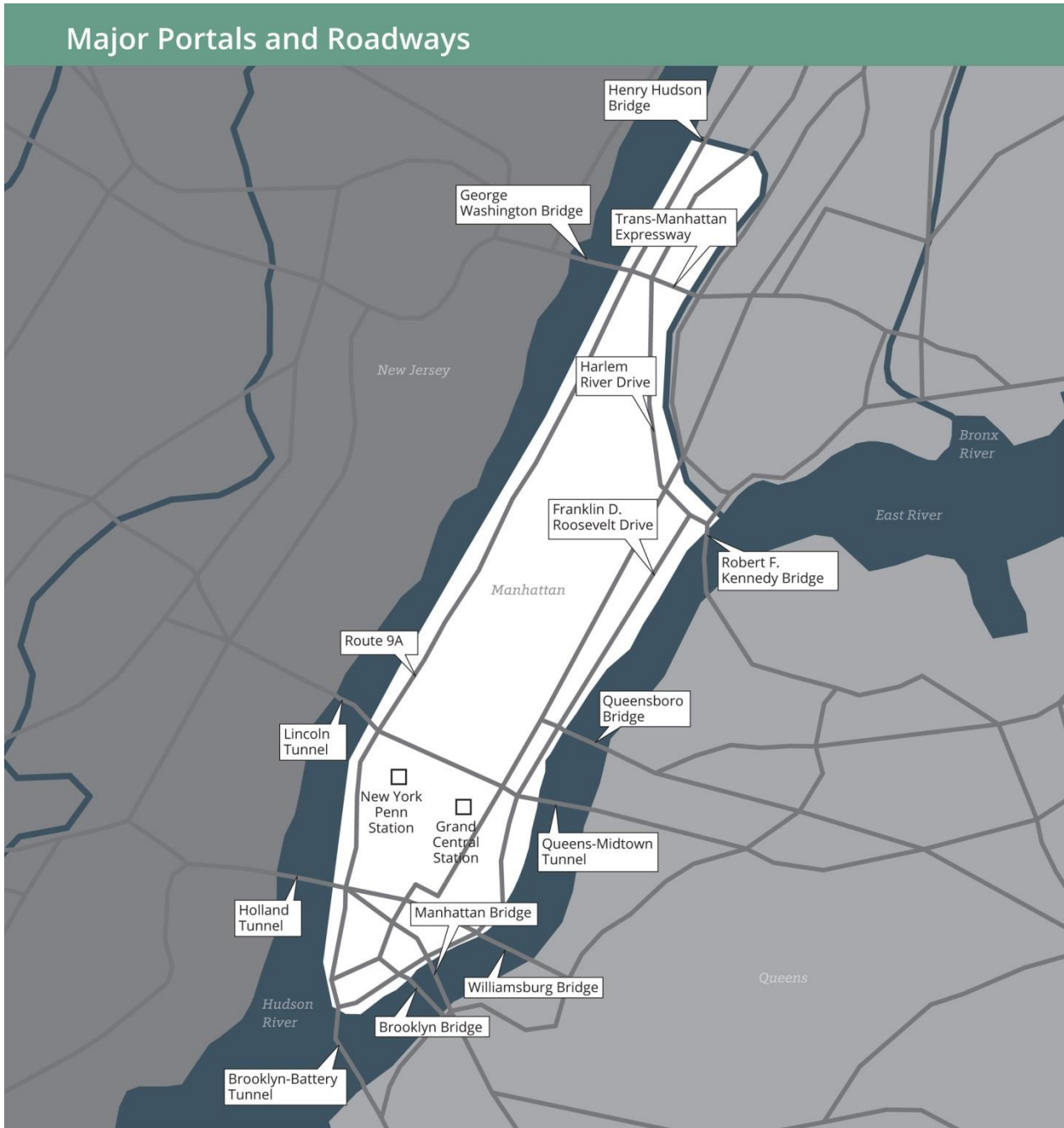


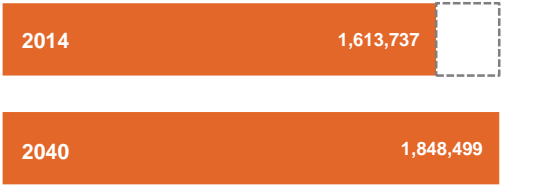
6.3 Manhattan



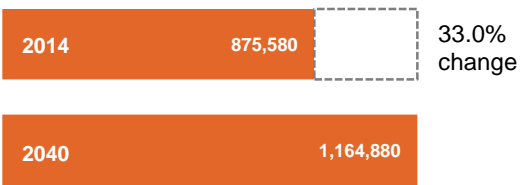
New York Metropolitan Transportation Council

Population and Travel Characteristics

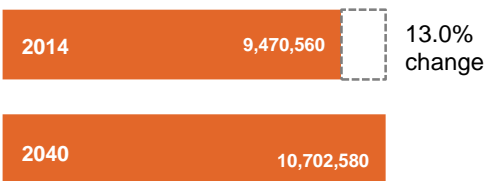
Population



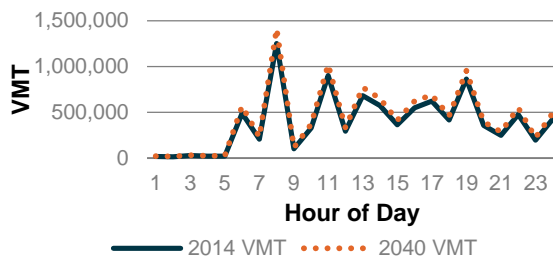
VHD Daily Totals



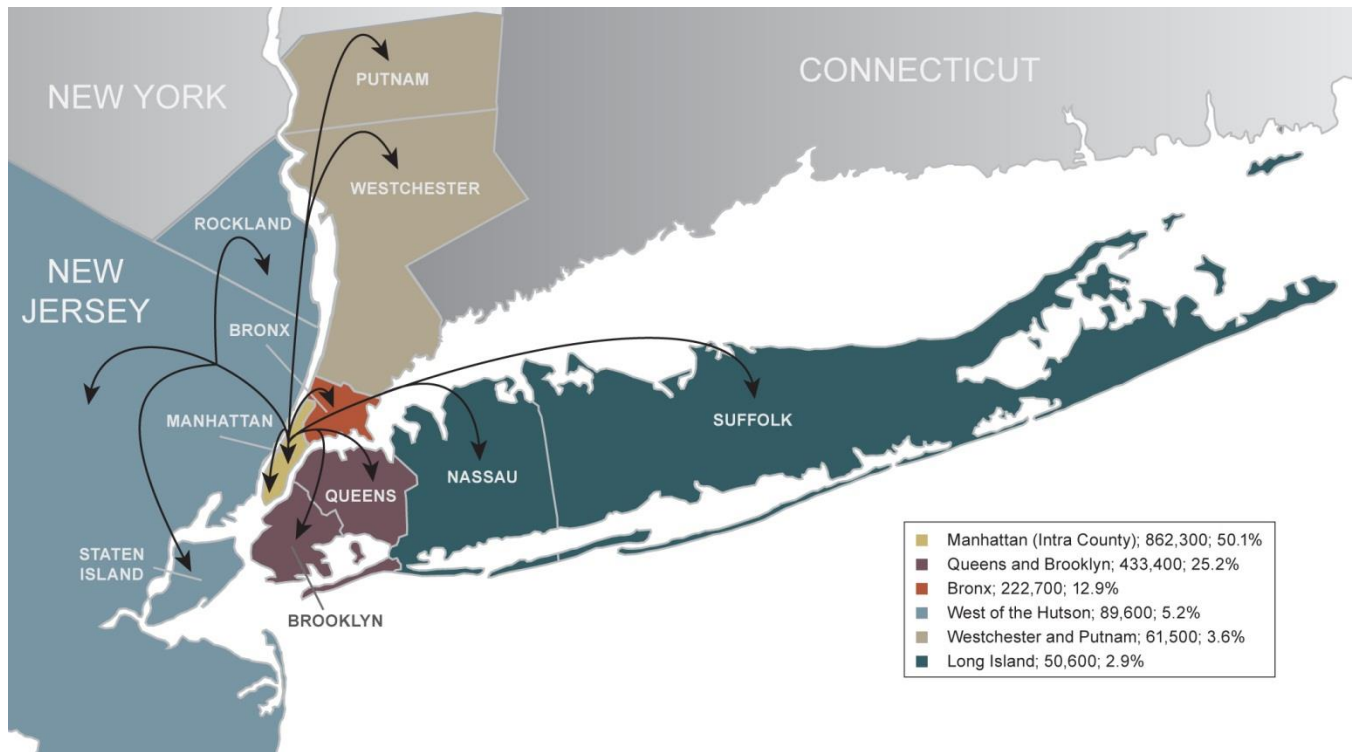
VMT Daily Totals



Manhattan 24-hour VMT



Two-Way Trips between The Bronx and Other Counties in the New York Metro Area



New York Metropolitan Transportation Council

Performance Measures County (Borough): New York (Manhattan)

Scenario 2014

Facility Type	D/C	0.8<= D/C<=1	D/C>1	LMC	TTI	ATS	VHD	PHD	VMT
AM Period (6 to 10 AM)									
Freeway	0.45	3%	14%	154.6	1.64	29.8	25,766	38,134	612,524
Arterial	0.33	3%	9%	361.2	2.34	14.2	340,320	503,673	847,616
Local	0.25	4%	4%	15.5	1.53	12.4	106,274	157,286	432,493
PM Period (4 to 8 PM)									
Freeway	0.30	3%	9%	190.2	1.37	32.9	20,508	30,351	690,411
Arterial	0.18	3%	2%	244.2	1.35	16.4	72,123	106,742	921,095
Local	0.11	1%	1%	3.0	1.14	13.8	26,341	38,984	341,050
Daily Total									
Freeway	0.42	6%	11%	667.7	1.51	30.4	82,553	122,178	3,091,744
Arterial	0.29	4%	4%	1188.2	1.65	14.5	594,832	880,351	4,315,343
Local	0.21	2%	2%	30.3	1.27	12.8	198,192	293,324	2,063,469
Total							875,577	1,295,854	9,470,556

Scenario 2040

Facility Type	D/C	0.8<= D/C<=1	D/C>1	LMC	TTI	ATS	VHD	PHD	VMT
AM Period (6 to 10 AM)									
Freeway	0.49	4%	15%	171.3	1.73	29.3	30,795	45,576	673,824
Arterial	0.36	3%	11%	401.8	2.72	13.8	461,661	683,258	920,385
Local	0.29	3%	7%	20.6	1.67	11.9	146,522	216,853	538,718
PM Period (4 to 8 PM)									
Freeway	0.33	3%	11%	235.2	1.43	32.4	24,776	36,668	772,864
Arterial	0.20	3%	3%	345.9	1.38	16.1	84,161	124,558	1,006,826
Local	0.14	1%	2%	6.4	1.17	13.3	37,940	56,152	471,237
Daily Total									
Freeway	0.46	6%	13%	818.5	1.59	29.8	102,460	151,641	3,429,586
Arterial	0.32	5%	5%	1577.0	1.77	14.1	784,873	1,161,612	4,694,240
Local	0.25	3%	3%	46.7	1.34	12.3	277,546	410,768	2,578,749
Total							1,164,879	1,724,021	10,702,575

D/C = Demand to Capacity; LMC = Lane Miles of Congestion; TTI = Travel Time Index; ATS = Average Travel Speed; VHD = Vehicle Hours of Delay; PHD = Person Hours of Delay; VMT = Vehicle Miles Traveled

Note: D/C = average Demand to Capacity for the particular facility type and period. The "0.8<=DC<=1" and "D/C>1" are the percent of travel that occurs in various conditions (somewhat congested and very congested).

Percentage Difference Between 2040 and 2014 Performance Measures

Facility Type	D/C	0.8<= D/C<=1	D/C>1	LMC	TTI	ATS	VHD	PHD	VMT
AM Period (6 to 10 AM)									
Freeway	9%	–	–	11%	5%	-2%	20%	20%	10%
Arterial	9%	–	–	11%	16%	-3%	36%	36%	9%
Local	16%	–	–	33%	9%	-4%	38%	38%	25%
PM Period (4 to 8 PM)									
Freeway	10%	–	–	24%	4%	-2%	21%	21%	12%
Arterial	11%	–	–	42%	2%	-2%	17%	17%	9%
Local	27%	–	–	109%	3%	-3%	44%	44%	38%
Daily Total									
Freeway	10%	–	–	23%	5%	-2%	24%	24%	11%
Arterial	10%	–	–	33%	7%	-3%	32%	32%	9%
Local	19%	–	–	54%	6%	-4%	40%	40%	25%
Total							33%	33%	13%

Manhattan – Congested Corridors

Manhattan’s traffic congestion patterns are distinctly different from all of the other counties, as the result of two factors:

- Manhattan contains the region’s Central Business District and an extremely high concentration of other trip generators.
- Manhattan is an island that can be accessed using a limited number of bridges and tunnels, which tend to constrain the flow of traffic into Manhattan in the morning and out of Manhattan in the evening.

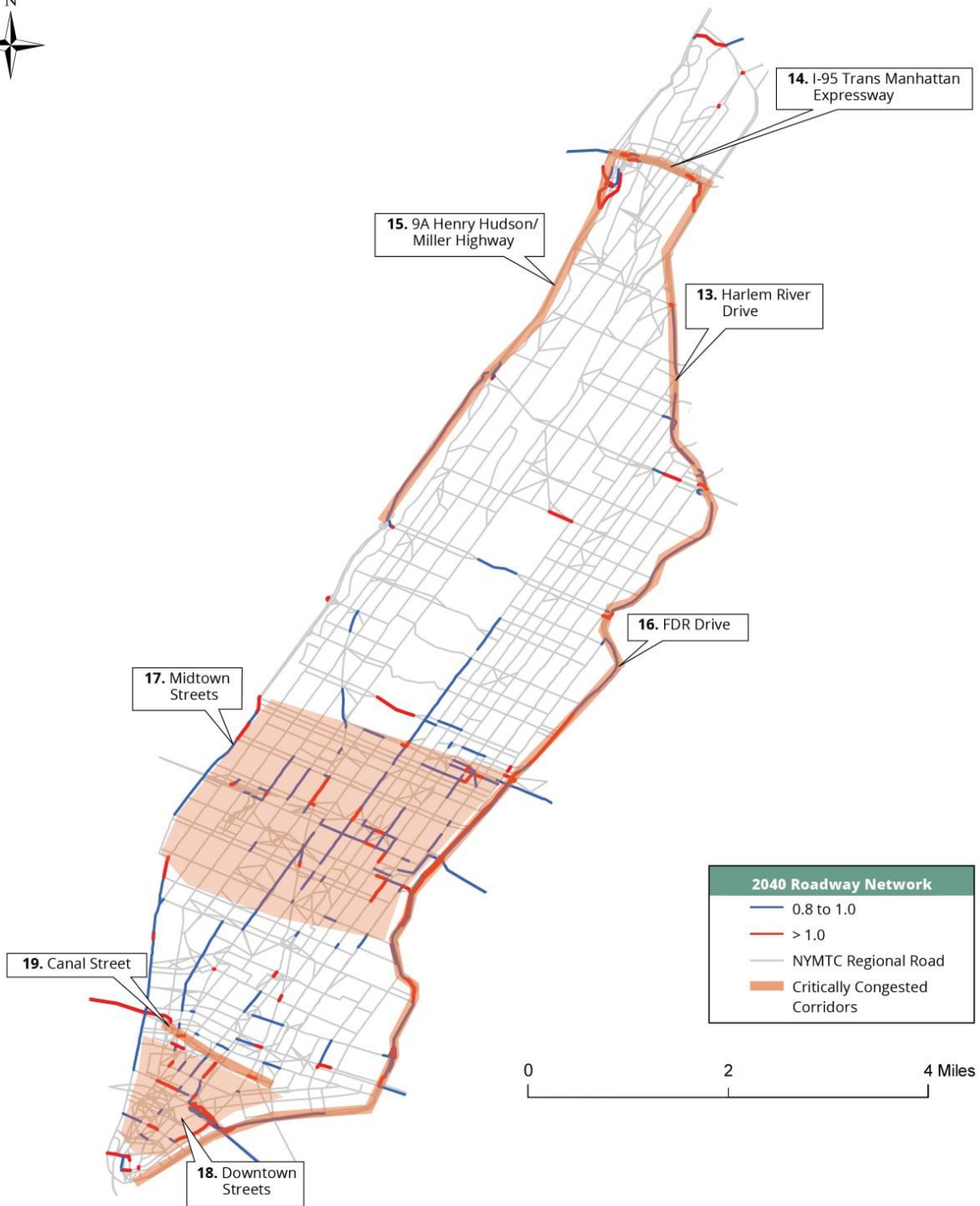
Therefore, there is relatively little traffic congestion within Manhattan in the morning, because entering flows are constrained by the river crossings. Traffic on streets serving major intra-Manhattan traffic flows experience congestion in the middle of the day. In the evening, congestion is present on the main routes leading to the most heavily used exit points from Manhattan (as well as at major evening entertainment and tourism locations – particularly Times Square and the adjacent Theater District).

Key congested locations include;

- 13. Harlem River Drive (HRD) from the RFK Bridge to I-95/Trans-Manhattan Expressway** – In the morning, this road is congested southbound approaching the point where traffic flows from the Third Avenue and RFK Bridges merge in and continue south onto the FDR Drive. The traffic queue from these choke points regularly spills back almost to I-95/Trans-Manhattan Expressway. In the evening, the pattern is reversed, with the choke point being where traffic from the HRD merges onto southbound I-95 (approach to the George Washington Bridge). There is also a southbound evening traffic queue at the same location as the morning queue, but much less severe.
- 14. I-95/Trans-Manhattan Expressway from the George Washington Bridge (GWB) to the Alexander Hamilton Bridge** – Both the inner and outer roadways are congested all day long due to merging and weaving at and between entrances and exits to/from several major connecting highways and well as local streets.

15. **NY-9A/Henry Hudson Parkway/Joe DeMaggio Highway from West 42nd Street to I-95/Trans-Manhattan Expressway/GWB** – In the morning, this largely elevated expressway is congested southbound approaching the end of the expressway at West 57th Street (at which point Route 9A continues as 12th Avenue, an eight-lane surface arterial with frequent signalized intersections) and the extremely high-volume intersection with West 42nd Street, after which 12th Avenue has only three southbound lanes. The traffic queues spilling back from these choke points regularly extend about two to three miles in the morning peak. In the evening, the choke point is at the ramps to I-95, causing a miles-long northbound queue.
16. **FDR Drive from the Battery to the RFK Bridge** – This expressway carries high volumes of traffic northbound and southbound for its entire length. It is the only limited access highway serving this entire stretch, and the only limited access highway of any kind on the East Side. It has many complex merging, weaving, and substandard sections that create choke points throughout the day. In the morning, southbound congestion eases considerably south of Midtown due to the large portion of traffic exiting in Midtown.
17. Midtown Streets, and
18. **Downtown Streets** – These are congested all day, but especially during the afternoon and evening periods when they are affected by both heavy pedestrian flows and spillbacks from bridges and tunnels leaving Manhattan.
19. **Canal Street from NY-9A/West Street to the Manhattan Bridge** – This downtown roadway is called out for special attention due to its functions as a connector to/from both the Holland Tunnel and the Manhattan Bridge, as well as serving trips within Manhattan. It is also an area of extremely high pedestrian activity, and is a commercial center in its own right that has more intense activity on weekends than on weekdays.

Manhattan: Congested Corridors and Hot Spot Areas (AM Period)



Manhattan: Congested Corridors and Hot Spot Areas (PM Period)

