Unintended Consequences of Urban Highways and Possible Solutions

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ITDP Webinar
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Traveling on Beautiful Interstate 70
Downtown Denver
Downtown Denver
Downtown Denver

1936

1970
CHOICE
OPPORTUNITY
Public Assets Are Aging

Shrinking investment over the past two decades has left the United States with an older, less efficient foundation for economic growth.

The Government Spends Less on Upkeep

In the 1950s and ‘60s, federal, state and local governments were spending twice as much on the nation’s public infrastructure, relative to the size of the economy, as they are today.
Relationship of VMT and VMT per Capita, (1970-2015)
1. Passenger travel trends no longer closely track economic trends.
2. Changes in gas prices have weak impact on VMT.
3. The urban form of American cities is changing.
4. Socio-demographic trends have potentially lasting effects on travel demand.
5. Individuals belonging to all generations are frequent users of modern technologies.
6. Technology-enabled shared mobility services are lessening necessity of private vehicle ownership.
In the 20th Century, the American era of highway-building created sprawling freeways that cut huge swaths through our cities. Too often vibrant, diverse, and functioning neighborhoods were destroyed or isolated by their construction, devastating communities and economies alike. Today, many of these urban freeways are reaching the end of their lifespans—and their continuing purpose and worth is being called into question.

As Federal and State Departments of Transportation confront shrinking budgets, and cities look for ways to increase their revenues, replacing freeways with surface streets has gained recognition as both a practical alternative to rebuilding expensive highways and as a means to restore and revitalize communities. Cities as diverse as Portland, OR, San Francisco, CA, Milwaukee, WI, and Seoul, South Korea, have successfully replaced urban highways with boulevards and surface streets, saving billions of dollars in infrastructure costs, increasing real estate values on adjacent land, and restoring urban neighborhoods.

As end-stage urban freeways and their adjacent corridors present opportunities to transform broken liabilities into assets, elected officials and citizens alike can be advocates for transformations that support socially and economically valuable places.
DESIGN FLAW
Limited Access vs Fine-grained Network
Traveling on Beautiful Interstate 70
TEXAS and the Interstate Highway System

Published by
TEXAS HIGHWAY DEPARTMENT
AUSTIN, TEXAS
1967

Major Road Crossing

Structures such as these will be built where other state highways and major local roads intersect and cross the interstate highways. By using the correct lane or ramp, motorists will be able to change routes, take any route they wish, without crossing any conflicting lane of traffic.

Minor Road Crossing

For a very low-traffic cross road where no interchange is needed a simple grade separation will be constructed to move cross traffic over or under the expressway lanes.
PRESIDENT EISENHOWER went on to say that the matter of running Interstate routes through the congested parts of the cities was entirely against his original concept and wishes;

that he never anticipated that the program would turn out this way . . . and that he was certainly not aware of any concept of using the program to build up an extensive intra-city route network as part of the program he sponsored. He added that those who had not advised him that such was being done, and those who steered the program in such a direction, had not followed his wishes.

NOTES FROM MEETING - APRIL 6TH, 1960
EISENHOWER PRESIDENTIAL LIBRARY ARCHIVES
“...frequent streets and short blocks are valuable because of the fabric of intricate cross-use that they permit among the users of a city neighbourhood.”

Jane Jacobs
“Our major highway systems are conceived, in the interests of speed, as linear organizations, that is to say as arteries...Highway planners have yet to realize that these arteries must not be thrust into the delicate tissue of our cities; the blood they circulate must rather enter through an elaborate network of minor blood vessels and capillaries.”

Lewis Mumford
Fine-grained Network

- Same Total Lanes
- More Capacity
  - VMT
  - Turns
  - Clearance Time
  - Signal Phase
  - Routing options
  - Walking Environment
  - Land use alternatives
NATURAL CHANNEL

Suitable water temperatures
adequate shading; good cover for fish life; minimal variation in temperatures; abundant leaf material input.

Pool-riffle sequence
- pool (silt, sand & fine gravel)
- riffle (coarse gravel)

Sorted gravels provide diversified habitats for many stream organisms.

Pool environment
- high flow
- low flow

Diversity of water velocities: high in pools, lower on riffles. Resting areas abundant beneath undercut banks or behind large rocks, etc.

MANMADE CHANNEL

Increased water temperatures;
no shading; no cover for fish life; rapid daily and seasonal fluctuations in temperatures; reduced leaf material input.

mostly riffle

Unsorted gravels:
reduction in habitats, few organisms

Pool environment
- high flow
- low flow

Insufficient depth of flow during dry seasons; support diversity of fish and aquatic life. Few if any pools (less riffles)

Insufficient depth of flow during dry seasons; support diversity of fish and aquatic life. Few if any pools (less riffles)
Habitat restoration is one of the main goals of the Army Corps Feasibility Study for the Los Angeles River.

Bird species of special concern found along the River Corridor include:

- American White Pelican
- Double Crested Cormorant
- Osprey
- Northern Harrier
- Sharp-shinned Hawk
- Coopers Hawk
- Merlin
- California Gull
- Vaux's Swift
- Loggerhead Shrike
- Yellow Warbler
- Yellow-breasted Chat
- Tri-colored Blackbird

(California Department of Fish and Game, Habitat Conservation Planning Branch, 2007, website).
CAPACITY

Adding Choices vs Solving Congestion
"Capacity" of a Street
DESIGN FOR PARKED WAYS PUBLISHED BY THE METROPOLITAN PARK COMMISSION OF MILWAUKEE IN 1909
“We shall solve the *problem* of the city by leaving the city”

Henry Ford, 1922
Freeway toll: $5.5 billion, 576 acres

And by 2020, traffic would be more jammed than ever.

By LARRY SANDLER
of the Journal Sentinel staff

Even if no lanes are added, rebuilding the Milwaukee area's aging freeway system could cost $3.5 billion and take 576 acres of land, planners estimate.

And after spending all that money and taking all that land, traffic still would be nearly twice as jammed in 2020 as it is now, the planners forecast.

Those numbers come from the Southeastern Wisconsin Regional Planning Commission, which is currently studying how to rebuild all of the seven-county region's freeways as they near the end of their useful lives over the next 20 years.

Planners also are looking at whether the system should be expanded to handle growing traffic, by turning many of the area's six-lane freeways into eight-lane freeways. They're still adding up the numbers on how much money and how much land that would take, said Ken Yunker, the commission's assistant director.

But even without expansion, "there's no way in the world they can have the money to pay for this without a big tax increase," Mayor John O. Norquist said.

State officials have said current gas taxes and license fees won't cover the costs of the freeway work, which would start with reconstruction of the Marquette Interchange downtown. Both the planning commission and the state Department of Transportation are trying to come up with recommendations on how to pay for the project.

The $3.5 billion estimate reflects the cost of rebuilding the freeways with design and safety improvements, such as smoothing out some curves and eliminating the left-hand entrance and exit ramps that force drivers to weave between lanes, the commission staff said.

That includes $1.1 billion for rebuilding the Marquette Interchange, a four-year job scheduled to begin in 2004.

If the entire freeway system were rebuilt exactly as it is now, left-hand ramps and all, the cost would be $3.35 billion, including $400 million for the downtown interchange, planners predict.

Either way, traffic congestion would get worse, the commission staff warns. Traffic jams that now extend over 45 freeway miles during rush hours would engulf 122 miles of freeways by 2020, covering 45% of the freeway system, the staff says.

Yunker has said the way to cut congestion would be to add lanes, at a still-uncalculated cost. The traffic forecast already assumes
Governments Look for New Ways to Pay for Roads and Bridges

Purchasing Power of Federal Gas Tax Rate Has Fallen by Nearly Two-Thirds Because of Inflation and Fuel-Efficiency Gains

Source: Institute on Taxation and Economic Policy (ITEP) analysis of data from the Federal Highway Administration (FHWA), Energy Information Administration (EIA), and Congressional Budget Office (CBO).
T O D
Transit Oriented Development
DOT
Development Oriented Transportation
PLACE Oriented Transportation
The Yichang BRT corridor uses innovative passing lanes to move over 100,000 people per day while using 20% less street width than traditional passing lanes.
PLAN NOW
CODE IT
Park East Redevelopment Corridor

Manpower (Block B)

Construction of the new world headquarters for Manpower Inc. was completed in Fall 2007. The $87 million development employs 1,200 people and includes a parking structure, public space, and extension of the Milwaukee Riverwalk. The building is the recipient of the 2007 Midwest Construction Award and the 2007 Real Estate and Construction Review Building of America Award. Gilbane Building Company was the general contractor.

North End Phase 1 and 2 (Block 23A and B)

A $175 million project developed in phases over the next 5-7 years is expected to become a neighborhood within itself with a variety of housing options and supportive retail services. Construction began earlier this year on phase 1, a 5-story apartment building featuring 83 apartments and 12,000 sq ft of 1st floor neighborhood retail (Block 24 on the Park East map). Construction of phase 2 is planned to begin later this year (Block 23B) and will consist of two 5-story apartment buildings that will offer 135-160 apartments, a new Riverwalk segment, public plaza, and new road. KBS is the general contractor.

Flation (Block 25)

Mixed-use project developed by Legacy Real Estate Partners, LLC with ground level retail, a corner public plaza, and 36 condominiums. This project was completed in Fall 2007. Currently, there are remaining condo units for sale and the retail space remains for lease. Altus Building Company was the general contractor.

Convoy Hill (Block 29)

Senior housing owned and operated by the Housing Authority of the City of Milwaukee. Phase 1 of the transformation of a former 120-unit, high-rise building into 182 on-site and 25 off-site housing units occurred in 2006. The new high-rise is a green LEED certified building with mixed income units and a garden roof walk.

The Modern (Block B)

Owned by Milwaukee Modern LLC. This will be a 30-story development to include 14 condos (priced between $250,000-$5 million), 203 high-end executive residences for lease and 7,200 sqft retail (spa and restaurant). Total private investment will be $72 million. Hunzinger is the general contractor.

The Asian (Block 30)

A 5-story, 160-room hotel development with 3,200 square feet of ground floor retail, a Riverwalk, and public green space. Total investment equals approximately $44 million.

Park East Square - Phase 1 (Block 26)

Although there are over 4 blocks that have been captioned by the Milwaukee County, this is the first block within the Park East corridor that has been officially sold by Milwaukee County. NSC & Associates has purchased the property and is proposing a hotel with ground floor retail and outdoor seating.
OWN IT
LEADERSHIP
A crusade to defeat the legacy of highways rammed through poor neighborhoods

April 24, 2016 5:39 AM 2016 5:39 AM
The Washington Post

As a U.S. Department of Transportation official, I have long been aware of the negative impact that highways have had on communities, especially those in poor and minority neighborhoods. The construction of highways has often been justified as a way to improve transportation and connect communities, but the reality is that these projects are often carried out without adequate consideration for the consequences.

The Washington Post transportation correspondent office

The idea of a crusade to defeat the legacy of highways rammed through poor neighborhoods is not new. Over the years, there have been various efforts to address the negative impacts of highway construction on communities. These efforts have included legislation, advocacy, and legal challenges. However, the scale of the problem is vast, and the solutions are complex.

Several long-term trends have contributed to the negative impact of highways on communities. The first is the emphasis on building highways as a means of connecting people, businesses, and industries. This focus has often taken precedence over the social and environmental impacts of highway construction. The second is the historical pattern of building highways in poor and minority neighborhoods, often displacing residents and businesses. This pattern has been reinforced by policies and practices that prioritize road construction over community needs.

The crusade to defeat the legacy of highways rammed through poor neighborhoods must involve a multi-faceted approach. This includes addressing the root causes of highway construction, such as political and economic interests, and ensuring that communities have a say in the planning and implementation of highway projects. It also requires rethinking the role of highways in connecting communities, and exploring alternative modes of transportation that are more sustainable and equitable.

The crusade to defeat the legacy of highways rammed through poor neighborhoods is not just a matter of addressing the past. It is an ongoing effort to ensure that communities are not further marginalized by transportation policies and practices. The goal is to build a more just and equitable transportation system, one that values the well-being of all communities.
BIPARTISANSHIP PROPELS SURFACE TRANSPORTATION BILL THROUGH SENATE

Mayors Now Pressing House to Take Action

By Kevin McCarthy

After successful Senate action on a bipartisan surface transportation reauthorization bill, Senate Democrats and Republicans have taken the first step toward ensuring that our cities and communities have the tools they need to build and maintain safe, efficient, and sustainable transportation systems.

The Senate voted 74-22 to approve the legislation on March 14. The bill will be considered by the House of Representatives in the coming weeks.

The bill includes provisions that will create up to 1 million new jobs and invest in our nation's infrastructure.

Villaraigosa, Bloomberg, Emanuel Highlight Mayoral Leadership Needed on Education Reform

Nutter Receives Riley Urban Design Leadership Award
Smart Cars, Dumb Places
“...land, they’re not making it anymore”
“Nobody goes there anymore, it’s too crowded”
SUCCESS REQUIRES

1. Strong community support with extraordinary leadership and political will

2. An **urban vision** for the city that is not dominated by the automobile; prioritize the **short trip vs the long trip**

3. Decision processes driven by long-term community **investment versus spending** federal allocations on projects within given timeframes.

4. Regulatory (FBC) and Land Disposition **Control**