provide more fiscal relief to the states. Helping state and local governments avoid job cuts is as effective as creating new jobs. Nothing is more clearly an obstacle to recovery than another round of public employee job losses and cutbacks in state spending on goods and services contracted out to the private sector. As Paul Krugman puts it so well, we cannot afford to have the states become 50 little Herbert Hoovers, cutting back spending and raising taxes as the economy struggles to recover. With budget gaps expected to exceed $450 billion in 2010 and 2011, the states and local governments need federal revenue sharing as never before. EPI researcher Ethan Pollack estimates that if Congress does not intervene, and state and local governments close their budget gaps by cutting spending, GDP growth will be reduced by about 4.5% over the next two years, at a cost of more than 3 million jobs.

### State funding mechanisms collapse the economy, federal key

**Lav and McNichol, 09** – \*former deputy director at the Center for Budget and Policy Priorities AND \*\*Senior fellow at the CBPP [Iris and Elizabeth McNichol, “New Fiscal Year Brings No Relief From Unprecedented State Budget Problems,” 8/12, <http://governor.mt.gov/news/docs/Center_on_Budget_Policy.pdf>)

Unlike the federal government, the vast majority of states are governed under rules that prohibit them from running a deficit or borrowing to cover their operating expenses. As a result, states have three primary actions they can take during a fiscal crisis: draw down available reserves, cut spending, and raise taxes. States already have begun drawing down reserves; the remaining reserves are not sufficient to allow states to weather the remainder of the recession. The other alternatives — spending cuts and tax increases — can further slow a state’s economy during a downturn, which produces a cumulative negative impact on national recovery as well. Some states have not been affected by the economic downturn, but the number is dwindling. Mineral-rich states — such as New Mexico, Alaska, and Montana — saw revenue growth as a result of high oil prices. However, the recent decline in oil prices has begun to affect revenues in some of these states. The economies of a handful of other states have so far been less affected by the national economic problems. In states facing budget gaps, the consequences are severe in many cases — for residents as well as the economy. As the 2009 fiscal year ended and states planned for 2010, budget difficulties have led some 39 states to reduce services to their residents, including some of their most vulnerable families and individuals.2 For example, at least 21 states have implemented cuts that will restrict low-income children’s or families’ eligibility for health insurance or reduce their access to health care services. Programs for the elderly and disabled are also being cut. At least 22 states and the District of Columbia are cutting medical, rehabilitative, home care, or other services needed by low-income people who are elderly or have disabilities, or significantly increasing the cost of these services. At least 24 states are cutting or proposing to cut K-12 and early education; several of them are also reducing access to child care and early education, and at least 32 states have implemented cuts to public colleges and universities. In addition, at least 41 states and the District of Columbia have made cuts reducing the size or work time of state government employees. Such cuts not only often result in reduced access to services residents need, but also add to states’ woes because of the impact on the economy from less consumer activity. If revenue declines persist as expected in many states, additional spending and service cuts are likely. Budget cuts often are more severe later in a state fiscal crisis, after largely depleted reserves are no longer an option for closing deficits. Expenditure cuts and tax increases are problematic policies during an economic downturn because they reduce overall demand and can make the downturn deeper. When states cut spending, they lay off employees, cancel contracts with vendors, eliminate or lower payments to businesses and nonprofit organizations that provide direct services, and cut benefit payments to individuals. In all of these circumstances, the companies and organizations that would have received government payments have less money to spend on salaries and supplies, and individuals who would have received salaries or benefits have less money for consumption. This directly removes demand from the economy. Tax increases also remove demand from the economy by reducing the amount of money people have to spend — though to the extent these increases are on upper-income residents that effect is minimized because much of the money comes from savings and so does not diminish economic activity. The federal government — which can run deficits — can provide assistance to states and localities to avert these “pro-cyclical” actions.

## A2 Federalism – Non Unique

### Recent immigration ruling tilts federal over states

Robinson 12 (Eugene, “The court’s stand for federalism, The Miami Herald, 6-25-12, http://www.miamiherald.com/2012/06/25/2867622/the-courts-stand-for-federalism.html)

Even more gratifying is the court’s reinforcement of an obvious principle: The federal government has the responsibility for setting immigration policy, not the states. We do not need — and, thanks to this ruling, will not have — 50 sets of laws specifying who gets to live in this country and who doesn’t. The Arizona law sought to make it a state crime to fail to have proper immigration papers; in other words, failing to produce the right documents when asked could have subjected a person not just to deportation but to criminal penalties. The court ruled that this was pre-empted by federal law, which imposes no such sanctions.

### Decisions later this year – not the plan – are key federalism issues

The Wall Street Journal 12 (Jess Bravin, “Federal Power at Issue in Key Cases”, 6-24-12, http://online.wsj.com/article/SB10001424052702304458604577487044123497430.html)

The Supreme Court's decisions on the 2010 health-care overhaul and Arizona's tough anti-immigration law, due out this week, are likely to help set the confines of federal power for decades to come. Both are about defining that boundary with the states, a point of tension since the founding of the nation. Even this year's political campaign is raising the federalism issue as the parties debate the proper level of Washington spending and taxes at a time of high budget deficits. The core constitutional question to be settled this week is whether Congress has the power to require almost every American to carry health insurance or pay a penalty. In March arguments at the Supreme Court, the challengers' lawyer, Paul Clement, said he had no legal objection to such a requirement—as long as each of the 50 state legislatures enacted it.

## A2 Federalism – No Link

### Non unique link – federal government dominates transportation policy

Dilger 11, -Senior Specialist in American National Government (Robert Jay, “Federalism Issues in Surface Transportation Policy: Past and Present”, 1-5-11, Congressional Research Service)

American federalism, which shapes the roles, responsibilities, and interactions among and between the federal government, the states, and local governments, is continuously evolving, adapting to changes in American society and American political institutions. The nature of federalism relationships in surface transportation policy has also evolved over time, with the federal government’s role becoming increasingly influential, especially since the Federal-Aid to Highway Act of 1956 which authorized the interstate highway system. In recent years, state and local government officials, through their public interest groups (especially the National Governors Association, National Conference of State Legislatures, National Association of Counties, National League of Cities, U.S. Conference of Mayors, and American Association of State Highway and Transportation Officials) have lobbied for increased federal assistance for surface transportation grants and increased flexibility in the use of those funds. They contend that they are better able to identify surface transportation needs in their states than federal officials and are capable of administering federal grant funds with relatively minimal federal oversight. They also argue that states have a long history of learning from one another. In their view, providing states flexibility in the use of federal funds results in better surface transportation policy because it enables states to experiment with innovative solutions to surface transportation problems and then share their experiences with other states. Others argue that the federal government has a responsibility to ensure that federal funds are used in the most efficient and effective manner possible to promote the national interest in expanding national economic growth and protecting the environment. In their view, providing states increased flexibility in the use of federal funds diminishes the federal government’s ability to ensure that national needs are met. Still others have argued for a fundamental restructuring of federal and state government responsibilities in surface transportation policy, with some responsibilities devolved to states and others remaining with the federal government.

### ARRA already sets up a system of transit grants that require state capitulation to federal requirements

Dilger 11, -Senior Specialist in American National Government (Robert Jay, “Federalism Issues in Surface Transportation Policy: Past and Present”, 1-5-11, Congressional Research Service)

The American Recovery and Reinvestment Act of 2009 (P.L. 111-5, signed by President Barack Obama on February 17, 2009), included $27.5 billion for highway, bridge and road projects, $8.4 billion for mass transit and $8.6 billion for discretionary grants to states to help fund capital costs associated with intercity rail services, with an emphasis on developing high-speed rail services. As a condition for the receipt of funding for these programs, the law includes a state maintenance-of-effort (MOE) requirement that requires the Governor of each state to certify to the Secretary of Transportation that, “the State will maintain its effort with regard to State funding for the types of projects that are funded by the appropriation. As part of this certification, the Governor shall submit to the Secretary of Transportation a statement identifying the amount of funds the State planned to expend from State sources as of the date of enactment of this Act during the period beginning on the date of enactment of this Act through September 30, 2010, for the types of projects that are funded by the appropriation.”109 States are required to submit a report on their activities not later than 90 days after the act’s enactment and an updated report not later than 180 days, one year, two years, and three years after enactment. States that are unable to maintain the level of effort will be prohibited by the Secretary of Transportation from receiving additional funds “pursuant to the redistribution of the limitation on obligations for Federal-aid highway and highway safety construction programs that occurs after August 1 for fiscal year 2011.”110

### Court has checks on abuses of federalism in the context of mass transit and have held that federal involvement is legitimate since it improves transit

Blackmun 85 - Associate Justice of the Supreme Court of the United States from 1970 until 1994, author of Roe v. Wade, (Harold Andrew, Opinion of the Court, http://www.law.cornell.edu/supct/html/historics/USSC\_CR\_0469\_0528\_ZO.html)

In these cases, the status of public mass transit simply underscores the extent to which the structural protections of the Constitution insulate the States from federally imposed burdens. When Congress first subjected state mass transit systems to FLSA obligations in 1966, and when it expanded those obligations in 1974, it simultaneously provided extensive funding for state and local mass transit through UMTA. In the two decades since its enactment, UMTA has provided over $22 billion in mass transit aid to States and localities. [n19] In 1983 alone, UMTA funding amounted to $3.7 billion. [n20] As noted above, SAMTA and its immediate predecessor have received a substantial amount of UMTA funding, including over $12 million during SAMTA's first two fiscal years alone. In short, Congress has not simply placed a financial burden on the shoulders of States and localities that operate mass transit systems, but has provided substantial countervailing financial assistance as well, assistance that may leave individual mass transit systems better off than they would have been had Congress never intervened at all in the area. Congress' treatment of public mass transit reinforces our conviction that the national political process systematically protects States from the risk of having their functions in that area handicapped by Commerce Clause regulation. [n21]

## A2 Federalism – No Collapse

### No risk of encroachment that’s substantial enough to alter federalism

Young 3 - Law Prof at Texas, Ernest, May 2003, Texas Law Review, p. L/N

One of the privileges of being a junior faculty member is that senior colleagues often feel obligated to read one's rough drafts. On many occasions when I have written about federalism - from a stance considerably more sympathetic to the States than Judge Noonan's - my colleagues have responded with the following comment: "Relax. The States retain vast reserves of autonomy and authority over any number of important areas. It will be a long time, if ever, before the national government can expand its authority far enough to really endanger the federal balance. Don't make it sound like you think the sky is falling."

### Courts will check any snowball

Robert F. Nagel, Law Professor, University of Colorado, March 2001, ANNALS OF THE AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE, p. 53

In what appears to be an ambitious campaign to enhance the role of the states in the federal system, the Supreme Court has recently issued a series of rulings that limit the power of the national government. Some of these decisions, which set boundaries to Congress's power to regulate commerce and to enforce the provisions of the Fourteenth Amendment, establish areas that are subject (at least in theory) only to state regulation. Others protect the autonomy of state governments by restricting congressional authority to expose state governments to suit in either state or federal courts and to "commandeer" state institutions for national regulatory purposes. Taken together, these decisions seem to reflect a judgment held by a slight majority of the justices that the dramatic expansion of the national government during the twentieth century has put in jeopardy fundamental principles of constitutional structure.

### States and Federal power aren’t zero sum --- concurrent regulation is the norm

**Schapiro ’06** (Robert, Prof Law – Emory, Fordham Law Review, March, Lexis)

The jurisprudence of Justice John Paul Stevens advances a strong vision of national unity. Like Justice Wiley Rutledge, for whom he clerked, Justice Stevens understands the United States Constitution as a document fundamentally designed to promote and preserve the union. The primary role of federal courts is to vindicate constitutional values, including the value of national unity. These background principles of unity provide the context for Justice Stevens's conception of federalism. In his thirty-five years on the bench, Justice Stevens has elaborated a robust theory of federalism. His theory, however, contrasts sharply with the dualist federalism that became the regnant model of the Rehnquist Court. Dual federalism, the idea that the national government and the states enjoy exclusive and nonoverlapping spheres of authority, does not describe the actual operation of government in the United States today. On the contrary, the overlap of national and state activities is ubiquitous. In areas ranging from narcotics trafficking n1 to securities trading to education, concurrent federal and state regulation is the norm. With the recent wave of national crises, including the War on Terrorism and Hurricane Katrina, the growth of state and national power and the resulting overlap in authority, seems likely to increase. Even in the more rarified atmosphere of the United States Supreme Court, the normative project of fully dividing state from federal power has little support. Since the advent of the New Deal Court in 1937, the Court no longer seeks to maintain strict boundaries between state and federal realms. On the present Court, only Justice Clarence Thomas has shown any inclination to return to the pre-New Deal conceptions of dual sovereignty.

## A2 Federalism – No Model

### No international modeling of federalism

**Moravcsik, 05** (Andrew, “Dream On America”, Newsweek, 1/31, <http://www.msnbc.msn.com/id/6857387/site/newsweek/>)

Not long ago, the American dream was a global fantasy. Not only Americans saw themselves as a beacon unto nations. So did much of the rest of the world. East Europeans tuned into Radio Free Europe. Chinese students erected a replica of the Statue of Liberty in Tiananmen Square. You had only to listen to George W. Bush's Inaugural Address last week (invoking "freedom" and "liberty" 49 times) to appreciate just how deeply Americans still believe in this founding myth. For many in the world, the president's rhetoric confirmed their worst fears of an imperial America relentlessly pursuing its narrow national interests. But the greater danger may be a delusional America—one that believes, despite all evidence to the contrary, that the American Dream lives on, that America remains a model for the world, one whose mission is to spread the word. The gulf between how Americans view themselves and how the world views them was summed up in a poll last week by the BBC. Fully 71 percent of Americans see the United States as a source of good in the world. More than half view Bush's election as positive for global security. Other studies report that 70 percent have faith in their domestic institutions and nearly 80 percent believe "American ideas and customs" should spread globally. Foreigners take an entirely different view: 58 percent in the BBC poll see Bush's re-election as a threat to world peace. Among America's traditional allies, the figure is strikingly higher: 77 percent in Germany, 64 percent in Britain and 82 percent in Turkey. Among the 1.3 billion members of the Islamic world, public support for the United States is measured in single digits. Only Poland, the Philippines and India viewed Bush's second Inaugural positively. Tellingly, the anti-Bushism of the president's first term is giving way to a more general anti-Americanism. A plurality of voters (the average is 70 percent) in each of the 21 countries surveyed by the BBC oppose sending any troops to Iraq, including those in most of the countries that have done so. Only one third, disproportionately in the poorest and most dictatorial countries, would like to see American values spread in their country. Says Doug Miller of GlobeScan, which conducted the BBC report: "President Bush has further isolated America from the world. Unless the administration changes its approach, it will continue to erode America's good name, and hence its ability to effectively influence world affairs." Former Brazilian president Jose Sarney expressed the sentiments of the 78 percent of his countrymen who see America as a threat: "Now that Bush has been re-elected, all I can say is, God bless the rest of the world." The truth is that Americans are living in a dream world. Not only do others not share America's self-regard, they no longer aspire to emulate the country's social and economic achievements. The loss of faith in the American Dream goes beyond this swaggering administration and its war in Iraq. A President Kerry would have had to confront a similar disaffection, for it grows from the success of something America holds dear: the spread of democracy, free markets and international institutions—globalization, in a word. Countries today have dozens of political, economic and social models to choose from. Anti-Americanism is especially virulent in Europe and Latin America, where countries have established their own distinctive ways—none made in America. Futurologist Jeremy Rifkin, in his recent book "The European Dream," hails an emerging European Union based on generous social welfare, cultural diversity and respect for international law—a model that's caught on quickly across the former nations of Eastern Europe and the Baltics. In Asia, the rise of autocratic capitalism in China or Singapore is as much a "model" for development as America's scandal-ridden corporate culture. "First we emulate," one Chinese businessman recently told the board of one U.S. multinational, "then we overtake." Many are tempted to write off the new anti-Americanism as a temporary perturbation, or mere resentment. Blinded by its own myth, America has grown incapable of recognizing its flaws. For there is much about the American Dream to fault. If the rest of the world has lost faith in the American model—political, economic, diplomatic—it's partly for the very good reason that it doesn't work as well anymore. AMERICAN DEMOCRACY: Once upon a time, the U.S. Constitution was a revolutionary document, full of epochal innovations—free elections, judicial review, checks and balances, federalism and, perhaps most important, a Bill of Rights. In the 19th and 20th centuries, countries around the world copied the document, not least in Latin America. So did Germany and Japan after World War II. Today? When nations write a new constitution, as dozens have in the past two decades, they seldom look to the American model. When the soviets withdrew from Central Europe, U.S. constitutional experts rushed in. They got a polite hearing, and were sent home. Jiri Pehe, adviser to former president Vaclav Havel, recalls the Czechs' firm decision to adopt a European-style parliamentary system with strict limits on campaigning. "For Europeans, money talks too much in American democracy. It's very prone to certain kinds of corruption, or at least influence from powerful lobbies," he says. "Europeans would not want to follow that route." They also sought to limit the dominance of television, unlike in American campaigns where, Pehe says, "TV debates and photogenic looks govern election victories." So it is elsewhere. After American planes and bombs freed the country, Kosovo opted for a European constitution. Drafting a post-apartheid constitution, South Africa rejected American-style federalism in favor of a German model, which leaders deemed appropriate for the social-welfare state they hoped to construct. Now fledgling African democracies look to South Africa as their inspiration, says John Stremlau, a former U.S. State Department official who currently heads the international relations department at the University of Witwatersrand in Johannesburg: "We can't rely on the Americans." The new democracies are looking for a constitution written in modern times and reflecting their progressive concerns about racial and social equality, he explains. "To borrow Lincoln's phrase, South Africa is now Africa's 'last great hope'." Much in American law and society troubles the world these days. Nearly all countries reject the United States' right to bear arms as a quirky and dangerous anachronism. They abhor the death penalty and demand broader privacy protections. Above all, once most foreign systems reach a reasonable level of affluence, they follow the Europeans in treating the provision of adequate social welfare is a basic right. All this, says Bruce Ackerman at Yale University Law School, contributes to the growing sense that American law, once the world standard, has become "provincial." The United States' refusal to apply the Geneva Conventions to certain terrorist suspects, to ratify global human-rights treaties such as the innocuous Convention on the Rights of the Child or to endorse the International Criminal Court (coupled with the abuses at Abu Ghraib and Guantanamo) only reinforces the conviction that America's Constitution and legal system are out of step with the rest of the world.

## A2 Privatization CP

### Privatization fails in urban mass transit – can’t keep the fares low enough

Gordon, 11 – Economic Analyst at Charles River Associates (Michael, “Funding Urban Mass Transit in the United States”, Boston College Economics Honor’s Thesis, http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2007981, p. 7-9, 3-23-11)//AWV

Due to the equity and convenience issues, major urban mass transit systems operate under public control. Fares have increased nationwide, but cannot increase to the market rate due to equity concerns. Historically, urban mass transit began as a private endeavor, with many systems owned and operated privately through the first half of the twentieth century. But these systems struggled to keep fares low while avoiding deficits. To survive, privately owned systems could have charged market rate fares, which would have limited lower income citizens’ abilities to utilize urban mass transit and would have decreased ridership. Because urbanized areas found lower fares in their best interest, public ownership and operation became more common. In Boston, for example, the private Boston Elevated Railway Company, founded in 1894, survived until the 1940s. At this point, the public Metropolitan Transit Authority bought it out, beginning control of public mass transit in the city.4 This public transformation allowed the government to give financial aid through subsidization, which has continued to this day. So, the government made urban mass transit systems public due to equity concerns, using government funding at the federal, state, and local levels to complement operating revenues earned through fares. And yet, Chicago Transit Authority (CTA) President Richard Rodriguez commented that “People don’t realize how subsidized it is. For $2.25 you can ride the bus from one part of the city to another. For $2.50 you can ride our rail system. If I were a private corporation and I were to charge them it would cost much more, $7 or $10 a ride. But people don’t get it.”5 The government has decided that the private sector cannot entirely provide urban mass transit yet deems it a service worth having. Some people have proposed privatizing parts of urban mass transit systems;6 for example, private companies could provide individual services or lease individual system lines in order to improve efficiency. Privatization would also likely lower system costs, as public enterprises tend to have higher costs than private ones. However, the economies of scale and equity concerns are such that privatizing entire systems is not a legitimate option.7 Private systems would increase fares and cut service to gain efficiency, but this would price out the poor and could cut service from the areas that need it the most.8 Instead, public urban mass transit agencies keep the fares artificially low through subsidization and often continue service at low-ridership times and areas; consequently, many systems have large deficit problems.

### **Privatization increases costs and decreases service – forces new government takeovers**

Keefe and Fine, 10 – \*associate professor of labor and employment relations, at the School of Management and Labor Relations, Rutgers University AND \*\* assistant professor in the School of Management and Labor Relations at Rutgers University's New Brunswick campus (Jeffrey and Janice, “In the Public Interest? Safeguarding New Jersey’s Public Investments,” 11/1,

<http://documents.scribd.com.s3.amazonaws.com/docs/8sldr9jt4wqpqcg.pdf?t=1289592554>

The Task Force’s report presumes that privatization will inevitably produce costs savings. The current empirical research on privatization however, which was largely ignored by the Task Force, suggests otherwise. Recent rigorous and comprehensive evaluations of privatization projects do not find significant benefits from privatization. A variety of explanations have been advanced to explain the lack of returns to privatization, including: government, itself, through process improvement can achieve more significant cost savings; monitoring and contracting costs for privatization can be as high as 20%, often making privatization an uneconomical alternative; competitive bidding markets for government contracts often do not exist; and private contractors collude causing price differences to erode (Bel and Warner 2007).

Arising from poor service quality and insufficient savings arising from privatization, many privatization projects result in reverse contracting (in-sourcing), where government reclaims work formerly privatized. Reverse contracting is growing. A combination of increased government efficiency, reverse contracting, and market failures, has stalled the shift toward privatization in the United States. Government service delivery remains the dominant method for the provision of twothirds of local public services.

### Privatization of mass transit won’t work – not financially viable, no competition, profit and interactivity concerns

Walker 10 - public transit planning consultant (Jarrett, <http://www.humantransit.org/2010/05/on-privatization-nostalgia.html?cid=6a00d83454714d69e2013480eb1745970c#comment-6a00d83454714d69e2013480eb1745970c>, 5-16-10)

As I mentioned briefly over the weekend, Christopher Leinberger in the Atlantic is wondering if we can go back to the early 20th century practice of letting developers build rail transit lines, and reap the resulting increase in property values. This idea is likely to have a lot of superficial appeal, because it combines two pervasive attitudes in New World countries: (a) nostalgia for a supposedly simpler past and (b) a suspicion, especially common in the US, that government is always intrinsically less competent than the private sector. But as someone who's been around a lot of privately-funded transit projects (usually called public-private partnerships or PPPs) I think it's important to pour some cool if not frigid water on the idea: •Most construction projects that were financially viable in 1900 would not be viable today, including the foundations of the great rapid transit networks that we see in Europe and New York. In 1900 there were no environmental laws nor many labor laws of substance, so of course construction was vastly cheaper. (This point needs to be raised not just in response to privatization-nostalgia arguments such as Leinberger's, but to all forms of nostalgia about old technologies.) It's tempting to believe that we build subway lines so much more slowly than Europe did around 1900 because we've lost some collective will. While that's partly true, it's also true that the values of today -- especially as they relate to environmental impact and labor -- are different, and more expensive, than they were back then. Countries that are building rapid transit today, such as China and India, generally have much lower labor costs and less onerous environmental impact processes (which is to say, much less effective ones). •A constant frustration around PPPs is the suspicion that government inevitably has the weaker hand in negotating them, and that as a result the benefits flow primary away from the public purse. •Private enterprise is efficient only in response to competition. Construction work on a rail project almost always goes to the private sector, because it's easy to set up a robust competition for that work. But it's harder to expose the private sector to competition when one company or consortium takes over planning and financing as well as construction. In Australia, the privatization frenzy has given us privately owned road tunnels and privately owned pieces of urban rail networks. No competitive pressure operates on the toll-collecting owners of these projects after they're built. •When we're talking about privately owned bits of a larger network, it can be hard to get the necessary integration with the rest of the network. Privately funded pieces of transit infrastructure often need higher fares than the publicly-owned bits, and these add complexity to the fare system. •A private operator of public transit will care about total revenue but may not care about ridership. A few high-paying riders give you as much revenue as a lot of low-paying ones. But we the people DO have an interested in services that carry more people, and that interest is hard to manifest in typical privately led rail projects. Sydney has one privately built segment in its rail network -- the four-station Airport Line -- and its fares ($15 one way, airport to city) are so high that it's cheaper for me to take a taxi. The two non-Airport stations on the line have missed out on a lot of redevelopment opportunity because the fares are just too high for the system to be useful. •Finally, developer-funded rail lines were used around 1900 to open up huge greenfield areas for new urban development -- greenfields that tended to be consolidated under one or a few owners. Today, we would call that sprawl. Today, also, land ownership is much more divided and hard to organize, even on the suburban fringe. Rail lines intrinsically bring their benefits to a large area, and only the government is usually in the position to spread the costs correspondingly widely.

### Mass transit infrastructure is not a good candidate for privatization because the payback is too risky or far off in the future

Cooper 2012 (Donna, “Meeting the Infrastructure Imperative An Affordable Plan to Put Americans Back to Work Rebuilding Our Nation’s Infrastructure,” February http://www.americanprogress.org/issues/2012/02/pdf/infrastructure.pdf)

Roy Kienitz, the former under secretary of transportation, points out, “It’s important to note that most transportation infrastructure projects are not viable candidates for private investment and therefore must rely entirely on public funds backed by federal- or state-imposed user fees or general tax revenues.”15 Nick Debenedictus, CEO of Aqua America Inc., a New York Stock Exchange-listed water company with 3 million customers across 13 states, makes a similar point with respect to water infrastructure: With respect to water and energy infrastructure, the lion’s share of investment is already privately financed, but even in these sectors there are infrastructure gaps, such as combined sewer overflows in many of our older cities, where private investors are not willing to invest because the payback is too risky or too far off in the future.16

### Public Investment in infrastructure key to success and the economy

Bivens 12 -Research fellow at the Economic Policy Institute (Josh, 4-18-12,

http://www.epi.org/publication/bp338-public-investments/)

Public investment by federal, state, and local governments builds the nation’s capital stock by devoting resources to the basic physical infrastructure (such as roads, bridges, rail lines, airports, and water distribution), innovative activity (basic research), green investments (clean power sources and weatherization), and education (both primary and advanced, as well as job training) that leads to higher productivity and/or higher living standards. While private actors also invest in these areas, they do so to a much smaller degree, in part because the gains from public investment accrue not just to those undertaking the investment, but to a wide range of people and businesses. In recent years, some debate has centered around increasing public investment to provide a near-term boost to the job market, based on research showing that infrastructure investment is about the most efficient fiscal support one can provide to a depressed economy. But there is also an enormous amount of economic evidence demonstrating that public investment is a significant long-run driver of productivity growth—and hence growth in average living standards. This lesson was lost in recent decades because —in a break from historical trends—productivity acceleration in the late 1990s was driven largely by private-sector investments in information and communications technology (ICT) equipment, and not by increased public investments. However, it is time to re-learn this lesson. A new round of research in the last decade confirmed the large impact of public investment on productivity growth. At the same time, the contribution of private ICT investment to productivity growth seems to be fading. The surest route to returning to the productivity growth we enjoyed in the post-World War II era and again in the late 1990s requires a substantial increase in public investments.

### Zero net benefit to privatization – it replicates the worst parts of public agencies

**Keefe and Fine, 10** – \*associate professor of labor and employment relations, at the School of Management and Labor Relations, Rutgers University AND \*\* assistant professor in the School of Management and Labor Relations at Rutgers University's New Brunswick campus (Jeffrey and Janice, “In the Public Interest? Safeguarding New Jersey’s Public Investments,” 11/1,

<http://documents.scribd.com.s3.amazonaws.com/docs/8sldr9jt4wqpqcg.pdf?t=1289592554>

The research literature increasingly questions the benefits of privatization. For example, Bel and Warner (2006) review all econometric studies of costs for waste collection and efficiency for water distribution from 1965 to the present and find the majority of studies report no difference in costs and efficiency or productivity between public and private production. Similarly, Zullo (2007) detects no immediate or long-term economic benefit from contracted bus services. Studies from the early 1980s reported savings from contracting urban bus operations; however, Leland and Smirnova (2009) replicating that research find privately owned and managed transit systems are no longer more efficient or effective than government owned agencies. They conclude this occurred for several reasons, which may apply more broadly to privatization. First, without any serious competition, private transit services remain a monopoly and operate under the same conditions as public providers. Second, private firms may have higher transaction costs in their financing and business activities that outweigh any initial cost savings. Third, over time, the pressure from the public may have intensified and private providers may have had to adapt to public demands requiring them to operate with similar constraints as public providers. This would also explain the rapid decrease in the sheer number of private providers. If service provision is no longer profitable, then many private companies simply have left the market. The Task Force’s mass transit privatization proposal follows this familiar formula, and is unlikely to lead to significant public savings in the long run. It may, however, yield short-term cash for the state, monopoly profits for the Academy Bus services, the most likely private bidder for NJ Transit’s profitable bus lines, and higher fares for commuters with no efficiency gains.

### Empirically – overall service will be cut and it will decrease ridership and bankrupt the company

**Madsen, 8** - contributing writer to the Online Journal (Wayne, The Columbus Dispatch, “No: Private operations cut costs, reduce services for sake of the owners,” <http://www.inthepublicinterest.org/article/wayne-madsen-con-should-mass-transit-be-privatized-us>)

Calls to privatize mass-transit systems must be seen as part of an overall agenda that won't be satisfied until it gobbles up every public asset created with taxpayers' funds. That includes electric and water utilities, community hospitals, public schools, highways, bridges and other assets that make up the public commons. A prime example of what happens when mass transit is turned over to private corporations is Santiago, the sprawling capital of Chile, with a metro-area population of more than 6 million. A few years ago, the government unwisely decided to turn over the revamping of Transantiago, the capital's bus system, to a private corporation. The private company quickly cut back service to poorer neighborhoods because profits were not as lucrative. The corporate planners also reduced the number of buses in service and decreased the number of bus stops. Rides that took 40 minutes soon took two hours. Many commuters were forced to walk and some others, constantly late for work, lost their jobs. The result was chaos. Santiago's smoothly functioning state-run Metro subway system found itself deluged by former bus riders, stretching its capacity. In a further display of capitalist hubris, some investors began negatively speculating on the financial prospects of Transantiago, creating huge losses for the company. As a result, the cash-flush state-run Metro was forced to make $300 million in loans to the privatized bus service -- beggaring Peter to pay Paul. In other words, Chilean taxpayers were forced to bail out a poorly run private enterprise that was formed from proceeds stolen from the taxpayers' own pockets. And how did Transantiago react to its poor service and resulting disruption of the lives of its customers? It ignored the complaints and threatened to raise fares if it did not get a new infusion of public funds. Commuters reacted by banding together and suing Transantiago for tens of thousands of dollars each. The same dismal picture is repeated in virtually every city that succumbed to the privatization craze. Buenos Aires' privatized Metro system is overcrowded and poorly serviced. Plans by the European Union to privatize rail service in France, Greece, Spain, Portugal and Belgium have resulted in strikes by workers, who see what is coming: loss of benefits and cuts in service. British Rail privatized in 1997 and the results have been poorer service and horrendous safety problems. Outsourcing safety and maintenance work resulted in a 1999 two-train crash outside London's Paddington Station that killed 31 passengers. As more and more cities try to switch commuters from greenhouse-causing cars to greener mass-transit systems, now is scarcely the time for further de-regulation and privatization. If anything, U.S. commuters need more centralized planning and tighter government oversight. It is hoped the lessons of Santiago, Buenos Aires and London will persuade transit-policy planners in the United States that the public commons and privatization are mutually exclusive terms. Americans are best served by transit systems where employees are treated fairly and receive living wages. If anything, it's time to devote more public funds to urban mass-transit systems as a first, significant step in the battle to fight global warming.

### **Privatization fails – will collapse infrastructure**

**Schweitzer, 11** - associate professor in the School of Policy, Planning and Development at USC (Lisa, Los Angeles Times, “For sale: U.S. infrastructure?,” <http://articles.latimes.com/2011/jul/13/opinion/la-oe-schweitzer-infrastructure-20110713>)

The draconian spending proposal, dubbed "the Republican road to ruin" by critics, comes at a time when groups such as the American Society of Civil Engineers are saying that the U.S. needs to invest an additional $1 trillion beyond current levels over the next decade just to maintain and repair existing infrastructure. We are facing a road infrastructure crisis, and it is of our own making. The federal gas tax has been unchanged, at 18 cents, since 1993, even as vehicles have gotten more fuel efficient. Adjusted for inflation, it amounts to a measly 12 cents today. But Americans, according to surveys, don't want to raise the tax. For politicians like Mica, this opens doors to privatization projects. Last month, he introduced a bill that would put private companies in charge of Amtrak's operations in the Northeast Corridor. Taking that step, he contended, would be the fastest way to get high-speed rail up and running in the U.S. because it's clear that President Obama's federally sponsored rail plan has little support in Congress. Maybe Mica is right. But rushing to privatize state-owned assets can lead to terrible infrastructure deals that let private companies walk away with prime assets and leave taxpayers with no guarantee of better services or lower fees. Unlike the Greeks, who must sell to receive bailout funds, we still have a say in our infrastructure future. But the time for planning ahead and striking strong deals is dwindling, along with our infrastructure funds. Many European countries and cities have privatized infrastructure and city services. You want to use the highway — you pay. You want to stroll through a "public" garden — you pay. You can avoid higher taxes, but if you want the services, you pay the private company that holds the franchise. It is a system that works fine for those with cash to spend. Scaling down public ownership of transportation networks also means carefully selecting which parts of the system to sell or lease out. Private companies usually desire assets associated with the most demand for services, such as the Northeast Corridor. But if we sell off or lease these assets to get private companies to build a high-speed rail system there, we may also be giving up the only part of a high-speed rail network likely to generate enough cash in the long term to keep a national system running without taxpayer help. So far, privately run transportation projects show mixed outcomes. For every successful privatization story of service improvement and mounting profits — Britain's airport privatization, say — there's a disaster story of poor service and taxpayers left holding the bailout bag: think the Chunnel or Chicago's privatized parking woes. Privatized transportation projects carry risks for both sides.

### Privatization undermines overall infrastructure and can’t meet future demands

**Plumer, 12** - reporter focusing on energy and environmental issues for the Washington Post (Brad, Washington Post, “More states privatizing their infrastructure. Are they making a mistake?,” 4/1, <http://www.washingtonpost.com/blogs/ezra-klein/post/more-states-privatizing-their-infrastructure-are-they-making-a-mistake/2012/03/31/gIQARtAhnS_blog.html>)

But before getting too excited about the magical powers of private firms, experts warn that there are potential pitfalls to these arrangements. For one, as Robert Puentes of Brookings noted in a recent [paper](http://www.brookings.edu/~/media/Files/rc/papers/2011/1208_transportation_istrate_puentes/1208_transportation_istrate_puentes.pdf%22%20%5Ct%20%22_blank)(pdf), these are complicated multi-decade financial arrangements. And “many states,” he notes, “lack the technical capacity and expertise to consider such deals and fully protect the public interest.” For another, the deals need to be structured wisely — in Maryland, for instance, Republicans [have warned](http://www.washingtonpost.com/local/md-politics/maryland-riding-wave-of-privatization/2012/03/24/gIQALZ0WaS_story.html) that certain provisions in the pending Senate bill could allow the government to circumvent the competitive bidding process. (The bill itself does, however, create several layers of review.) Moreover, a road that’s privately owned for 75 years has the potential to conflict with other public-policy goals. For instance, as a recent GAO [report](http://www.gao.gov/new.items/d04419.pdf%22%20%5Ct%20%22_blank) (pdf) found, four of the five privately-funded toll road projects in the last 15 years included non-compete clauses that prevented the government from building nearby roads. As Tim Lee [notes](http://www.theatlantic.com/business/archive/2012/03/the-mirage-of-free-market-roads/255167/), “real-world privatization schemes are often explicitly protectionist.” So what if a state, say, later decides that it wants to build a rail network that competes with the private road? All sorts of complications could arise. Plus, privatization can’t work everywhere. “It’s not a universal tool,” says Jonathan Peters, a professor of finance at the College of State Island who has studied these partnerships. There are plenty of roads in states like Montana, for starters, that don’t pay for themselves and would be unappealing to private investors. There are ways around this — Madrid, for one, [built its subway system](http://www.city-journal.org/2010/20_2_snd-subway-lessons.html) by offering formula-based subsidies to private firms, which still bore the risk of a shortfall in rider demand — but it’s trickier. Few transportation experts think we can fill our [multi-trillion-dollar infrastructure shortfall](http://www.washingtonpost.com/local/study-2-trillion-needed-for-us-infrastructure/2011/05/16/AFyppB5G_story.html) with private money alone.

### Public-private partnerships fail and won’t attract investment

**Reinhardt and Utt, 12** - William G. Reinhardt is editor and publisher of Public Works Financing. Ronald D. Utt, Ph.D., is Herbert and Joyce Morgan Senior Research Fellow in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation (“Can Public–Private Partnerships Fill the Transportation Funding Gap?,” 1/13, [http://www.heritage.org/research/reports/2012/01/can-public-private-partnerships-fill-the-transportation-funding-gap)//DH](http://www.heritage.org/research/reports/2012/01/can-public-private-partnerships-fill-the-transportation-funding-gap%29//DH)

Limited P3 Use to Date

While some P3s have succeeded in adding significant road capacity in a number of metropolitan areas in recent years, they remain a minor contributor to overall transportation infrastructure investment. According to a comprehensive 2011 review of P3s prepared for the American Road and Transportation Builders Association:[[5]](http://www.heritage.org/research/reports/2012/01/can-public-private-partnerships-fill-the-transportation-funding-gap%22%20%5Cl%20%22_edn5)

* Just eight states accounted for almost 75 percent of the total contract value ($54.3 billion) of P3 projects over the past 22 years;
* Only 11 of the P3 projects—totaling $12.4 billion—included a financing component;
* The P3 market share of all highway investment since 2008 is about 2 percent; and
* P3 projects, most of which are tolled express lanes next to existing freeways in heavily congested urban corridors, accounted for 11 percent of capital for new highway capacity under construction in 2011.

Thus, despite the successes beginning with Denver’s E-470 tollway in 1989, P3s are still a minor part of the surface transportation landscape. Opposition to tolling, opposition to private profits from operating public infrastructure, and concern over foreign investment in government assets in the U.S. have generated political opposition in some states. These challenges need to be overcome before the P3 concept can become a significant supplement to taxpayer funding.

As a consequence, policymakers should recognize that P3s are not the solution to the transportation infrastructure investment gap that threatens to undermine commerce in the United States. There are too few financially viable P3 projects to meet the national need for new highway capacity and to modernize existing roads. No amount of enabling legislation will bring private investors into projects that are not financeable, and very few highways could support themselves on tolls alone. Thus, some combination of gas taxes, sales taxes, fees, and appropriations of state funds is necessary to make a creditworthy public–private partnership.

### Privatization substantially increases costs – empirically

**Nyden, 11** – staff writer (Paul, Charleston Gazette, “Amtrak Privatization Foes Point to Britain,” <http://www.masstransitmag.com/news/10287477/amtrak-privatization-foes-point-to-britain>

But Gary Zuckett, executive director of West Virginia Citizen Action Group, called the proposal to privatize Amtrak using the British model "the wrong road to go down." "British privatization ended up costing taxpayers there even more money, after the railroads went bankrupt, than the public subsidies cost before privatization," Zuckett said. "Why are we proposing to go down the same road?" Zuckett added. "I agree with Congressman Rahall and Sen. Rockefeller that this is not a good idea. We need to support our rail system, not sell it off." Reconnecting America, a Washington, D.C.-based think tank that advocates for transit-oriented development, is working to preserve Amtrak. Today, heavily traveled, profitable rail lines in the Northeast help finance railroad lines in less populated areas throughout the United States. "Very few, if any, of the long-distance lines will attract private sector funding," said John Robert Smith, president and CEO of Reconnecting America. "The focus on privatizing the Northeast Corridor will weaken the existing national system ... Removing the profitable Northeast Corridor from the current system of shared benefits deprives the rest of the nation's rail system of critically needed operating assistance." In a report, Reconnecting America wrote that Mica's proposed changes were likely to "weaken or terminate the intercity rail connections that are the lifelines in small towns from Montana to West Virginia, as well as big cities such as Chicago and Los Angeles." Zuckett said the plan would "allow private entities to cherry pick the profitable lines and leave the other ones to flounder." "We need to keep Amtrak intact and support the whole system," he said. "It is good that profitable areas help areas like West Virginia and western states that really need rail service." The legislation proposed by House Republicans to privatize Amtrak would put it on sale to the highest bidder in the private market. Reconnecting America says the Republican-backed legislation would put at least 110,000 jobs at risk later this year. The group also compared Mica's proposed legislation to what happened in Great Britain. "The plan is very similar to the United Kingdom's attempt to privatize its rail network. Taxpayers had to bail out the infrastructure company and increase their annual subsidy to support the rail network," the group wrote in the report. "The system is now more expensive than before privatization." Reconnecting America predicts private investors in the U.S. would show little or no interest in investing money in railroads anywhere outside the Northeast. Amtrak has operated its rail system for more than 40 years sharing revenues between different regions in the country. As a result, Amtrak has political support from both conservative Southern Republicans and liberal Democrats along the Northeastern coast. In Great Britain, Railtrack, the railroad infrastructure and maintenance company, went bankrupt after five years of private ownership. "The taxpayer portion of passenger rail funding in the UK increased after privatization [and] proposed savings did not materialize," Reconnecting America stated in its report.

### Government labor costs are lower – unionization is irrelevant

**Keefe and Fine, 10** – \*associate professor of labor and employment relations, at the School of Management and Labor Relations, Rutgers University AND \*\* assistant professor in the School of Management and Labor Relations at Rutgers University's New Brunswick campus (Jeffrey and Janice, “In the Public Interest? Safeguarding New Jersey’s Public Investments,” 11/1,

<http://documents.scribd.com.s3.amazonaws.com/docs/8sldr9jt4wqpqcg.pdf?t=1289592554>

Although the Task Force never considered the potential benefits, there are large potential cost savings for in-sourcing currently privately contracted work. Government has a substantial advantage in supplying its own professional work since it pays its professional employees considerably less than the private sector, giving it a substantial economic cost advantage in providing professional services, such as engineering, law, informational technology and accounting.

While the Task Force did recognize the importance of public employee involvement in a competitive contracting process, it failed to understand employee and union incentives that motivate incumbent at-risk employees through their union to collaborate with public managers to improve service processes. These collaborations often result in internal efficiencies greater than those achieved through privatization. The federal government now requires a public incumbent employee bid for all competitive contracting processes. Federal employees have won 90% of all of these competitions.

## A2 Coercion – Link Turn

### Road centered transportation wastes taxes and risks higher taxes

Pollard, 4’ – Senior Attorney and Director, Land and Community Program at Southern Environmental Law Center (Trip, “Article: Follow the money: transportation investments for smarter growth,” Temple Environmental Law & Technology Journal, Spring, 2004, 22 Temp. Envtl. L. & Tech. J. 155)//AWV

Transportation infrastructure investments have brought a range of economic benefits, including reducing the costs of moving goods, generating employment, and increasing productivity. However, road-centered transportation approaches are exacting a tremendous economic cost. There is increasing evidence that sprawling development promoted by current transportation investments often does not pay for itself, and thus can burden taxpayers. n12 Although new development does bring additional tax revenues, far-flung growth often does not generate enough taxes to pay for the new roads, water lines, schools, and other infrastructure and services that need to be provided, leading to higher taxes or greater debt for states and localities. At the same time, infrastructure that taxpayers have already paid for may be underused or abandoned as development spreads outward.

### Ending road focused transportation is a more efficient use of tax revenue

Pollard, 4’ – Senior Attorney and Director, Land and Community Program at Southern Environmental Law Center (Trip, “Article: Follow the money: transportation investments for smarter growth,” Temple Environmental Law & Technology Journal, Spring, 2004, 22 Temp. Envtl. L. & Tech. J. 155)//AWV

Current transportation policies and infrastructure decisions are producing a poor rate of return on an enormous investment of tax dollars. There are alternatives. New transportation approaches are being developed that reduce subsidies for sprawl and motor vehicle use and move toward a more balanced portfolio of transportation investments, investments that are less damaging to the environment and to public health, provide more efficient mobility and access, and promote stronger communities and long-term economic growth. n33 [\*164] The mounting problems accompanying current transportation and development patterns have led to increased public concern, creating pressure for change and significant opportunities to promote new approaches.

### Urban sprawl results in an increased tax burden

Clean Water Action Council, 2002 – Wisconsin environmental organization (N/A, “Land Use & Urban Sprawl,” Clean Water Action Council, 2002, http://www.cwac.net/landuse/index.html)//AX

3. Increased Tax Burden --- The costs of providing community services have skyrocketed as homes and businesses spread farther and farther apart, and local governments are forced to provide for widely spaced services. Owners of these dispersed developments seldom pay the full government costs of serving them, forcing the rest of us to subsidize them with higher taxes at the local, state and federal level. An example: a master plan for the State of New Jersey evaluated conventional sprawl growth patterns against a mix of "infill" development, higher density concentrated new development and traditional sprawl. The projected differences are large. Infill and higher density growth would result in a savings of $1.18 billion in roads, water and sanitary sewer construction (or more than $12,000 per new home) and $400 million in direct annual savings to local governments. Over 15 years, it amounts to $7.8 billion. This does not take into account reductions in the cost of other public infrastructure that result from "infill" growth: decreased spending on storm drainage, less need for school busing (and parent taxi service), fewer fire stations, and less travel time for police, ambulance, garbage collection, and other services.

## A2 Coercion – Extinction o/w

### Extinction comes first

**Bok, 1988** [Sissela, Professor of Philosophy, Brandeis, “Applied Ethics and Ethical Theory,” Ed. David Rosenthal and Fudlou Shehadi]

The same argument can be made for Kant’s other formulations of the Categorical Imperative: “So act as to use humanity, both in your own person and in the person of every other, always at the same time as an end, never simply as a means”; and “So act as if you were always through actions a law-making member in a universal Kingdom of Ends.” No one with a concern for humanity could consistently will to risk eliminating humanity in the person of himself and every other or to risk the death of all members in a universal Kingdom of Ends for the sake of justice.To risk their collective death for the sake of following one’s conscience would be, as Rawls said, “irrational, crazy.” And to say that one did not intend such a catastrophe, but that one merely failed to stop other persons from bringing it about would be beside the point when the end of the world was at stake. For although it is true that we cannot be held responsible for most of the wrongs that others commit, the Latin maxim presents a case where we would have to take such a responsibility seriously—perhaps to the point of deceiving, bribing, evenkilling an innocent person, in order that the world not perish.

### Role of the ballot is to maximize the lives saved – we should never sacrifice individuals for abstract market values

**Cummisky 96** (David, professor of philosophy at Bates College, Kantian Consequentialism, pg. 145)

We must not obscure the issue by characterizing this type of case as the sacrifice of individuals for some abstract “social entity.” It is not a question of some persons having to bear the cost for some elusive “overall social good.” Instead, the question is whether some persons must bear the inescapable cost for the sake of other persons. Robert Nozick, for example, argues that to use a person in this way does not sufficiently respect and take account of the fact that he is a separate person, that his is the only life he has.” But why is this not equally true of all those whom we do not save through our failure to act? By emphasizing solely the one who must bear the cost if we act, we fail to sufficiently respect and take account of the many other separate persons, each with only one life, who will bear the cost of our inaction. In such a situation, what would a conscientious Kantian agent, an agent motivated by the unconditional value of rational beings, choose? A morally good agent recognizes that the basis of all particular duties is the principle that “rational nature exists as an end in itself” (GMM 429). Rational nature as such is the supreme objective end of all conduct. If one truly believes that all rational beings have an equal value, then the rational solution to such a dilemma involves maximally promoting the lives and liberties of as many rational beings as possible (chapter 5). In order to avoid this conclusion, the non-consequentialist Kantian needs to justify agent-centered constraints. As we saw in chapter 1, however, even most Kantian deontologists recognize that agent-centered constraints require a non-value-based rationale. But we have seen that Kant’s normative theory is based on an unconditionally valuable end. How can a concern for the value of rational beings lead to a refusal to sacrifice rational beings even when this would prevent other more extensive losses of rational beings? If the moral law is based on the value of rational beings and their ends, then what is the rationale for prohibiting a moral agent from maximally promoting these two tiers of value? If I sacrifice some for the sake for others, I do not use them arbitrarily, and I do not deny the unconditional value of rational beings. Persons may have “dignity, that is, an unconditional and incomparable worth” that transcends any market value ( GMM 436)., but persons also have a fundamental equality that dictates that some must sometimes give way for the sake of others (chapter 5 and 7). The concept of the end-in-itself does not support the view that we may never force another to bear some cost in order to benefit others. If one focuses on the equal value of all rational beings, the equal consideration suggests that one may have to sacrifice some to save many.

### Existence outweighs other impacts. It is necessary for the “I” that can behave ethically or create meaning

**Gelven, 1994** [Michael, Prof. Phil. – Northern Illinois U., “War and Existence: A Philosophical Inquiry”, p. 136-137]

The personal pronouns, like "I" and "We," become governed existentially by the possessive pronouns, like "ours," "mine," "theirs"; and this in turn becomes governed by the adjective "own." What is authentic becomes what is our own as a way of existing. The meaning of this term is less the sense of possession than the sense of belonging to. It is a translation of the German eigen, from which the term eigentlich (authentic) is derived. To lose this sense of one's own is to abandon any meaningfulness, and hence to embrace nihilism. To be a nihilist is to deny that there is any way of being that is our own; for the nihilist, what is one's own has no meaning. The threat here is not that what is our own may yield to what is not, but rather that the distinction itself will simply collapse. Unless I can distinguish between what is our own and what is not, no meaningfulness is possible at all. This is the foundation of the we-they principle. The pronouns in the title do not refer to anything; they merely reveal how we think. Like all principles, this existential principle does not determine specific judgments, any more than the principle of cause and effect determines what the cause of any given thing is. The we-they principle is simply a rule that governs the standards by which certain judgments are made. Since it is possible to isolate the existential meanings of an idea from the thinglike referent, the notions of we-ness and they-ness can be articulated philosophically. On the basis of this primary understanding, it is possible to talk about an "existential value," that is, the weight o. rank given to ways of existing in opposition to other kinds of value, such as moral or psychological values. But the principle itself is not, strictly speaking, a principle of value; it is an ontological principle, for its foundation is in the very basic way in which I think about what it means to be. The ground of the we-they principle is, quite simply, the way in which we think about being. Thus, it is more fundamental than any kind of evaluating or judging. One of the things that the authentic I can do, of course, is to concern itself with moral questions. Whether from a deontological sense of obligation or from a utilitarian projection of possible happiness, an I that considers these matters nevertheless is presupposed by them. Although authenticity and morality are distinct, a sense of who one is must precede a decision about how to act. Thus, the question of authenticity comes before the question of obligation. And since the worth of the I is generated from the prior worth of the we, it follows there can be no moral judgment that cancels out the worth of the I or the We. This is not to say that anything that benefits the we is therefore more important than what ought to be done. It is merely to say that any proper moral judgment will in fact be consistent with the integrity of the we. Thus, I would be morally prohibited from offending someone else merely for my own advantage, but no moral law would ever require me to forgo my existential integrity. This is true not only for moral questions but for any question of value whatsoever: all legitimate value claims must be consistent with the worth of the I and the We. It is only because my existence matters that I can care about such things as morality, aesthetics, or even happiness. Pleasure, of course, would still be preferable to pain, but to argue that one ought to have pleasure or even that it is good to have pleasure would simply reduce itself to a tautology: if I define pleasure as the satisfaction of my wants, then to say I want pleasure is tautological, for I am merely saying that I want what I want, which may be true but is not very illuminating. The existential worth of existing is therefore fundamental and cannot be outranked by any other consideration. Unless I am first meaningful, I cannot be good; unless I first care about who I am, I cannot genuinely care about anything else, even my conduct. To threaten this ground of all values, the worth of my own being, then becomes the supreme assault against me. To defend it and protect it is simply without peer. It is beyond human appeal or persuasion.

## A2 Coercion – Consequentialism O/W Libertarianism

### Their moral imperatives revolve around a flawed libertarian method- consequences must be evaluated first to escape the cycle

Friedman 97 (Jefferey, Political Science at Bernard University, "What's Wrong with Libertarianism," Critical Review, Volume: 3, pg 435-436)

The effect of libertarian straddling on libertarian scholarship is suggested by a passage in the scholarly appendix to Boaz’s collection of libertarian essays, The Libertarian Reader. There, Tom G. Palmer (also of the Cato Institute) writes that in libertarian scholarship, “the moral imperatives of peace and voluntary cooperation are brought together with a rich understanding of the spontaneous order made possible by such voluntary cooperation, and of the ways in which coercive intervention can disorder the world and set in motion complex trains of unintended consequences” (Boaz r997b, 416, emphasis added). Palmer’s ambiguous “brought together” suggests (without coming right out and saying) that even if there were no rich understanding of spontaneous order, libertarianism would be sustained by “moral imperatives?’ But in that case, why develop the rich understanding of spontaneous order in the first place, and why emphasize its importance now that it has been developed? Spontaneous order is, on Palmer’s own terms, irrelevant, since even if a rich understanding of it yielded the conclusion that markets are less orderly or less spontaneous than states, or that the quality of the order they produce is inferior to that produced by states, we would still be compelled to be libertarians by moral imperatives. The premise of the philosophical approach is that nothing can possibly trump freedom-cum-private property. But if libertarian freedom is an end in itself and is the greatest of all values, one’s endorsement of it should not be affected in the slightest by such empirical questions as whether libertarianism would spell starvation or warfare. The premise of the empirical approach is, conversely, that such consequences do matter.Why investigate the effects of libertarianism if they could not conceivably outweigh the putative intrinsic value of private property? If a priori reasoning tells us that laissez—faire capitalism is just, come what may, then why should we care to find out what may, in fact, come?

### Policy must be viewed through a consequentialist framework- slipping into the libertarian mindset only recreates the root cause of the affirmative harms

Friedman 97 (Jefferey, Political Science at Bernard University, "What's Wrong with Libertarianism," Critical Review, Volume: 3. pg 458-459)

On the one hand, the reclamation of the Enlightenment legacy can lead in far more directions than the political—science path I have suggested. It is surely important to launch anthropological, economic, historical, sociological, and psychological investigations of the preconditions of human happiness. And post-libertarian cultural historians and critics are uniquely positioned to analyze the unstated assumptions that take the place of the requisite knowledge in determining democratic attitudes. A prime candidate would seem to be the overwhelming focus on intentions as markers for the desirability of a policy. If a policy is well intended, this is usually taken to be a decisive consideration in its favor. This heuristic might explain the moralism that observers since Tocqueville have noticed afflicts democratic cultures. To date, this phenomenon is relatively unexplored. Analogous opportunities for insightful postlibertarian research can be found across the spectrum of political behavior. What is nationalism, for example, if not a device that helps an ignorant public navigate the murky waters of politics by applying a simple “us-versus-them” test to any proposed policy? Pursuit of these possibilities, however, must be accompanied by awareness of the degeneration of postwar skepticism into libertarian ideology**.** If the post-libertarian social scientist yields to the hope of re-establishing through consequentialist research the antigovernment politics that has until now been sustained by libertarian ideology; she will only recreate the conditions that have served to retard serious empirical inquiry. It is fashionable to call for political engagement by scholars and to deny the possibility that one can easily isolate one’s work from one’s political sympathies**.** But difficulty is no excuse for failing to try. Libertarians have even less of an excuse than most, since, having for so long accused the intellectual mainstream of bias and insulation from refutation, they should understand better than anyone the importance of subverting one’s own natural intellectual complacency with the constant reminder that one might be wrong. The only remedy for the sloppiness that has plagued libertarian scholarship is to become one’s own harshest critic. This means thinking deeply and skeptically about one’s politics and its premises and, if one has libertarian sympathies, directing one’s scholarship not at vindicating them, but at finding out if they are mistaken.

### Political responsibility requires an examination of consequences.

Isaac, 2002 [Jeffrey, James H. Rudy Professor of Political Science and director of the Center for the Study of Democracy and Public Life at Indiana University, Bloomington, Dissent, vol. 49, no. 2, Spring]

As writers such as Niccolo Machiavelli, Max Weber, Reinhold Niebuhr, and Hannah Arendt have taught, an unyielding concern with moral goodness undercuts political responsibility. The concern may be morally laudable, reflecting a kind of personal integrity, but it suffers from three fatal flaws: (1) It fails to see that the purity of one's intention does not ensure the achievement of what one intends. Abjuring violence or refusing to make common cause with morally compromised parties may seem like the right thing; but if such tactics entail impotence, then it is hard to view them as serving any moral good beyond the clean conscience of their supporters; (2) it fails to see that in a world of real violence and injustice, moral purity is not simply a form of powerlessness; it is often a form of complicity in injustice. This is why, from the standpoint of politics--as opposed to religion--pacifism is always a potentially immoral stand. In categorically repudiating violence, it refuses in principle to oppose certain violent injustices with any effect; and (3) it fails to see that politics is as much about unintended consequences as it is about intentions; it is the effects of action, rather than the motives of action, that is most significant. Just as the alignment with "good" may engender impotence, it is often the pursuit of "good" that generates evil. This is the lesson of communism in the twentieth century: it is not enough that one's goals be sincere or idealistic; it is equally important, always, to ask about the effects of pursuing these goals and to judge these effects in pragmatic and historically contextualized ways. Moral absolutism inhibits this judgment. It alienates those who are not true believers. It promotes arrogance. And it undermines political effectiveness. WHAT WOULD IT mean for the American left right now to take seriously the centrality of means in politics? First, it would mean taking seriously the specific means employed by the September 11 attackers--terrorism. There is a tendency in some quarters of the left to assimilate the death and destruction of September 11 to more ordinary (and still deplorable) injustices of the world system--the starvation of children in Africa, or the repression of peasants in Mexico, or the continued occupation of the West Bank and Gaza by Israel. But this assimilation is only possible by ignoring the specific modalities of September 11. It is true that in Mexico, Palestine, and elsewhere, too many innocent people suffer, and that is wrong. It may even be true that the experience of suffering is equally terrible in each case. But neither the Mexican nor the Israeli government has ever hijacked civilian airliners and deliberately flown them into crowded office buildings in the middle of cities where innocent civilians work and live, with the intention of killing thousands of people. Al-Qaeda did precisely this. That does not make the other injustices unimportant. It simply makes them different. It makes the September 11 hijackings distinctive, in their defining and malevolent purpose--to kill people and to create terror and havoc. This was not an ordinary injustice. It was an extraordinary injustice. The premise of terrorism is the sheer superfluousness of human life. This premise is inconsistent with civilized living anywhere. It threatens people of every race and class, every ethnicity and religion. Because it threatens everyone, and threatens values central to any decent conception of a good society, it must be fought. And it must be fought in a way commensurate with its malevolence. Ordinary injustice can be remedied. Terrorism can only be stopped. Second, it would mean frankly acknowledging something well understood, often too eagerly embraced, by the twentieth century Marxist left--that it is often politically necessary to employ morally troubling means in the name of morally valid ends. A just or even a better society can only be realized in and through political practice; in our complex and bloody world, it will sometimes be necessary to respond to barbarous tyrants or criminals, with whom moral suasion won't work. In such situations our choice is not between the wrong that confronts us and our ideal vision of a world beyond wrong. It is between the wrong that confronts us and the means--perhaps the dangerous means--we have to employ in order to oppose it. In such situations there is a danger that "realism" can become a rationale for the Machiavellian worship of power. But equally great is the danger of a righteousness that translates, in effect, into a refusal to act in the face of wrong. What is one to do? Proceed with caution. Avoid casting oneself as the incarnation of pure goodness locked in a Manichean struggle with evil. Be wary of violence. Look for alternative means when they are available, and support the development of such means when they are not. And never sacrifice democratic freedoms and open debate. Above all, ask the hard questions about the situation at hand, the means available, and the likely effectiveness of different strategies. Most striking about the campus left's response to September 11 was its refusal to ask these questions. Its appeals to "international law" were naive. It exaggerated the likely negative consequences of a military response, but failed to consider the consequences of failing to act decisively against terrorism. In the best of all imaginable worlds, it might be possible to defeat al-Qaeda without using force and without dealing with corrupt regimes and political forces like the Northern Alliance. But in this world it is not possible. And this, alas, is the only world that exists. To be politically responsible is to engage this world and to consider the choices that it presents. To refuse to do this is to evade responsibility. Such a stance may indicate a sincere refusal of unsavory choices. But it should never be mistaken for a serious political commitment.

## Politics Links – Bipart

### Transportation bill proves mass transit is bipartisan

The Hill 12 (Russell Berman and Keith Laing, “House unlikely to vote on reworked highway bill upon return from recess” 2-25-12 http://thehill.com/blogs/transportation-report/infrastructure/212545-house-unlikely-to-vote-on-highway-bill-upon-return-from-recess)

Senate Majority Leader Harry Reid (D-Nev.) plans to open the amendment process again on Monday, according to his office, and hopes to reach an agreement with Senate Minority Leader Mitch McConnell (R-Ky.) as early as Tuesday on which amendments to allow. Republican leaders in the House, meanwhile, split up and then delayed the transportation measure last week after it became clear they could not wrangle enough GOP votes to pass it. Conservatives complained about the high cost, while Republicans from urban and suburban districts opposed cuts to Amtrak and changes to the long-term funding of mass transit. As of late last week, Rep. John Mica (R-Fla.), the chairman of the Transportation and Infrastructure Committee, told reporters he still expected the bill to pass the House without wholesale changes. But party leaders finally came to the conclusion that even with an open amendment process on the floor, that was not going to happen. “The ship was sinking, and they kept trying to save it,” a senior GOP aide said. While the overall reduction in spending could attract some conservative votes, the aide said Friday the changes were designed to win support from about 15 to 25 Republicans concerned about cuts to mass transit, along with at least some Democrats. The proposal to de-link mass transit money from the highway trust fund will be removed, and Republicans are likely to drop a measure that would offset the cost of the bill with changes to the federal employee pension program, the senior GOP aide said.

### Post the transportation bill mass transit is bipartisan

Nadler 12 - U.S. Rep. Jerrold Nadler represents New York’s 8th Congressional District (http://www.bensonhurstbean.com/2012/02/nadler-hails-republican-reversal-on-mass-transit-funding/)

Bensonhurst Bean recently ran several posts on an attempt by Republicans in the U.S. House of Representatives to cut funding for mass transit from a federal transportation bill. A bi-partisan group in Congress wrote an amendment to restore transit funding to the bill, which Rep. Nadler introduced. Nadler put out a press release yesterday applauding reports that House Republicans are revising the measure, known as H.R. 7, to once again include dedicated funding for mass transit: “I am encouraged by reports that House Republicans are backing off their plans to dismantle transit funding,” Nadler told reporters. “If these reports are true, I am pleased that our efforts to stop devastating transit cuts were successful. However, there are many Republicans in Congress who are clearly against transit and they may try this again. We must remain vigilant and keep the pressure on to protect transit funding. Even with the proposed fix to transit, I remain concerned about many other aspects of this bill. I now call on the Republicans to reach across the aisle, as we have always done in the Transportation Committee, and develop a bipartisan bill that we can all support to meet our nation’s infrastructure needs and create jobs.”

### Public transit is not a partisan issue

Wronski 12 (Richard, “Mass transit fund debate splits GOP Congress members”, 2-15-12, http://articles.chicagotribune.com/2012-02-15/news/ct-met-congress-transit-funding-20120214\_1\_mass-transit-transportation-bill-highway-trust-fund)

With the Chicago area highly dependent on federal money for public transportation, transit agencies are calling on local Congress members to keep the status quo. In addition to the Democrats, two of the seven GOP representatives — Judy Biggert and Robert Dold — say they will not support the measure. Rep. Peter Roskam favors the bill, while Joe Walsh, Adam Kinzinger, Randy Hultgren and Don Manzullo have yet to say how they will vote. "When we look at transportation infrastructure, this is not a Republican or a Democratic issue. It's an American issue," Dold said Monday, speaking at the same news conference as Lipinski.

## Politics Links – Jobs

### Jobs policies are bipartisan

The New York Times 12 (Jonathan Weisman, “Republicans to Push Bill in an Effort to Add Jobs”, 3-6-12, http://www.nytimes.com/2012/03/07/us/politics/republicans-to-push-bill-in-an-effort-to-add-jobs.html?pagewanted=all)

WASHINGTON — House Republicans will try this week to get back on the political message they want, job creation, and they are getting some help from President Obama and the Senate Democratic leadership, who share the need to appear cooperative on legislation to boost hiring.

## Politics Links – Manufacturing

### Manufacturing policies are bipartisan

Gallup 11 (Frank Newport, “Republicans, Democrats Disagree on Gov't Role in Creating Jobs”, 10-21-11, http://www.gallup.com/poll/150236/republicans-democrats-disagree-gov-role-creating-jobs.aspx)

The top recommendation among Republicans and Republican-leaning independents is keeping manufacturing jobs in the U.S., followed by less government involvement and lower taxes. Democrats and Democratic-leaning independents' top recommendation is spending more on infrastructure jobs, and then keeping manufacturing jobs in the U.S.

## Politics Links – GOP Likes

### GOP leadership supports mass transit

The Washington Post, 12 (Ashley Halsey III, “House GOP seeks mass transit deal to revive transportation bill”, http://www.washingtonpost.com/local/trafficandcommuting/house-gop-seeks-mass-transit-deal-to-revive-transportation-bill/2012/02/28/gIQAFK58fR\_story.html)

The House GOP leadership will try to broker a tricky deal to appease friends and foes of mass transit as they seek to revive a stalled long-term transportation bill. “We’re trying to cobble together the different factions to get enough votes to pass it,” House Transportation Committee Chairman John L. Mica (R-Fla.) said Tuesday, describing his Monday meeting with House Speaker John A. Boehner (R-Ohio). “We do not have a plan yet. We have five [or] six options we’re considering.”

### The Tea Party can shut up – Reagan loved mass transit

New York Daily News 12 (“Derail this Bill”, 2-7-12, http://articles.nydailynews.com/2012-02-07/news/31035827\_1\_mass-transit-mass-transportation-gasoline-tax)

That’s how things were before 1983, when Republican hero President Ronald Reagan signed into law a measure that guaranteed mass transit nationally a slice of gasoline tax collections. Doing so, Reagan enabled the MTA to end the days of undependable rolling stock, deteriorating stations and dicey rails and tunnels.

## Politics Links – Lobby

### Transit lobby and business lobby can generate massive GOP support for mass transit

Wolfe 12 – Politico Pro’s senior transportation & infrastructure reporter, formerly Editor of CQ's Executive Briefing for transportation (Kathryn A., “Transit funding: GOP plan appears squashed”, The Politico, 4-17-12, <http://www.politico.com/news/stories/0412/75221.html>) // AWV

Almost everything about the House’s transportation bill seems up in the air except this: The changes to transit funding that Republicans originally proposed have been squashed. It’s a measure of how effective the transit lobby was at marshaling opposition to the original bill and how ingrained in communities transit has become regardless of politics or location. But it also suggests a fundamental political miscalculation with the Highway Trust Fund that’s ended up costing House Speaker John Boehner (R-Ohio) and his leadership team a significant amount of time and credibility, which they can ill afford, particularly considering that the Senate, though usually coy, has already passed its own bill. In recent history, about 20 percent of gas tax revenues that went to the Highway Trust Fund, which mostly pay for highway infrastructure, have been funneled into federal transit projects. Currently, out of the 18.4 cents per gallon tax on gas, 2.86 cents goes into the transit account. When the House GOP finally revealed its transportation bill earlier this year, it contained a change that would have kicked transit out of its dedicated share of the Highway Trust Fund. Essentially, Republicans wanted to stop shoveling gas tax money to transit and instead fund transit over the five-year life of the transportation bill by making a one-time $40 billion transfer from the general fund. That, in turn, was to be paid for with one-time revenues from changes to federal employee pensions. But that move set off alarm klaxons all along the Beltway. “I knew from the get-go” what the GOP was trying to do, said a lobbyist for a major city’s transit agency. “As soon as I saw they were going to do that, I started emailing.” Other cities’ transit agencies mobilized, too, with a single goal: to make removing mass transit from the Highway Trust Fund “the ultimate poison pill of transportation politics,” the lobbyist said. Energized, the transit lobby began working suburban Republicans in and around big cities that depend on mass transit — including New York, Chicago and Philadelphia — and Boehner had a problem not only with Democrats but with a significant segment of his own party. “The transit part lost 20, 30 [GOP] members,” said one House GOP aide. The defection included New York Republican Reps. Peter King, Chris Gibson, Bob Turner, Michael Grimm and Nan Hayworth; Ohio Republican Rep. Steve LaTourette; and Pennsylvania Republican Rep. Mike Fitzpatrick, among others. The business lobby — traditionally a core Republican constituency — also was unhappy with the move. The Partnership for New York City spearheaded a letter campaign that attracted support from blue-chip companies — such as Macy’s, American Express, Hearst Corp., Aetna, Viacom, Bloomberg, Ernst & Young, Citigroup and others. In a letter to the House GOP leadership, the companies said the transit change would result in “irreparable damage to the transportation infrastructure of New York and America’s other great cities.” They asked lawmakers to send the bill back to the committee for a rewrite. The U.S. Chamber of Commerce also signed on to a letter opposing the funding changes to transit — although they eventually reversed course and signed another letter saying they supported the bill in its entirety. Jim Oberstar, former chairman of the House Transportation and Infrastructure Committee, said Republicans “got the message from home that we like transit, and especially those in New York and generally the New England region who said if we vote to terminate transit, we’re not coming back here.”

## Politics Links - Unpopular

### The plan would be massively unpopular

Worthen, 11 – Resource Architect for Sustainability at the American Institute of Architects, (Bill, “Putting the Masses Behind Mass Transit”, Reuters, 3-30-11, <http://www.reuters.com/article/2011/03/30/idUS188765760220110330>)//AWV

It's no secret that Americans are in love with the automobile. Yet, this heavy reliance on autos is taking a toll on the country's flawed transportation system. Fluctuating gas prices, rising everyday living costs, environmental concerns and an aging infrastructure further tax our transportation system and suggest that it's time to reconsider this long-standing love affair with cars. We're reaching the limits of our capacity and density regarding transportation. Anyone who commutes to work via automobile is likely well-versed in the frustrations caused by traffic, highway degradation and other problems. Yet across the nation we see a real resistance to mass transit. From New Jersey Governor Chris Christie's decision last fall not to build a second commuter rail line into Manhattan, to the current debate whether to connect Tampa and Orlando, Fla., via high speed rail, mass transit projects often struggle to gain a foothold in the U.S. Negative associations with massive infrastructural changes, such as Alaska's much-maligned "Bridge to Nowhere" or the extra $12 billion cost to construct the "Big Dig" in Boston, have impacted government funding and public support for mass transit projects. Yet, imagine an America with 50 percent fewer vehicles on the road, where most people commute for work and pleasure by train, where parking garages sit empty because of the popularity of buses as a main source of transportation. As it stands today, this kind of future is hard to imagine.

### Mass transit unpopular; less than 3% of people ride it

10 News, 12 (“Report: Public Transit Unpopular Among Locals”, 1/24/12, 10 News, http://www.10news.com/news/30291681/detail.html)//JA

A new report obtained by 10News on Tuesday reveals astounding new numbers on how San Diegans get to work. There is new information about the popularity of public transit in the annual Quality of Life dashboard report issued by the research group Equinox Center. The report was released days after a state lawsuit critiquing the region's public transit. Local resident David Pettyjohn said he takes buses to work and school from Encinitas to Oceanside every day. "It's cheap transportation and saves me a lot of money on gas," said Pettyjohn. "That's why I do it." Pettyjohn is the exception. Whether by train, bus or trolley, commuters are not using public transit, according to figures crunched by the research group Equinox Center. The report said 76 percent of local residents drive to work alone in a vehicle and 10 percent carpool. Though some bike and some walk to work, a little more than 3 percent of local residents take public transportation. When compared to other cities, San Diego's public transit rates are higher than a city like Dallas. However, San Diego's rate is lower than cities such as Portland, Ore. and Los Angeles, which is at 6.15 percent. "We think of Los Angeles as being the ultimate car city, but more people are taking transit there," said Ann Tartre, the executive director of the Equinox Center. "I think it shows if a city like LA can tackle its transit issues, we can do that here too. There's definitely an impact. Other numbers show each of us is spending about 40 hours extra stuck in traffic per year. More traffic, of course, impacts pollution rates." The finding is one of many in the Equinox Center's just-released Quality of Life dashboard report, which provides a snapshot of issues ranging from trash and water to land use. "With this being an election year, we're hoping the dashboard will be a tool for residents and candidates on some issues they care about to see how we are doing on those issues," said Tartre.

### Transportation Bill Proves Mass Transit Isn’t Popular with the Public or Government

**Billups, 12** - Originally from Hollis, Queens, Billups moved to Albany to attend the State University at Albany where she received her Bachelor of Arts. Erin Billups joined Time Warner Cable's Washington D.C. Bureau at its launch in July 2011. Prior to covering Washington, Billups covered Albany politics for NY1 News. Before working for NY1, Billups was the political reporter for Time Warner Cable's upstate newschannels and its political show, Capital Tonight (Erin, “Washington Beat: MTA Leader Concerned As House Republicans Stall $260B Transportation Bill” 2/22/12, NY1, http://www.ny1.com/content/news\_beats/political\_news/156475/washington-beat--mta-leader-concerned-as-house-republicans-stall--260b-transportation-bill)//JA

Unable to garner the needed votes, the House’s Republican leadership delayed consideration of a $260 billion transportation bill last week, promising to address some of the nearly 300 amendments submitted by members on both sides of the aisle, including several from New York's congressional delegation. "I think that the drafters go back to the drawing board and they recognize that we have some issues that we can't just overlook," said Staten Island-Brooklyn Representative Michael Grimm. Highways, roads, bridges and mass transit have been partially funded for 30 years through the U.S. Highway Trust Fund, which has been financed through the gas tax. The House bill removes mass transit from that fund, and a spokesman says it refocuses the original purpose of the trust fund — maintaining the highways. During a call with transit officials from across the country, Metropolitan Transportation Authortiy Chairman Joseph Lhota said without dedicated funding his agency is in serious trouble. "That billion dollars in funding is used to buy rail stock and switching and signaling equipment, critical to maintaining our system in a state of good [repair](http://www.ny1.com/content/news_beats/political_news/156475/washington-beat--mta-leader-concerned-as-house-republicans-stall--260b-transportation-bill)," said Lhota. House Republicans right now are trying to find $40 billion to fund mass transit for the next five years, but so far are falling short. "It doesn't look like in this era, public transit will get as much money from the general fund as it's gotten from the Highway Trust Fund," said Urban Institute Infrastructure Initiative Director Sandra Rosenbloom. A spokesman for the House’s transportation committee says at this point they still plan to move forward with the bill, though they are considering some revisions. Meanwhile, Democrats are doubtful Republicans are taking their concerns into account. "We are not, in New York, going to be satisfied and think that our needs are taken care of. The Republicans who have the majority, they have shown no desire to work in a bipartisan basis," said Democratic Congressman Eliot Engel of the Bronx. The transportation bill may be brought up for consideration when lawmakers return to Washington next week.