### Urban Mass Transit Affirmative

\*\*\*1AC\*\*\*…………………………….……………………………………………………………………………2

\*\*\*Inherency/SQ Fails\*\*\*…………………………………………………………………… …………………..19

\*\*\*Solvency\*\*\*…………………………………………………………………………………………………...23

\*\*\*Economy Adv \*\*\*……………………………………………….……………………………………………26

\*\*\*Warming Adv\*\*\*…… ……………………………………………………………………………………….41

\*\*\*Sustainable Communities Adv \*\*\*…………………… .…………………………………………………….48

\*\*\*Answers to\*\*\*………………………………………...………………………………………………………57

##  \*\*\*1AC\*\*\*

### Plan Text

#### Text: The United States federal government should substantially increase its transportation infrastructure investment in urban mass transit.

### Contention One: Inherency/Status Quo

#### Status quo transportation policy is unsustainable – urban mass transit system is seriously underfunded and crumbling despite rising populations in vital metropolitan regions.

Neal R. Peirce Transportation funding: Transit systems drive our future Published: Monday, October 24, 2011, 4:15 AM http://www.oregonlive.com/opinion/index.ssf/2011/10/transportation\_funding\_transit.html

Why should we spring for the multibillions of hard-to-find dollars that the experts say are necessary to patch up America's essential -- but often deteriorating -- public transportation systems? It's straightforward, argues the New York-based Regional Plan Association (RPA). Transportation, it asserts, isn't just a question of patching a few potholes or cleaning dirty subway cars. It's a matter of the national future -- whether our economy hums or shrinks, carrying our standard of living down with it. Illustrating its point, RPA cites the case of America's top 10 transit regions, among them New York, Los Angeles, Chicago, Boston and Atlanta. Collectively, the 10 regions represent a third of America's economic output and a quarter of our population. And they're projected to grow 26 percent --90 million people -- in the next 30 years. But most of them are seriously in arrears in vital transit system maintenance and upgrading. That's dangerous because today's congested roadways have made transit indispensable to people's movements and the regions' economies. And that's not just true for New York, long America's transit leader, which went through a "near-death experience" in its fiscal crisis of the 1970s. It later recouped with massive transit investments, yet now lacks a transit capital program for the next three years. In Chicago, where the transit system provides more than a half billion rides a year, funding is so thin that about 40 percent of the stations and 68 percent of its railcars are technically past their useful life. In Boston, just paying off the debt service on bonds equals all fare revenues. Atlanta's MARTA system will see its backlog of essential system upgrading rise from $1.3 billion to $3 billion if the region fails to pass a transportation referendum in autumn 2012. Overall, RPA board chair Elliott "Lee" Sander told a Washington Post Live conference on transportation this month, the transit backlog of the top cities is about $50 billion -- with only $5.4 billion a year being spent to deal with it. Let the transit systems slip too far, the RPA warns, and future development will be diverted to outer-ring suburbs accessible only by highways, adding to congestion and energy consumption" -- a "failure profound for the United States in terms of global competitiveness, job growth, livability, equity and climate change."

#### Despite an increase in ridership, mass transit does not have proper funding to be successful.

Marisol Bello, staff writer for USA TODAY. 12/8/2011. http://www.usatoday.com/news/nation/story/2011-12-07/mass-transit-ridership/51720984/1

People are turning to public transit as a less expensive option to high gas prices, which, he says, "All of us reach a threshold of pain in our commutes." Regular gasoline averaged $3.29 a gallon Wednesday, up 33 cents from a year ago, according to the Oil Price Information Service. About 60% of public transit riders are commuters going to and from work, Melaniphy says. More use mass transit trips in billions for the first nine months of each year. Source: American Public Transportation Association Data for the third quarter show no letup in the trend. Overall ridership was up 2% to 2.6 billion in July through September from a year earlier, and 162 of 210 transit agencies had increases. Still, the number of rides falls short of the third quarter of 2008 when ridership reached 2.73 billion. At that time, a gallon of regular gas hovered between $3.68 and $3.95 a gallon. The increase is part of an upward trend in transit ridership that has been taking place since the mid-1990s, says Bradley Lane, a professor of urban planning and transportation at the University of Texas at El Paso. He says transit agencies have focused on attracting riders who have other travel options by offering technology upgrades, such as apps that allow them to know when a bus or train will reach their station. The increase in riders comes as almost 80% of public transit agencies say they cut service or increased fares last year or are considering such moves because funding went down or stayed flat, according to a Transportation Association survey.

#### Money continues to pour into highway projects; while we starve transit of resources

Benjamin Ross is president of the Action Committee for Transit, a Maryland advocacy group,

and writes frequently in Dissent. Source: Dissent (00123846) Date: July 1, 2009

Another piece of common wisdom is all too true, however. The decline in highway user fees is placing a severe stress on transportation budgets. The stress is most severe in states with industrial economies—St. Louis recently eliminated more than a quarter of its transit service despite rising passenger counts. New York’s subway system, its ridership at a fifty-year peak, is threatened with service cuts as drivers in the outer boroughs resist proposals to impose tolls or “congestion charges” on streets and bridges they now use for free. The cause of this budget stress can be traced back to the lessened popularity of automobile travel. The shift in public preferences can be seen both in travel choices and in voters’ resistance to new automobile user fees, but it has not been reflected on the expenditure side of transportation budgets. Major highway construction projects continue, and many states are using federal stimulus money to build additional roads rather than catch up on backlogged maintenance. The combination of continued roadbuilding alongside shrinking user fee revenues has put transportation budgets in a vise. The public has spoken for a shift from autos to transit—indeed, it has spoken twice, with its feet and with its votes. But the political system has been hard of hearing. Money continues to pour into highway projects of marginal value while transit is starved of resources.

### Contention Two: Solvency

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

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

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.

#### Additional federal support and investment is key to the future of urban mass transit.

Transportation for America, 2009 STRANDED AT THE STATION

THE IMPACT OF THE FINANCIAL CRISIS IN PUBLIC TRANSPORTATION August 2009 http://www.t4america.org/docs/081809\_stranded\_at\_thestation.PDF

Financial support from states and localities is important, but they cannot do it on their own.

As with all transportation systems in the U.S. – whether highways, airports, or transit -- federal

policy and funding determine whether any given mode reaches its potential. Currently, the federal

government devotes 82 cents of every transportation dollar to roads and 18 percent to public

transportation. Federal policy requires local taxpayers to match each federal dollar for public

transportation with a dollar of their own, while requiring only a quarter match for roads. The

federal government provides formula funding to localities, but does not give them the flexibility

to spend it as needs dictate; rather, it requires them to spend on equipment and construction,

even if the pressing need is for money to preserve services in an economic downturn.

### Advantage \_\_\_ : Economy

#### Employment rates are stagnant now – key to the economy

AP 6/15/2012 “Unemployment rates rose or were unchanged in two-thirds of US states in May” http://www.washingtonpost.com/politics/unemployment-rates-rose-or-were-unchanged-in-two-thirds-of-us-states-in-may/2012/06/15/gJQADtELfV\_story.html

Unemployment rates rose in 18 U.S. states in May, the most in nine months. Increasing unemployment in more than a third of U.S. states is the latest evidence of a weaker job market. The Labor Department said that unemployment rates fell in only 14 states. That’s fewer than the previous month, when rates fell in 37 states. Rates were unchanged in 18 states. 0 Comments Weigh InCorrections? Personal Post Nationally, the rate rose to 8.2 percent in May from 8.1 percent in April, the first increase in almost a year. Employers added only 69,000 jobs, the fewest in 12 months. Still, 27 states added jobs in May. California gained the most, adding 33,900. Ohio was next with 19,600. North Carolina reported the biggest loss, shedding 16,500 jobs. It was followed by Pennsylvania, which lost nearly 10,000. Nevada had the nation’s highest unemployment rate, at 11.6 percent, followed by Rhode Island’s 11 percent and California’s 10.8 percent. North Dakota, meanwhile, reported the nation’s lowest rate of 3 percent. Nebraska had the next lowest, at 3.9 percent. Despite the slowdown in hiring in recent months, some of the hardest-hit states have seen substantial improvement in the past year. Michigan and Nevada have both seen their unemployment rates fall 2.1 percentage points in the past 12 months. Both states still have higher unemployment rates than the national average. But Michigan’s rate was 8.5 percent last month, down from 10.6 percent in May 2011. Florida and Mississippi have seen their rates fall 2 percentage points in the past 12 months. Florida’s rate was 8.6 percent, down from 10.6 percent in the same month last year. Mississippi’s is 8.7 percent, down from 10.7 percent in May 2011. Some of those declines reflect more hiring. The nation has gained more than 1 million jobs in the past six months. But the lower rates also are a result of more people becoming discouraged and dropping out of the work force. The government only counts people as unemployed if they are actively looking for work.

#### The U.S. manufacturing sector is at the tipping point – now’s key to revive the linchpin of the economy

Arvind Kaushal, Thomas Mayor, and Patricia Riedl Autumn 2011 “Manufacturing’s

Wake-Up Call” All authors are senior executives at booz&co, a leading global consulting firm.

A debate over the future of U.S. manufacturing is intensifying. Optimists point to the relatively cheap dol- lar and the shrinking wage gap between China and the U.S. as reasons the manufacturing sector could come back to life, boosting U.S. competitiveness and reviving the fortunes of the American middle class. Whenever production statistics in the U.S. surge, it seems to bol- ster that hope; as New York Times columnist and Nobel laureate Paul Krugman put it in May 2011, “Manufac- turing is one of the bright spots of a generally disap- pointing recovery.” But then when disappointing economic growth in- dicators are released, the pessimists weigh in. They ar- gue that the U.S. has permanently lost its manufactur- ing competitiveness in many sectors to China and other countries, that the sector is still declining after years of offshoring and neglect, and that it might never return to its role as the linchpin of the U.S. economy. Both the optimists and the pessimists are partially correct. U.S. manufacturing is at a moment of truth. Currently, U.S. factories competitively produce about 75 percent of the products that the nation consumes. A series of identifiable smart actions and choices by busi- ness leaders, educators, and policymakers could lead to a robust, manufacturing-driven economic future and push that figure up to 95 percent. Alternatively, if the U.S. manufacturing sector remains neglected, its output could fall by half, meeting less than 40 percent of the nation’s demand, and U.S. manufacturing capa- bilities could then erode past the point of no return.

#### Jobs are critical to immediate economic recovery and urban mass transit is the best way to create those jobs.

Adie Tomer, Elizabeth Kneebone, Robert Puentes, and Alan Berube Missed Opportunity: Brookings Institute, May 2012 Transit and Jobs in Metropolitan America 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 metropolitanareas 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 thatrecently opened light rail lines such as Charlotte and Phoenix also saw upticks, as did others that relyalmost 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 analysisrecommends using access to jobs and labor as a measure of the economic benefit of transportation tometropolitan areas.8 Transit also supplies travel choices for workers, and is thus especially importantto populations who depend on such service because they are too old or poor, or otherwise choose notto 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 transportationcompared with more car-dependent areas such as Nashville and Oklahoma City.9 In some metropolitanareas, transit can help workers avoid severe rush hour traffic congestion, and reduce the costs of their commutes relative to driving.

#### Dollars invested in mass transit provide tens of thousands of jobs and boosts urban economies.

APTA (American Public Transportation Association), March 2012 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 industrymanufacturers and their suppliers. These firms employ many people, whichfurther multiplies the effects of public transportation dollars when theseindividuals 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 costsand $17.9 billion on capital costs, which created and supported nearly 2million jobs.1Estimates of the number of jobs created by public transportation includethree 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 bythe 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.

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

Jonathan Michael Feldman From Mass Transit to New Manufacturing American Prospect; Apr2009, 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.

#### Global economic crisis causes war---strong statistical support—also causes great power transitions

Royal 10 – Jedediah Royal, Director of Cooperative Threat Reduction at the U.S. Department of Defense, 2010, “Economic Integration, Economic Signaling and the Problem of Economic Crises,” in Economics of War and Peace: Economic, Legal and Political Perspectives, ed. Goldsmith and Brauer, p. 213-214

Less intuitive is how periods of economic decline may increase the likelihood of external conflict. Political science literature has contributed a moderate degree of attention to the impact of economic decline and the security and defence behaviour of interdependent states. Research in this vein has been considered at systemic, dyadic and national levels. Several notable contributions follow. First, on the systemic level, Pollins (2008) advances Modelski and Thompson’s (1996) work on leadership cycle theory, finding that rhythms in the global economy are associated with the rise and fall of pre-eminent power and the often bloody transition from one pre-eminent leader to the next. As such, exogenous shocks such as economic crises could usher in a redistribution of relative power (see also Gilpin, 10981) that leads to uncertainty about power balances, increasing the risk of miscalculation (Fearon, 1995). Alternatively, even a relatively certain redistribution of power could lead to a permissive environment for conflict as a rising power may seek to challenge a declining power (Werner, 1999). Seperately, Polllins (1996) also shows that global economic cycles combined with parallel leadership cycles impact the likelihood of conflict among major, medium, and small powers, although he suggests that the causes and connections between global economic conditions and security conditions remain unknown. Second, on a dyadic level, Copeland’s (1996,2000) theory of trade expectations suggests that ‘future expectation of trade’ is a significant variable in understanding economic conditions and security behavior of states. He argues that interdependent states are likely to gain pacific benefits from trade so long as they have an optimistic view of future trade relations. However, if the expectation of future trade decline, particularly for difficult to replace items such as energy resources, the likelihood for conflict increases , as states will be inclined to use force to gain access to those resources. Crises could potentially be the trigger for decreased trade expectations either on its own or because it triggers protectionist moves by interdependent states. Third, others have considered the link between economic decline and external armed conflict at a national level. Blomberg and Hess (2002) find a strong correlation between internal conflict and external conflict, particularly during periods of economic downturn. They write, The linkages between internal and external conflict and prosperity are strong and mutually reinforcing. Economic conflict tends to spawn internal conflict, which in turn returns the favour. Moreover, the presence of a recession tends to amplify the extent to which international and external conflicts self-reinforce each other. (Blomberg & Hess, 2002, p.89). Economic decline has also been linked with an increase in the likelihood of terrorism (Blomberg, Hess, & Weerapana, 2004), which has the capacity to spill across borders and lead to external tensions. Furthermore, crises generally reduce the popularity of a sitting government. ‘Diversionary theory’ suggests that, when facing unpopularity arising from economic decline, sitting governments have increased incentives to create a ‘rally round the flag’ effect. Wang (1996), DeRouen (1995), and Blomberg, Hess and Thacker (2006) find supporting evidence showing that economic decline and use of force are at least indirectly correlated. Gelpi (1997) Miller (1999) and Kisanganie and Pickering (2009) suggest that the tendency towards diversionary tactics are greater for democratic states than autocratic states, due to the fact that democratic leaders are generally more susceptible to being removed from office due to lack of domestic support. DeRouen (2000) has provided evidence showing that periods of weak economic performance in the United States, and thus weak presidential popularity, are statistically linked to an increase in the use of force..

### Advantage \_\_\_ : Global Warming

**Urban mass transit is the single most effective strategy available to reduce the CO2 emissions that are the cause of global warming.**

Shapiro et al, 2002 Dr. Robert J. Shapiro is Managing Director of Sonecon, LLC, a non-resident Fellow of the Brookings Institution and the Progressive Policy Institute. He holds a Ph.D. and M.A. from Harvard University, an M.Sc. from the London School of Economics and Political Science, and an A.B. from the University of Chicago. 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.

#### Reducing transportation emissions is the key

**Union of Concerned Scientists 2012** (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.

#### Unmitigated warming causes extinction of humankind

**Mazo 2010** (Jeffrey Mazo, Managing Editor of Survival and Research Fellow for Environmental Security and Science Policy at the International Institute for Strategic Studies, March 2010, “Climate Conflict: How global warming threatens security and what to do about it”)

The best estimates for global warming to the end of the century range from 2.5-4.~C above pre-industrial levels, depending on the scenario. Even in the best-case scenario, the low end of the likely range is 1.goC, and in the worst 'business as usual' projections, which actual emissions have been matching, the range of likely warming runs from 3.1--7.1°C. Even keeping emissions at constant 2000 levels (which have already been exceeded), global temperature would still be expected to reach 1.2°C (O'9""1.5°C)above pre-industrial levels by the end of the century." Without early and severe reductions in emissions, the effects of climate change in the second half of the twenty-first century are likely to be catastrophic for the stability and security of countries in the developing world - not to mention the associated human tragedy. Climate change could even undermine the strength and stability of emerging and advanced economies, beyond the knock-on effects on security of widespread state failure and collapse in developing countries.' And although they have been condemned as melodramatic and alarmist, many informed observers believe that unmitigated climate change beyond the end of the century could pose an existential threat to civilisation." What is certain is that there is no precedent in human experience for such rapid change or such climatic conditions, and even in the best case adaptation to these extremes would mean profound social, cultural and political changes.

#### The threshold for probability is one percent

Strom 2007 (Robert – professor emeritus of planetary science at the University of Arizona, Hot House: Global Climate Change and the Human Condition, 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.

#### Even if global warming has a long timeframe, err affirmative. There is a psychological bias against long-term threats

Psychology Today, 12/28/2007 (10 Ways We Get the Odds Wrong, p. http://www.psychologytoday.com/print/24035)

We underestimate threats that creep up on us. Humans are ill-prepared to deal with risks that don't produce immediate negative consequences, like eating a cupcake or smoking cigarettes. As a result, we are less frightened of heart disease than we should be. Heart disease is the end result of actions that one at a time (one cigarette or one french fry) aren't especially dangerous. But repeated over the years, those actions have deadly consequences. "Things that build up slowly are very hard for us to see," says Kimberly Thompson, a professor of risk analysis at the Harvard School of Public Health. Obesity and global warming are in that category. "We focus on the short-term even if we know the long-term risk."

#### It also causes huge resource wars and is a conflict multiplier

**Klare 2006** (Michael Klare, professor of peace and world security studies at Hampshire College, March 10, 2006, “The Coming Resource Wars,” http://goo.gl/sPH9D)

It's official: the era of resource wars is upon us. In a major London address, British Defense Secretary John Reid warned that global climate change and dwindling natural resources are combining to increase the likelihood of violent conflict over land, water and energy. Climate change, he indicated, "will make scarce resources, clean water, viable agricultural land even scarcer" -- and this will "make the emergence of violent conflict more rather than less likely." Although not unprecedented, Reid's prediction of an upsurge in resource conflict is significant both because of his senior rank and the vehemence of his remarks. "The blunt truth is that the lack of water and agricultural land is a significant contributory factor to the tragic conflict we see unfolding in Darfur," he declared. "We should see this as a warning sign." Resource conflicts of this type are most likely to arise in the developing world, Reid indicated, but the more advanced and affluent countries are not likely to be spared the damaging and destabilizing effects of global climate change. With sea levels rising, water and energy becoming increasingly scarce and prime agricultural lands turning into deserts, internecine warfare over access to vital resources will become a global phenomenon. Reid's speech, delivered at the prestigious Chatham House in London (Britain's equivalent of the Council on Foreign Relations), is but the most recent expression of a growing trend in strategic circles to view environmental and resource effects -- rather than political orientation and ideology -- as the most potent source of armed conflict in the decades to come. With the world population rising, global consumption rates soaring, energy supplies rapidly disappearing and climate change eradicating valuable farmland, the stage is being set for persistent and worldwide struggles over vital resources. Religious and political strife will not disappear in this scenario, but rather will be channeled into contests over valuable sources of water, food and energy. Prior to Reid's address, the most significant expression of this outlook was a report prepared for the U.S. Department of Defense by a California-based consulting firm in October 2003. Entitled "An Abrupt Climate Change Scenario and Its Implications for United States National Security," the report warned that global climate change is more likely to result in sudden, cataclysmic environmental events than a gradual (and therefore manageable) rise in average temperatures. Such events could include a substantial increase in global sea levels, intense storms and hurricanes and continent-wide "dust bowl" effects. This would trigger pitched battles between the survivors of these effects for access to food, water, habitable land and energy supplies. "Violence and disruption stemming from the stresses created by abrupt changes in the climate pose a different type of threat to national security than we are accustomed to today," the 2003 report noted. "Military confrontation may be triggered by a desperate need for natural resources such as energy, food and water rather than by conflicts over ideology, religion or national honor." Until now, this mode of analysis has failed to command the attention of top American and British policymakers. For the most part, they insist that ideological and religious differences -- notably, the clash between values of tolerance and democracy on one hand and extremist forms of Islam on the other -- remain the main drivers of international conflict. But Reid's speech at Chatham House suggests that a major shift in strategic thinking may be under way. Environmental perils may soon dominate the world security agenda. This shift is due in part to the growing weight of evidence pointing to a significant human role in altering the planet's basic climate systems. Recent studies showing the rapid shrinkage of the polar ice caps, the accelerated melting of North American glaciers, the increased frequency of severe hurricanes and a number of other such effects all suggest that dramatic and potentially harmful changes to the global climate have begun to occur. More importantly, they conclude that human behavior -- most importantly, the burning of fossil fuels in factories, power plants, and motor vehicles -- is the most likely cause of these changes. This assessment may not have yet penetrated the White House and other bastions of head-in-the-sand thinking, but it is clearly gaining ground among scientists and thoughtful analysts around the world. For the most part, public discussion of global climate change has tended to describe its effects as an environmental problem -- as a threat to safe water, arable soil, temperate forests, certain species and so on. And, of course, climate change is a potent threat to the environment; in fact, the greatest threat imaginable. But viewing climate change as an environmental problem fails to do justice to the magnitude of the peril it poses. As Reid's speech and the 2003 Pentagon study make clear, the greatest danger posed by global climate change is not the degradation of ecosystems per se, but rather the disintegration of entire human societies, producing wholesale starvation, mass migrations and recurring conflict over resources. "As famine, disease, and weather-related disasters strike due to abrupt climate change," the Pentagon report notes, "many countries' needs will exceed their carrying capacity" -- that is, their ability to provide the minimum requirements for human survival. This "will create a sense of desperation, which is likely to lead to offensive aggression" against countries with a greater stock of vital resources. "Imagine eastern European countries, struggling to feed their populations with a falling supply of food, water, and energy, eyeing Russia, whose population is already in decline, for access to its grain, minerals, and energy supply." Similar scenarios will be replicated all across the planet, as those without the means to survival invade or migrate to those with greater abundance -- producing endless struggles between resource "haves" and "have-nots." It is this prospect, more than anything, that worries John Reid. In particular, he expressed concern over the inadequate capacity of poor and unstable countries to cope with the effects of climate change, and the resulting risk of state collapse, civil war and mass migration. "More than 300 million people in Africa currently lack access to safe water," he observed, and "climate change will worsen this dire situation" -- provoking more wars like Darfur. And even if these social disasters will occur primarily in the developing world, the wealthier countries will also be caught up in them, whether by participating in peacekeeping and humanitarian aid operations, by fending off unwanted migrants or by fighting for access to overseas supplies of food, oil, and minerals. When reading of these nightmarish scenarios, it is easy to conjure up images of desperate, starving people killing one another with knives, staves and clubs -- as was certainly often the case in the past, and could easily prove to be so again. But these scenarios also envision the use of more deadly weapons. "In this world of warring states," the 2003 Pentagon report predicted, "nuclear arms proliferation is inevitable." As oil and natural gas disappears, more and more countries will rely on nuclear power to meet their energy needs -- and this "will accelerate nuclear proliferation as countries develop enrichment and reprocessing capabilities to ensure their national security." Although speculative, these reports make one thing clear: when thinking about the calamitous effects of global climate change, we must emphasize its social and political consequences as much as its purely environmental effects. Drought, flooding and storms can kill us, and surely will -- but so will wars among the survivors of these catastrophes over what remains of food, water and shelter. As Reid's comments indicate, no society, however affluent, will escape involvement in these forms of conflict.

### Advantage \_\_\_: Sustainable Communities

#### Lack of mass transit promotes suburban sprawl; which harms the environment.

Anna Islam ,Brandon Lynn, and Bridget Maher 2008 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.

#### Sprawl disrupts photosynthesis --- causing extinction

Chandler 2000 (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. "

#### Failure to invest in urban mass transit and reliance on cars is the single largest source of air pollution.

WCN, 2006 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) Despite the fact that presently cars produce 1/2 as much carbon monoxide as they did twenty years ago, this has only had beneficial results within the confines 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.

#### 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

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

Fleischfresser 2011Channtal Fleischfresser (Worked for The Economist, WNET/Channel 13, Al Jazeera English, Wall Street Journal and Associated Press. Degrees from the University of Pennsylvania and the Columbia University Graduate School of Journalism.) 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.

## \*\*\*Inherency/SQ Fails ext\*\*\*

### Inherency / Status quo fails extension

#### Status quo is unsustainable – 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.

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

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

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.

#### SQ is unsustainable – too focused on highways and match program is backwards.

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

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.

## \*\*\*Solvency ext\*\*\*

### Solvency Extension

#### This evidence describes what urban mass transit capital needs are

Dianne S. Schwager, TCRP Senior program officer Cambridge Systematics, Inc 2008 STATE AND NATIONAL PUBLIC TRANSPORTATION NEEDS ANALYSIS http://www.apta.com/gap/policyresearch/Documents/transit\_needs\_studies.pdf

Urban public transportation capital needs are defined both by the requirements of updating or replacing the physical assets associated with the existing systems and with the physical assets associated with system expansion that are needed to serve an increase in riders. Public transportation needs estimates presented in this section are based on the following major components: • Replacement of bus and rail vehicles as they reach the end of their expected FTA recommended service life; • Major rehabilitation of bus and rail vehicles (midlife rebuilds) to maintain vehicles in proper and safe condition and to allow the fleet to remain fully usable until the end of its FTA recommended expected service life; • Elimination of the backlog of vehicle needs to bring the nation’s fleet into a state-of-good-repair; • Replacement and rehabilitation of other existing public transportation assets, including, but not limited to, bus and rail maintenance and yard facilities, stations, track, signals, switching systems, power generation, and distribution facilities, structures, and fare collection and communication systems and other associated capital equipment; • Expansion of the bus and rail vehicle fleet to accommodate increased ridership demands, provide new services, and reduce crowding on some existing systems; and • Expansion of other public transportation assets to accommodate increased ridership demands, including the construction of new fixed-guideway public transportation systems to serve high demand corridors.

#### 77.7 billion is necessary to bring mass transit into good repair (but this includes rural as well)

Jay Landers, 2010 Civil Engineering, October 2010 Vol. 80 Issue 10, p28-29. 2p.

An estimated $77.7 billion (in 2009 dollars) is needed to bring all U.S. mass transit assets to a “state of good repair,” according to a report released by the U.S. Department of Transportation’s Federal Transit Administration (fta) in July. Entitled National State of Good Repair Assessment, the report notes that nearly one-third of the nation’s mass transit assets are in either “marginal” or “poor” condition and that the condition of the assets is likely to decline further if additional funding is not forthcoming. The findings pertain to the “assets of all urbanized area and rural transit operators,” according to the report. In particular, the assessment calculated the reinvestment reinvestment needs associated with three modes: rail, “bus and related,” and joint assets. The rail mode comprises heavy rail, light-rail, commuter rail, automated guideways, and monorail. The mode referred to as bus and related consists of motor and trolley buses, van pool vehicles, and so-called demand response vehicles, which are dispatched to pick up passengers upon request. Finally, the joint assets mode includes such items as administrative facilities and support vehicles that are not used for generating revenue.

#### Investment backlog in public transportation is 77.7 billion dollars.

Jay Landers, 2010 Civil Engineering, October 2010 Vol. 80 Issue 10, p28-29. 2p.

The fta then calculated the level of investment that would be needed to rehabilitate or replace all of the assets that had scored below 2.5. The current investment backlog was found to total $77.7 billion, of which $59.2 billion involved the rail mode, the report states. The remaining $18.4 billion related to the bus and joint assets modes. Even if the backlog were eliminated, an annual average investment of $14.4 billion would be needed to maintain assets in a state of good repair, according to the report. Such a figure would require a significant boost to current expenditures for mass transit.

#### Mass transit should benefit from federal gas tax funds because it offers significant benefits to the functioning of the road network as well.

APTA, American Public Transportation Association, May 2012, Policy Development and Research, “public transportation protects americans from gas price volatility” www.apta.com

Contrary to attempts to separate public transportation, it clearly acts as part of the national transportation network, offering primary and redundant services that make the nation more economically efficient. Since its users are part of the national transportation network and often view public transportation as a supplement or alternative to highways—particularly in congested regions or during times of high gas prices—public transit should benefit from the same user fees used to fund our highway network. The correlation between gas prices and transit ridership shows that transit offers significant benefits to the functioning of the road network. This correlation suggests that public transportation should continue to receive funds from the motor fuels tax.

#### Investment backlog for mass transit is increasing.

Jay Landers, 2010 Civil Engineering, October 2010 Vol. 80 Issue 10, p28-29. 2p.

In 2009 the “actual level of investment in the rehabilitation, replacement, and improvement of the nation’s existing transit assets” ranged from $12 billion to $13 billion, the report states. Such a disparity between investment needs and actual investment levels suggests that the “investment backlog for the nation’s transit assets is increasing,” the report states. Meanwhile, if investment levels remain unchanged, the proportion of assets exceeding their useful service lives will jump from the current level of 16 percent to more than 30 percent by 2029.

#### Increasing the federal share of investment from 40% to 50% would provide needed money for expansion of transit services.

Joan Fitzgerald (professor and director of the graduate program in Law, Policy and Society and a Senior Research Fellow at the Kitty and Michael Dukakis Center for Urban and Regional Policy at Northeastern University) et al (including Lisa Granquist Ishwar Khatiwada Joe McLaughlin Michael Renner Andrew Sum) September 2010 Reviving the U.S. Rail and Transit Industry: Investments and Job Creation http://www.worldwatch.org/system/files/Reviving-the-US-Rail-and-Transit-Industry.pdf

Under this second scenario, the goal is to double U.S. transit ridership in 20 years. To do this, the consulting firm Cambridge Systematics estimates that the U.S. government (at all levels—federal, state, and local) would need to invest $60 billion annually.19 The federal government would need to increase its share of transit capital investments from 40 percent in 2008 to 50 percent, for an annual investment of $30 billion— a level that is consistent with the upper end of the $21–$32 billion range of federal spending recommended in the studies summarized in Table 6. Federal spending at this level would allow for a clearing of the investment backlog identified earlier as well as an expansion of transit services. Spending $30 billion annually on transit capital programs yields a federal budget of $180 billion over six years. Table 7 shows the outcome of applying the 2008 breakdown of transit capital spending provided in Table 4 to this $180 billion figure. Assuming that federal funding for capital projects covers 50 percent of total U.S. mass transit spending the figures presented inTable 7 can roughly be doubled, so that total (federal, state, and local) mass transit capital spending over six years would be $360 billion, or an average of $60 billion per year.

## \*\*\*Economy Advantage\*\*\*

### Urban mass transit key to jobs/economy

#### Mass transit investment helps the economy; increases competitiveness.

Transportation for America, 2009 STRANDED AT THE STATION

THE IMPACT OF THE FINANCIAL CRISIS IN PUBLIC TRANSPORTATION August 2009 http://www.t4america.org/docs/081809\_stranded\_at\_thestation.PDF

Public transportation costs money to operate—but it can save households and businesses thousands of dollars a year. It also generates profits, jobs, tax revenue, new development and redevelopment, and it enhances land values and economic competitiveness. Indeed, transit is one of the best investments we can make in difficult economic times. According to one study, every dollar invested in transit generates six dollars’ worth of economic activity.7 Every $10 million invested in transit operations, the same study found, can be expected to result in approximately 570 jobs and $32 million in sales for businesses. Moreover, as of 2006, transit agencies employed 369,000 Americans, a population greater than that of St. Louis, Pittsburgh or Tampa. The average annual salary for these employees was approximately $57,000,8 and positions in transit operations and maintenance are blue-collar, green jobs that cannot be outsourced. So, too, are construction jobs generated by building new transit lines and stations, vehicles, and maintenance facilities. Transit can also save families a great deal of money. One recent study found that, by avoiding auto-related costs such as fuel, parking, payments, insurance, and repair, the average American household can save close to $8,700 per year, or $724 per month,9 through transit use. This figure is unsurprising when you consider that the average annual cost to own and operate a car, according to the American Automobile Association, is nearly $10,000.10 The Center for Neighborhood Technology, meanwhile, has found that families living in “location efficient” areas where public transit is available spend as little as 15 percent of their household incomes on transportation—or about half as much as transportation can cost families in “inefficient” locations without transit.11 The savings made possible by transit are especially important to Americans in low-income households, many of whom are forced to drive by a lack of transit options. As of 2005, 73 percent of households below the federal poverty line had a car,12 and on average, working families making between $20,000 and $50,000 spend close to 30 percent of their household incomes on transportation—more than they spend on housing.13 Using Bureau of Labor Statistics data from 2003, however, researcher Todd Litman has found that low-income households without a car spend a significantly smaller percentage of their income on transportation than households with a car—several times smaller for households earning less than $30,000 a year.14 Of course, poor families can always save money by buying cheaper cars; but then cheaper cars are less reliable, so repair costs are higher, and workers can lose their jobs if their cars suddenly become unavailable and no transit alternative exists.

**Mass transit solves jobs, the economy, the environment, pays for itself, would be used, and is popular with the American people**

Fabiola Carrion, January 7, 2010. PSN's Broadband and Green Jobs Policy Specialist. Published online at http://www.progressivestates.org/news/dispatch/public-transit-best-vehicle-economic-recovery//jt

An overseen benefit of public transit is the creation and retention of sustainable jobs. On January 5, 2010, the Center for Neighborhood Technology, Smart Growth America, and U.S. PIRG released What We Learned from the Stimulus, a study that concluded that public transportation generates more jobs than highway construction, although highway construction received more American Recovery and Reinvestment Act funds than public transit. Public Transit as a Recession Fighter: In fact, the data showed that ARRA’s investment in public transportation produced twice as many jobs per dollar as investing in roads. For every billion dollars spent on public transportation, 16,419 jobs were created whereas only 8,781 jobs were produced for every billion dollars spent on projects for highways infrastructure programs. Another study conducted by the American Public Transit Association further concluded that 30,000 jobs are created when $1 billion is invested in public transportation. It is estimated that the average American household spends 19% of its income in transportation; in contrast, a resident who rides mass transit spends only 9% of his or her income on transportation. A 4% increase in transit ridership in 2008 demonstrates that public transportation an alternative to cope during the current economic crisis. Environmental protection is another important motive to switch from private to public transportation. The Urban Land Institute reports that transportation is the largest producer of carbon dioxide emissions in the United States. Numerous studies indicate that energy consumption decreases with transit use: investments in public transportation can reduce greenhouse emissions by 24% by 2050. Why Transit Gets the Most Jobs Bang for the Buck: What We Learned from the Stimulus outlines three primary reasons why public transit investment creates more stable jobs: (1) lesser expenses on land acquisition, (2) the complexities of the projects, and (3) maintenance of public modes of transportation. Jobs in public transportation are not only comprised of the installation of machinery, but also on their upkeep, dispatch, and operation. For every transportation-related device that is installed, at least four different job opportunities are created. Further, transit operations produce 72% more jobs than transit capital investment. In contrast to road construction, investment in transit transportation creates a stable job market. 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 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. Mass Transit is key to stop congestion – roads aren’t enough. Uddin, March 27, 2012. Dr. Waheed, Former UN expert, professor, consultant, and author of global infrastructure asset management. “Metros in the World: Providing clean mass transit, reducing congestion and car emissions, and improving safety are important considerations for implementing sustainable transport policies in cities.” <http://infrastructureglobal.com/metros-in-the-world-providing-clean-mass-transit-reducing-congestion-and-car-emissions-in-cities> //jt Dependence of our mobility and life style on fossil fuel consumption is definitely not sustainable. Fossil fuel sources are diminishing, greenhouse gas emissions are reaching to an extremely high level, and migration of people from rural areas to urban areas and mobility needs are all accelerating these adverse impacts on the environment. There is a strong need to implement sustainable transportation policies for reducing dependence on fossil fuel, resulting emissions, congestion, and crashes. Building more roads for relieving congestion due to car traffic is not a sustainable solution. Many cities are still trying to relieve congestion and accommodate higher rates of car ownership by building wider roads with more interchanges. But as the former mayor of Bogota, Enrique Peñalosa, said, “Trying to solve traffic problems by building more roads is like putting out a fire with gasoline.” Fossil fuel free electric-powered metro (including electric tramways/buses, subways, light rails, and railways) and biofuel transit busses are sustainable and efficient solutions for mobility needs in cities. These mass transit technologies replace hundreds of thousands of car trips reducing congestion, greenhouse gas emissions, and demand on transportation related fossil fuel consumption. As shown in these figures, many cities have implemented metro transport infrastructure and/or expanding their metro networks (data credit: Wikipedia).

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

Kathryn Phillips A stimulating investment - mass transit San Francisco Chronicle November 22, 2009 04:00 AM Copyright San Francisco Chronicle. All rights reserved. This material may not be published, broadcast, rewritten or redistributed. Sunday, November 22, 2009 transportation policy expert for the Environmental Defense Fund Read more: 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.

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

Weisbroad and Reno, 2009. Glen, researcher at the Economic Development Research Group, Inc. and Arlee, of Cambridge Systematics, Inc. “Economic Impact of Public Transportation Investment. Published online at <http://www.apta.com/resources/reportsandpublications/Documents/economic\_impact\_of\_public\_transportation\_investment.pdf> //jt

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).

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

Adie Tomer, Elizabeth Kneebone, Robert Puentes, and Alan Berube Missed Opportunity: Brookings Institute, May 2012 Transit and Jobs in Metropolitan America 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 forpolicymakers. Private sector employers already make location decisions based on a number offactors 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 toworkers and markets.Now, however, severe budget constraints and rapidly fluctuating energy prices and transportationcosts complicate the route to broader economic recovery. In the short run, transit agenciesface real threats of service cuts, delayed investments in both new capital projects and vehicles, anddeferred maintenance. Revenue declines are widespread and many agencies are already planning fareincreases and operating cuts to close yawning budget gaps. In some cases, these go along with numerousother cuts made in recent years. Only one of 64 transit agencies surveyed recently reported thatit has not had to reduce service or increase fares in response to larger fiscal challenges.66 Belt tighteningat 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 neighborhoodin these metros can reach 49 and 58 percent of the metro areas’ jobs, respectively, via transit. Bothmetro 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 reductionor elimination of certain transit services in these places. One analysis shows that the fundingreductions to the Milwaukee County system alone would make 25,000 currently served jobs “inaccessibleby transit” and would be directly burdensome to low-income workers. This would be on top of theestimated 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 severalcases, reductions in transit funding are probably inevitable, particularly as federal stimulus dollarsrun out. But these decisions must be made intelligently. Across-the-board cuts are politically appealingbecause they spread the pain, but they lack a strategic sense of which existing investments are mostimportant for enhancing job access. As states and regions strive to put Americans back to work, policymakersshould 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 impactsof 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 Whengasoline 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 fromjust 6 percent in 2004.70 The U.S. Energy Information Administration predicts average retail gasolineprices of nearly $4 per gallon for summer 2011, further squeezing transit budgets.71

#### Mass transit benefits the economy – creates jobs, promotes economic development, increases real estate values, reduces gas consumption, and saves families money.

EDF, 2012 The case for investing in transit Environmental Defense Fund http://www.edf.org/transportation/policy/transit-funding

The economic case for smart transit investmentTransit investments make sense economically, too (see map [PDF] showing the economic case for smart transit investment). Why? Smart transit investment:•Creates jobs, both short-term construction jobs and long-term operating jobs long after construction is over.•Promotes economic development and enhances real-estate values (see the American Public Transportation Association's studies and reports).•Provides more affordable access to jobs and connects employers to broader labor pools.•Reduces gasoline consumption, helping to keep money in the local economy rather than sending it overseas to oil-rich nations.

**Investment in mass transit helps the economy by reducing congestion and increasing productivity – for every dollar invested in public transportation, 4 dollars in economic returns are generated**.

APTA (American Public Transportation Association), March 2012 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 shiftingpeople away from their cars. And it can carry many people in a smallerspace on the street or along a corridor.For example, a single bus can carry 60 people and a full train car can carrymore than 1,600. A high quality rail or bus line can carry as many people asseven lanes of highway or 17 lanes of urban street.By moving more people in a smaller space, public transportation allowscities to increase their economic output while maintaining a smallerfootprint at lower cost of transportation infrastructure than would berequired without public transit. Cities can, therefore, achieve more growthfor less money with high quality public transportation.As previously discussed, public transit availability and density areinterconnected. “The locations of downtown office districts—often focusedon financial services and related business sectors—usually coincide withthe location of greatest public transportation availability and usage.”9For example, in the Washington, DC, metropolitan service area, 28 percentof the area’s tax base is located on 4 percent of the land area that is withinone-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 blocksof the Portland Streetcar line between 2001 and 2005. As a report on transitorienteddevelopment said of the Portland project: “Properties closest tothe 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 thatinvest in public transportation.In fact, investment in public transit generates business expansion andeconomic growth worth more than the monetary value of the initialinvestment. APTA estimates that every $1 billion invested in publictransportation produces $3.6 billion in added business sales volume,which in turn generates nearly $500 million in federal, state, and local taxrevenues. For every $1 invested in public transportation, $4 in economicreturns are generated.

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

Paul M. Weyrich and William S. Lind How Transit Benefits People Who Do Not Ride It:

A Conservative Inquiry October 2003 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.

#### Transit is needed in order to contribute the economy by better job access.

Alan Berube May 12, 2011 “Transit and Jobs: Better Than You Thought and Worse Than You Hoped” http://www.brookings.edu/up-front/posts/2011/05/12-transit-access-berube

Last fall, I left my rather antiquated PDA behind and finally joined the ranks of iPhone users (thank you, Brookings). An iPhone 4, no less. A lot about it was better than I ever imagined. Text messages in alternating color bubbles? Take a video and upload it straight to YouTube? Actually see HTML content in my emails? Are you kidding me?? But it’s not called an iEverything. It’s an iPhone. And so it’s rather ironic--but not surprising to the initiated (and the haters)--that the phone part is not exactly the device’s strong suit. (I joined before the whole Verizon thing, so that could have something to do with it.) Dropped calls are a not-infrequent fact of life now. And then there’s the whole typing thing … I’m getting used to it, but I do have to write emails a LOT more than, say, use Urbanspoon. I thought about all this as we were getting ready to unveil our new report today on transit and jobs in metropolitan America. My colleagues spent two years putting together a database of public transit systems--371 in total--that operate in the nation’s 100 largest metropolitan areas. We examined who in these metro areas has access to transit, and how many jobs you can reach via that transit in a reasonable amount of time. On one hand, transit covers more people than I thought it did. Fully seven in 10 working-age people in metro areas live within three-quarters of a mile of a transit stop. Despite massive suburbanization of the U.S. population in recent decades, transit is well within reach of most large-metro commuters. That was as pleasantly surprising as finding the app that allowed me to live-stream “This American Life” direct from WBEZ. At the same time, we shouldn’t celebrate transit for transit’s sake. Great, you’ve got a bus that goes through your neighborhood--where does it take you? How long does it take to get there? In particular, can it get you to your job … or the job that you want to have? That’s hardly the only reason people use transit, but it’s arguably the most important for the economic health of metro areas. And this is where the letdown occurs. We found that even if you give the typical metropolitan commuter a very generous 90 minutes to ride transit in one direction, she could reach less than one-third of the total jobs in her metro area. If you’re a less-skilled service worker--the type of person who might rely on transit--you can reach an even lower share of metropolitan jobs in the industries most likely to employ you. Whoops, dropped call. Like everything else in metro America, of course, there’s a lot of variation. If you’re in Chattanooga, for example, there a less than one-in-four chance that there’s any transit near you. If you’re in Honolulu, though, there’s probably a bus outside your front door. Right now. What that variation in metro experience—and the overall results—indicate is that this is about more than transit. You can have lots of transit, and still fail to reach a lot of regional jobs within a reasonable amount of time (Chicago, we’re looking in your direction). Conversely, you can have modest, unsexy transit and deliver workers from their homes to a majority of regional job centers efficiently (hello, Tucson). Transit simply must be part of a successful 21st century metropolitan economy, given rising energy prices, population growth, and the imperative to engage more people in the labor market whether or not they own a car. We simply can’t allow draconian state and local budget cuts to permanently rip the wires out of these systems. But transit can and should do much more to promote access to jobs. In part, that means coordinating much more closely between transportation, housing, and economic development planning. We talked about how to do that at today’s event with representatives from metro areas across the country, as well as Transportation Secretary LaHood and HUD Secretary Donovan. Bottom line--transit can’t be all flashy apps and high design (Take light rail to the ballpark! Live in a condo above a streetcar!). In an era of constrained fiscal and natural resources, we need to focus on how transit can best contribute to economic growth. Simply, it’s about jobs. Or as my big thumbs might type on that little screen, “oy’d snpiy kpnd.” Still working on it.

**Mass transit is necessary to get people to their jobs**.

Robert Puentes May 23, 2011 “Move It: How the U.S. Can Improve Transportation Policy Connecting Workers With Work” http://www.brookings.edu/research/opinions/2011/05/23-transportation-policy-puentes

 Finally, we have to make it easier for people to get to their jobs. Lower-income households depend more on transit than other households to access labor-market opportunity, due to the high costs of car ownership. Transit does a good job of getting into low-income neighborhoods, but it doesn't do so well connecting those riders to jobs, particularly lower-skilled jobs. In some metro areas, inner-city workers are cut off from suburban labor-market opportunities. In others, low-income suburban residents spend large shares of their income on owning and operating a car. Only about one-quarter of jobs in low- and middle-skill industries are accessible via public transit within 90 minutes for the typical metropolitan commuter, compared with one-third of jobs in high-skill industries. In Los Angeles, for example, 99% of low-income neighborhoods are served by transit. However, the typical resident can get to only 36% of jobs by transit. We need to give those lower-skilled workers more mobility and access to opportunity—which means more transportation choices. Governments need to think differently about the problem, to look at where jobs and workers are and figure out creative ways to bring them together. For an idea of the way ahead, consider Los Angeles. Under a far-reaching plan by Mayor Antonio Villaraigosa, the city will add and extend bus lines and create corridors to connect residential and commercial areas. The Westside Subway Extension will also include a station at Century City, one of the largest employment centers in the county. Congress could help on projects like this by working with states to speed up approvals. For example, states with very strong environmental review and planning processes—such as California—should be able to waive steps such as the draft environmental impact statement that the federal government requires. Another important step would be a national infrastructure bank. A quasipublic entity like the Tennessee Valley Authority or Amtrak, the bank would make loans to fund transportation projects that were important to the nation as a whole. It would have to not only further policy goals—as a federal agency would—but also demand from project sponsors the same assurances and rate of return that a bank would. It is not a silver bullet, but if designed and implemented appropriately, it would be a targeted mechanism to make critical new investments on a merit basis, while adhering to market forces and leveraging the private capital we know is ready to invest here in the U.S. The stakes are too high—for economic recovery and fiscal responsibility—to allow spending that does not result in real returns and put us on the path to long-term prosperity. But even in this moment of fiscal austerity and restraint, we need a playbook that stimulates job creation, takes advantage of private-sector entrepreneurship and financing, and puts us on a path to the Next American Economy. Transportation is a fundamental part of that.

#### Collapse of mass transit in key urban areas will destroy the US economy.

Neal R. Peirce Transportation funding: Transit systems drive our future Published: Monday, October 24, 2011, 4:15 AM http://www.oregonlive.com/opinion/index.ssf/2011/10/transportation\_funding\_transit.html

The stakes are nothing less, RPA President Robert Yaro insists, than reversing the disinvestment in the top regions that are so deeply dependent on transit: "These regions are the centers of the nation's entrepreneurship, economy and science. Letting them fail through mobility failure would take a big chunk of the nation's economy down with them. We can't let it happen." And there are real fears. "We're in danger of a slow agonizing slip to the bottom," Richard Sarles, CEO/general manager of the regional agency that runs the Washington region's Metro system, told the Post Live conference. "We have a $6 billion commitment" for improvement from the local governments, he said, "but without federal help that's just Band-Aid repairs" -- especially in a region expecting to add 1.5 million people in the next 30 years.

#### Investment in mass transit revitalizes the economy

Economic Policy Institute 2012 (David Cooper, EPI, “Assessing the economic benefits of increased investment in Los Angeles’s public transit infrastructure” June 2012) http://www.epi.org/publication/ib334-assessing-economic-benefits-transit-rail/

Much has been said about how increased infrastructure investment at the national level can help counteract the lingering effects of the Great Recession. Numerous studies have highlighted the United States’ enormous backlog of infrastructure needs (Heintz, Pollin, and Garrett-Peltier 2009), the high return to investment of this type of fiscal stimulus (Economic Development Research Group 2009), and the tremendous role that public investment has in improving and sustaining long-term economic health (Bivens 2012). Yet it is important to also recognize that well-targeted infrastructure investments can be used at the regional level to strengthen local economies and help revive regional industries where job losses were particularly severe. The Los Angeles County Metropolitan Transportation Authority (LA Metro) is in the process of undertaking the 30/10 Initiative, which “would accelerate construction of 12 key Metro expansion projects originally scheduled to be built over three decades— and complete them by 2019” (LA Metro 2010). This type of targeted public investment in transit infrastructure can significantly boost the regional economy over the near term and also provide myriad benefits to the region’s residents and businesses over the long term.

#### Cuts not spending hurt the economy in the context of infrastructure

Brookings Institute, 2011 (John Fairbanks, Rachel Harvey, Carrie Collins, Metropolitan Policy Program, “Getting America to Work”, May 2011) http://www.brookings.edu/~/media/research/files/reports/2011/5/12%20jobs%20and%20transit/0512\_jobs\_transit\_media\_memo.pdf

The Missed Opportunity report is being released as governments across the country are contemplating serious cuts to transit funding, which could exacerbate some of the access problems identified. “Governments across the country are considering serious cuts to transit funding,” said Elizabeth Kneebone, Senior Research Associate and co-author, “That could worsen access problems, particularly for lower-income residents who depend on transit the most. After a recession that saw unemployment and poverty climb, we need to foster metropolitan-scale policies that help people get to work and don’t leave the growing number of suburban poor behind.”

#### SQ is economically unsustainable – lack mass transit availability and reliant on foreign oil.

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

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. All this driving is costing Americans a fortune in time and money. American households now spend an average of 17.6% of their budgets on transportation, the second largest expense after housing and one-third more than what they spend on food. These costs are particularly acute for lower-income Americans: the country’s poorest households spend more than 40% of their take-home pay on transportation.11 As gas prices continue to rise as they have in recent months, the costs of driving are more acutely squeezing Americans’ checkbooks. Our continued dependence on imported fuel is one of the leading culprits of our trade imbalance: More than half of the U.S. trade deficit can be attributed to petroleum imports.12 In 2009, Americans wasted 4.8 billion hours sitting in traffic, at a cost of $115 billion and 3.9 billion wasted gallons of fuel13—more than one-sixth the amount of oil imported annually from the Persian Gulf.14 Thus, our heavy reliance on cars— and the oil they run on—has grave implications for our national security.

#### Investment in mass transit helps the economy – every dollar creates thousands of jobs and GDP growth.

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

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 invest¬ment: every $1 spent on infrastructure projects spurs economic activity, raising the level of GDP by about $1.59.3

**Federal investment in urban mass transit helps the economy**.

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

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 alterna¬tives. 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.

#### Mass transit saves billions every year.

US Department of Transportation 2-22-2007 Public Transit in the United States, http://www.fta.dot.gov/ publications/reports/other\_ reports/publications\_134.html

By economic yardsticks, the annual benefits that transit returns to the national economy easily outpace costs (by $26 billion in 1997). During the 1990s transit returned $23 billion per year in affordable mobility for households that prefer not to drive, cannot afford a car, or cannot drive due to age or disability; $19.4 billion per year in reduced congestion delays for rush-hour passengers and motorists; $10 billion per year in reduced auto ownership costs for residents of location efficient neighborhoods; up to $12 billion per year in reduced auto emissions; $2 billion savings per year in local human service agency budgets; and a 2 percent boost in property tax receipts from commercial real estate.

#### Transportation and land use concerns are vital to economic recovery.

Benjamin Ross is president of the Action Committee for Transit, a Maryland advocacy group,

and writes frequently in Dissent. Source: Dissent (00123846) Date: July 1, 2009

As new policies take shape, an area to watch is the intersection of transportation and land use with economic recovery. Where is the pentup demand that could revive housing construction? Suburban McMansions have been overbuilt; they are a drug on the market and in some places threaten to decay into slums. What can still be sold—or more likely rented—are apartments and townhouses in the new transitoriented urban centers. In few cities, however, is the existing transit network strong enough to fully support this kind of development. Building new urban rail lines will stimulate the economy twice. The direct impact of construction dollars will be followed by the redevelopment that transit brings. There is a backlog of proposed urban rail projects—sought by Republican mayors and downtown business interests as well as urban Democrats—that far exceeds current budgets. New York’s Second Avenue subway is now funded only north of Sixty-Third Street; Los Angeles wants to build a subway to the sea beneath Wilshire Avenue; and cities from Seattle and Honolulu to Baltimore and Charlotte are planning light rail lines. The new administration’s first steps in urban transportation may seem more like opening the floodgates than taking the initiative. But they could represent no less of a change. Just to bring transportation policy up to date would be almost a revolution.

### Mass transit spending helps manufacturing

**Mass transit spending is the best way to help manufacturing**.

Jonathan Michael Feldman From Mass Transit to New Manufacturing American Prospect; Apr2009, Vol. 20 Issue 3, pA12-A16, 5p.

Of all the non-defense products that government purchases, mass-transit goods are among the most technically advanced, and they rely heavily on manufacturing. Mass transit conserves energy and is one of the least polluting forms of travel. Government purchasing power, combined with heavy unionization in the transit service and producer sectors, also makes this sector amenable to public planning for good social outcomes. Government can support local production, particularly in highly unionized and population centers. The density of cities facilitates both union organizing and mass transit.

#### Expansion of mass transit promotes manufacturing and wealth creation.

Jonathan Michael Feldman From Mass Transit to New Manufacturing American Prospect; Apr2009, 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

**Plan boosts manufacturing by increasing demand for transit busses**.

Kathryn Phillips A stimulating investment - mass transit San Francisco Chronicle November 22, 2009 04:00 AM Copyright San Francisco Chronicle. All rights reserved. This material may not be published, broadcast, rewritten or redistributed. Sunday, November 22, 2009 transportation policy expert for the Environmental Defense Fund Read more: http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2009/11/21/IN2H1ALLFM.DTL#ixzz1ySjUopPk

Unfortunately, U.S. transportation policy greatly favors funding highways over public transit. The result is small and sporadic bus orders, making it difficult for the bus industry to grow. The Duke study authors conclude: "If federal, state, and local policy were to shift to a clear, sustained commitment to public transit, the nation would have the manufacturing capability to meet the resulting increased demand for transit buses." In short, American companies have the know-how and the talent; they just need sustained funding.

### Transit solves congestion

#### Transit reduces traffic congestion and the rate at which traffic congestion grows.

Paul M. Weyrich and William S. Lind How Transit Benefits People Who Do Not Ride It:

A Conservative Inquiry October 2003 http://www.apta.com/gap/policyresearch/Documents/how\_transit\_benefits.pdf

Does rail transit actually relieve traffic congestion? Yes, it does. In some cities, it actuallyreduces congestion; in others, it reduces the rate at which traffic congestion grows. In bothcases, people who drive rather than riding transit benefit.Of course, the usual claque of transit critics denies these facts – facts we will demonstrate areindeed facts. The inimitable Wendell Cox, the anti-transit crowd's Don Quixote, said:But more important than the source of light rail ridership is that it carries suchmodest volumes in relation to traffic on adjacent roadways. In no case haslight rail attracted enough drivers out of their cars to materially reduce trafficcongestion . . .14Two of his many Sancho Panzas, libertarian transit critics Thomas A. Rubin and James E.Moore, say, “Rail is not a decongestant. New facilities cannot decongest existing facilities.”15If it were true that new facilities cannot decongest existing facilities, there would be no pointin building anything, and we could all just stay home. As conservatives, we rather like thatidea – we’ve always had a sneaking sympathy for the Spanish Carlists’ prescription: rip up therailways and bring back the Inquisition – but we somehow doubt it would sell.The facts show that, as usual, the anti-transit myth-makers are wrong. A good place to startfinding the facts is in an interesting study by the Texas Transportation Institute (TTI) at TexasA&M University. The TTI looked at the increase in traffic congestion in large urban areasbetween 1992 and 1997. It found a substantial difference between cities that had rail transitand those that did not. For the 1992-97 period examined, traffic congestion . . . increased 55.9% in urban areas without rail transit, but only 32.4% in urban areas with rail transit in major travel corridors. In other words, traffic congestion grew at a rate 73% higher in non-rail cities, than in cities with rail in one or more major travel corridors

#### Now is the key time to increase investment – mass transit is a vital resource to the economy and American workers. – reduces congestion

RIPTA, May 31 2012. Rhode island public transportation authority. “National Dump the Pump Day – June 21, 2012”

< http://www.ripta.com/national-dump-the-pump-day-%E2%80%93-thursday--june-21--2012>//jt

We know what happens when gas prices are high. Many people park their cars and take public transportation instead. In fact, using public transportation is an economical way to beat high gas prices…if it is available. According to APTA’s most recent Transit Saving Report, a two-person household can save, on the average, more than $10,000 a year by downsizing to one car. At a time when our economy is still hurting and gas prices are continuing to skyrocket, people need to save money. This is a time to increase public transportation service, not decrease it. However, Congress has yet to pass a long overdue surface transportation bill that will increase public transportation investment. State and local revenues that fund public transportation have declined since the economic recession started and that has also negatively impacted public transit systems’ budgets. All levels of government, federal, state, and local should invest more in public transportation. From urban to suburban to rural communities, public transportation is a vital resource to Americans, and a cornerstone of our nation’s economy. Relying on transit for their daily mobility needs, Americans use local public transportation systems to commute to and from work, to travel to school and the doctor’s office, to go shopping, and to visit with family and friends. Public transportation use reduces our nation’s dependence on foreign oil by 4.2 billion gallons of gasoline a year and it also saves 37 million metric tons of carbon emissions annually. Last, but not least, public transportation has a proven track record of reducing congestion. The latest research shows that in 2010, U.S. public transportation use saved 796 million hours in travel time, 303 million gallons of fuel, and $17 billion in congestion costs in 439 urban areas.

#### Transit reduces traffic congestion.

Paul M. Weyrich and William S. Lind How Transit Benefits People Who Do Not Ride It:

A Conservative Inquiry October 2003 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.

#### Increased transit availability leads to reduced auto travel.

Linda Bailey and Patricia L. Mokhtarian, Ph.D. 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

This study found a significant correlation between transit availability and reduced automobile travel, independent of transit use. Transit reduces U.S. travel by an estimated 102.2 billion vehicle miles traveled (VMT) each year. This is equal to 3.4 percent of the annual VMT in the U.S. in 2007.

## \*\*\*Warming Advantage\*\*\*

### Urban mass transit key to solve warming

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

Linda Bailey and Patricia L. Mokhtarian, Ph.D. 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.

#### Public transit significantly reduces greenhouse gas emissions and dependence on foreign oil.

Transportation for America, 2009 STRANDED AT THE STATION

THE IMPACT OF THE FINANCIAL CRISIS IN PUBLIC TRANSPORTATION August 2009 http://www.t4america.org/docs/081809\_stranded\_at\_thestation.PDF

Finally, public transit significantly reduces greenhouse gas emissions and dependence on foreign oil, both by directly reducing vehicle miles traveled as well as by supporting denser, more sustainable patterns of development. This, in turn, increases the cost-effectiveness of transit, resulting in a virtuous cycle. By supporting alternatives to suburban “sprawl,” transit also reduces other environmental impacts, including loss of prime farmland, declining water quality, and harmful emissions. The transportation sector accounts for one-third of America’s carbon emissions, and as vehicle miles traveled have increased, so have emissions.21 Altogether, American vehicles burn fuel at a rate of 6,300 gallons per second, helping to make the U.S. the world’s leading producer of carbon emissions.22 Transit, however, reduces vehicle miles traveled by 102.2 billion miles per year— meaning that without transit, America’s contribution to global warming would be much greater.23 A 2002 study found that transit saves Americans more than 855 million gallons of gasoline a year, or 45 million barrels of oil—equal to about one month’s worth of imports from Saudi Arabia or three months of the fuel needed to heat, cool and supply electricity to all of the homes in America.24

#### Investment in urban mass transit reduces energy use and pollution – to achieve a similar decrease in carbon emissions you would have to plant a forest larger than the state of Indiana.

Linda Bailey and Patricia L. Mokhtarian, Ph.D. 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

An earlier study on public transportation fuel savings assessed the total number of automobile VMT required to replace transit trips in the U.S. (ICF 2007). This study calculated the direct petroleum savings attributable to public transportation to be 1.4 billion gallons a year. Under the current study, however, the secondary effects of transit availability on travel were also taken into account. In order to calculate this, we created a statistical model that accounts for the effects of public transportation on land use patterns, and the magnitude of those effects as carried through to travel patterns. The total effect then shows savings from people who simply live near transit (without necessarily using it). By reducing vehicle miles traveled, public transportation reduces energy use in the transportation sector and emissions. The total energy saved, less the energy used by public transportation and adding fuel savings from reduced congestion, is equivalent to 4.2 billion gallons of gasoline. The total effects reduce greenhouse gas emissions from automobile travel by 37 million metric tons. This consists of 30.1 million metric tonnes reduced from secondary effects and a net savings of 6.9 million metric tonnes from primary effects and the effects of transit induced congestion reduction. To put the CO2 reductions in perspective, to achieve parallel savings by planting new forests, one would have to plant a forest larger than the state of Indiana. Total CO2 emission reductions from public transportation are shown, for primary and total effects, in Figure 1, above.

#### Massive reduction in pollution after acceptance of urban mass transit

Yihsu Chen of California, Merced Alexander Whalley University of California, Merced & NBER. Green Machines: The Effects of Urban Mass Transit on Air Quality. February 10, 2010 http://ei.haas.berkeley.edu/pdf/seminar/seminar20100212.pdf

Beyond an obvious interest for environmental and public economists the air quality effects of mass transit infrastructure have tremendous practical relevance. Every day 155 million people travel on urban rail transit systems in over 110 cities throughout the world (International Association of Public Transport, 2009). Since the year 2000 alone urban rail transit systems in 37 cities have opened, including Delhi, Dubai, and most recently Shenyang, China. Furthermore, many systems are drawing on large public subsidies to expand capacity rapidly. For example, an initiative to transform Beijing into a `public transport city' with the goal of reducing air pollution below 2008 levels will double the size of the metro system from 224 km to 554 km of track by 2015 (CCTV, 2009). To evaluate the social value of mass transit subsidies credible evidence on the effect of mass transit infrastructure on air quality is required (see e.g. Parryand Small, 2009).Our objective is to provide causal estimates of the effect of mass transit infrastructure on air quality in an emerging economy. There are (at least) two important challenges in this exercise. The first is a very basic data constraint as high quality data on air pollution are frequently unavailable for many cities in emerging economies. Second, transit infrastructure and ridership may be endogenously related to air pollution. For example, cross-city variation in transportation infrastructure spending is likely to be confounded with other factors (e.g. the level of congestion) that also determine air pollution. In addition, optimizing individuals are likely to travel using mass transit in part to avoid air pollution or congestion, rendering time-series variation in ridership likely confounded with unobservable determinants of air pollution.3We confront both of these challenges. By exploiting potentially exogenous variation in mass transit ridership from the opening a new mass transit system, we attempt to estimate causal elasticities that incorporate avoidance behavior effects. We use the discontinuity in mass transit ridership on opening day for a completely new mass transit system to identify the effect of transit ridership on air pollution based on a regression discontinuity approach. Furthermore, because high frequency air pollution data for a range of pollutants were collected before, and after, the opening date of the Mass Transit System (MRT), Taipei provides a uniquely compelling context to estimate these effects. Figure 1 displays the time series of MRT ridership, and clearly shows the sharp discontinuity in ridership on opening day (March 28th, 1996). It is this discontinuity in mass transit ridership that forms the heart of our analysis. Our regression discontinuity analysis indicates that the MRT caused a meaningful reduction in one tailpipe pollutant, Carbon Monoxide (CO). The effects appear to be both statistically and economically significant as the MRT opening caused a reduction in CO of 9-14%. We also and similar point estimates for the effects on another tailpipe pollutant, Nitrogen Oxides (NOx), but the estimates are less precise. Importantly, the RD estimates are substantively different from the positive but imprecise OLS estimates. Thus, addressing avoidance behavior in the estimation of the effects of mass transit seems to be as important as in the context of the estimation of the health effects of air pollution.

**Mass transit is the most effective strategy for reducing energy consumption and improving the environment**.

Paul M. Weyrich and William S. Lind How Transit Benefits People Who Do Not Ride It:

A Conservative Inquiry October 2003 http://www.apta.com/gap/policyresearch/Documents/how\_transit\_benefits.pdf

Rail transit’s ability to reduce traffic congestion is probably its main benefit to people who do not ride it. But it is by no means the only benefit. Another is transit’s positive effects on the environment. Let us hasten to say that, as conservatives, we are by no means environmentalists. The only time you would find us sitting in a tree is if we were attempting to shoot a deer. We are, however, conservationists. We believe that the duty of stewardship requires us to pass on to future generations breathable air, swimmable and drinkable water, adequate reserves of coal and oil, and green countryside to walk in. From Edmund Burke to Russell Kirk and from the dark Satanic mills to the dark Satanic malls, true conservatives have disliked the modern practice of sending our patrimony up in smoke. There is no question that public transit reduces energy consumption (and the flow of petrodollars to people who like to crash airplanes into our skyscrapers) and helps conservation, and that both of these benefit the people who do not ride transit as well as those who do. After all, we all drink the same water and breathe the same air. Here, we will take a brief look at just one of many studies, one undertaken for the American Public Transportation Association, Conserving Energy and Preserving the Environment: The Role of Public Transportation.30 Right at the outset, this study makes a point that is of interest to conservatives: With its fuel and pollution advantages, increased use of transit offers the most effective strategy available for reducing energy consumption and improving the environment without imposing new taxes, government mandates, or regulations on the economy or consumers.31

**Cities are expanding; and extending transit systems is necessary to making these cities sustainable**.

Alex Steffen Jan/Feb2012, Issue 191, p1-3, 3p.Want to grow the economy? Shrink your city's emissions

In tough times, some of us see protecting the climate as a luxury, but that's an outdated 20th-century worldview from a time when we thought industrialization was the end goal, waste was growth, and wealth meant a thick haze of air pollution. Cities and urbanization are the story of the 21st century. Already, most of us live in cities. Over the next 40 years, though, we'll ride a building boom unlike anything humanity has ever seen, or may ever see again, as the world's cities swell by billions. Cities at the center of this demographic revolution will be utterly changed. All that growth means opportunity -- at a time when we badly need it. In all sorts of ways, how we build our cities determines how we use energy within them. Denser, more walkable communities use much less energy than car-dependent ones. Multifamily homes use much less than homes on big lots. Compact urban infrastructure beats sprawling systems. Even consumer choices change in compact communities: How many condo owners, after all, have home gyms? Climate-focused city planning can lead to massive reductions in per capita energy use. That, in turn, can spur rapid economic growth. Cities at the cutting edge of this kind of development, like Copenhagen and Amsterdam, aim to be carbon-neutral within 20 years. Change at that speed means not just doing things differently but doing different things and starting now. Top of the list: avoiding big investments in outdated projects such as highway construction in favor of concentrating resources on transforming key neighborhoods, extending transit systems, and upgrading infrastructure. Carbon-neutral cities will also help uncage urban innovation, given that making them carbon-zero will involve a million opportunities to do things better in nearly every industry. I suggest new innovation zones: specific parts of cities (perhaps currently underutilized or abandoned) that can be turned over to small- and mid-scale experiments in carbon-zero work, commerce, and living. Think of them as seedbeds for new urban ways of life. Guided by clear, basic rules and fast-tracked permitting, and encouraged by connections with local industry and universities, such zones could quickly become hothouses for growing the kinds of city-building businesses that will feed the global economy as it surges into this urban century. If they bloom, they will draw the kind of creative young people every city is fighting for; what many of the brightest of the next generation want most of all is to participate in making a better future. With good climate-focused city planning and a commitment to urban innovation, cities will begin to revitalize neighborhoods, prepare local businesses for global competition and rising energy costs, and become magnets for talent and new thinking. A hundred cities committed to carbon-zero futures would be a hundred cities on their way back to prosperity -- and a brighter future for the planet.

**Public transportation saves millions of barrels of oil a year; reducing the dependence on foreign oil**.

Paul M. Weyrich and William S. Lind How Transit Benefits People Who Do Not Ride It:

A Conservative Inquiry October 2003 http://www.apta.com/gap/policyresearch/Documents/how\_transit\_benefits.pdf

The study done for APTA offers these supporting facts: ● Public transportation saves more than 855 million gallons of gasoline a year, or 45 million barrels of oil. These savings equal about one month’s oil imports from Saudi Arabia . . . 13 ● For every passenger mile traveled, public transportation uses about onehalf the fuel of private automobiles, sports utility vehicles (SUVs) and light trucks. ● The reduced VOC (volatile organic compounds) and NOx (nitrogen oxides) emissions that result from public transportation use save between $130 million and $200 million a year in regulatory costs. ● 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 . . .33

#### Expanding public transportation would be less costly and decrease environment congestion when compared directly to the current usage and is an achievable goal that people will take part in.

Shapiro et al, 2002 Dr. Robert J. Shapiro is Managing Director of Sonecon, LLC, a non-resident Fellow of the Brookings Institution and the Progressive Policy Institute. He holds a Ph.D. and M.A. from Harvard University, an M.Sc. from the London School of Economics and Political Science, and an A.B. from the University of Chicago.

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

Achieving a genuine measure of energy independence and cleaner air by investing in our public transportation systems has significant economic advantages. While this study measured current and potential benefits of public transportation, the findings lead us to believe that achieving greater energy savings and environmental gains by significantly increasing the passenger loads would be less costly than continuing to expand the fleet of private vehicles, build and maintain more roads and highways to accommodate them, and absorb the rising energy, environmental and congestion expenses of this approach. Increasing Americans’ use of public transit is an achievable goal. In the early 20th century, America led the world in mass transit development and use. Recent data suggest that a transit renaissance may be underway in the United States. Specifically, the study points to the following facts: 1) since 1995, use of public transportation has grown sharply and faster than the use of private vehicles; 2) passenger miles ridden on public buses and rail systems have grown faster than the passenger miles ridden in private automobiles, SUVs and light trucks; and 3) public transportation ridership has grown at a faster rate than air travel in recent years. “Conserving Energy and Preserving the Environment: The Role of Public Transportation” concludes that making much greater use of public transportation may be the most effective strategy to sharply reduce our dependence on foreign oil and make historic strides in environmental quality. The study argues that these results can be achieved if we make public transportation a vital part of our nation’s energy and environmental policies.

**Increasing reliance on public transportation is the fastest way to improve our environment and reduce our reliance on foreign oils**.

Shapiro et al, 2002 Dr. Robert J. Shapiro is Managing Director of Sonecon, LLC, a non-resident Fellow of the Brookings Institution and the Progressive Policy Institute. He holds a Ph.D. and M.A. from Harvard University, an M.Sc. from the London School of Economics and Political Science, and an A.B. from the University of Chicago. 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 the United States strives to achieve greater energy efficiency and independence and to improve the environment, the role of transportation has become paramount. America consumes more energy and produces more pollution in mobility and travel than in any other activity. It follows that any serious effort to reduce our dependence on foreign oil and make significant additional progress on the environment must address the way Americans travel. This study examines the role of public transportation in conserving energy and reducing pollution. The data show that traveling by public transportation, per person and per mile, uses significantly less energy and produces substantially less pollution than comparable travel by private vehicles. We find that increasing the role of public transportation can provide the most effective strategy available for reducing energy consumption and improving the environment without imposing new taxes and government regulations on the economy or consumers.

### Transportation key to warming

#### Majority of oil goes to transportation fuel – must change our habits to reduce consumption

Taras Grescoe, (writer, frequent contributor to the NYT, the Independent, and National Geographic), Straphanger: Saving our Cities and Ourselves from the Automobile, 2012

Too much of the oil now being used – the oil that may soon be gone—goes to keeping cars and trucks on the roads. Ninety percent of every barrel of oil in the world is used for transportation fuel, and American cars and trucks alone use nine million barrels of oil a day, one tenth of the worlds daily production. While the global car industry tries to rebrand itself with plug-ins and hybrids, the widespread use of electricity as an alternative fuel is problematic in its own right: half of the electricity in the United States comes from burining carbon dioxide – emitting coal, a proportion that rises yearly.

#### Transportation is the biggest producer of pollution currently within the United States.

Shapiro et al, 2002 Dr. Robert J. Shapiro is Managing Director of Sonecon, LLC, a non-resident Fellow of the Brookings Institution and the Progressive Policy Institute. He holds a Ph.D. and M.A. from Harvard University, an M.Sc. from the London School of Economics and Political Science, and an A.B. from the University of Chicago. 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

The most fundamental costs of mobility, however, involve the energy required to move people and goods over any distance, and the pollution released as this energy is burned. As shown in Table 1, in 2000 Americans consumed more energy moving from place to place than industry used to produce all of its goods. All forms of transportation also consumed almost four times the energy of all residential uses and more than six times the energy of all commercial uses. Moreover, petroleum products provide virtually all of the fuel used for transportation, while other sectors use more diverse, efficient, and environmentally friendly sources of energy.

## \*\*\*Sustainable Community ext\*\*\*

### Sprawl links

#### Current trends in transportation have allowed massive suburban sprawl -the epicenter of oil combustion causing climate change

Mark Robinowitz. Peak Traffic: Planning NAFTA superhighways at the edn of the Age of Oil Part one, From the Wilderness.com. 2006 http://www.fromthewilderness.com/free/ww3/051006\_peak\_traffic.shtml

Transportation planning in the United States—the epicenter of oil combustion—has been remarkably impervious to rising gasoline prices and growing awareness of climate change and the geological reality of finite fossil fuel supplies. Hundreds of billions of dollars have been committed for massive expansions of the interstate highway system. The plans for these “NAFTA superhighways” and Outer Beltways assume limitless cheap oil, a trillion dollar mistake that must be corrected if there is hope for a renewable energy society after petroleum. This article examines transportation planning in the United States and offers a tool that concerned citizens could use to force governments to shift long-term plans to prepare to mitigate Peak Oil. Peak Oil: Personal Impact and Public Policies Three-dollar-a-gallon gasoline has increased public concern about energy supplies, but this awareness has not translated into changes in public policies. Widespread outrage about astronomical oil company profits has not fueled political pressure to tax excessive profits to fund a European style inter-city rail network, put solar panels on millions of homes or other initiatives designed for a Post-Peak Oil world. The arrival of Peak Oil and climate change onto the world political stage has not deterred governments from further investments in suburban sprawl, more highways, and other overdevelopment dependent on endless supplies of dollar a gallon petrol. A large part of the public discussion about Peak Oil is about personal transportation issues, since most people’s consciousness of industrial energy systems is focused on purchasing petroleum at the pump. There are many excellent strategies for reducing one’s energy consumption: driving less, carpooling, car sharing, using public transportation (if available), bicycling, walking, living closer to your job (if possible) and buying locally made products to reduce transportation demands. However, an effective response to Peak Oil will require efforts at all levels—family, neighborhood, city, state, nation and planet—to be useful in the post-Peak era. From The Wilderness, Life After the Oil Crash, Energy Bulletin, and many other news sources have documented that the most important issues of Peak Oil are about food supplies (especially for metropolitan areas far removed from farms), civil liberties, economic instabilities, and global conflicts. A shift in transportation policy that admits to Peak Oil and climate change is needed to spark widespread discussions of needed changes to retool civilization for a post-carbon future.

#### Cars create Urban Sprawl and Pollution

"Land Use and Urban Sprawl on Clean Water Action Council." Land Use and Urban Sprawl on Clean Water Action Council. Clean Water Action Council, 2002. Web. 21 June 2012. <http://www.cwac.net/landuse/index.html>.

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. 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. 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.

### Sprawl impacts

#### Curbing sprawl is critical to create an ecologically sustainable future

Nina-Marie Lister, assistant professor of Urban & Regional Planning at Ryerson Polytechnic University. Beyond Sprawl, Alternatives Journal. Summer 2000 http://www.fes.uwaterloo.ca/alternatives/263/edit263.htm

Instead of building sustainable communities, our designers, developers, builders, planners and bankers appear to be stuck in a destructive and costly paradigm. The central theme throughout this issue, and probably the critical first step to building more sustainable communities, is the need to curb urban sprawl. This is the paradigm of car-dependency, traffic jams and identical homes on characterless streets with names like "Forest Lane" and "Woodland Trail" -- streets named without the slightest hint of irony after the natural features that were destroyed in order to build them.The good news is that the alternatives to sprawl are many and hopeful. In fact, the vision shown on the cover is for Vancouver's Southeast False Creek, now a dilapidated industrial area that is being planned as Canada's first truly sustainable community. In this issue of Alternatives, we profile this and a variety of other redesign initiatives, ranging from increasing urban density and retrofitting suburban areas, to using innovative ecological building technologies and whole community designs.But dealing with the built environment is only the first step in combatting sprawl. It is important also to acknowledge that although urban sprawl is a physical phenomenon with important ecological implications, it is driven by deeper social factors.Many critics of suburban sprawl believe that it is directly related to a decline in community and sense of civic commitment. In Canada, we see US-style "gated communities" spreading in our suburbs, with security fences and 24-hour guards that are paid to enforce this spatial segregation between the rich and poor. And even average homes in the suburbs have become larger and more luxurious with each passing decade, while the homeless are marginalized further and pushed into the central cities.The disproportionate attention to bathrooms -- the citadel of privacy -- is yet another sign of our glorification of the increasingly luxurious private realm. New home and even condo owners have come to expect a full bathroom for each bedroom. And this "McMansion Mania" is peaking at a time when the public realm is becoming increasingly squalid and impoverished -- characterized by enormous parking lots, fading public services and decaying public schools and libraries.Sprawling "edge cities" -- exclusive enclaves of private splendour -- are the ultimate reflection of our consumer-driven narcissistic obsession with the private realm. So too are they a denial of related social ills -- homelessness, poverty and civic disengagement. As our cities sprawl outward, with their safely cocooned inhabitants, it becomes increasingly easy to turn a blind eye to anything "not in my backyard."To go beyond the suburbs, we must not only redesign communities but also restore the feeling and living reality of community itself. In short, if we do not face and directly address the social problems associated with our urban areas, we are merely applying architectural Band-Aids.But while physical redesign cannot solve urban problems, it is almost certainly part of the solution. The act of redesign can build community by reconnecting us and our neighbours to a real place, and by creating in the process a bolder, more confident culture of vision and change. Whether they be community plantings, building a straw bale house, creating an energy co-op, or retrofitting a home for solar energy, small but tangible demonstrations of the possible can help build communities in more ways than one.And these small steps can and do lead to bigger strides. Together, broader policies and "best practices" in urban and social planning, architectural design, and supporting infrastructure are the key to minimizing energy and resource use while encouraging ecological recovery and improving social conviviality. In this synergy lies the truly creative re-design of our communities.

#### Unsustainability causes extinction

Jason Miller, Author uncapitalist.com. It's the American Wa or the Highway: The UnCapitalist Journal. January 09, 2006 http://uncapitalist.com/blog/?itemid=1419

Aside from the obvious moral depravity and numerous social injustices associated with our greed-driven socioeconomic paradigm, there is a particularly grave pragmatic consequence from which no human being can escape. The American Way is a path to extinction, particularly as the citizens of populous nations like China and India race to satiate themselves in the orgy conspicuous consumption. The Earth cannot sustain 6.5 billion people living the "American Way". How can we measure the sustainability of life on Earth? One means at our disposal is to examine ecological footprints. Each nation has an ecological footprint which (according to Wikipedia) is the amount of land and water area a person or a human population would need to provide the resources required to sustainably support itself and to absorb its wastes, given prevailing technology. To gain perspective on how unsustainable the American Way truly is, consider that the average US citizen exerts 52 times the ecological pressure as the average Somali. At 9.57 hectares per capita, the United States has the world’s largest ecological footprint. (Bangladesh’s .5 represents the other end of the spectrum). If every nation had the same global footprint as the United States, we would need 5 Earths to support global consumption!

#### Urban sprawl in America encourages overuse of the automobile globally causing global warming and causing loss of millions of lives due to auto accidents

Vox Populi Network 2002 http://www.voxpopuli-ne.com/2002\_11/page44.html “Urban Sprawl Causes Global Warming”

If governments do not act quickly to discourage the building of cities for cars, the international effort to control global warming will become much more difficult, reports a new study by the Worldwatch Institute, a Washington, D.C.-based research organization. Sprawling urban areas are helping to make road transportation the fastest growing source of the carbon emissions warming the earth's atmosphere. "Wind turbines, energy-efficient cars, and other new technologies have received much attention in recent debates over energy policy, but we've been neglecting the role that urban design can play in stabilizing the climate," said Molly O'Meara Sheehan, author of City Limits: Putting the Brakes on Sprawl. "Local concerns like clogged roads, dirty air, and deteriorating neighborhoods are already fueling a backlash against sprawl. Understanding the role of sprawl in climate change should only speed up the shift towards more parks and less parking lots. We can have healthier, more livable cities and protect the planet from climate change too." A large body of research shows that sprawl already wreaks havoc on people's health. Each year, traffic accidents take up to a million lives worldwide. In some countries, the number of lives cut short by illness from air pollution exceeds those lost to accidents. And by making driving necessary and walking and cycling less practical, sprawling cities widen waistlines by depriving people of needed exercise. Cities in the United States have been sprawling for decades, spreading out much faster than population growth. Chicago, for example, saw a 38 percent increase in population from 1950 to 1990, but the city's land area grew more than three times as fast, a 124 percent increase. But U.S. citizens are increasingly dissatisfied with sprawl. A recent national poll found that sprawl topped the list of local concerns. And in the year 2000 election, U.S. voters approved some 400 local and state ballot initiatives addressing sprawl-related problems. At least 38 U.S. states have passed laws creating incentives for more compact development. "The United States has the world's most car-reliant cities," said Sheehan. "U.S. drivers consume roughly 43 percent of the world's gasoline to propel less than 5 percent of the world's population. The big question facing the United States today is whether we can turn away from a car-centered model and develop better land-use practices and less destructive transportation systems." By the end of the decade, the majority of the world's people will live in urban areas. The urban design decisions made today, especially in cities in the developing world where car use is still low, will have an enormous impact on global warming in the decades ahead. Adoption of the U.S. car-centered model in these places would have disastrous consequences. Thirty years from now, for example, China, excluding Hong Kong, is expected to have 752 million urban dwellers. If each were to copy the transportation habits of the average resident of the San Francisco area in 1990, the carbon emissions from transportation in urban China alone could exceed 1 billion tons, roughly as much carbon as released in 1998 from all road transportation worldwide.

**Auto use hurts environment and causes air pollution**.

Anna Islam ,Brandon Lynn, and Bridget Maher 2008 Negative Environmental Impacts of American Suburban Sprawl and the Environmental Argument for New Urbanism

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

There are a number of adverse affects associated with automobile use. Automobile manufacturers consume a vast number of natural resources as well as emitting toxic emissions. Energy consumption is another impact of automobile use with the vast majority of automobiles running on petroleum-based fuel. The construction of roads has adverse affects on water, plants, and animal life. Also, cars contribute a large amount of waste products to be disposed of. Automobiles are a major source of air pollution, “accounting for 21 percent of suspended particulates, 66 percent of carbon monoxide, 50 percent of carbon dioxide, 35 percent of ozone forming hydrocarbons, and 40 percent of nitrogen oxides (“The Environmental Impact of Automobiles” 28).”

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

Mitchell Miller, WTOP Radio. Sprawl Damages Chesapeake Bay, WTOP. 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.

### 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.

### Cars harm public health - accidents

#### Auto accidents are a significant cause of death – leading cause of death for young people

Taras Grescoe, (writer, frequent contributor to the NYT, the Independent, and National Geographic), Straphanger: Saving our Cities and Ourselves from the Automobile, 2012

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.

#### Transit use increases public safety – saving lives and money from accidents.

Transportation for America, 2009 STRANDED AT THE STATION

THE IMPACT OF THE FINANCIAL CRISIS IN PUBLIC TRANSPORTATION August 2009 http://www.t4america.org/docs/081809\_stranded\_at\_thestation.PDF

Transit use also improves public safety by reducing vehicle crashes, which are the leading cause of death for Americans between the ages of five and 34. More than 40,000 Americans are killed annually in car crashes,18 costing a total of $164 billion.19 The National Safety Council, however, has found that riding a bus is 25 times safer than being in a car.20

#### Cars cause accidents, pollution deaths, social isolation, and cancer.

Taras Grescoe, (writer, frequent contributor to the NYT, the Independent, and National Geographic), Straphanger: Saving our Cities and Ourselves from the Automobile, 2012

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.

## \*\*\*Answers to\*\*\*

### A2 People won’t ride mass transit

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

Taras Grescoe, (writer, frequent contributor to the NYT, the Independent, and National Geographic), Straphanger: Saving our Cities and Ourselves from the Automobile, 2012

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

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

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

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

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

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

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.

Benjamin Ross is president of the Action Committee for Transit, a Maryland advocacy group,

and writes frequently in Dissent. Source: Dissent (00123846) Date: July 1, 2009

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.

#### The public supports mass transit

Mike Prager (a reporter for The Spokesman-Review) April 4, 2011, “Getting There: Transit experts praises STA’s, city’s planning” The Spokesman-Review

The public needs to understand why it is worth investing in transit, Inglish said. Reducing dependence on foreign oil, easing global warming, protecting air quality, improving national security, reducing congestion and boosting the economy are among the reasons, he said. Utah’s system is attracting private investment for development projects around transit stations, and a survey shows that transit enjoys 90 percent public support, Inglish said. The system’s layout relies on integrated land-use planning that seeks to curtail urban sprawl and attract new development to transit stops. The mainstay riders of any transit line are workers and college students as well as people attending large events, making transit part of the larger economic picture. “We’ve seen a change in people’s desires, so it’s not forcing anything on anyone,” Inglish said. Examples of innovative transportation systems are showing up globally, and the U.S. is on the road to joining the trend, he said. Vienna, Austria, has a rubber-tire trolley line that would make sense in a city like Spokane, Inglish said. Susan Meyer, Spokane Transit Authority chief executive officer, has said that she wants the community to consider a rubber-tire trolley for a downtown line running from Browne’s Addition to Gonzaga University. In addition, STA is working on plans to create a layered approach of high-performance transit combined with existing neighborhood routes.

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

Philip Newswanger (Senior Writer for Inside Business) October 7, 2011 “More people using public transportation” Inside Business

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.

Paul M. Weyrich and William S. Lind How Transit Benefits People Who Do Not Ride It:

A Conservative Inquiry October 2003 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.

Paul M. Weyrich and William S. Lind How Transit Benefits People Who Do Not Ride It:

A Conservative Inquiry October 2003 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.

### A2 (States) Counterplans - Federal government key

**Urban areas are key economic engines and its necessary to have a federal role in securing mass transportation**.

Joshua L. Schank President & CEO 2012 Great Policy Discussions We Are (Almost) Having

Eno Center for Transportation http://www.enotrans.org/eno-brief/great-policy-discussions-we-are-almost-having

But putting aside the modal fragmentation this proposal creates, it is also the opening salvo in a discussion of the future of the federal role in transportation. The House proposal implies that the “true” federal priority is in highways and that other forms of transportation, while perhaps important, do not rise to the same level of national interest. The implicit argument is that transit and other local transportation should be a local responsibility. This might make sense if not for the fact that highways also provide local transportation. Over 90 percent of Americans commute to work by car, and most of the roads these cars drive on are federal-aid highways. Why should people driving to work be a federal responsibility, but people taking the bus be a local one? First lawmakers should decide if there is a federal role in metropolitan transportation. If the answer is “yes” then it would be counterproductive to focus that role on only one mode. Given that metropolitan regions are the economic engines of the nation, where over 80 percent of Americans live, it follows that mobility and accessibility within them is of national importance. Metropolitan mobility and accessibility can only be effectively addressed through a multimodal approach.

#### Federal role in capital investment and operations support is necessary for the success of mass transit.

Lisa Caruso June 17, 2009 5:25 PM http://transportation.nationaljournal.com/2009/06/is-it-time-for-the-feds-to-fun.php

Rodger James Sillars, a consultant with Effective Melodious Metamorphic Sagacity and former administrater with the Greater Cleveland Regional Transit Authority, offers the following comments: The short answer is that of course operating expense should be federally funded. It was funded for a good while as the federal role in funding transit began after the mid sixties. It simply made good sense. The problem was that for major players the capital needs were so great at most systems that major efforts were made to fund big capital needs and seek local support for lesser operations needs. The capital funding needs were just so great. As systems found the need to add funding for major expansion (largely in capital) or to add resources for new mandates to provide accessible services for the disabled (for example) the capital needs were significantly impacted. The industry simply let the naysayers win the argument and operating assistance was progressively phased out starting with larger systems and eventually working down to more fragile operations in small and rural population centers. It was a bad deal from the start. Transit never got anywhere close to full funding for legitimate needs. Systems were forced to locally fund some capital projects or compete to pay a higher matching percentage to get critical projects done. It was the American people who suffered in this situation. They never got many of the service choices that they needed. Even with the generous expansion of support under the current administration the needs in virtually all areas of the country are not being met quickly enough. The public cannot be allowed to go without existing services because local authorities were unable to foresee or plan for massive cost increases in operations for fuel and massive loses of support from a deeply troubled economy. Affected areas that due to economic factors well beyond their control suddenly find themselves literally knocked down by removal the local economic lubricant that mass transit provides. The local economic engine literally gets locked up by an artificial barrier put in place without any rational reason, but accepted by various leaders who could not have foreseen either our present economic distress. Long overdue massive starts on addressing local funding needs are tragically made less effective by the funding restrictions that removed the needed sparks to add in restarting the local economic engine. The no operations aid was a vehicle to set limits and encourage efficient use of government funds. Anyone who knows this business is aware of misguided projects and poorly allocated funds, but these are a small part of the whole funding package. Simplistic rules are unlikely to clean up problem spending and the reality is that each areas problems are unique and require a tailored strategic approach that is competently implemented. Regrettably simple rules like restricting operations support cannot make that happen. Let's forget simplistic restrictions on operations assistance.

#### Funding vital transportation is a national imperative which the federal government should participate in.

Colin F. Peppard June 4, 2009 10:31 AMTransportation Policy Advocate, Natural Resources Defense Council http://transportation.nationaljournal.com/2009/06/is-it-time-for-the-feds-to-fun.php

A recently released Environmental Defense Fund report, Reinventing Transit, shows that transit is becoming a vital transportation option for a growing cross-section of America. Innovative policymakers and transit operators are extending transit access to more and more households, whether in rural, suburban, or urban communities, while also using innovative tools to make transit operations more efficient. Record transit ridership growth over the past few yeasr shows that American families are responding enthusiastically to these new, affordable transportation options that enhance their lives by making their communities more livable. Finally, the clear national imperative to enhance our energy security and reduce climate change dictates that more Americans must have access to efficient, convenient, and reliable transit service.However, only in limited cases can local transit agencies now receive federal assistance for operating expenses under current programs outside of small urban and rural areas. In recent months, an overwhelming number of transit agencies around the country have raised fares and cut transit services to close budget gaps caused by the flagging economy. Especially in a tough economy, we should strive to ensure that the employees who provide America’s transit service have a job, and do that job productively, so they can continue to provide working families with one of the most affordable transportation options. To satisfy the increasing demand for transit, Congress should expand opportunities for federal financial support for transit operations where this supports meeting national transportation goals. However, policymakers should proceed carefully, keeping three things in mind if we go down this path.

### A2 Private CP

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

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

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.

Donna Cooper February 2012 Meeting the Infrastructure Imperative An Affordable Plan to Put Americans Back to Work Rebuilding Our Nation’s Infrastructure 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

Josh Bivens, April 18, 2012 (Ph.D., Economics, New School for Social Research

B.A., Economics, University of Maryland at College Park, Research fellow at the Economic Policy Institute)

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.

### Politics answers – Plan is a win / winners win

#### Transportation legislation is a win for Obama --- looks like job creation

Lightman, 3/12/2012 (David, Transportation Spending – Washington Spin Makes Good Look Even Better, McClatchy, p. http://www.mcclatchydc.com/2012/03/12/141581/transportation-spending-washington.html)

The Senate on Tuesday plans to debate, and likely pass this week, an ideal election-year bill: a bipartisan plan to spend billions on highway and transit projects. Passage of the bill not only would be an economic boost, but it would serve several important political purposes. Lawmakers are boasting how the $109 billion, two-year measure would save or create as many as 2.8 million jobs. They are congratulating one another for working across party lines, a trait that hasn't been evident much in recent years. And they can go home and point to rutted roads and congested highways and brag that they did something about it. Or can they? "The highway bill is fairly routine. It's not like a special stimulus bill," said Robert Bixby, executive director of the nonpartisan Concord Coalition, a budget watchdog group. While the bill is welcome as a job producer, he said, "it's not going to make a significant dent in the jobs market." Politicians, though, tout the bill as a vital jobs measure. "This is an important piece of legislation. Not dealing with tens of jobs or hundreds of jobs or thousands of jobs, but millions of jobs," said Senate Majority Leader Harry Reid, D-Nev. Many House of Representatives Republicans prefer a longer-term approach. The House is expected to consider legislation later this month. "At this point in time, the plan is to bring up the Senate bill," said House Speaker John Boehner, R-Ohio. Independent analysts tended to agree with Bixby. "The bill does take steps in the right direction," said Joshua Schank, president and chief executive officer of the Eno Center for Transportation, a nonprofit, nonpartisan think tank. But, he said, "There's a huge amount of politics here. Congress wants to look like they're doing something for the economy, and that they're doing something in a bipartisan way."

#### Passing controversial legislation generates capital for Obama --- winners win

Halloran 10 (Liz, Reporter – NPR, “For Obama, What A Difference A Week Made”, National Public Radio, 4-6, http://www.npr.org/templates/story/story.php?storyId=125594396)

Amazing what a win in a major legislative battle will do for a president's spirit. (Turmoil over spending and leadership at the Republican National Committee over the past week, and the release Tuesday of a major new and largely sympathetic book about the president by New Yorker editor David Remnick, also haven't hurt White House efforts to drive its own, new narrative.) Obama's Story Though the president's national job approval ratings failed to get a boost by the passage of the health care overhaul — his numbers have remained steady this year at just under 50 percent — he has earned grudging respect even from those who don't agree with his policies. "He's achieved something that virtually everyone in Washington thought he couldn't," says Henry Olsen, vice president and director of the business-oriented American Enterprise Institute's National Research Initiative. "And that's given him confidence." The protracted health care battle looks to have taught the White House something about power, says presidential historian Gil Troy — a lesson that will inform Obama's pursuit of his initiatives going forward. "I think that Obama realizes that presidential power is a muscle, and the more you exercise it, the stronger it gets," Troy says. "He exercised that power and had a success with health care passage, and now he wants to make sure people realize it's not just a blip on the map." The White House now has an opportunity, he says, to change the narrative that had been looming — that the Democrats would lose big in the fall midterm elections, and that Obama was looking more like one-term President Jimmy Carter than two-termer Ronald Reagan, who also managed a difficult first-term legislative win and survived his party's bad showing in the midterms. Approval Ratings Obama is exuding confidence since the health care bill passed, but his approval ratings as of April 1 remain unchanged from the beginning of the year, according to Pollster.com. What's more, just as many people disapprove of Obama's health care policy now as did so at the beginning of the year. According to the most recent numbers: Forty-eight percent of all Americans approve of Obama, and 47 disapprove. Fifty-two percent disapprove of Obama's health care policy, compared with 43 percent who approve. Stepping Back From A Precipice Those watching the re-emergent president in recent days say it's difficult to imagine that it was only weeks ago that Obama's domestic agenda had been given last rites, and pundits were preparing their pieces on a failed presidency. Obama himself had framed the health care debate as a referendum on his presidency. A loss would have "ruined the rest of his presidential term," says Darrell West, director of governance studies at the liberal-leaning Brookings Institution. "It would have made it difficult to address other issues and emboldened his critics to claim he was a failed president." The conventional wisdom in Washington after the Democrats lost their supermajority in the U.S. Senate when Republican Scott Brown won the Massachusetts seat long held by the late Sen. Edward Kennedy was that Obama would scale back his health care ambitions to get something passed. "I thought he was going to do what most presidents would have done — take two-thirds of a loaf and declare victory," says the AEI's Olsen. "But he doubled down and made it a vote of confidence on his presidency, parliamentary-style." "You've got to be impressed with an achievement like that," Olsen says. But Olsen is among those who argue that, long-term, Obama and his party would have been better served politically by an incremental approach to reworking the nation's health care system, something that may have been more palatable to independent voters Democrats will need in the fall. "He would have been able to show he was listening more, that he heard their concerns about the size and scope of this," Olsen says. Muscling out a win on a sweeping health care package may have invigorated the president and provided evidence of leadership, but, his critics say, it remains to be seen whether Obama and his party can reverse what the polls now suggest is a losing issue for them.

### Politics answers – PC not key

#### Studies prove that political capital barely affects the outcome of legislation

Beckmann and Kumar, September 2011 (Matthew – associate professor of political science at the University of California, Irvine, and Vimal – professor of economics at the Indian Institute of Technology, Opportunism in Polarization: Presidential success in Senate Key Votes, 1953-2008, Presidential Studies Quarterly, Vol. 41, Iss. 3, p. 488-503)

The final important piece in our theoretical model—presidents' political capital—also finds support in these analyses, though the results here are less reliable. Presidents operating under the specter of strong economy and high approval ratings get an important, albeit moderate, increase in their chances for prevailing on “key” Senate roll-call votes (b = .10, se = .06, p < .10). Figure 4 displays the substantive implications of these results in the context of polarization, showing that going from the lower third of political capital to the upper third increases presidents' chances for success by 8 percentage points (in a setting like 2008). Thus, political capital's impact does provide an important boost to presidents' success on Capitol Hill, but it is certainly not potent enough to overcome basic congressional realities. Political capital is just strong enough to put a presidential thumb on the congressional scales, which often will not matter, but can in close cases.

### Politics answers / Plan popular - lobbies

#### Key lobbies like the AFL-CIO and US Chamber of Commerce support mass transit investment.

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

The need to repair our infrastructure is not in dispute. In a rare move, the U.S. Chamber of Commerce and the AFL-CIO issued a joint statement in January 2011 calling for Congress to focus on upgrading our national infrastructure: “With the U.S. Chamber of Commerce and the AFL-CIO standing together to support job creation, we hope that Democrats and Republicans in Congress will also join together to build America’s infrastructure.”1

### Terrorism Impact Defense

**No nuclear terrorism –statistically insignificant cumulative probability**

John **Mueller** (Woody Hayes Chair of National Security Studies, Mershon Center, and is professor of Political Science, at Ohio State University) **2010** “Atomic Obsession: Nuclear Alarmism from Hiroshima to Al Qaeda” p, 187-190

Assigning a probability that terrorists will be able to overcome each barrier is, of course, a tricky business, and any such exercise should be regarded as rather tentative and exploratory, or perhaps simply as illustrative-though it is done all the time in cost-benefit analysis. One might begin a quantitative approach by adopting probability estimates that purposely, and heavily, bias the case in the terrorists' favor. In my view, this would take place if it is assumed that the terrorists have a fighting chance of 50 percent of overcoming each of the 20 obstacles displayed in Table 13-1, though for many barriers, probably almost all, the odds against them are surely much worse than that. Even with that generous bias, the chances that a concerted effort would be successful comes out to be less than one in a million, specifically 1,048,576. Indeed, the odds of surmounting even seven of the 20 hurdles at that unrealistically, even absurdly, high presumptive success rate is considerably less than one in a hundred. If one assumes, somewhat more realistically, that their chances at each barrier are one in three, the cumulative odds they will be able to pull off the deed drop to one in well over three billion specifically 3.486,784,401. What they would be at the (still entirely realistic) level of one in ten boggles the mind. One could also make specific estimates for each of the hurdles, but the cumulative probability statistics are likely to come out pretty much the same-or even smaller. There may be a few barriers, such as numbers 13 or absolute loyalty trump the one oftechnical competence. This would increase the chances that the bomb-making enterprise would go undetected, while at the same time decreasing the likelihood that it would be successful. However, given the monumentality of the odds confronting the would-be atomic terrorist, adjustments for such issues are scarcely likely to alter the basic conclusion. That is, if one drastically slashed the one in 3.5 billion estimate a thousandfold, the odds of success would still be one in 3.5 million. Moreover, all this focuses on the effort to deliver a single bomb. If the requirement were to deliver several, the odds become, of course, even more prohibitive. Getting away from astronomical numbers for a minute, Levi points out that even if there are only ten barriers and even if there were a wildly favorable 80 percent chance of overcoming each hurdle, the chance of final success, following the approach used here, would only be 10 percent. Faced even with such highly favorable odds at each step, notes Levi, the wouldbe atomic terrorist might well decide "that a nuclear plot is too much of a stretch to seriously try." Similarly, Jenkins calculates that even if there are only three barriers and each carried a 50/50 chance of success, the likelihood of accomplishing the full mission would only be 12.5 percent.14 Odds like that are not necessarily prohibitive, of course, but they are likely to be mind-arrestingly small if one is betting just about everything on a successful outcome. Multiple Attempts The odds considered so far are for a single attempt by a single group, and there could be multiple attempts by multiple groups, of course. Although Allison considers al-Qaeda to be "the most probable perpetrator" on the nuclear front, he is also concerned about the potential atomic exploits of other organizations such as Indonesia's Jemaah Islamiyah, Chechen gangsters, Lebanon's Hezbollah, and various doomsday cults. IS However, few, if any, groups appear to have any interest whatever in striking the United States except for al-Qaeda, an issue to be discussed more fully in the next chapter. But even setting that consideration aside, the odds would remain long even with multiple concerted attempts.16 If there were a hundred such efforts over a period of time, the chance at least one of these would be successful comes in at less than one in over 10,000 at the one chance in two level. At the far more realistic level of one chance in three, it would be about one in nearly 35 million. If there were 1,000 dedicated attempts, presumably over several decades, the chance of success would be worse than one in a thousand at the SO/50 level and one in nearly 3.5 million at the one in three level.I7 Of course, attempts in the hundreds are scarcely realistic, though one might be able to envision a dozen or so. Additionally, if there were a large number of concerted efforts, policing and protecting would presumably become easier because the aspirants would be exposing themselves repeatedly and would likely be stepping all over each other in their quest to access the right stuff. Furthermore, each foiled attempt would likely expose flaws in the defense system, holes the ...,. defenders would then plug, making subsequent efforts that much more dif• ficult. For example, when the would-be peddler of a tiny amount of pur loined highly enriched uranium was apprehended in 2006, efforts were made to trace its place of origin using nuclear forensics. IS ." Also, the difficulties for the atomic terrorists are likely to increase over time because of much enhanced protective and policing efforts by ... self-interested governments. Already, for example, by all accounts Russian nuclear materials are much more adequately secured than they were 10 or ~, .-s 15 years ago.19

**Not an existential threat – no overreaction**

John **Mueller** (Woody Hayes Chair of National Security Studies, Mershon Center, and is professor of Political Science, at Ohio State University) **2010** “Atomic Obsession: Nuclear Alarmism from Hiroshima to Al Qaeda” p. 232

From this perspective, then, rhetorical declamations insisting that terrorism poses an existential threat are profoundly misguided. And so self-destructive overreactions (like the war in Iraq) which are also encouraging to the terrorists. As Osama bin Laden crowed in 2004: It is easy for us to provoke and bait .... All that we have to do is to send two mujahidin ... to raise a piece of cloth on which is wtitten al-Qaeda in order to make the generals race there to cause America to suffer human, economic, and political losses. Our policy is one -...... of bleeding America to the point of bankruptcy. The terrorist attacks cost al-Qaeda $500,000 while the attack and its aftermath .. inflicted a cost of more than $500 billion on the United States. .... Or perhaps, it is even worse. To the extent that we "portray the terrorist nuclear threat as the thing we fear most," notes Susan Martin, "we ow--. ture the idea that this is what terrorists must do if they want to be taka. ; seriously:'48 Existential bombast can be useful for scoring political points, selling. newspapers, or securing funding for pet projects or bureaucratic expansion. However, it does so by essentially suggesting that, if the terrorists really want to destroy us, all they have to do is hit us with a terrific punch, particularly a nuclear one. Although the attack may not in itself be remotely" enough to cause the nation to cease to exist, purveyors of bombast assure the terrorists that the target country will respond by obligingly destroying itself in anguished overreaction. The suggestion, then, is that it is not ' only the most feared terrorists who are suicidal. As Sageman points out, the United States hardly faces a threat to its existence, because even a nuclear strike by terrorists "will not destroy the nation:' As things stand now, he.. adds, "only the United States could obliterate the United States:'49 Atomic terrorism may indeed be the single most serious threat to the national security of the United States. Assessed in an appropriate context, however, the likelihood that such a calamity will come about seems breathtakingly small. Sensible, cost-effective policies designed to make that probability even lower may be justified, given the damage that can be inflicted by an atomic explosion. But unjustified, obsessive alarmism about the likelihood and imminence of atomic terrorism has had policy consequences that have been costly and unnecessary. Among them are the war in Iraq and the focus on WMD that seduced federal agencies away from due preparation 5o for disasters that have actually happened, such as Hurricane Katrina. Arch-demon Zawahiri once noted that the group only became aware of biological weapons "when the enemy drew our attention to them by repeatedly expressing concerns that they can be produced simply with easily available materials;'5! By constantly suggesting that the United States will destroy itself in response to an atomic explosion, the existential bombast about a terrorist bomb that follows so naturally from decades of atomic obsession encourages the most diabolical and murderous terrorists to investigate the possibility of obtaining one. Fortunately, however, would-be atomic terrorists are exceedingly unlikely to be successful in such a quest, however intense the inspiration and encouragement they receive from the unintentional cheerleaders among their distant enemies.