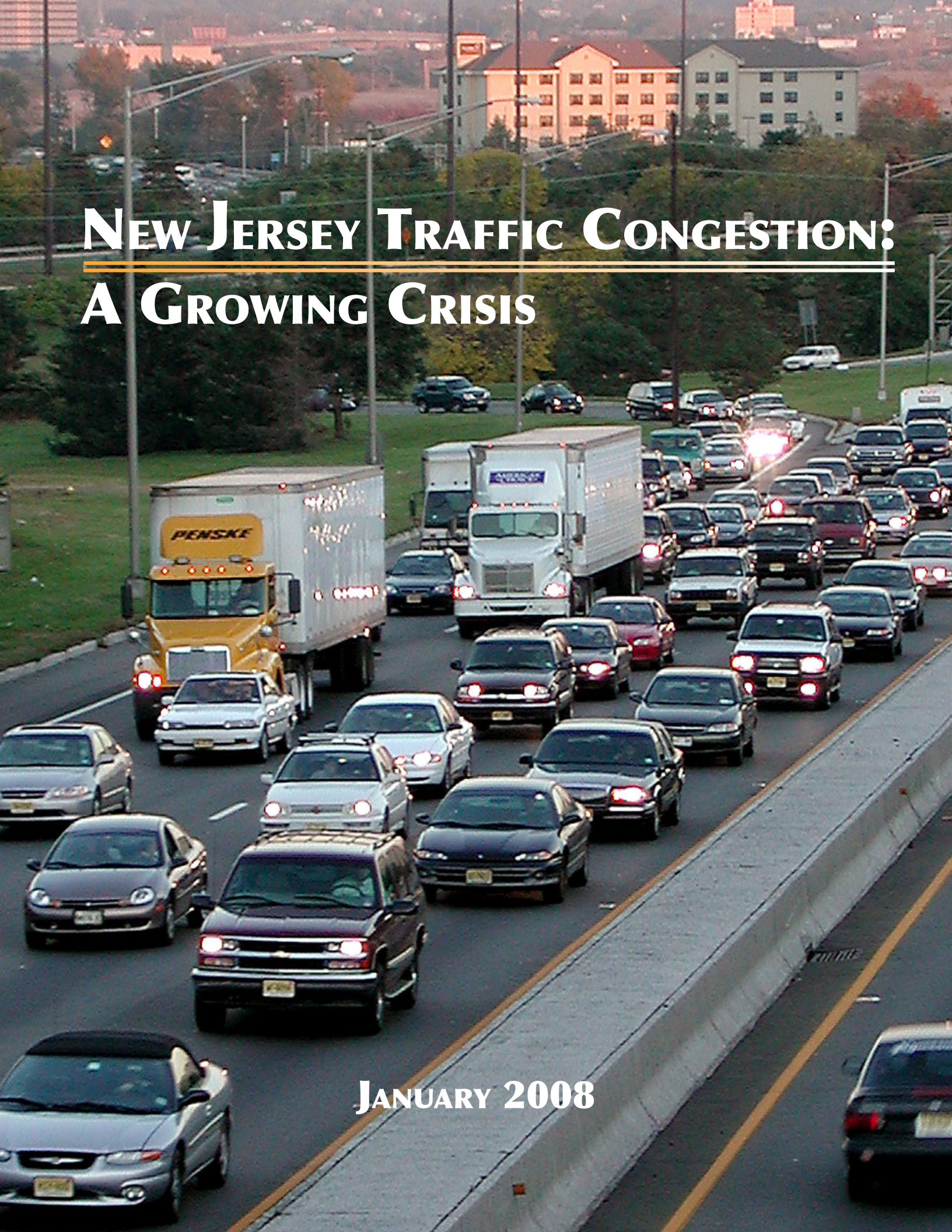
New Jersey Traffic Congestion: A Growing Crisis



January 2008

Cover photo: Route 3, Passaic County

Introduction

A rising tide of traffic congestion threatens to increase roadway gridlock, stifle the economy, and erode our quality of life in New Jersey. Failure to take significant steps now to relieve current congestion and to prevent worsening congestion is a real threat to the State's ability to remain economically competitive. Hours lost in traffic results not only in decreased productivity, but also impacts the quality of life of New Jersey's families. The State must invest now to implement congestion relief initiatives on the roadways and make public transit a more widely available and attractive travel option.

New Jersey has the most densely traveled roads in the Northeast and experiences almost a million hours of delay every day, according to NJDOT's Congestion Management System. Today, more than 40 percent of the State's roads are either near, at capacity, or already exceeding capacity.[1] Not only are roadways more crowded, they are congested for a longer period of time. The concept of a single rush hour when highway traffic is the heaviest is disappearing as the percentage of roadways that experience daily congestion for more than an hour has increased from 15 percent to 27 percent.[2] Congestion is more sharply experienced in northern New Jersey, which ranks seventh among very large urban areas in annual hours of delay per traveler.[3] Growth in southern New Jersey is also causing increased traffic congestion.

Population growth, economic development and changes in land use have combined to produce steadily increasing levels of traffic congestion. The trend is expected to continue and worsen, resulting in increased hours of congestion delays on the State roadway system, increased costs to taxpayers and motorists, and increased air pollution. According to the 2003 Blue Ribbon Commission Report, by 2020, New Jersey is projected to have a million more residents, 21 percent more jobs, and double the amount of freight moving through the State, adding a total of 34 billion additional vehicle miles traveled to New Jersey roadways. (or 45 percent more than the 75 billion miles traveled today.)

"A rising tide of traffic congestion threatens to increase roadway gridlock, stifle the economy, and erode our quality of life in New Jersey. The state must begin investing now to improve the reach and availability of public transit, break roadway bottlenecks and incorporate better transportation planning as part of land use development," said The Blue Ribbon Commission.[4]

In the nation's most densely populated state, where families value their quality of life, massive new road construction is too expensive, disruptive, and inefficient to adequately relieve congestion. Consequently, the State must invest in strategic congestion relief initiatives, including: improving the reach, connectivity and capacity of the public transit system; addressing the State's biggest roadway bottlenecks; applying new technologies to give motorists real-time traffic information; and incorporating smart congestion relief strategies in land use planning and development. Years of underfunding have created a substantial backlog of congestion relief projects that must be undertaken together with forward looking approaches.

To adequately begin to address congestion needs, the State must increase its investment annually for roadway projects according to the States's Congestion Management System. This is in addition to planned investments in the State's transit system for major capacity improvements such as the Access to the Region's Core (ARC) project, with the new trans-Hudson tunnel as its centerpiece.

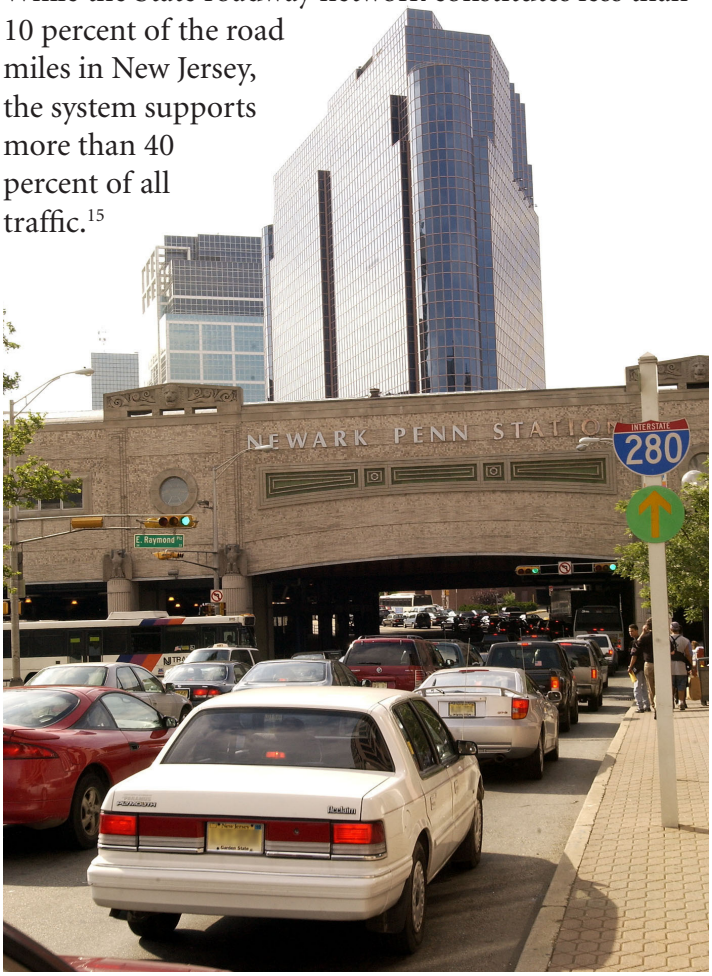
- New Jerseyans waste more than a full work-week, or 52 hours per year, stuck in traffic.[5]
- The average annual cost of congestion for New Jersey is $1,465 per licensed driver.[6]
- The cost of congestion in New Jersey has increased to up to $8.6 billion.[7]
- New Jersey has the third longest commute time in the nation.[8]
- In terms of economic competitiveness New Jersey ranks 43rd in the nation largely due to its average "travel time to work."[9]
- By 2015, total traffic will grow by 18 percent more vehicle miles traveled on New Jersey's highways and freeways.[10]
- New Jerseyans waste about $345 million annually in fuel due to traffic.[11]

Current Conditions

Congested conditions on the State's highways are a daily fact of life. Delays of 30 minutes to an hour at bridge and tunnel crossings are commonplace. Roadway accidents that historically would have caused minor delays, now cascade into major delays due to increased congestion. Traffic congestion results in driver stress, reduced quality of life, decreased productivity, wasted fuel, more air pollution and increased costs to motorists and to businesses.

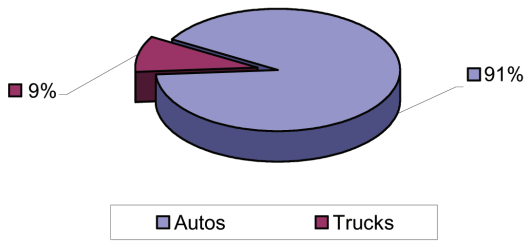
New Jersey has the most densely traveled roadways in the Northeast, and Garden State motorists experience almost a million hours of delay daily.[12] Of all the northeastern states, New Jersey has the most traffic, as measured by vehicle lane miles traveled annually.[13] In 2001 congestion cost the New Jersey/New York/ Connecticut regional economy more than seven billion dollars – second only to the Los Angeles metropolitan region.[14] Estimates based on 2006 data reach $8.6 billion.

While the State roadway network constitutes less than 10 percent of the road miles in New Jersey, the system supports more than 40 percent of all traffic.[15]



Today, 14 percent of the State's roads are congested, with another 28 percent nearing capacity. New Jersey has the greatest traffic density of any Northeastern state, as measured by vehicle lane miles traveled annually.[16]

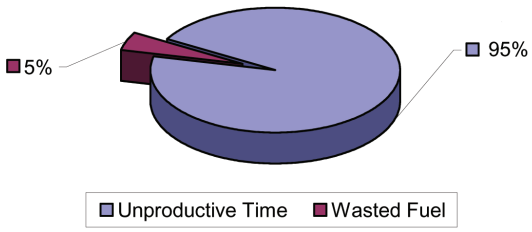
Annual Costs of Congestion for Autos vs. Trucks ($ Millions)



Annual 2006 Costs of Congestion: Autos vs. Trucks

Source: *NJIT 2007 - Alternative Performance measures for Evaluating Congestion*

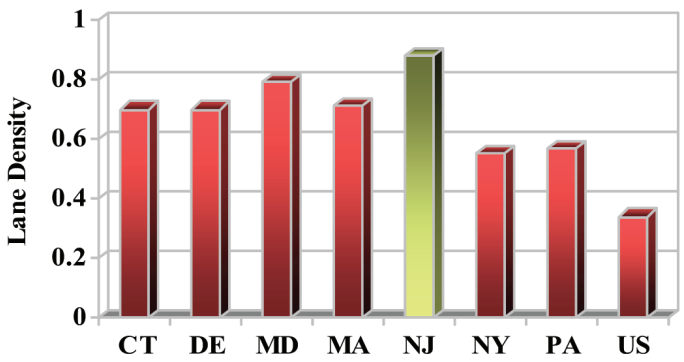
Annual Costs of Unproductive Time vs. Wasted Fuel ($ Millions)



Annual 2006 Costs of Congestion: Unproductive Time vs. Wasted Fuel

Source: *NJIT 2007 - Alternative Performance measures for Evaluating Congestion*

Year 2002 VMT/Lane-Miles
Millions of Vehicle Miles per Lane Mile per Year (Lane Density)



Source: *NJDOT Statewide Capital Investment Strategy FY2008 - FY2012*

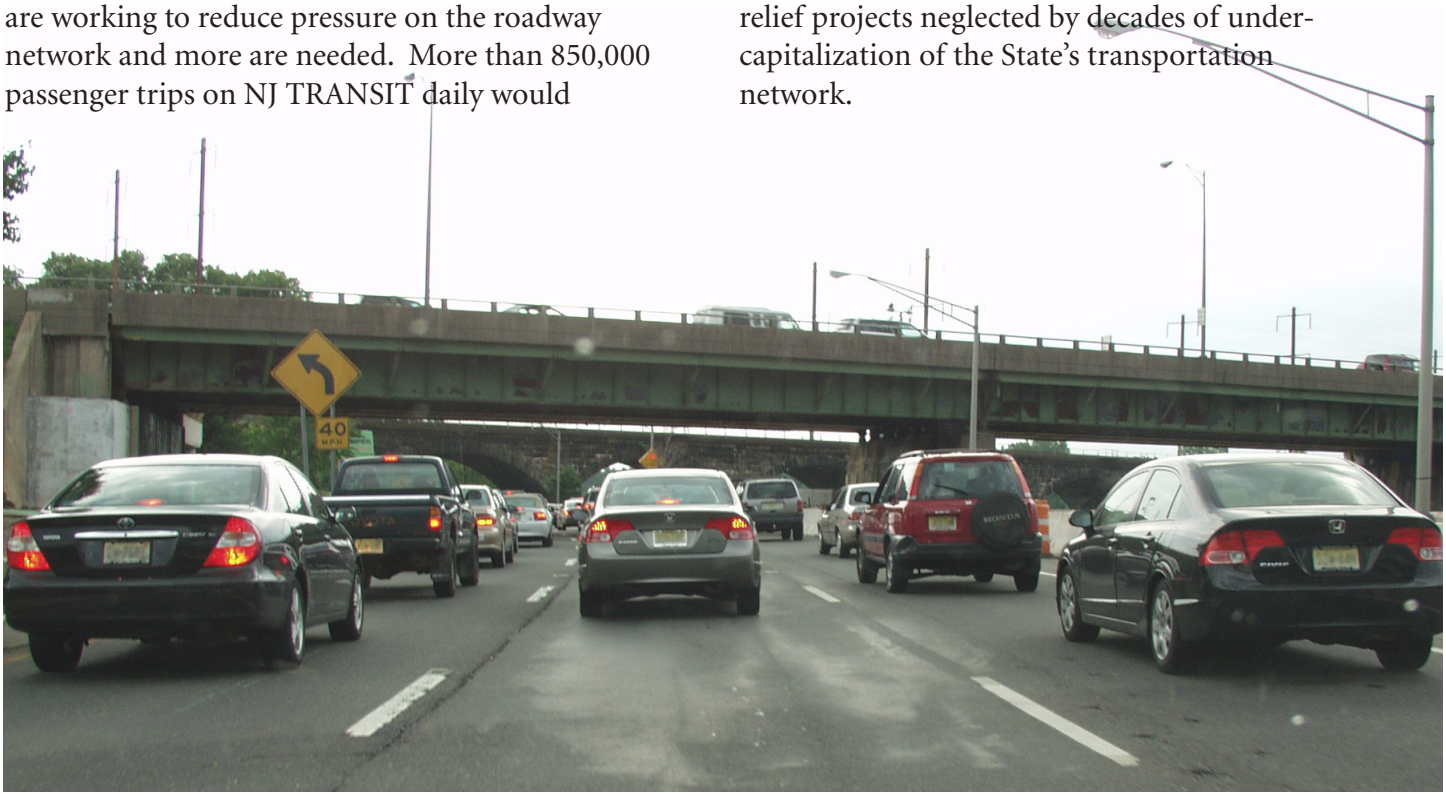
Growing Pressure

New Jersey has grown from a State of nearly 5 million residents in the mid-20th Century to one that today has more than 8 million people. Today's congestion is worsening and traffic will continue to increase and aggravate existing conditions unless immediate actions are taken. In 2006, New Jersey residents drove a combined 75 billion miles. Population growth, which is projected to reach nearly two million more residents over the next 20 years, combined with increased traffic generated by economic development, and increased demand for freight movement will generate another 34 billion vehicles miles traveled on the State's already over burdened roadway network.

"The combination of dramatic population increases, job growth and suburban sprawl has a toxic effect on traffic in an auto-dependent state like New Jersey. Our clogged roadways, the hours of delays people suffer, and the costs to individuals and businesses will make congestion the next social, economic, and environmental crisis in our state if we fail to act."

While New Jersey ranks second in the nation in public transit usage, the overwhelming majority of residents make their daily commutes in single occupancy cars. Four consecutive years of substantial ridership growth on the State's transit system suggests that the investments made in transit are working to reduce pressure on the roadway network and more are needed. More than 850,000 passenger trips on NJ TRANSIT daily would otherwise be adding to congestion on local and state roadways – creating paralysis on many roads and at major river crossings. While this report does not address transit initiatives in detail, it is important to note that investing in rail and bus capacity and service expansions to more communities is absolutely essential to any cogent congestion relief strategy.

In addition to major investments in public transportation, the State has made some progress in addressing certain roadway bottlenecks. Currently, the New Jersey Department of Transportation is spending nearly $300 million annually to address 46 major bottleneck locations statewide. These investments range from building new interchanges to adding turning lanes to improved signalization and restriping projects. However strategic, these investments are not enough to address the backlog of congestion relief projects neglected by decades of under-capitalization of the State's transportation network.

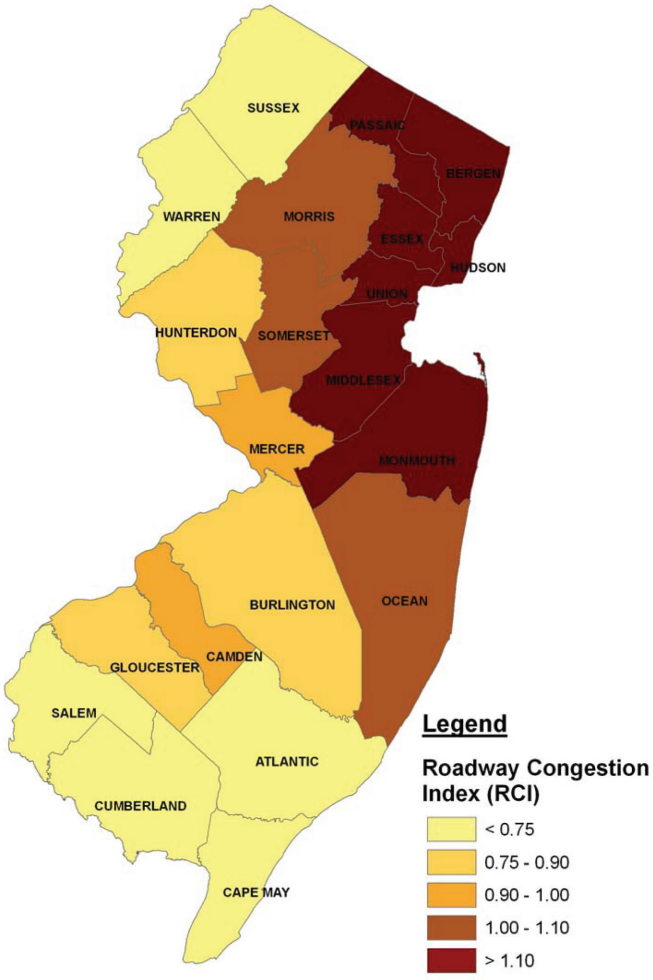


Unmet Needs

It is projected more than $9 billion is required to address the backlog of unfunded and partially funded congestion relief projects.[17]

New highway construction does not automatically promote better mobility. And it's clear that New Jersey does not have vast tracts of land to build significant new roadways to relieve congestion. However, there are opportunities to increase highway capacity through certain roadway widening projects and interchange improvements that would benefit the existing network.

Roadway Congestion Index (RCI)



Source: *NJIT 2007 - Alternative Performance measures for Evaluating Congestion*

For example, the current chokepoint on the New Jersey Turnpike between exits 6 and 9 should be eliminated with lanes added in each direction. This would require an investment of more than $2 billion to construct approximately 170 lane miles of new roadway, including a new toll plaza at interchange 8.

The most heavily traveled road in New Jersey, the Garden State Parkway, would also benefit from widening initiatives designed to reduce bottlenecks and expand capacity. Utilizing the existing right-of-way, lane widening between exits 30 in Somers Point and 80 in Toms River should add one lane in each direction. At a cost of $630 Million, this project would relieve congestion by adding capacity.

Congestion relief tools must also include the use of new technologies to provide motorists with real-time traffic information that can help reduce congestion at roadway chokepoints. New Jersey should expand, for example, the system of variable message signs installed along Routes 78, 287 and the New Jersey Turnpike that is currently being implemented to alert motorists of upcoming construction activities and traffic pattern changes throughout the project's duration. NJDOT has installed a real-time work zone travel system along the project.

Similar initiatives are needed on other major roadways statewide, including Routes 295, 80, and 17.

The State must optimize the value of the statewide traffic operations center that is currently under development to monitor traffic conditions on the state network—including the New Jersey Turnpike, Garden State Parkway, and Atlantic City Expressway – and relay that information to motorists via radio traffic services, traffic and news websites, and dynamic roadway signage, as well as the future 5-1-1 telephone hotline system.

Funding is also needed to fulfill the State's unmet parking needs, provide regional interceptor locations that take cars off the most congested roadways and channel more commutation trips to public transit. While NJDOT and NJ TRANSIT are currently making investments to expand park and ride facilities, the current parking space inventory is inadequate to meet today's demand and future demand is projected to increase by a minimum of 19.6 percent based on proposed Park & Ride facilities.[18]

NEW JERSEY BOTTLENECKS

Examples of some Locations

- NJ 1 Corridor
- NJ 3 & US 46 Interchange
- US 9 (Garden State Parkway to NJ 88)
- NJ 17 Intersections, Bergen County
- NJ 73 & NJ 70 Traffic Circle
- I-78 & Garden State Parkway Interchange 142
- I-95 Scudder Falls Bridge over Delaware River to Pennsylvania
- I-280 & Garden State Parkway Interchange 145
- I-295 / I-76 / NJ 42 Interchange Area
- Garden State Parkway (NJ 444) Intersection with County 657 (Stone Harbor Blvd.)
- NJ Turnpike Exits 6-9 widening
- Atlantic City Expressway Exit 7 (Garden State Parkway) to Exit 31 Westbound

Finally, smart growth strategies that incorporate transportation infrastructure at the earliest phases of development and land use planning can substantially reduce current and future traffic congestion. This requires identifying whether existing zoning requirements fully consider the need for transit accessibility and existing roadway conditions in the approvals process, as well as a transparent examination of the costs of development to the municipality and the State transportation systems.

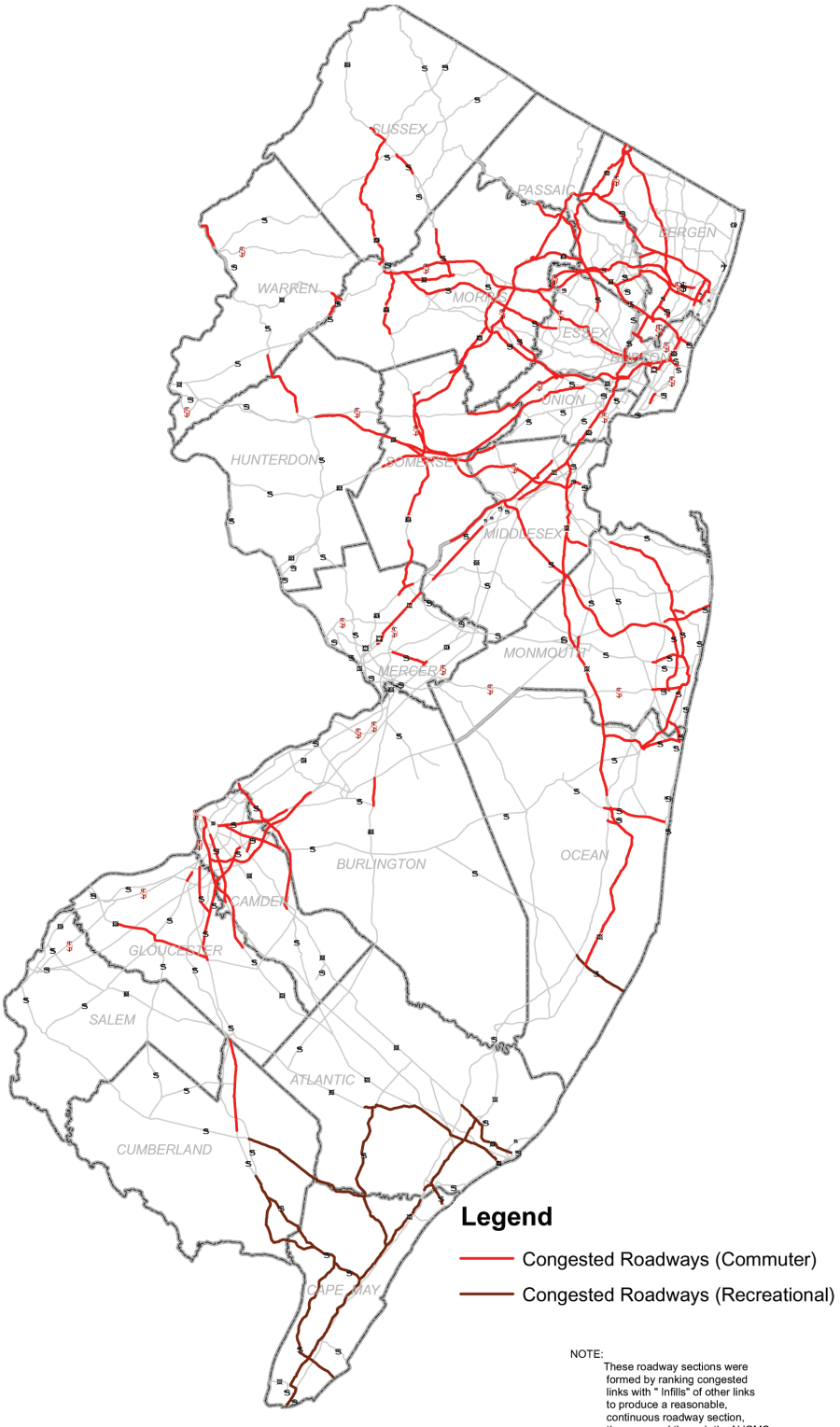
Congested Commuter/ Recreational Roadways

COMMUTER ROADWAYS

ROUTE	Begin MP	End MP	COUNTY	MaxHrVC	Corridor Rank
NJ 17	0.00	26.81	BERGEN	1.500	1
NJ 3	0.00	10.84	Pas-Bergen-Hudson	1.500	2
NJ 4	0.00	10.89	Passaic-Bergen	1.500	3
I-78	37.40	58.50	Som-Union-Essex	1.213	4
NJ 23	0.00	16.74	Essex-Pas-Morris	1.500	5
NJ 36	0.00	5.78	MONMOUTH	1.500	6
I-80	26.23	68.35	Mor-Ess-Pas-Ber	1.051	7
US 1	28.57	57.73	Mid-Uni-Ess-Hud	1.500	8
NJ 495	0.83	1.98	HUDSON	1.354	9
NJ 139 U	0.00	0.83	HUDSON	1.500	10
NJ 38	0.00	8.50	Camden-Burlington	1.500	11
I-295	26.71	43.18	Camden-Burlington	1.355	12
NJ 24	0.00	10.59	Morris-Essex-Union	1.286	13
NJ 21	0.00	4.10	ESSEX	1.500	14
NJ 79	0.00	1.60	MONMOUTH	1.500	15
NJ 66	0.00	3.62	MONMOUTH	1.500	16
NJ 35	12.93	43.11	Ocean-Monmouth	1.500	17
I-287	0.00	67.54	Mid-Som-Mor-Pas-Ber	1.175	18
NJ 139 L	0.00	1.45	HUDSON	1.500	19
NJ 88	0.00	10.02	OCEAN	1.500	20
US 9	94.47	136.25	Ocean-Monmouth-Mid	1.500	21
US 130	25.70	48.00	Camden-Burlington	1.500	22
NJ 37	5.78	13.42	OCEAN	1.500	23
NJ 10	0.00	19.70	Morris-Essex	1.500	24
NJ 42	3.00	14.28	Gloucester-Camden	1.451	25
I-280	0.00	16.80	Mor-Ess-Hud	1.131	26
I-76	0.00	1.94	CAMDEN	1.000	27
NJ 208	0.00	10.07	Bergen-Passaic	1.110	28
US 46	32.15	38.49	MORRIS	1.500	29
US 46	52.30	72.15	Essex-Pas-Bergen	1.353	30
NJ 138	0.00	3.52	MONMOUTH	1.270	31
US 202	56.19	80.31	Mor-Pas-Ber	1.500	32
US 1	14.08	22.70	MIDDLESEX	1.500	33
US 202	19.55	32.77	SOMERSET	1.500	34
NJ 27	8.36	24.33	MIDDLESEX	1.500	35
NJ 18	5.14	42.20	Monmouth-Middlesex	1.198	36
NJ 73	17.80	34.15	Camden-Burlington	1.500	37
NJ 70	0.00	7.40	CAMDEN	1.500	38
US 130	60.00	82.50	Mercer-Middlesex	1.500	39
NJ 166	0.00	2.23	OCEAN	1.500	40
I-676	0.00	3.78	CAMDEN	1.000	41
NJ 168	2.48	10.81	CAMDEN	1.500	42
NJ 7	3.67	5.29	BERGEN	1.490	43
US 1	62.80	64.90	BERGEN	1.000	44
NJ 440	0.00	3.98	MIDDLESEX	1.000	45
US 22	19.80	55.70	Hun-Som-Union	1.500	46
NJ 15	0.00	6.50	MORRIS	1.500	47
NJ 93	0.00	3.52	BERGEN	1.337	48
US 206	62.90	71.25	SOMERSET	1.500	49
NJ 120	0.80	2.83	BERGEN	1.050	50
NJ 28	0.00	12.12	Somerset-Middlesex	1.500	51
NJ 124	9.40	11.47	Essex-Union	1.480	52
US 30	0.96	16.98	Camden	1.500	53
NJ 71	14.40	16.76	Monmouth	1.500	54
US 9	70.50	90.97	OCEAN	1.500	55
US 202	37.40	50.30	Somerset-Morris	1.500	56
NJ 70	43.45	59.84	Ocean-Monmouth	1.150	57
US 1T	0.00	4.14	Essex-Hudson	1.180	58
NJ 45	25.80	27.06	GLOUCESTER	1.500	59
NJ 440	20.88	22.00	HUDSON	1.227	60
US 1	3.83	11.97	MERCER	1.370	61
NJ 154	0.00	1.70	CAMDEN	1.500	62
NJ 41	0.00	8.88	Gloucester-Camden	1.500	63
US 206	87.30	116.40	Morris-Sussex	1.500	64
I-80	0.50	3.60	WARREN	0.942	65
NJ 34	23.79	26.79	MIDDLESEX	1.500	66
US 46	21.00	22.40	Warren-Morris	1.470	67
NJ 124	0.00	7.30	MORRIS	1.340	68
NJ 33	3.78	7.88	MERCER	1.500	69
NJ 47	40.80	51.80	CUMBERLAND	1.500	70
US 206	52.65	59.90	Mercer-Somerset	1.420	71
NJ 15	14.20	17.20	SUSSEX	1.492	72
US 206	23.46	26.80	BURLINGTON	1.410	73
NJ 27	0.00	3.80	Mercer-Middlesex	1.390	74
NJ 57	19.68	21.10	WARREN	1.496	75
NJ 31	33.60	42.28	Hunterdon-Warren	1.451	76
US 322	6.00	18.25	GLOUCESTER	1.363	77
NJ 47	62.66	74.00	GLOUCESTER	1.500	78
NJ 182	0.00	0.98	WARREN	1.370	79

RECREATIONAL ROADWAYS

ROUTE	SRI_CMS	Begin MP	End MP	COUNTY
US 9	00000009	3.06	42.80	CM - Atlantic
US 30	00000030	49.15	58.23	ATLANTIC
US 40	00000040	45.40	64.27	ATLANTIC
NJ 47	00000047	0.00	34.80	CM - Cumberland
NJ 49	00000049	37.60	53.78	Cum-Atl-CM
NJ 50	00000050	0.00	18.54	CM - Atlantic
NJ 52	00000052	0.00	2.74	CAPE MAY
NJ 72	00000072	21.50	28.72	OCEAN
NJ 83	00000083	0.00	3.84	CAPE MAY
NJ 109	00000109	0.00	3.06	CAPE MAY
NJ 347	00000347	0.00	8.59	CM - Cumberland



NOTE:
These roadway sections were formed by ranking congested links with " Infills" of other links to produce a reasonable, continuous roadway section, then mapped through the NJCMS link Priority Ranking System, based on:
. V/C Ratios
. AADT
. Function Class/ Facility Type
.. Geographic Context

Source: *NJDOT Statewide Capital Investment Strategy FY2008 - FY2012*

Conclusion

Current highway congestion levels are a product of many factors beyond the control of transportation providers including population and economic growth, land use, changes in household structure, and evolving work and travel patterns.

Everyone is paying a high price for the rising tide of traffic congestion in New Jersey. Motorists are paying more than $1,465 annually. New Jersey drivers are sacrificing 307 million hours annually with their families.[19] The region's economy is footing the bill for billions of dollars in lost productivity. And all of us suffer when the very air we breathe is increasingly polluted by auto emissions.

The solution to relieving congestion is straightforward. New Jersey must invest substantially in expansions of and improvements to the public transit system as well as in strategic roadway initiatives that break bottlenecks, utilize new technologies to improve traffic information systems and expand the capacity of the existing roadway network. This will require a minimum of $300-$400 million annually in addition to the investments currently planned in the State's capital program.

The decades-old backlog of congestion relief projects puts New Jersey at a disadvantage in that it must address historic and current needs while concurrently planning for future demand. However difficult, investments that reduce the backlog and begin immediately to address current congestion challenges will improve current conditions and prevent congestion from worsening as traffic demand increases.

END NOTES

[1] NJDOT Capital Investment Strategy (CIS), FY2008 -2012

[2] IBID

[3] IBID

[4] The Blue Ribbon Commission Report – 2003

[5] NJIT 2007 - Alternative Performance measures for Evaluating Congestion

[6] IBID

[7] IBID

[8] US Census Bureau 2005

[9] State Competitiveness Report, Beacon Hill Institute 2006

[10] NJDOT Capital Investment Strategy (CIS), FY2008 -2012

[11] NJIT 2007 - Alternative Performance measures for Evaluating Congestion

[12] NJDOT Capital Investment Strategy (CIS), FY2008 -2012

[13] IBID

[14] IBID

[15] IBID

[16] IBID

[17] IBID

[18] NJDOT Park & Ride Inventory

[19] NJIT 2004 Alternative Performance Measures for Evaluating Congestion


PENSKE