

Why No New Hudson River Crossing to Manhattan?

The Reasoning Behind The Congestion We See

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This report seeks to analyze the rationale behind why no new crossing has been built in the last fifty years due to these implications. This report will also address the economic impacts of the New York Metro Area due to the limited availability to cross the Hudson River and why poor urban planning facilitated this response.

Introduction:

New York City, a center of finance, culture, fashion and media, results in a workforce of about 2 million people (Partnership for New York City, 2006). The population is growing and with limited space and expensive housing, people are more inclined to move away from the city center. This causes more commuters to use the New York Metropolitan Area's transportation system and make longer trips, using trains, buses, private cars and other modes. However, the area's transportation system has not been keeping pace with the rapidly growing population that is commuting from farther areas. Figure 1 shows the current 31 counties across three states that make up the New York City Metropolitan Area.

What is unique about the New York Metropolitan Area is that it is separated by many bodies of water. These disconnected land masses need connections for not just people who live in the region, but for interstate commerce across the country as well. Beginning in 1883 with the opening of the Brooklyn Bridge, New York City had been steadily building and expanding its bridges and tunnels. During the American highway boom of the fifties and sixties, this process was further intensified and then it stopped. The last major bridge to be built was the Verrazano Narrows Bridge in 1964. New York City changed their direction and stopped building expressways, bridges and tunnels. No alternative was implemented exacerbating congestion on arterial roads. There seems to be one river that is worst served for the people to cross after the highway boom halted; that is the Hudson River.



Figure 1: A map of the 31 counties that make up the New York City Metropolitan Area (Climate Change and a Global City: An Assessment of the Metropolitan East Coast Region, 2000).

Separating the states of New York and New Jersey, the Hudson River has only three motorist connections to Manhattan; the Holland Tunnel, Lincoln Tunnel and the George Washington Bridge. The river also has three train connections to Manhattan; the Downtown and Uptown Hudson Tubes, and North River Tubes. However, the last expansion of one of these crossings occurred in 1962 on the George Washington Bridge. The last new train tube

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was built well over a century ago in 1910. However, even with the expansion and construction of new connections, it simply was not enough to handle the post-war highway boom.

Many new crossings and expansion projects have been proposed during the decades to correct the bottleneck to cross the Hudson, but none came to fruition. There are a number of explanations to why this happened. There are social, economic and political implications to why we see the backups we see today. This report seeks to analyze the rationale behind why no new crossing has been built in the last fifty years due to these implications. This report will also address the economic impacts of the New York Metro Area due to the limited availability to cross the Hudson River and why poor urban planning facilitated this response.

The Magnitude of Congestion:

The following excerpt by Robert A. Caro in his book *The Power Broker* describes the egregious extent of New York City congestion to New Jersey during a typical evening rush. “In the evenings, when 80,000 daily commuters were heading home to Jersey, all of Manhattan between 175th and 181st streets was solid with cars, trucks, and buses moving toward the George Washington Bridge. Downtown, the typical line of cars waiting to enter the Holland Tunnel plaza was, at 5pm, eight blocks long. The Times, clocking travel time to the Lincoln Tunnel, found on one evening that it took a truck twenty-seven minutes to make a one-block-square circuit to the entrance plaza.) Within the city, it seemed that there was not a crevice into which cars did not cram; traffic was piling up everywhere; on the crosstown side streets in midtown Manhattan, the Times found, motorists frequently spent forty minutes traversing the two and a half miles from one side of the island to the other.”

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It is well established that policies aimed at better managing or increasing the capacity of urban transport networks increases productivity and hence GDP (Transport, 2007). The efficient use of roads and mass transit attract more businesses and jobs to a region increasing its economic vitality. With this known, why was traffic so badly managed by officials in the New York Metro Area? Terrible urban planning which facilitated and encouraged individuals to drive and not take mass transit, the US economic stagnation and near bankruptcy of New York City in the seventies and eighties, and social change are all factors that led to the demise of expanding highway and train infrastructure not only across the Hudson River, but the entire region.

The Geography Problem:

There are 24 vehicle lanes and 6 train tracks that cross the Hudson River on Manhattan's west side. Conversely, the East/Harlem Rivers on Manhattan's east side have 92 vehicle lane crossings and 36 train track crossings. The disparity is due in large part by the geography of the New York City area. The Hudson River is significantly wider at one mile at its minimum width compared to the East River at 0.4 mile. The first ten crossings which were bridges built in Manhattan were on its east side including the Brooklyn Bridge. Technology at the time allowed for bridges to span the East River, but not the Hudson River because it was simply too long of a span. Tunneling was too dangerous and too costly at the time.

Until advances were made in tunneling in the beginning of the twentieth century, it then became more feasible to connect New Jersey with Manhattan. The first Hudson River tunnels connecting them were built in 1908. These were the Uptown and Downtown Hudson Tubes built by a private Railroad Company. The North River Tubes were built in 1910 by a private

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Railroad Company as well. Table 1 below summarizes all the Hudson River crossings to Manhattan including vehicular ones that will be discussed later.

Table 1: List of Hudson River Crossings to Manhattan

Hudson River Crossings				
Type	Crossings	# of Lanes/Tracks	Capacity	Opened
Train	Uptown Hudson Tubes	2	-	1908
	Downtown Hudson Tubes	2	-	1908
	North River Tubes	2	-	1910
Motor Vehicle	Holland Tunnel	4	8,000 veh/hr	1927
	George Washington Bridge	14	28,000 veh/hr	1931
	Lincoln Tunnel	6	12,000 veh/hr	31, '37, '45

The Pro-Build Era:

The 20th century gave witness to many social norms that affected the development of New York City and its connections to places outside its boundaries. For the first three decades of the century, the public was bogged down by congestion from horse wagons, trolleys and pedestrians on city streets. The solution, with the full support of the people, New York City's first subway was built in 1904. The subway was proliferating and expanding throughout the city connecting the farthest corners, cutting commute times and controlling development outside of the Manhattan.

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The age of the automobile was in its infant stage at the time the first subway was built. However, with the public's eagerness to not be at the mercy of the train's schedule and its limited routes propelled the automobile to overcome the train. In 1920, the New York State Legislature recognized the popularity and growing importance of this mode of transport, and the need for a vehicular crossing between Manhattan and New Jersey. This crossing was to alleviate strains on the ferries and to circumvent the trading barrier posed by the Hudson River. The Holland Tunnel broke ground in 1920 and was completed in 1927 much to the public's pleasing. Over twenty thousand people walked through the tunnel on the day it opened (Holland Tunnel).

The New York area saw a surge in building crossings across the Hudson River from Manhattan. The George Washington Bridge was next; it was completed in 1931 with only 8 lanes crossing at that time (Jersey, 2011). Then came the Lincoln Tunnel's center tube, built in 1937, its north tube in 1945 and its south tube in 1951 (Anderson). The George Washington Bridge was then expanded adding six additional lanes on a new lower level in 1962. All of this building occurred during the highway boom in the United States and most of the public; especially politicians have supported them all.

The Public:

Different attitudes in the public were beginning to settle in and affect the political spectrum of building more highways and bridges. While for decades the public was pro-build, that time was beginning to decline when new generations realized the adverse affects of such public works. The highways and bridges that connected the region together were starting to be

looked at as detrimental to the health of the communities they bisected and the homes they have destroyed. The public was also becoming more worrisome about how humans were impacting the environment.

Bisecting the Bronx, the Cross Bronx Expressway is an example of destruction at its worst. This expressway, completed in 1961 carries Interstate 95 through densely populated communities to connect the existing George Washington Bridge and the proposed Throgs Neck Bridge with no regard to its social and environmental ramifications. While, an estimated 60,000 people in the path of the expressway were uprooted, many more thousands of people vacated the area near the expressway because of unlivable conditions. The excruciating noise from construction, the hardship of crossing the construction zone, the toxic fumes from packed solid traffic, and an increase in crime are all reasons that facilitated members of these communities to leave. East Tremont, a neighborhood that the expressway cut through was once a flourishing middle class area, but it became a deserted, impoverished area during and after the construction of the expressway (Caro, 1974).

Seeing the consequences of the Cross Bronx, the idea that new transportation projects were for the good of city was declining. This negative sentiment transferred over to the proposed Verrazano Narrows Bridge to connect Staten Island and Brooklyn. The residents of Bay Ridge, a closely-knit, densely populated area in southwest Brooklyn were opposed to the bridge. Repeating the same situation in the Bronx, a new expressway was built as the approach to the bridge through Bay Ridge, uprooting thousands and dividing the community in two. The Verrazano Bridge, completed in 1964, was the last major bridge to be constructed in the New

York Metro Area (Anderson, Verrazano-Narrows Bridge Historic Overview). With people tired and frustrated and politicians fearing retaliation from voters the propensity of the public to approve massive public works was exhausted. All proposed expressways in Manhattan thereafter were cancelled. One of them is the Lower Manhattan Expressway that would have connected the existing Manhattan and Brooklyn Bridges in the east with the Holland Tunnel with a new third tube. The proposed Mid-Manhattan Expressway that would have connected the Queens Midtown Tunnel in the east with the Lincoln Tunnel to the west was cancelled. The Cross Harlem Expressway that would have connected the existing Triborough Bridge in the east to the proposed Hudson River Bridge in the west was cancelled as well. Figure 2 shows a map of these proposed and cancelled expressways and crossings in Manhattan.

Financial Crisis:

With the public scrutinizing public works more, every proposed expressway was seen as being more costly than beneficial to their needs. Transportation planners were perplexed; as more highways were built to alleviate others, that new highway became packed solid too and did not relieve other congested arteries. Cars seemed to be coming out of thin air (Caro, 1974). The more highways that were built consequently encouraged the mass to purchase cars and live further away in the sprawling suburbs with large homes, manicured lawns and a pristine driveway just for their automobile. New Jersey experienced much of this suburban growth. Figure 3 shows the population explosion for counties in North Jersey. The first four counties are in the New York City Metro Area.

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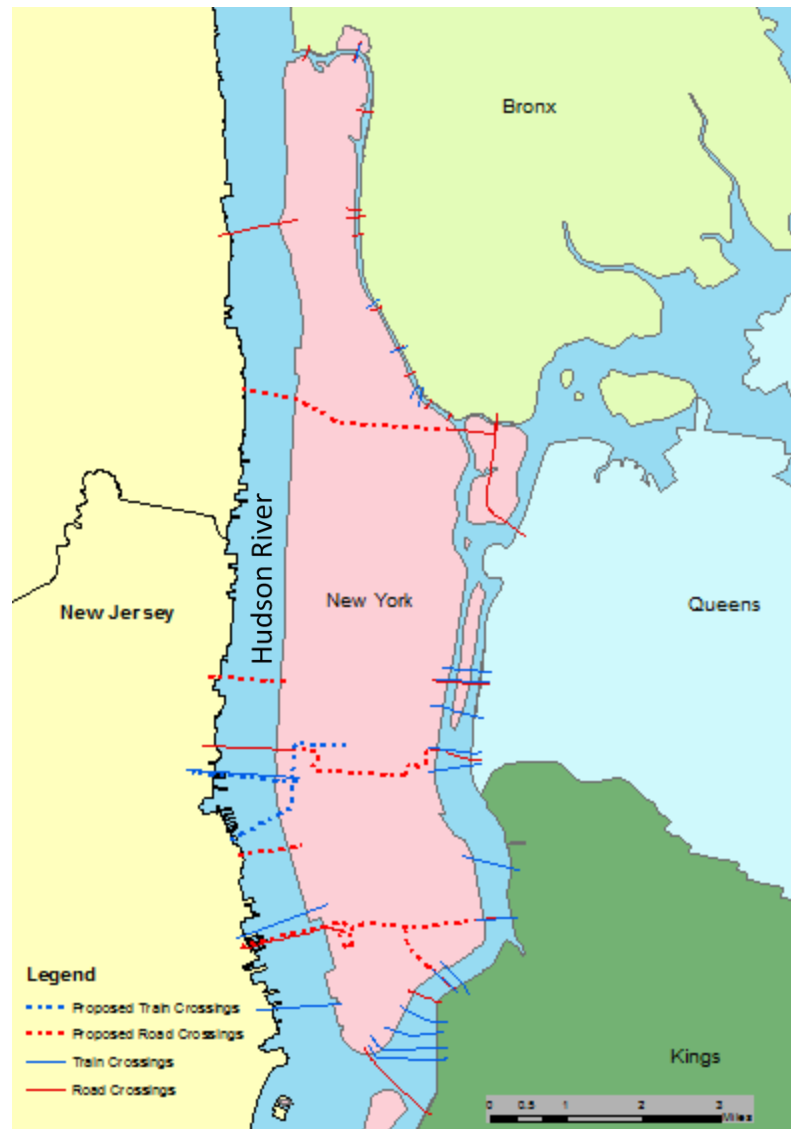


Figure 2: Map of these proposed and cancelled expressways and crossings in Manhattan, NY.

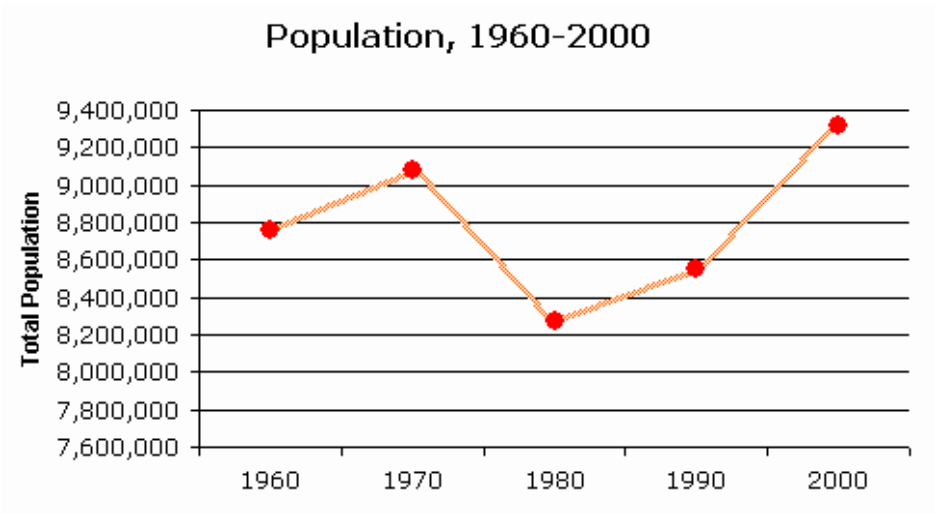


Figure 3: Population Growth by County in North Jersey (Peters, 2012). The first four counties on the list are in the New York Metropolitan Area.

To the contrary, the City of New York experienced a decline in population because of the explosion in growth its suburbs. Figure 4 shows the New York City population from 1960 – 2000.

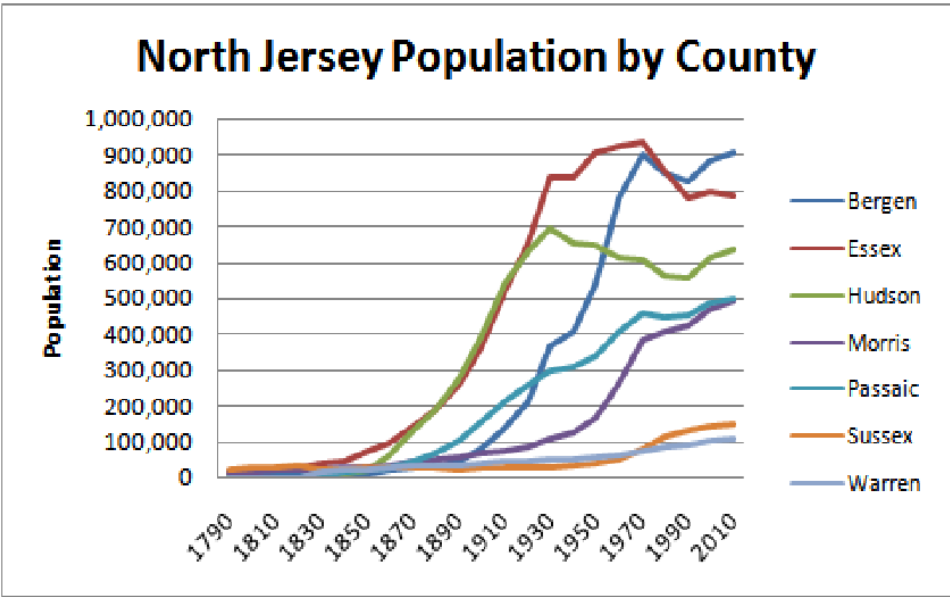


Figure 4: New York City Population Growth from 1960 – 2000 (New York, NY Populatio Growth)

For those who could afford a car and live in a house left for the surrounding suburbs. They would become the new travelers that would commute to the center city in the morning and depart in the evening leaving the city barren at night. The population of New York City was shifting and manufacturing jobs were leaving. Simultaneously, a national economic recession was looming and this all contributed to dire finances for the city (Shalala & Bellamy, 1977). No longer can the city afford their massive public works as before and certainly not a new crossing across the Hudson.

This sealed the faith that no new bridge across the Hudson River would be built. The lower-income people who stayed behind in the city did not care for expressways because they could not afford a car. Politicians were weary to spend scarce revenues on new public works in the city. There were more important things to worry about such as the drug, growing crime and violence, and aging infrastructure near collapse. The city could no longer afford the maintenance on existing infrastructure. The most famous incident of deteriorating infrastructure that had lapses in maintenance was the elevated West Side Highway. In the most ironic of circumstances a section collapsed due to a cement truck on its way to repair cracks in the deck.

Economical Losses:

The economy eventually recovered, but over the decades congestion on Hudson River bridges and tunnels to Manhattan proliferated. The massive congestion that we see today has

many economic consequences. Delays endured by commuters, workers and other travelers annually cost some \$5 billion to \$6.5 billion in lost time and productivity and an estimated \$2 billion in wasted fuel and other vehicle operating costs. There is a net loss of \$3.2 billion to \$4 billion annually due to excess congestion. Combined business costs, lost revenues and lost productivity meant that there are 37,000 to 52,000 fewer jobs created in the NY Metro Region every year. These traffic delays add to logistical, inventory and personnel costs that annually amount to an estimated \$1.9 billion in additional costs of doing business and \$4.6 billion in unrealized business revenue (Partnership for New York City, 2006).

Revival:

Realizing the colossal economic losses, governments are now seriously considering the construction of new crossings to alleviate congestion. The ARC Tunnel or Access to the Region's Core Tunnel proposed in 2010 would have added additional service for Amtrak and NJ Transit trains, doubling their capacity. It was slated to run under 34th Street to connect with Penn Station. Furthermore, it was projected to create 16,000 new permanent, non-construction related jobs in New Jersey and 24,000 in New York City. This job growth would subsequently generate \$4.3 and \$5 billion in gross regional product for New Jersey and New York City respectively (Watson, 2005). It made sense to the public to do it and the project was approved and construction began. However, as construction was underway for a short period, Governor Chris Christie of New Jersey canceled the project citing cost overruns that New Jersey could not afford.

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Subsequently, two alternatives were devised to renew a new Hudson River crossing almost immediately; the Gateway Tunnel Project and an extension of the NYC MTA No. 7 line. Both alternatives had their advantages and disadvantages for the New York Metro Area. Table 2 compares and contrasts these two alternatives with the original ARC Tunnel Project. None of these alternatives have a source of funding which makes the likelihood of them ever being completed even less so.

Table 2: Comparison of Train Tunnel Projects to cross the Hudson River to Manhattan, NY (Steinemann, 2011)

	Gateway Project	ARC Project	Proposed No. 7 NYC Subway to Secaucus
Add additional New Jersey Transit peak trains to NYC per hour	13	24	0
Allow direct service to NYC for New Jersey Transit's Bergen and Passaic Lines	No <i>(but will be built in a way to allow connection in the future)</i>	Yes	No
Expand NYC Subway Direct Access in Manhattan beyond the lines available from current Penn Station	Maybe <i>(contemplates adding one more line: the 7)</i>	Yes <i>(would have added direct access to seven more lines: N, Q, R, B, D, F & M)</i>	Yes <i>(would add direct access to ten more lines: N, Q, R, B, D, F, M, 4, 5 & 6)</i>
Expected Completion Date	2020	2018	?
Trains Controlled by New Jersey Agency	Yes <i>(in coordination with Amtrak)</i>	Yes	No
Expands Pedestrian Capacity at Moynihan/Penn Station Complex	Yes	Yes	No
Relieves congestion on NJ Transit lines throughout New Jersey	Yes	Yes	No

Conclusion:

Constructing expressway facilities and approach roads to bridges in socially unsustainable manners during the highway boom of the fifties and sixties resulted in diminishing public support for them. The economic stagnation and near collapse of New York City's finances afterwards in the seventies and eighties made it impossible to construct any new crossing over or under the Hudson River between Manhattan and New Jersey. It became clear that no new vehicular crossings will ever be built.

However, a train crossing seems to be more feasible. The ARC Tunnel Project demonstrated that the public and governments support it, but the precariousness of funds killed it. At least for now there are serious discussions to relieve congestion on Hudson River bridges and tunnels by constructing a new crossing. Bearing in mind the economic losses to the NY Metro Area it is vital to increase the capacity of the existing Hudson River crossings to Manhattan. The political and social will already exists; it only comes down to a matter of economics. If a project is proven viable and funds are allocated a new train crossing will be seen sooner than we think.

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