The New Atlantis
A Journal of Technology & Society

Place-Conscious Transportation Policy

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I started working at the New Jersey Department of Transportation (NJDOT) in 1973, right out of college, as a civil engineering trainee. For the first twenty years of my career as a transportation engineer, I bought into the prevailing ethos of the profession that the solution to congestion was to build more and bigger roads. The mission of transportation planning, we believed, was simply accommodating the demands of traffic, whether on local streets or on state and national highways. We felt we were not doing our jobs properly unless enough lanes were added to ensure free-flowing traffic 24/7/365. The quality of life in communities and the condition of the environment were someone else's business; our job was to move cars and trucks as smoothly and rapidly as possible.

Gradually my faith in this "wider, straighter, faster" paradigm of traffic planning began to change. This occurred while I was in charge of a new unit at NJDOT that had been created to meet with communities, business owners, public agencies, and other community stakeholders to seek their support for various road projects. We were supposed to reduce community resistance, which was beginning to delay and even cancel projects. But as time went on, it became clear to me that the real point of transportation projects should be building successful communities and fostering economic prosperity.

How Did We Get Into This Jam?

Prior to the introduction of the automobile, the American conception of what constitutes a good road was vastly different than it is today. Serving the community and creating an efficient and livable pattern of

development were central to the aims of street design. Transportation was fully integrated into land use planning.

The growing popularity of automobiles after 1910 created pressure for the federal government to become more directly involved in financing roads. Spurred on by cries of "Get farmers out of the mud," Congress passed the Federal Aid Road Act of 1916, which made continuous funding available for states to make road improvements. Motorists and other organized interests began to apply intense pressure to build more highways. In the 1930s, many American officials visited the German Autobahn network and returned with a sense of urgency that we needed to create a national system of high-speed freeways. This ultimately led to federal legislation in 1944 to establish the Interstate Highway System and in 1956 to fund it, which ignited the great road-building era of the 1950s, 60s, and 70s.

Today, it is fashionable to vilify transportation planners for ignoring the negative effects of large-scale road-building on our communities. However, two men at the top of the transportation field during the years the Interstate Highway System was formed—Thomas H. MacDonald, chief of the federal Bureau of Public Roads (BPR), and his top aide, Herbert S. Fairbank—warned, in a 1944 report issued to President Roosevelt by the National Interregional Highway Committee, that thoughtless planning and improperly placed roads "will become more and more of an encumbrance to the city's functions and an all too durable reminder of planning that was bad." They recognized that a shift of population to the suburbs was beginning to take a toll on cities.

Unfortunately, the federal government ignored MacDonald and Fairbank's vision of connecting highway development to a broader regional planning approach. As late as 1947, at the annual meeting of the American Association of State Highway Officials, MacDonald urged his colleagues to do whatever they could to reverse politicians' refusal to subsidize mass transportation. Repeatedly, however, Presidents Roosevelt, Truman, and Eisenhower, along with Congress, ignored these sensible recommendations for an integrated and balanced transportation network in the various federal highway bills that were enacted.

Starting in the 1950s, the transportation industry mobilized in an unprecedented way to deliver a mandate for a new generation of highways that would eliminate hassles and obstacles to the rapid flow of traffic. Planning in the United States became dominated by transportation engineers, while citizens, advocacy groups, and planners in other fields

saw their influence decline. The transportation profession was remarkably successful in convincing two generations of politicians, developers, construction industries, special-interest groups, and the public about how things should be done. With blinders fully on, the transportation planners and the nation at large ignored mounting evidence of the unintended consequences of this huge road-building campaign.

Efficiency for Automobile Traffic, and Its Consequences

By the early 1990s, when the Interstate Highway System—one of the biggest construction projects in human history—was essentially completed, congestion in urban areas was still growing worse, and community opposition to new road projects was stronger than ever. Within the transportation profession, there was a dawning recognition that something was inherently wrong with the way we were thinking about and designing highways.

Not knowing any other way to operate, however, the transportation profession continued to plan new road projects in the same old way—using a formula that, though it may seem arbitrary now, had by then become standard: attempt to meet peak demand by ensuring the free flow of traffic up to the thirtieth-busiest hour of the year. When the inevitable resistance from affected communities arose, state departments of transportation found that invoking the "national interest"—which had worked so well during the years of Interstate Highway construction to override community objections—was no longer effective in pushing through the projects. By the 1990s, citizen opposition was able to bring many projects to a standstill.

Meanwhile, evidence was mounting that the wider, straighter, and faster approach was not solving the problem. The Texas Transportation Institute, in its Urban Mobility Reports, has shown that over the last two decades of the twentieth century, congestion indicators spiraled out of control; for instance, the 2005 report reveals that the average hours a motorist spent annually in traffic had tripled.

This was occurring because of the way street and road networks were being planned. New highway capacity made spread-out development possible, which was creating congestion faster than transportation agencies could widen or replace failing highways. Furthermore, mass transit could not feasibly serve the sprawling suburbs, and street design made biking and walking all but impossible. All of these factors caused vehicle trips and vehicle miles to explode at a much faster rate than population growth. Transportation professionals and state departments of transportation

watched these problems worsen, but stood aside and did nothing, believing that their job was building roads, and land-use planning was someone else's responsibility.

As a result, construction costs for adding new traffic capacity have been escalating sharply, at exactly the same time that our aging transportation infrastructure demands more attention. States are facing steep financial difficulties, exacerbated by the recent recession, and state legislators are loath to speak of raising taxes. Meanwhile, many roads and bridges built in the highway boom years between the 1940s and 1960s have aged to the point of needing major repairs or replacement, creating a towering backlog of fix-it-first projects. All of these factors make it far less likely that even the most determined state departments of transportation can build their way out of congestion.

As congestion has worsened in a transportation system focused on high-speed travel, so have other social problems. The ever-increasing vehicle miles traveled annually in the United States is closely connected to the major problems of energy and environmental policy. At the same time, our nation's public health indicators are taking a nosedive. The Centers for Disease Control and Prevention reports that, between 1960 and 2005, the obesity rate among American adults rose from 13 percent to 35 percent. Until about 1989, most states had an obesity rate below 10 percent, but by 2009, all but one state had an obesity rate over 20 percent, and nine states had an obesity rate above 30 percent.

The CDC has emphasized the role of inactivity in this rapid deterioration of public health, and warns us that our increasing lack of fitness brings major health problems in addition to obesity: diabetes, cardiovascular disease, increased symptoms of depression and anxiety, and poorer development and maintenance of bones and muscles. While some still dispute our transportation system's role in this widening health crisis, studies linking sprawl and obesity are accumulating.

Fresh Thinking About Places and Planning

Today, awareness of the problems with transportation planning is on the rise, attitudes are changing, and the time is ripe for rethinking our approach. There are several changes that can be implemented to better the way we develop and get around to places:

1. Target the "right" capital improvement projects. The first step is to recognize that transportation decisions have a huge impact on community

and land-use planning—and vice versa. Major investments in roads should be pursued only in communities and regions with effective land-use plans in place, which will protect the public investment in new highway capacity. With our nation struggling mightily to figure out how to raise funds for infrastructure, we can no longer afford to support land-use practices that consume new highway capacity long before the useful life of the investment. We must invest in ways that will permanently solve our transportation problems, not create new ones that we will then have to raise funds for in only a few years. Meanwhile, the transportation profession itself needs to accept that road projects carry significant social and environmental consequences. Transportation professionals need to heed Thomas MacDonald and Herbert Fairbank's advice from the 1930s, as described by Richard F. Weingroff in the magazine *Public Roads*: "Freeway location should be coordinated with housing and city planning authorities; railroad, bus, and truck interests; air transportation and airport officials; and any other agencies, groups, and interests that may affect the future shape of the city."

2. Make place-making and far-sighted land use planning central to transportation decisions. Traffic planners and public officials need to foster land-use planning at the community level, which supports a state's transportation network rather than overloading it. This includes creating more attractive *places*, in both existing developments and new ones, that people will want to visit. A strong sense of place benefits the overall transportation system. Great places—popular spots with a good mix of people and activities, which can be comfortably reached by foot, bike, and perhaps mass transit as well as cars—put little strain on the transportation system. In Burlington, Vermont, for instance, U.S. Route 7 successfully supports regional through traffic as two lanes in a residential setting, while just two miles south, multiple lanes fail every day due to a lack of thoughtful place-making. Cities like Denver, Charlotte, Portland, and even Los Angeles are now fostering development that provides citizens with choices on travel instead of forcing them onto overcrowded roads. Poor land-use planning, by contrast, generates thousands of unnecessary vehicle trips, creating dysfunctional roads, which further worsens the quality of the places. The locations cited in the 2010 Urban Mobility Report as having the most dramatic increases in congestion over the last two decades are largely those that grew after World War II—when the build-more-lanes ideology was dominant.

3. Shift away from single-use zoning. We must begin to phase out planning regulations that treat schools, affordable housing, grocery

stores, and shops as undesirable neighbors. The misguided logic of current zoning codes calls for locating amenities as far away from residential areas as possible. Locating essential commercial services along busy state and local highways creates needless traffic and forces local traffic to mix with commuting and regional traffic, thus choking the capacity of the road system. The emergence of form-based zoning codes (FBCs), which essentially remove government regulation of how property is used, allows the free market—instead of government planners in cubicles—to decide on land uses that work best for the community. Instead of imposing regulations on what can be built and where for decades to come, FBCs seek to influence only the form of development so that it contributes to what the local market decides is important: building heights, parking locations, setbacks from the street, and so forth.

4. Get more mileage out of our roads. The nineteenth- and early-twentieth-century practice of creating connected road networks, still found in many beloved older neighborhoods, can help us beat twenty-first century congestion. Mile for mile, a finely-woven, dense grid of connected streets has much more carrying capacity than a sparse, curvilinear tangle of unconnected cul-de-sacs, which forces all traffic out to the major highways. Unconnected street networks, endemic to post-World War II suburbs, do almost nothing to promote mobility.

5. View streets themselves as places. Streets take up a high percentage of a community's land—nearly a third of the area of parts of some cities. Yet, under planning policies of the past seventy years, people have given up their rights to this public property. While streets were once a place where children played and grownups stopped for conversation, they are now the exclusive domain of cars. Even the sidewalks along high-speed local streets and highways feel inhospitable. But there is a new movement to look at streets in the broader context of communities. It's actually a rather simple idea: streets need to be designed in a way that induces traffic speeds appropriate for that particular context. High-speed travel should be left for freeways; the rest of our streets should be designed for speeds that allow businesses and residents to decide on what the market will support and where it will be supported.

6. Spread transportation investment money around. If we continue with the practice of chasing big engineering projects as our first choice in solving congestion, most communities will wait decades for a solution to their problems. The huge cost of adding lanes to existing problem areas

and building new roads will allow for only a few congestion hot spots to be fixed each year. In contrast, investments in transportation and land use that support choices on travel and shape development to keep our roads congestion-free will focus our limited funding on better uses. For instance, a scenario-planning study done for the Salt Lake City region in the late 1990s concluded that balanced investment and development would reduce infrastructure needs from $27 billion to $22 billion over two decades. At the same time, congestion would be reduced, economic stimulus increased, and the rural life that Utah residents cherished would not be gobbled up by sprawl.

A New Approach to Transportation

In the post-World War II era, the transportation profession responded to a mandate from government officials to build a new generation of highways for public mobility and national defense. They should be commended for a job well done. But a new generation of solutions is needed for the twenty-first century, and this well-organized and well-trained profession should apply its talents to helping us adapt to these new realities. We need a new vision of transportation that truly improves our mobility, sustains our communities, protects our environment, and helps restore our physical fitness and health.

The transportation profession can no longer respond to mounting levels of congestion, nor to community and environmental dilemmas, by trying to widen existing roads or build new ones. New highways are now packed with cars almost as soon as they open. And today there is simply not the money available for that kind of large-scale road building. Most states cannot even keep up with the backlog of repair projects.

When I was at NJDOT, we came to realize that the 1950s were long past, and that we needed a new approach to meet the needs of our citizens. New Jerseyans lost their patience with top-down government decision-making. So we began collaborating with the public on solutions that took into account the whole context of communities being served by a particular road, creating an approach known as Context Sensitive Solutions. Like most people, we initially believed that Americans were in love with the automobile and would demand that we continue to provide them with bigger, faster roads separated from shopping and neighborhoods. While we did find this response in some communities, we were surprised by how many more communities firmly supported better land use and community planning.

We Americans may always love our automobiles, but that does not mean we want to spend all day stuck inside them. Transportation systems that afford Americans the option of getting to places without using their cars actually offer more freedom than those that keep people solely dependent on the auto to get anywhere. And more flexible systems will lighten the fiscal burden on taxpayers, since it will be less necessary for government to raise revenue to help the less fortunate get around. People understand this, and can see that a transportation network that caters exclusively to cars has harmed our communities, compromised our health, fueled the environmental crisis, and made us dependent on foreign oil.

Some critics of this new approach to transportation investment might feel it is too centralized and technocratic. But there is nothing un-American about planning communities as a whole, or acknowledging that roads are just one of the elements that create a livable place. Place-based processes are profoundly democratic: they call for full engagement of citizens and businesses in communities to determine their own future and then inform government of the type of transportation investment that best suits them. In contrast, has there ever been a more top-down approach than that used by transportation agencies over the latter half of the twentieth century? While at the New Jersey Department of Transportation for thirty-four years, I watched community after community, property owner after property owner, feel powerless and helpless as we made decisions that affected their property rights.

A place-based approach to transportation policy is in keeping with America's best traditions. Indeed, a commonsense understanding of place guided the design of our communities until at least 1920. While pre-twentieth-century community planners were by no means perfect, they did create places where transportation was integrated into broader public aims. The roads and bridges in these areas were built to foster economic development and quality of life in the community, not to hamper it.

If we are to embrace the concept of economically sustainable, healthy, and livable communities that serve a diverse population and provide options for mobility, then we must integrate our transportation planning with our larger goals, and we must design our roads for all users. We must allow the people of America to have more say on how their places are shaped. To do so, we can draw on the wisdom of our past to build communities that will flourish well into the future.

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