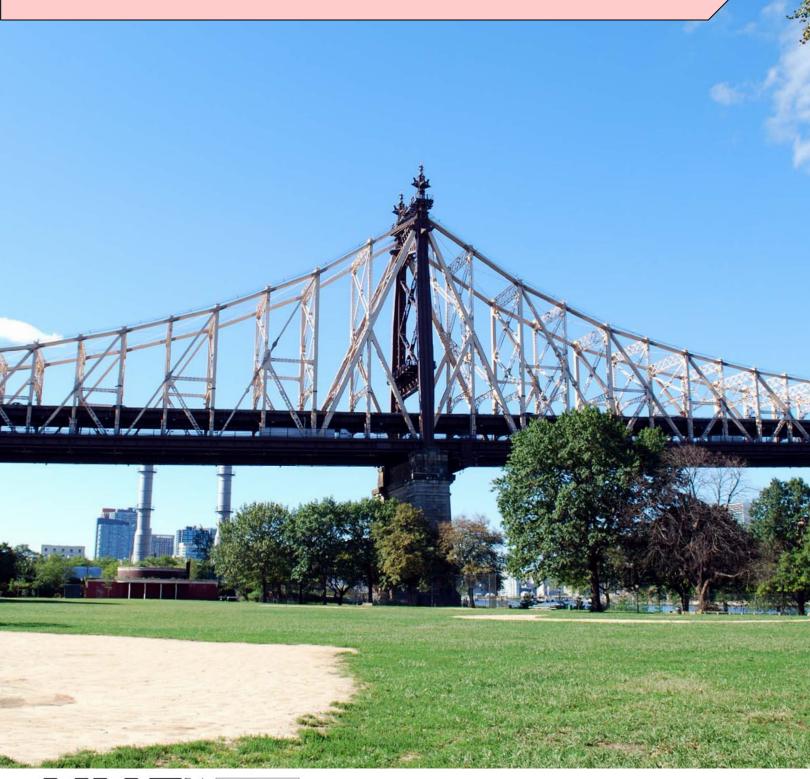
### New York City Bridge Traffic Volumes 2009







Janette Sadik-Khan Commissioner

A member of the New York Metropolitan Transportation Council

February 2011

### **New York City Bridge Traffic Volumes 2009**

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### Introduction



### INTRODUCTION

The 2009 *New York City Bridge Traffic Volumes* report is an annual publication prepared by the New York City Department of Transportation (NYCDOT), and funded by the Unified Planning Work Program (UPWP), and the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy For Users (SAFETEA – LU).

Since 1948, the New York City Department of Transportation (NYCDOT) has monitored traffic flow on 47 bridges operated by the City of New York. This 2009 *New York City Bridge Traffic Volumes* report summarizes vehicular volumes, classification data, and trends for the 47 bridges that cross over water. Volume and trend information also is presented for the nine bridges and tunnels operated by the Metropolitan Transportation Authority Bridges and Tunnels (MTABT), and the six bridges and tunnels operated by the Port Authority of New York and New Jersey (PANYNJ).

All bridges are monitored with automatic traffic recording (ATR) machines. Hourly volumes by direction for each bridge are presented in tabular form. Graphical presentations of the hourly volumes by direction are provided by histograms. Hourly classification data identifies the volumes by vehicle type. A regression analysis of the total daily volumes for each facility for the years 1948-2009 was performed in order to develop trend information. In addition, changes in the traffic volumes for all facilities over the past 61 years are shown in graphical form.

Note: NYCDOT uses the averages of vehicular volumes from selected representative weekdays. Publications from other sources may be based on alternative computation methodologies for some facilities, notably the tolled bridges and tunnels, possibly yielding different results for those facilities.

The report presents annual growth rates for each bridge. These growth rates are derived from the linear regression equation, which reflects the best fitting straight line for the data plotted. A more comprehensive analysis of bridges and tunnels serving Manhattan is presented in the *Manhattan River Crossings* report which also is published annually.

Each of the 47 New York City bridges and the MTABT and PANYNJ facilities has been classified under a highway functional classification system. Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service each roadway provides.

The five functional classifications are defined as follows:

- 1. <u>Interstate</u> connects population centers across state lines.
- 2. <u>Principal Arterial</u> serves major centers of activity of an urban area and carries a high proportion of the total urban area travel on a minimum of mileage.
- 3. <u>Minor Arterial</u> interconnects with and augments urban principal arterials; provides service for trips of moderate length at a somewhat lower level of travel mobility than principal arterials; distributes travel to geographic areas smaller than those identified with the higher system.
- 4. <u>Collector Street</u> provides both land access service and traffic circulation within residential neighborhoods, and commercial and industrial areas. Differs from the arterial

systems in that facilities on the collector system may penetrate residential neighborhoods, distributing trips from arterials to the ultimate destination. Conversely, collector streets also collect traffic from local streets in residential neighborhoods and channel it into the arterial system.

5. <u>Local Street</u> - comprises all facilities not on one of the higher systems. Serves primarily to provide direct access to abutting land and access to the higher order systems. Offers the lowest level of mobility and usually contains no bus or truck routes.

# Summary Hook Creek Bridge in Queens

5

### **SUMMARY**

### 2009 Volumes

- In 2009, daily traffic on the 47 bridges operated by the New York City Department of Transportation increased 0.5%, to 2.680 million from 2.666 million in 2008.
- Daily traffic on the four East River bridges increased 1.7%, to 485,300 in fall 2009 from 477,200 in fall 2008.
- Daily volume using the nine Harlem River bridges increased 0.8%, to 543,700 in 2009 from 539,400 in 2008.
- Daily traffic using the four bridges over Newtown Creek between Queens and Brooklyn increased 1.9%, to 263,600 in 2009 from 258,800 in 2008.
- On the eight bridges in The Bronx, daily traffic decreased 1.1%, to 449,200 from 454,300.
- On the ten bridges in Brooklyn, daily traffic increased 0.9%, to 330,600 from 327,600.
- On the eleven bridges in Queens, daily traffic decreased 0.3%, to 542,700 from 544,100.
- Daily traffic on the Fresh Kills Bridge in Staten Island decreased 0.4%, to 64,500 from 64,700.
- The most heavily used City-operated water crossing in 2009 was the Whitestone Expressway Bridge, which carried 198,100 daily vehicles across the Flushing River in Queens.
- Other high volume bridges were the Alexander Hamilton Bridge over the Harlem River between The Bronx and Manhattan (191,600 daily vehicles), the Kosciuszko Bridge over Newtown Creek between Brooklyn and Queens (188,300), the Queensboro Bridge over the East River between Manhattan and Queens (180,200), the Eastern Boulevard Bridge over the Bronx River in The Bronx (176,800), the Mill Basin Bridge on the Belt Parkway in Brooklyn (144,500), the Brooklyn Bridge over the East River between Brooklyn and Manhattan (125,000), and the Hutchinson River Parkway Bridge in The Bronx (119,300).

### **Major Increases**

- On bridges carrying more than 50,000 daily vehicles, the largest percentage increase was on the Hamilton Avenue over Gowanus Canal in Brooklyn, where daily traffic increased 5.4%, to 55,600 daily vehicles in 2009 from 52,700 in 2008. The largest numerical increase was on the Kosciuszko Bridge over Newtown Creek between Brooklyn and Queens (+6,500 daily vehicles, to 188,300 in 2009 from 181,800 in 2008).
- On bridges carrying fewer than 50,000 daily vehicles, the Hunters Point Avenue Bridge over Dutch Kills in Queens had the highest percentage increase (+129.8%), and the highest numerical increase (+9,300 daily vehicles, to 16,500 in 2009 from 7,200 in 2008). This large increase was caused by the closure of the nearby Borden Avenue Bridge which was closed for reconstruction throughout 2009.

### **Major Decreases**

- On bridges carrying more than 50,000 daily vehicles, the Willis Avenue Bridge over the Harlem River between Manhattan and The Bronx showed the largest percentage and numerical decline, as daily volume decreased by 5.8% to 58,500 daily vehicles in 2009 from 62,200 in 2008 (3,700 fewer daily vehicles).
- On bridges carrying fewer than 50,000 daily vehicles, the Carroll Street Bridge over Gowanus Canal in Brooklyn showed the largest percentage reduction (-13.3%, to 950 daily vehicles in 2009 from 1,100 in 2008). The largest numerical decrease was on the Roosevelt Avenue Bridge over the Flushing River in Queens, where daily traffic decreased by 1,700 vehicles, to 17,200 in 2009 from 18,900 in 2008 (-9.0%).

### 2008-2009 Traffic Volume Trends N.Y.C. Bridges and Tunnels Both Directions Page 1 of 3

EAST RIVER BRIDGES	Highway Functional Classification	2008	2009	Percent Change
Brooklyn Bridge	Principal Arterial	123,781	125 021	1.0 %
Manhattan Bridge	Principal Arterial	70,341	125,021 71,936	2.3 %
Queensboro Bridge	Principal Arterial	176,306	180,162	2.2 %
Williamsburg Bridge	Principal Arterial	106,783	108,102	1.3 %
	T fillelpal Arterial	·		
Total, 4 East River Bridges		477,211	485,313	1.7 %
HARLEM RIVER BRIDGES				
Alexander Hamilton Bridge	Interstate	189,598	191,646	1.1 %
Broadway Bridge	Principal Arterial	33,266	35,566	6.9 %
Macombs Dam Bridge	Principal Arterial	38,897	39,508	1.6 %
Madison Avenue Bridge	Principal Arterial	41,740	43,480	4.2 %
Third Avenue Bridge	Principal Arterial	58,510	59,039	0.9 %
University Heights Bridge	Principal Arterial	39,340	39,165	- 0.4 %
Washington Bridge	Minor Arterial	52,768	52,420	- 0.7 %
Willis Avenue Bridge	Principal Arterial	62,167	58,548	- 5.8 %
145th Street Bridge	Minor Arterial	23,148	24,364	5.3 %
Total, 9 Harlem River Bridges		539,434	543,736	0.8 %
BROOKLYN-QUEENS BRIDGES				
Grand Street Bridge	Principal Arterial	13,031	12,576	- 3.5 %
J.J. Byrne Memorial Bridge *	Principal Arterial	26,926	26,637	- 1.1 %
Kosciuszko Bridge	Interstate	181,783	188,322	3.6 %
Pulaski Bridge	Principal Arterial	37,019	36,103	- 2.5 %
Total, 4 Brooklyn-Queens Bridges (Over Newto	wn Creek)	258,759	263,638	1.9 %
BRONX BRIDGES				
		4=	445.5	40.55
City Island Bridge	Minor Arterial	15,955	14,313	- 10.3 %
East 174th Street Bridge	Minor Arterial	14,158	14,130	- 0.2 %
Eastchester Bridge	Principal Arterial	20,842	20,329	- 2.5 %
Eastern Boulevard Bridge	Interstate	174,597	176,800	1.3 %
Hutchinson River Bridge	Principal Arterial	121,499	119,285	- 1.8 %
Pelham Bridge	Minor Arterial	19,131	17,521	- 8.4 %
Unionport Bridge	Principal Arterial	62,342	61,700	- 1.0 %
Westchester Avenue Bridge	Principal Arterial	25,789	25,131	- 2.6 %
Total, 8 Bronx Bridges		454,313	449,209	- 1.1 %

<sup>\*</sup> Also known as Greenpoint Avenue Bridge.

### 2008-2009 Traffic Volume Trends N.Y.C. Bridges and Tunnels Both Directions Page 2 of 3

BROOKLYN BRIDGES	Highway Functional Classification	2008	2009	Percent Change
Carroll Street Bridge	Local	1,103	956	- 13.3 %
Cropsey Avenue Bridge	Principal Arterial	35,881	36,379	1.4 %
Hamilton Avenue Bridge	Principal Arterial	52,731	55,577	5.4 %
Metropolitan Avenue Bridge	Principal Arterial	38,587	37,557	- 2.7 %
Mill Basin Bridge	Principal Arterial	144,010	144,536	0.4 %
Ninth Street Bridge	Minor Arterial	13,362	13,251	- 0.8 %
Stillwell Avenue Bridge	Principal Arterial	10,197	10,302	1.0 %
Third Avenue Bridge	Principal Arterial	17,901	17,587	- 1.8 %
Third Street Bridge	Minor Arterial	9,482	10,028	5.8 %
Union Street Bridge	Minor Arterial	4,390	4,441	1.2 %
Total, 10 Brooklyn Bridges		327,644	330,614	0.9 %
QUEENS BRIDGES				
Borden Avenue Bridge	Minor Arterial	15,002	Closed	
Flushing Bridge	Principal Arterial	56,179	54,941	- 2.2 %
Hook Creek Bridge	Principal Arterial	75,460	75,108	- 0.5 %
Hunters Point Bridge	Collector	7,165	16,467	129.8 %
Joseph P. Addabbo Bridge *	Principal Arterial	22,346	24,237	8.5 %
Little Neck Bridge	Principal Arterial	45,405	47,695	5.0 %
Midtown Highway Bridge	Interstate	84,769	84,048	- 0.9 %
Rikers Island Bridge	Collector	15,621	15,436	- 1.2 %
Roosevelt Avenue Bridge	Principal Arterial	18,859	17,168	- 9.0 %
Roosevelt Island Bridge	Collector	10,161	9,454	- 7.0 %
Whitestone Expwy Bridge	Interstate	193,122	198,124	2.6 %
Total, 11 Queens Bridges		544,089	542,678	- 0.3 %
STATEN ISLAND				
Fresh Kills Bridge	Principal Arterial	64,724	64,490	- 0.4 %
TOLL-FREE GRAND TOTALS		2,666,174	2,679,678	0.5 %

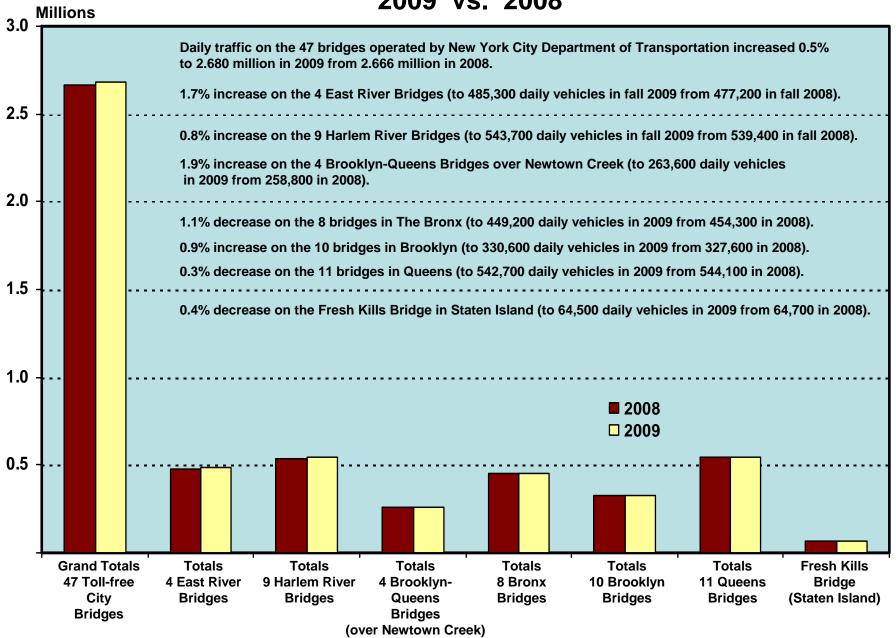
<sup>\*</sup> North Channel Bridge.

### 2008-2009 Traffic Volume Trends N.Y.C. Bridges and Tunnels Both Directions Page 3 of 3

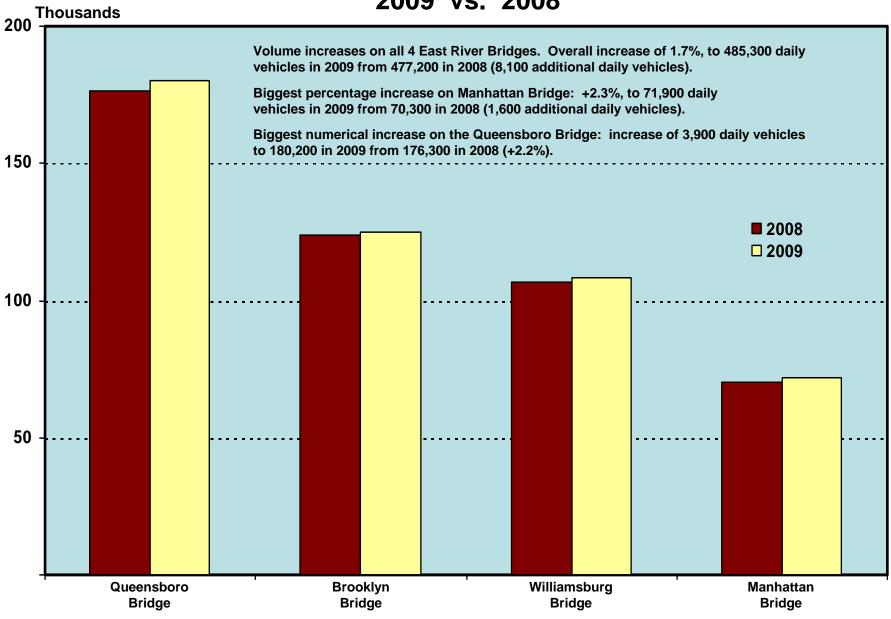
	Highway Functional			Percent
MTABT Manhattan Facilities	Classification	2008	2009	Change
Brooklyn-Battery Tunnel	Interstate	55,037	50,674	- 7.9 %
Henry Hudson Bridge	Principal Arterial	69,101	66,607	- 3.6 %
Queens-Midtown Tunnel	Interstate	86,709	85,144	- 1.8 %
R.F.K. Memorial Bridge Manhattan Plaza *	Principal Arterial	95,146	91,731	- 3.6 %
Total, 4 MTABT Manhattan Crossings		305,993	294,156	- 3.9 %
PANYNJ Manhattan Facilities				
George Washington Bridge	Interstate	293,059	289,694	- 1.1 %
Holland Tunnel	Interstate	97,057	96,184	- 0.9 %
Lincoln Tunnel	Principal Arterial	118,153	118,982	0.7 %
Total, 3 PANYNJ Manhattan - New Jersey Crossin	gs	508,269	504,860	- 0.7 %
MTABT Outer Borough Bridges				
Bronx-Whitestone Bridge	Interstate	117,015	112,978	- 3.4 %
Cross Bay Bridge	Minor Arterial	21,876	21,762	- 0.5 %
Marine Parkway Gil Hodges Memorial Bridge	Minor Arterial	21,357	22,067	3.3 %
R.F.K. Memorial Bridge Bronx Plaza *	Interstate	77,606	78,459	1.1 %
Throgs Neck Bridge	Interstate	114,319	107,324	- 6.1 %
Verrazano-Narrows Bridge	Interstate	203,507	202,052	- 0.7 %
Total, 6 MTABT Outer Borough Bridges		555,680	544,642	- 2.0 %
PANYNJ Staten Island Bridges				
Bayonne Bridge	Principal Arterial	20,058	19,422	- 3.2 %
Goethals Bridge	Interstate	72,834	71,230	- 2.2 %
Outerbridge Crossing	Principal Arterial	72,884	74,852	2.7 %
Total, 3 Staten Island - New Jersey Bridges		165,776	165,504	- 0.2 %

<sup>\*</sup> Formerly Triborough Bridge.

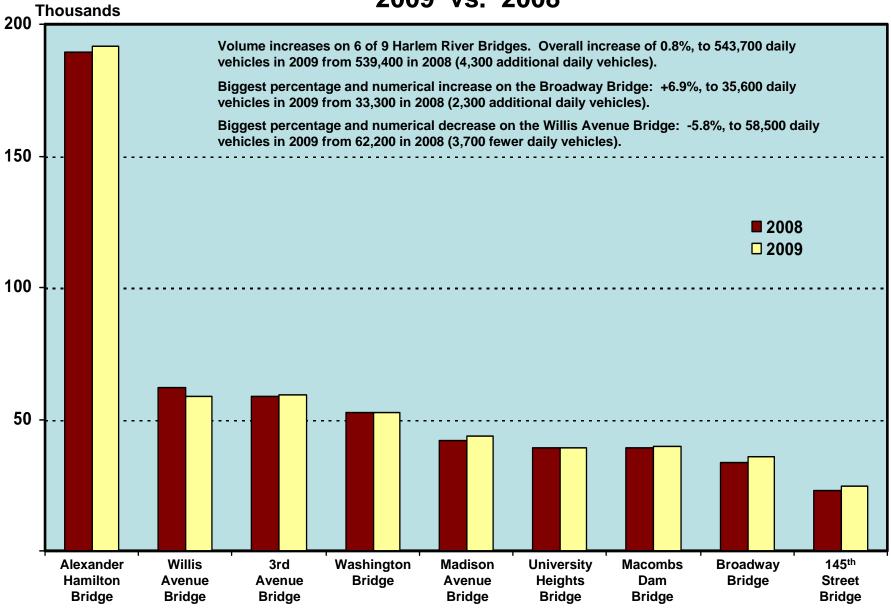
# New York City Toll-free Bridges Daily Volumes 2009 vs. 2008



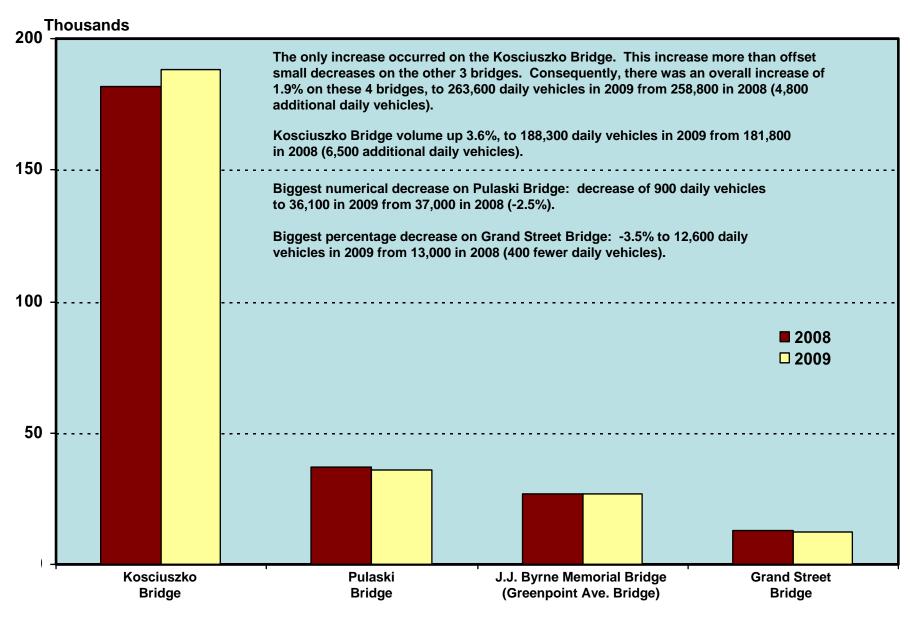
# East River Bridges Daily Volumes 2009 vs. 2008



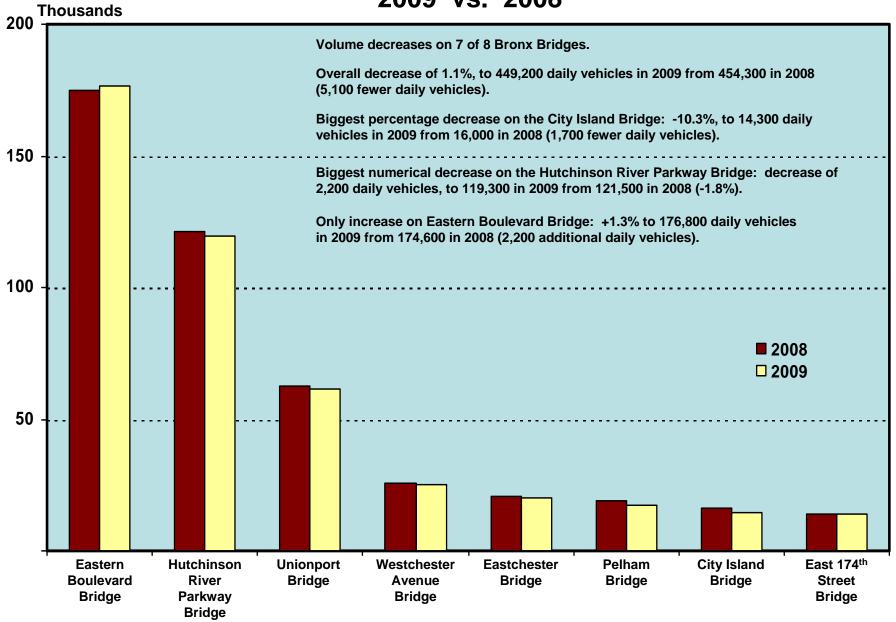
# Harlem River Bridges Daily Volumes 2009 vs. 2008



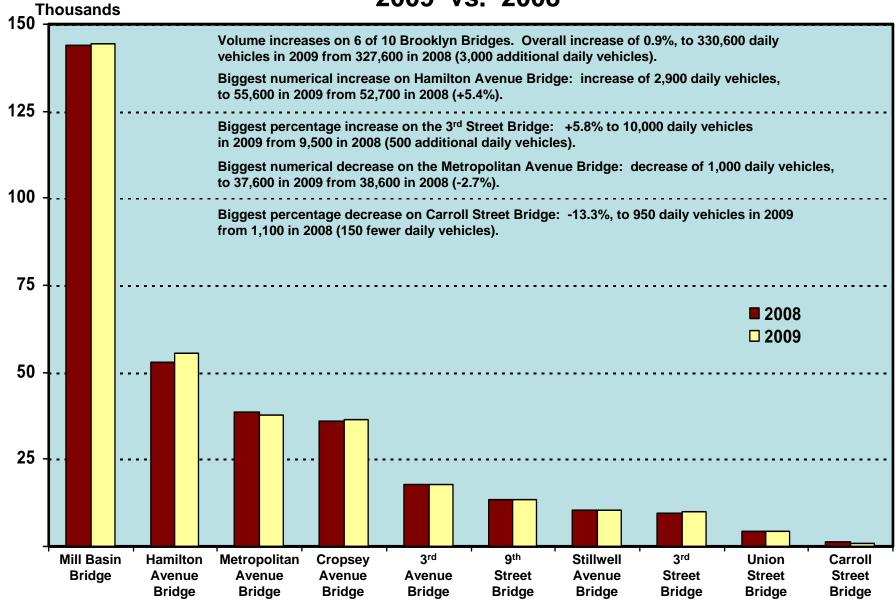
# Brooklyn-Queens (Newtown Creek) Bridges Daily Volumes 2009 vs. 2008



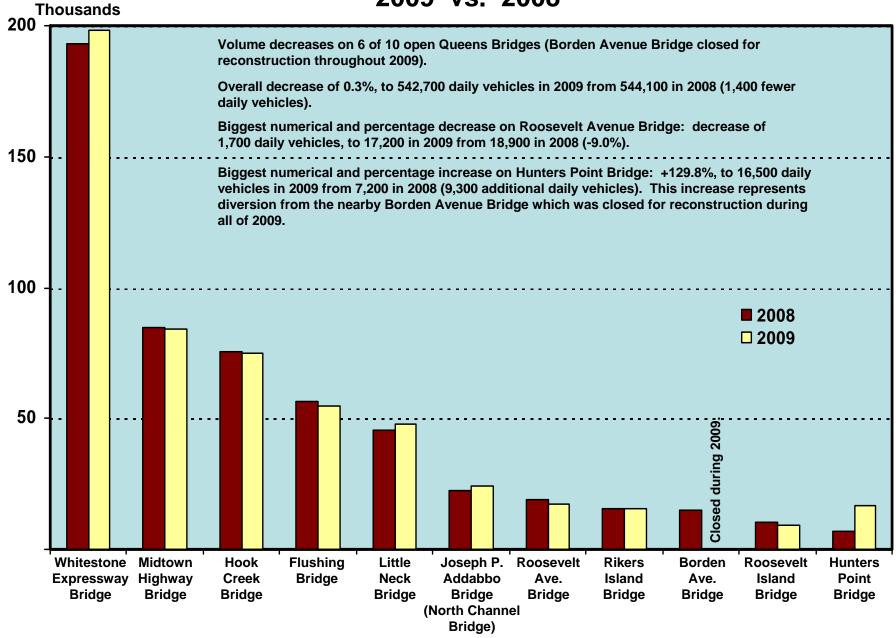
# Bronx Bridges Daily Volumes 2009 vs. 2008



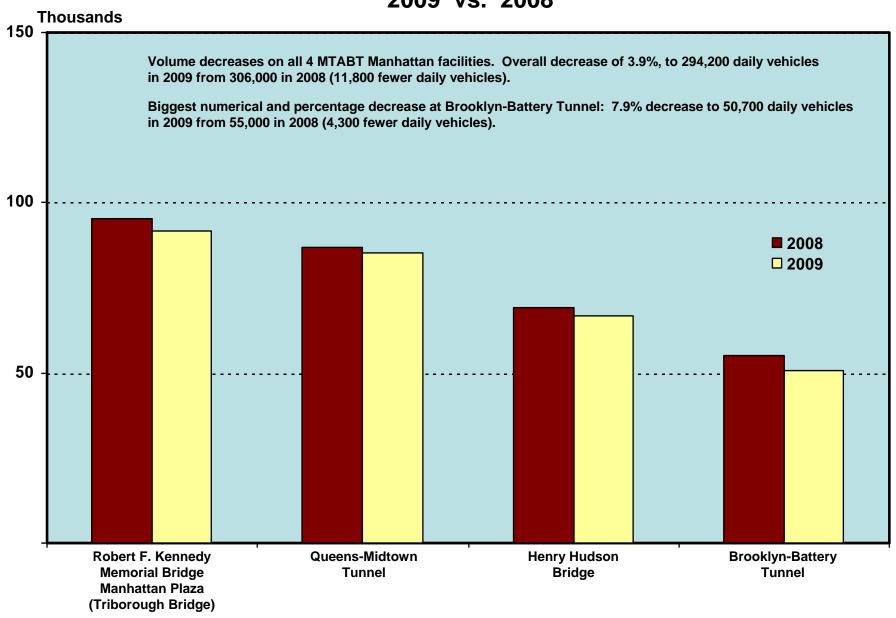
# Brooklyn Bridges Daily Volumes 2009 vs. 2008



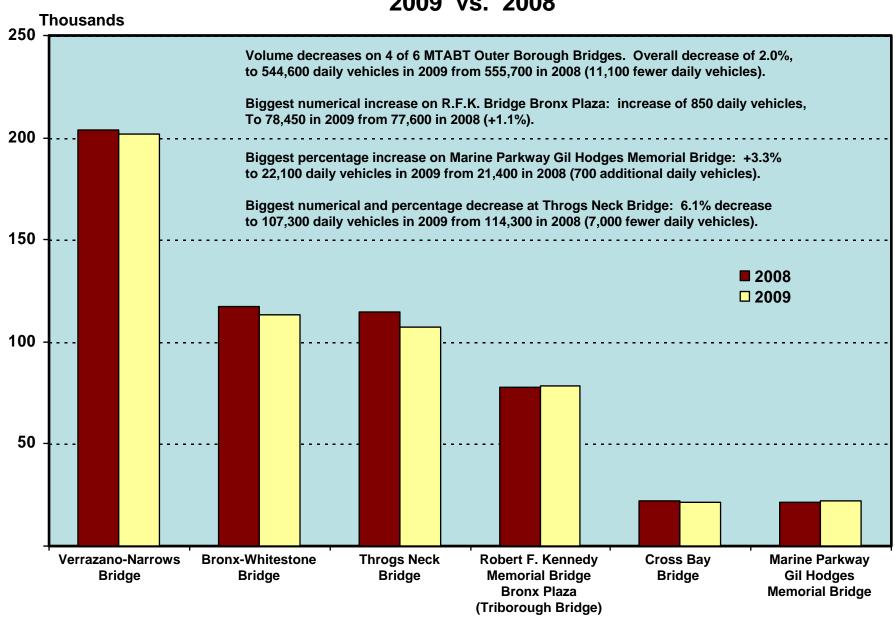
# Queens Bridges Daily Volumes 2009 vs. 2008



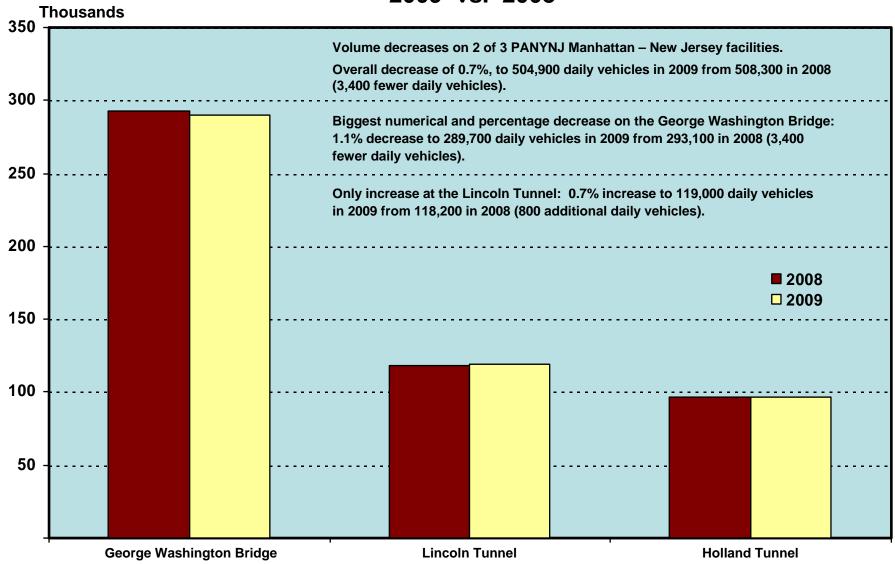
# Metropolitan Transportation Authority Bridges & Tunnels (MTABT) Manhattan Facilities Daily Volumes 2009 vs. 2008



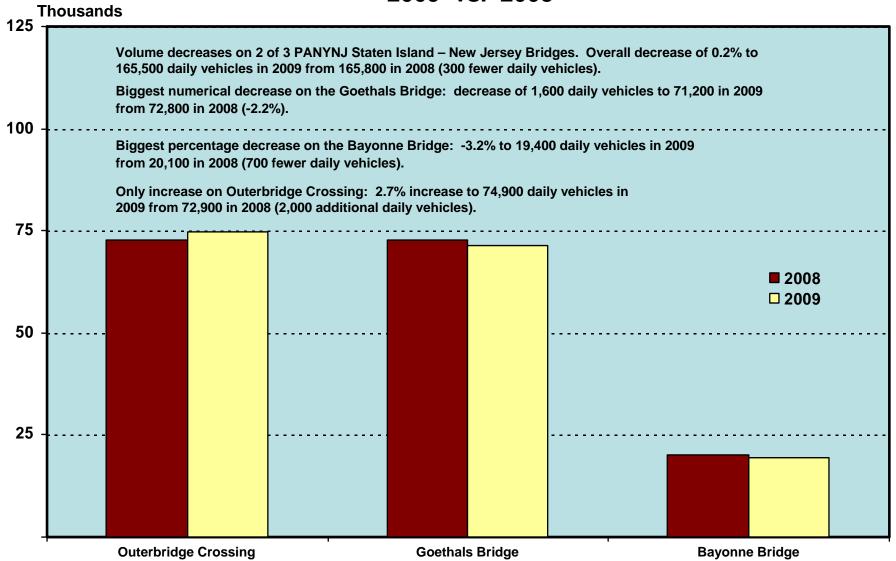
# Metropolitan Transportation Authority Bridges & Tunnels (MTABT) Outer Borough Bridges Daily Volumes 2009 vs. 2008



# Port Authority of New York & New Jersey (PANYNJ) Manhattan – N.J. Facilities Daily Volumes 2009 vs. 2008



# Port Authority of New York & New Jersey (PANYNJ) Staten Island – N.J. Bridges Daily Volumes 2009 vs. 2008



### Ten-Year Trends 1999 - 2009



#### **Ten-Year Trends: 1999 - 2009**

- Total traffic on the 47 City-operated bridges decreased 0.6% during this ten-year period, to 2,680,000 daily vehicles in 2009 from 2,695,000 in 1999.
- Traffic on the four toll-free East River bridges decreased 6.0%, to 485,300 daily vehicles in 2009 from 516,500 in 1999. The greatest numerical and percentage decrease occurred on the Manhattan Bridge, where daily volume decreased by 22.1%, to 71,900 in 2009 from 92,300 in 1999. The only increase was on the Williamsburg Bridge (+0.2%, to 108,200 daily vehicles from 107,900).
- Traffic on the nine toll-free Harlem River bridges decreased 3.5%, to 543,700 in 2009 from 563,200 in 1999. The greatest numerical and percentage decrease occurred on the Willis Avenue Bridge, where daily volume decreased by 18.2%, to 58,500 in 2009 from 71,600 in 1999. The biggest percentage increase was on the Madison Avenue Bridge (+14.1%, to 43,500 daily vehicles in 2009 from 38,100 in 1999). The biggest numerical increase was on the Alexander Hamilton Bridge where daily traffic increased to 191,600 daily vehicles in 2009 from 180,200 in 1999 (+6.4%).
- On the four bridges over Newtown Creek between Brooklyn and Queens, daily traffic decreased 1.2%, to 263,600 daily vehicles in 2009 from 266,800 in 1999. The greatest percentage decrease was recorded on the Grand Street Bridge (-12.6%, to 12,600 daily vehicles in 2009 from 14,400 in 1999). The greatest numerical decrease occurred on the Kosciuszko Bridge, where daily volume decreased to 188,300 in 2009 from 194,800 in 1999 (-3.3%). The greatest numerical and percentage increase occurred on the Pulaski Bridge, where daily volume increased by 16.6%, to 36,100 in 2009 from 31,000 in 1999.
- Daily volume on the eight bridges in the Bronx increased 11.2%, to 449,200 daily vehicles in 2009 from 403,900 in 1999. The greatest numerical increase occurred on the Hutchinson River Parkway Bridge, where volume increased by 20,600 daily vehicles, to 119,300 in 2009 from 98,700 in 1999 (+20.9%). The greatest percentage increase occurred on the East 174<sup>th</sup> Street Bridge (+149%, to 14,130 daily vehicles from 5,700). The greatest numerical and percentage decrease occurred on the Westchester Avenue Bridge, where daily volume decreased by 19.5%, to 25,100 in 2009 from 31,200 in 1999.
- Average daily traffic on the ten bridges in Brooklyn decreased 2.3%, to 330,600 daily vehicles in 2009 from 338,300 in 1999. The greatest percentage decrease was recorded on the Carroll Street Bridge (-23.4%, to 950 daily vehicles in 2009 from 1,250 in 1999). The greatest numerical decrease occurred on the Hamilton Avenue Bridge, where daily volume decreased to 55,600 in 2009 from 67,300 in 1999 (-17.4%). The greatest numerical and percentage increase occurred on the Ninth Street Bridge, where daily volume increased by 139%, to 13,300 in 2009 from 5,500 in 1999.
- Traffic on the eleven bridges in Queens increased 0.3%, to 542,700 daily vehicles in 2009 from 541,100 in 1999. The greatest numerical increase occurred on the Midtown Highway Bridge, where volume increased by 11,300 daily vehicles, to 84,000 in 2009 from 72,700 in 1999 (+15.5%). The greatest percentage increase occurred on the Hunters Point Avenue Bridge (+93.5%, to 16,500 daily vehicles from 8,500). Much of this increase was traffic diverted from the nearby Borden Avenue Bridge which was closed for reconstruction throughout 2009. The greatest percentage decrease was recorded on the Roosevelt Avenue Bridge (-27.8%, to 17,200 daily vehicles in 2009 from 23,800 in 1999). The greatest numerical decrease occurred on the Flushing Bridge, where daily volume decreased by 8,400, to 54,900 in 2009 from 63,300 in 1999 (-13.3%).

# 10-Year Traffic Volume Trends ~ 1999-2009 N.Y.C. Bridges and Tunnels Both Directions Page 1 of 3

EAST RIVER BRIDGES	Highway Functional Classification	1999	2009	Percent Change
Brooklyn Bridge	Principal Arterial	127,065	125,021	- 1.6 %
Manhattan Bridge	Principal Arterial	92,311	71,936	- 22.1 %
Queensboro Bridge	Principal Arterial	189,190	180,162	- 4.8 %
Williamsburg Bridge	Principal Arterial	107,941	108,194	0.2 %
Total, 4 East River Bridges		516,507	485,313	- 6.0 %
HARLEM RIVER BRIDGES				
	Intorototo	400 004	101.040	C 4.0/
Alexander Hamilton Bridge	Interstate	180,201	191,646	6.4 %
Broadway Bridge	Principal Arterial	35,412	35,566	0.4 %
Macombs Dam Bridge	Principal Arterial	41,813	39,508	- 5.5 %
Madison Avenue Bridge Third Avenue Bridge	Principal Arterial Principal Arterial	38,102 68,544	43,480 59,039	14.1 % - 13.9 %
University Heights Bridge	•	•	•	- 13.9 % - 7.4 %
Washington Bridge	Principal Arterial Minor Arterial	42,287 58,907	39,165 52,420	- 7.4 % - 11.0 %
Willis Avenue Bridge	Principal Arterial	56,90 <i>7</i> 71,555	52,420 58,548	- 11.0 % - 18.2 %
145th Street Bridge	Minor Arterial	26,361		- 16.2 % - 7.6 %
145th Street Bridge	Willor Arterial	20,301	24,364	- 7.0 %
Total, 9 Harlem River Bridges		563,182	543,736	- 3.5 %
BROOKLYN-QUEENS BRIDGES				
Grand Street Bridge	Principal Arterial	14,390	12,576	- 12.6 %
J.J. Byrne Memorial Bridge *	Principal Arterial	26,613	26,637	0.1 %
Kosciuszko Bridge	Interstate	194,784	188,322	- 3.3 %
Pulaski Bridge	Principal Arterial	30,975	36,103	16.6 %
Total, 4 Brooklyn-Queens Bridges (Over Newton	wn Creek)	266,762	263,638	- 1.2 %
BRONX BRIDGES				
City Island Bridge	Minor Arterial	16,863	14,313	- 15.1 %
East 174th Street Bridge	Minor Arterial	5,667	14,130	149.3 %
Eastchester Bridge	Principal Arterial	21,510	20,329	- 5.5 %
Eastern Boulevard Bridge	Interstate	157,987	176,800	11.9 %
Hutchinson River Bridge	Principal Arterial	98,700	119,285	20.9 %
Pelham Bridge	Minor Arterial	21,430	17,521	- 18.2 %
Unionport Bridge	Principal Arterial	50,563	61,700	22.0 %
Westchester Avenue Bridge	Principal Arterial	31,214	25,131	- 19.5 %
Total, 8 Bronx Bridges		403,934	449,209	11.2 %

<sup>\*</sup> Also known as Greenpoint Avenue Bridge.

#### 10-Year Traffic Volume Trends ~ 1999-2009 N.Y.C. Bridges and Tunnels **Both Directions** Page 2 of 3

**Highway Functional** 

Percent

BROOKLYN BRIDGES	Highway Functional Classification	1999	2009	Percent Change
Carroll Street Bridge	Local	1,248	956	- 23.4 %
Cropsey Avenue Bridge	Principal Arterial	31,076	36,379	17.1 %
Hamilton Avenue Bridge	Principal Arterial	67,259	55,577	- 17.4 %
Metropolitan Avenue Bridge	Principal Arterial	38,752	37,557	- 3.1 %
Mill Basin Bridge	Principal Arterial	147,347	144,536	- 1.9 %
Ninth Street Bridge	Minor Arterial	5,544	13,251	139.0 %
Stillwell Avenue Bridge	Principal Arterial	9,478	10,302	8.7 %
Third Avenue Bridge	Principal Arterial	21,647	17,587	- 18.8 %
Third Street Bridge	Minor Arterial	10,849	10,028	- 7.6 %
Union Street Bridge	Minor Arterial	5,061	4,441	- 12.3 %
Total, 10 Brooklyn Bridges		338,261	330,614	- 2.3 %
QUEENS BRIDGES				
Borden Avenue Bridge	Minor Arterial	14,156	Closed	
Flushing Bridge	Principal Arterial	63,348	54,941	- 13.3 %
Hook Creek Bridge	Principal Arterial	70,555	75,108	6.5 %
Hunters Point Bridge	Collector	8,509	16,467	93.5 %
Joseph P. Addabbo Bridge *	Principal Arterial	19,337	24,237	25.3 %
Little Neck Bridge	Principal Arterial	52,846	47,695	- 9.7 %
Midtown Highway Bridge	Interstate	72,749	84,048	15.5 %
Rikers Island Bridge	Collector	14,240	15,436	8.4 %
Roosevelt Avenue Bridge	Principal Arterial	23,784	17,168	- 27.8 %
Roosevelt Island Bridge	Collector	9,491	9,454	- 0.4 %
Whitestone Expwy Bridge	Interstate	192,099	198,124	3.1 %
Total, 11 Queens Bridges		541,114	542,678	0.3 %
STATEN ISLAND				
Fresh Kills Bridge	Principal Arterial	65,577	64,490	- 1.7 %
TOLL-FREE GRAND TOTALS		2,695,337	2,679,678	- 0.6 %

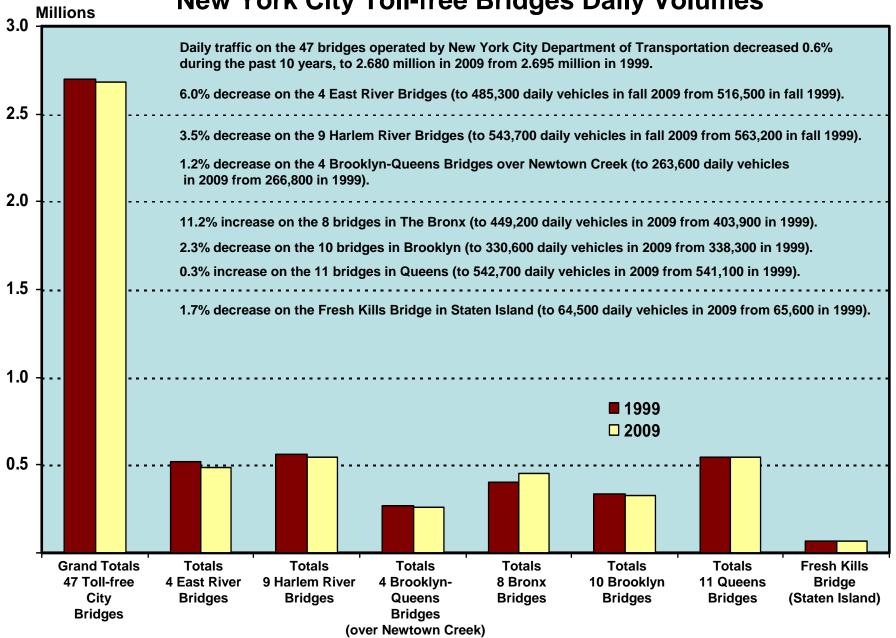
<sup>\*</sup> North Channel Bridge.

# 10-Year Traffic Volume Trends ~ 1999-2009 N.Y.C. Bridges and Tunnels Both Directions Page 3 of 3

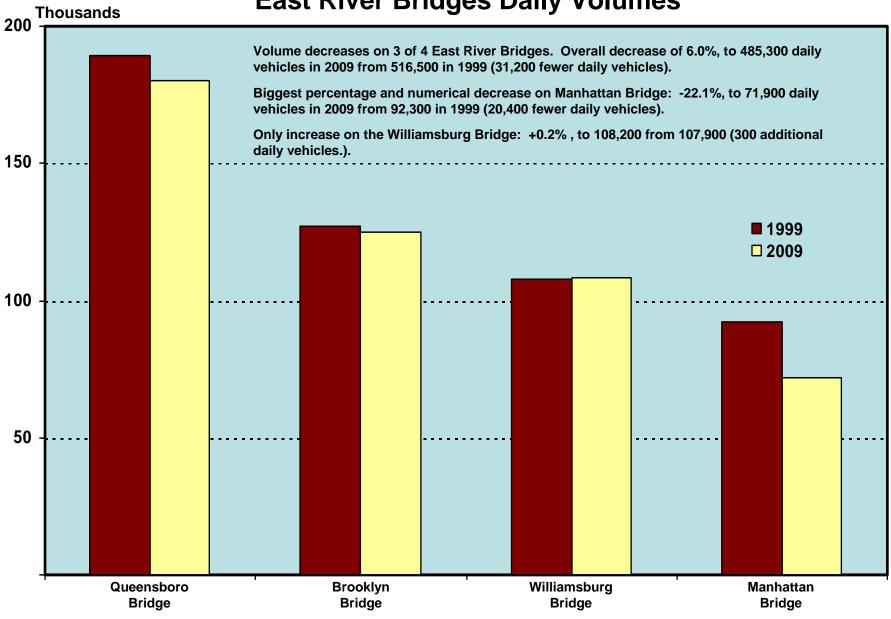
MTABT Manhattan Facilities	Highway Functional Classification	1999	2009	Percent Change
Brooklyn-Battery Tunnel	Interstate	63.307	50,674	- 20.0 %
Henry Hudson Bridge	Principal Arterial	61,165	66,607	8.9 %
Queens-Midtown Tunnel	Interstate	80,941	85,144	5.2 %
R.F.K. Memorial Bridge Manhattan Plaza *	Principal Arterial	98,553	91,731	- 6.9 %
Total, 4 MTABT Manhattan Crossings		303,966	294,156	- 3.2 %
PANYNJ Manhattan Facilities				
George Washington Bridge	Interstate	317,640	289,694	- 8.8 %
Holland Tunnel	Interstate	103,020	96,184	- 6.6 %
Lincoln Tunnel	Principal Arterial	128,692	118,982	- 7.5 %
Total, 3 PANYNJ Manhattan - New Jersey Crossing	S	549,352	504,860	- 8.1 %
MTABT Outer Borough Bridges				
				/
Bronx-Whitestone Bridge	Interstate	120,170	112,978	- 6.0 %
Cross Bay Bridge	Minor Arterial	16,975	21,762	28.2 %
Marine Parkway Gil Hodges Memorial Bridge	Minor Arterial	19,904	22,067	10.9 %
R.F.K. Memorial Bridge Bronx Plaza *	Interstate	80,019	78,459	- 1.9 % 18.0 %
Throgs Neck Bridge Verrazano-Narrows Bridge	Interstate Interstate	90,986 194,623	107,324 202,052	3.8 %
Total, 6 MTABT Outer Borough Bridges		522,677	544,642	4.2 %
PANYNJ Staten Island Bridges				
Bayonne Bridge	Principal Arterial	17,603	19,422	10.3 %
Goethals Bridge	Interstate	70,863	71,230	0.5 %
Outerbridge Crossing	Principal Arterial	78,424	74,852	- 4.6 %
Total, 3 Staten Island - New Jersey Bridges		166,890	165,504	- 0.8 %

<sup>\*</sup> Formerly Triborough Bridge.

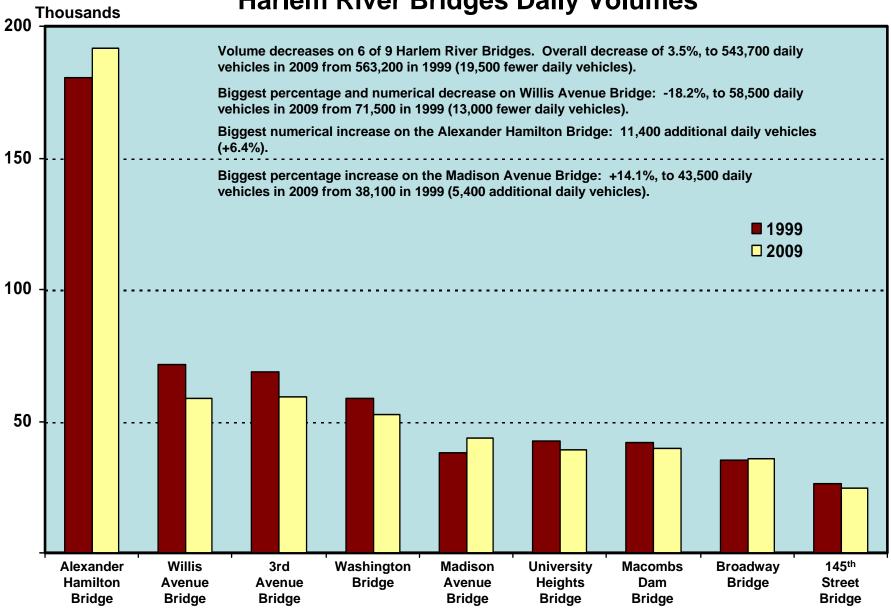
#### 10-Year Volume Changes ~ 1999 – 2009 New York City Toll-free Bridges Daily Volumes



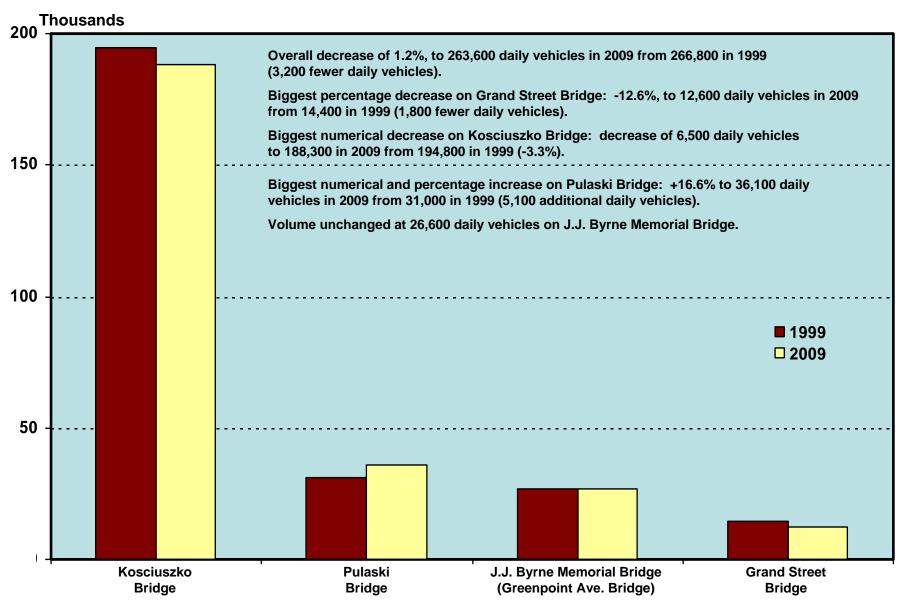
## 10-Year Volume Changes ~ 1999 – 2009 East River Bridges Daily Volumes



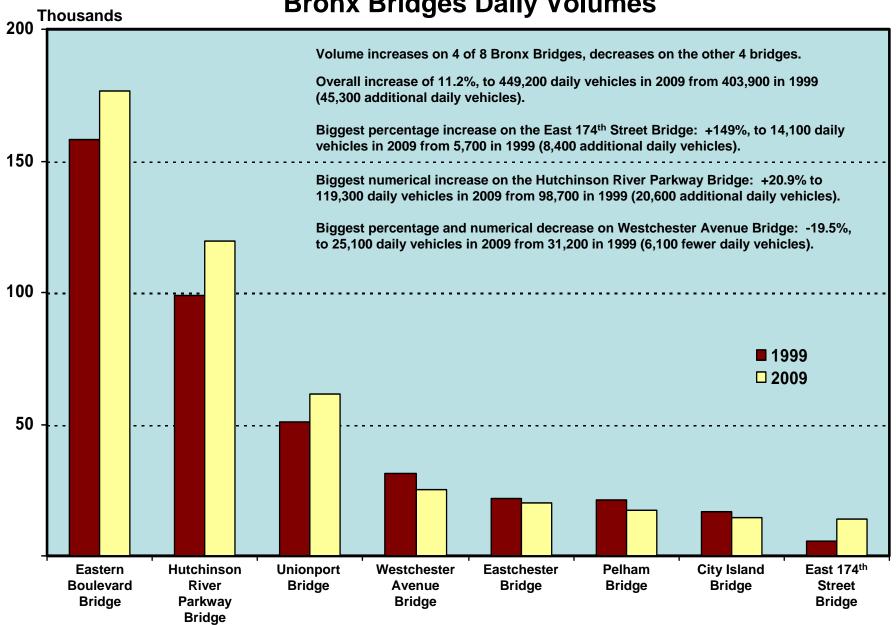
## 10-Year Volume Changes ~ 1999 – 2009 Harlem River Bridges Daily Volumes



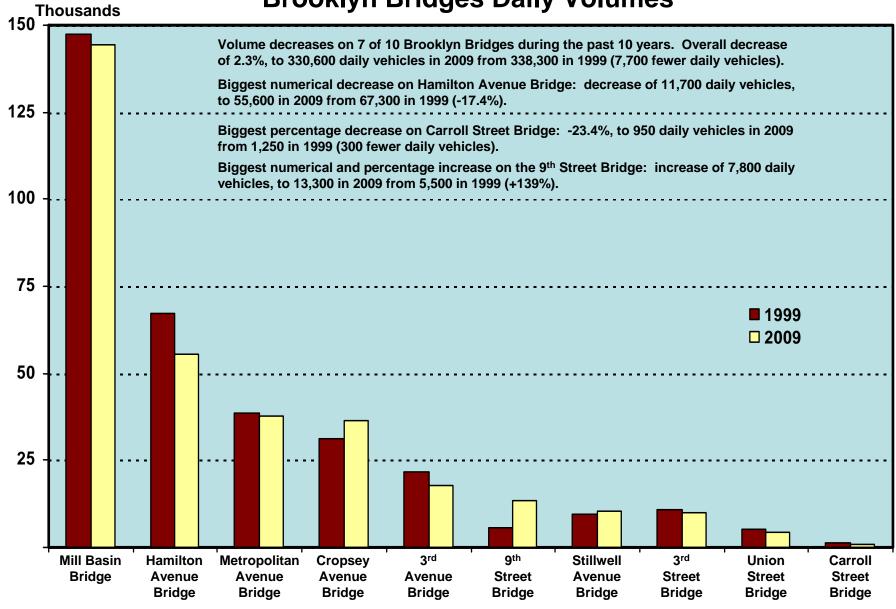
### 10-Year Volume Changes ~ 1999 – 2009 Brooklyn-Queens (Newtown Creek) Bridges Daily Volumes



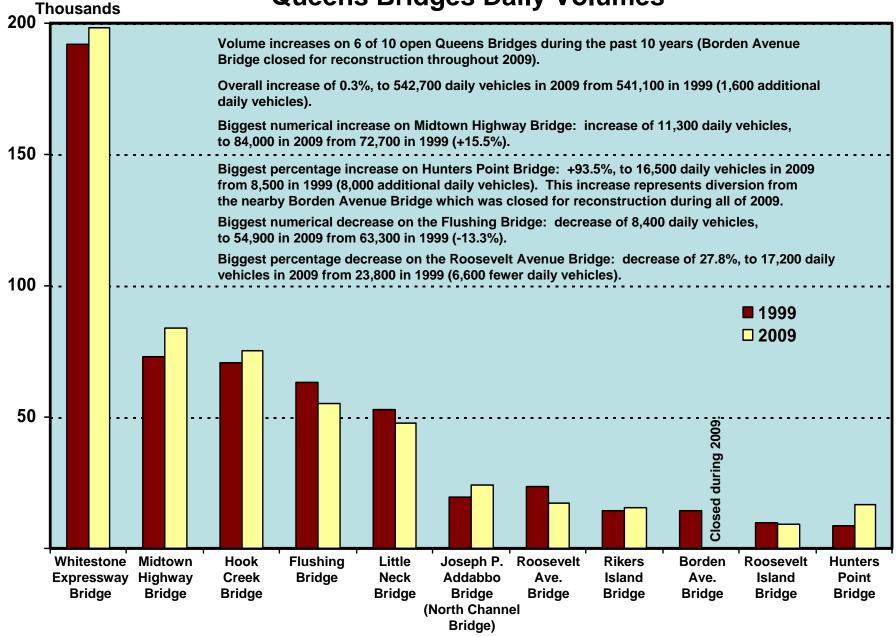
### 10-Year Volume Changes ~ 1999 – 2009 Bronx Bridges Daily Volumes



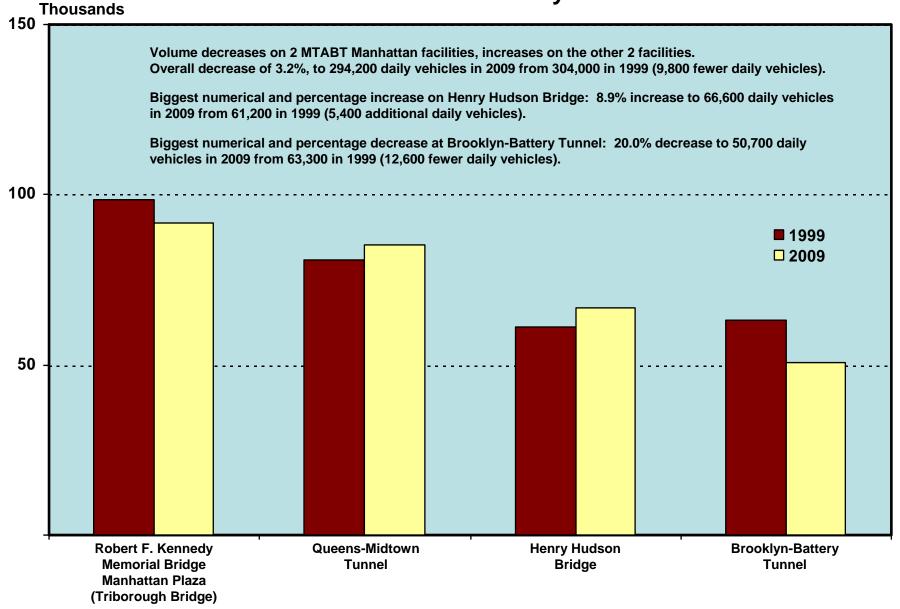
### 10-Year Volume Changes ~ 1999 – 2009 Brooklyn Bridges Daily Volumes



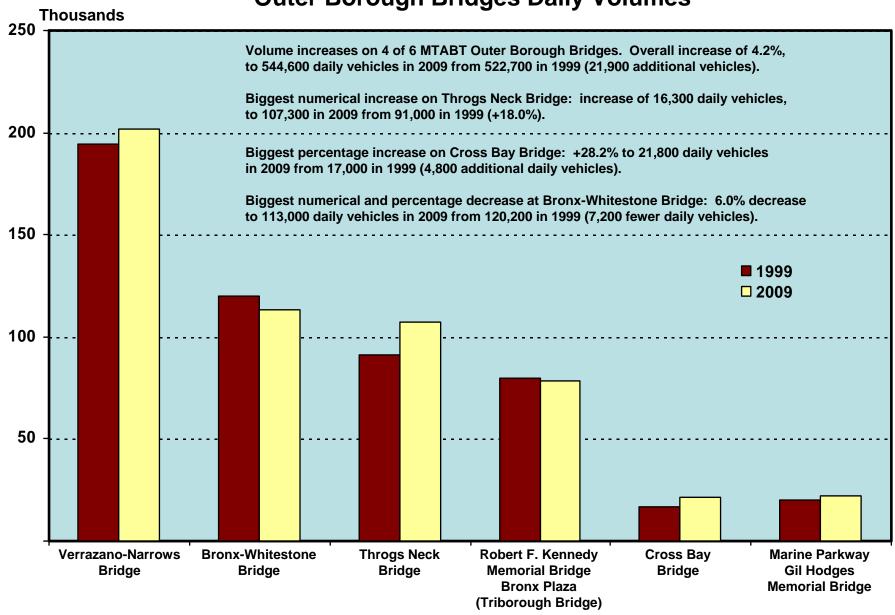
#### 10-Year Volume Changes ~ 1999 – 2009 Queens Bridges Daily Volumes



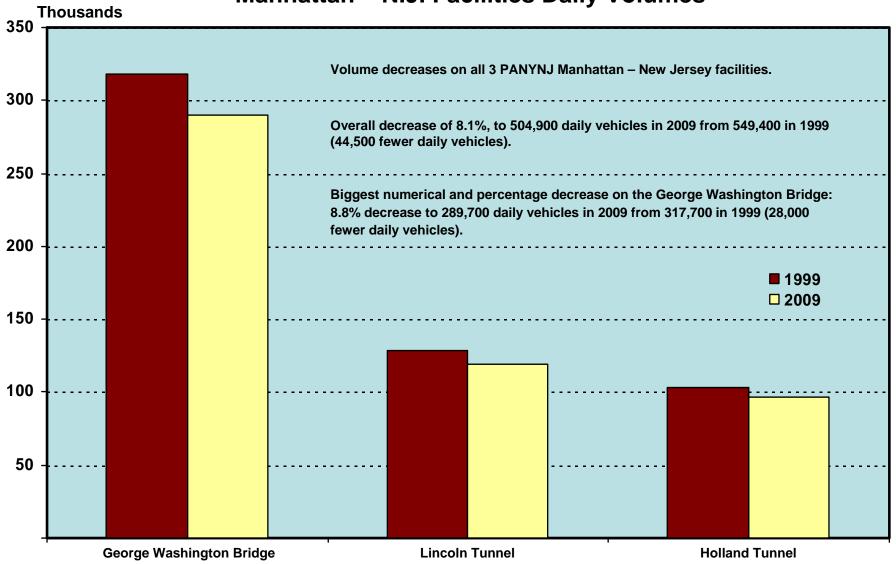
# 10-Year Volume Changes ~ 1999 – 2009 Metropolitan Transportation Authority Bridges & Tunnels (MTABT) Manhattan Facilities Daily Volumes



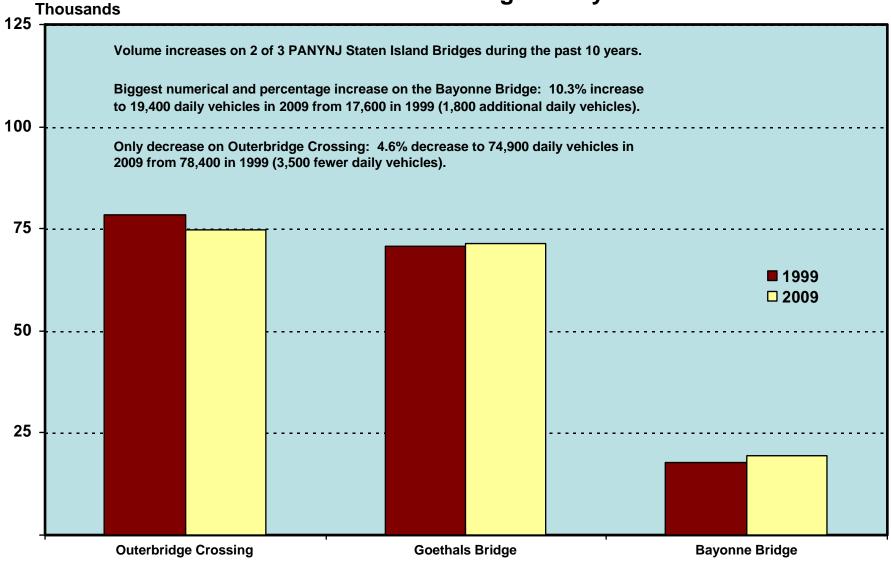
# 10-Year Volume Changes ~ 1999 – 2009 Metropolitan Transportation Authority Bridges & Tunnels (MTABT) Outer Borough Bridges Daily Volumes



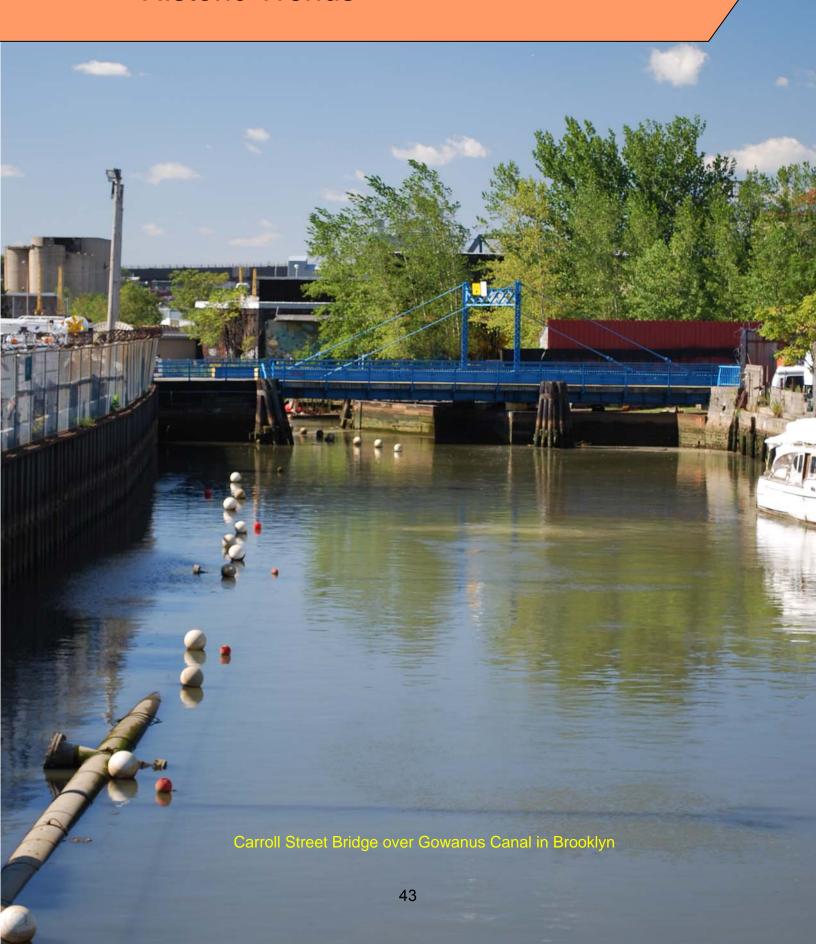
#### 10-Year Volume Changes ~ 1999 – 2009 Port Authority of New York & New Jersey (PANYNJ) Manhattan – N.J. Facilities Daily Volumes



#### 10-Year Volume Changes ~ 1999 – 2009 Port Authority of New York & New Jersey (PANYNJ) Staten Island – N.J. Bridges Daily Volumes



### **Historic Trends**



#### **Historic Trends**

- In 1948, traffic on the City-operated bridges was 924,000 daily trips. By 1968, that figure had more than doubled to 1,912,000. In 2009, it stood at 2,680,000 daily trips, nearly three times the 1948 volume.
- Between 1949 and 1959, bridge traffic grew 4.0% per year on the 44 City bridges open during that time. The highest annual growth rates were on the Brooklyn Bridge over the East River (+10.5%), Mill Basin Bridge along the Belt Parkway in Brooklyn (+8.9%), Unionport Bridge in the Bronx (+8.6%), Kosciuszko Bridge over Newtown Creek (+7.7%), and Macombs Dam Bridge over the Harlem River (+7.3%). In addition, annual growth exceeded 6.0% on the Third Avenue Bridge over the Harlem River (+6.9%), Grand Street Bridge over Newtown Creek (+6.8%), the Midtown Highway, Hook Creek, and Whitestone Expressway Bridges in Queens (+6.8%, +6.4%, and +6.2%, respectively), and University Heights Bridge over the Harlem River (+6.1%).
- Between 1959 and 1969, bridge traffic increased 3.7% per year on the 45 City bridges open during that time. The Whitestone Expressway Bridge in Queens had the highest annual growth rate (+13.0%), followed by the Fresh Kills Bridge in Staten Island (+11.5%). Rapid annual growth rates also occurred on the Unionport, Westchester Avenue, and Pelham Bridges in the Bronx (+10.3%, +9.2%, and +7.7%, respectively), and Roosevelt Island Bridge in Queens (+7.4%).
- Between 1969 and 1979, total traffic on the 47 City bridges showed an average annual decline of 0.3% per year. The highest annual growth rates were on the Borden Avenue and Rikers Island Bridges in Queens (+6.0% and +4.8%, respectively), and Fresh Kills Bridge in Staten Island (+4.4%).
- Between 1979 and 1989, bridge traffic grew 2.2% per year on the 47 City bridges. The highest growth rates were on the Rikers Island Bridge in Queens (+8.8% annually) and the East 174th Street Bridge in the Bronx (+6.9% annually).
- Between 1989 and 1999, bridge traffic grew 1.2% per year on the 47 City bridges. The highest annual growth rates were on the Third Street Bridge over Gowanus Canal in Brooklyn (+5.8% per year), the Little Neck Bridge over Alley Creek in Queens (+4.3% per year), the Queensboro Bridge over the East River between Manhattan and Queens (+3.6% per year), the University Heights Bridge over the Harlem River between Manhattan and The Bronx (+3.4% per year), and the Hamilton Avenue Bridge over Gowanus Canal in Brooklyn (+3.4% per year).
- Traffic crossing the Harlem River increased significantly following the opening of the Alexander Hamilton Bridge in 1963. By 1965, daily traffic on the Alexander Hamilton Bridge had exceeded 125,000 vehicles. As a result, traffic on the Harlem River crossings increased 28% between 1962 and 1965.
- Bridge traffic increased steadily in the late 1960s and by 1971 had reached 2,059,000 vehicles per day. This was followed by a downward trend between 1971 and 1979. Daily bridge traffic in 1979 was 65,000 below the 1969 level. Thereafter, bridge traffic increased in most years, with 713,300 more daily vehicles crossing the bridges in 2009 than in 1979.

#### Total NYC Toll Free Bridges Average Daily Traffic Volumes 1948 - 2009

Year	East River	Harlem River	Brooklyn- Queens	Bronx
1948	254,068	207,177	76,884	141,247
1949	260,933	193,510	65,778	135,682
1950	240,227	222,671	78,998	150,973
1951	269,352	249,199	95,480	145,227
1952	261,704	222,196	108,369	183,453
1953 1954	292,726 297,903	248,629 236,056	108,718 118,199	177,999 183,057
1955	297,903	250,030	116,018	180,249
1956	297,866	266,781	120,881	197,809
1957	297,028	316,530	137,610	184,031
1958	304,470	329,747	110,097	196,948
1959	312,431	342,349	144,137	188,531
1960	322,660	345,199	135,059	205,757
1961	316,813	333,463	145,861	259,905
1962	318,170	313,230	160,540	263,020
1963	333,880	309,090	160,400	291,240
1964 1965	341,030 353,518	407,680 401,259	172,570 171,379	328,190 351,358
1966	355,745	401,239	198,884	354,029
1967	352,936	427,744	197,695	337,982
1968	357,232	362,095	147,024	389,519
1969	379,416	412,992	199,029	378,854
1970	371,743	429,690	194,709	366,604
1971	364,070	432,195	200,624	391,040
1972	390,292	422,364	200,199	345,542
1973	394,290	449,670	168,037	272,116
1974 1975	394,631 404,379	439,112 440,354	180,771 194,534	282,009 284,772
1976	398,248	429,629	194,534	280,315
1977	398,140	442,200	192,432	268,480
1978	400,146	450,758	194,721	301,248
1979	382,028	427,816	201,314	277,666
1980	392,460	446,292	196,019	284,383
1981	395,125	448,323	201,487	287,933
1982	414,984	470,785	179,788	291,600
1983 1984	413,152	491,153 496,949	221,703 224,209	301,686
1985	428,541 476,032	538,263	225,050	306,019 311,072
1986	469,711	546,896	224,816	356,257
1987	460,092	530,228	238,975	362,490
1988	460,858	520,282	222,871	364,570
1989	461,102	539,381	239,889	354,927
1990	448,713	539,563	243,408	343,574
1991	447,969	533,368	236,472	338,921
1992 1993	443,145 431,874	537,353	231,197 230,020	343,744 336,776
1994	448,263	542,306 526,044	230,020	340,515
1995	464,903	521,882	237,305	348,009
1996	463,482	530,950	239,752	361,505
1997	511,410	546,750	258,585	362,846
1998	523,690	560,062	268,324	392,771
1999	516,507	563,182	266,762	403,934
2000	514,767	578,770	279,944	424,946
2001 2002	427,321 467,080	568,759 551,831	276,288 262,121	439,239 437,363
2002	493,418	549,510	275,737	448,186
2004	507,589	552,421	275,654	453,006
2005	498,213	561,392	280,189	459,149
2006	494,576	557,043	265,298	456,001
2007	496,666	557,925	263,326	453,636
2008	477,211	539,434	258,759	454,313
2009	485,313	543,736	263,638	449,209

## Total NYC Toll Free Bridges (continued) Average Daily Traffic Volumes 1948 - 2009

			Staten	
Year	Brooklyn	Queens	Island	Totals
1948 1949	91,917 111,439	147,106 173,925	5,597 5,759	923,996 947,026
1950	122,058	180,610	6,250	1,001,787
1951	140,124	200,163	8,023	1,107,568
1952	127,050	212,687	7,891	1,123,350
1953	141,728	220,866	7,858	1,198,524
1954	154,877	221,700	9,098	1,220,890
1955	140,907	218,696	9,841	1,209,583
1956	157,758	265,239	9,415	1,315,749
1957	153,756	261,111	9,897	1,359,963
1958	179,537	256,536	10,121	1,387,456
1959	176,508	264,201	8,573	1,436,730
1960	181,995	259,348	8,147	1,458,165
1961 1962	207,273 217,232	265,848 257,140	10,270 9,400	1,539,433 1,538,732
1963	210,610	288,190	12,450	1,605,860
1964	213,469	312,090	15,010	1,790,039
1965	241,570	310,588	15,539	1,845,211
1966	223,516	313,379	17,175	1,865,215
1967	211,307	354,637	17,309	1,899,610
1968	248,667	387,512	19,789	1,911,838
1969	251,115	387,146	22,379	2,030,931
1970	238,020	400,381	21,631	2,022,778
1971	241,116	402,853	26,744	2,058,642
1972	240,091	387,808	28,455	2,014,751
1973	226,608	407,538	37,213	1,955,472
1974	240,762	403,573	36,207	1,977,065
1975	234,623	390,507	38,684	1,987,853
1976 1977	237,416 228,117	387,662 387,403	34,675 30,295	1,958,646 1,947,067
1978	226,627	410,037	34,467	2,018,004
1979	247,018	393,749	36,806	1,966,397
1980	242,682	384,581	41,604	1,988,021
1981	240,109	432,886	46,947	2,052,810
1982	258,284	439,128	68,481	2,123,050
1983	253,358	446,926	46,450	2,174,428
1984	274,583	449,118	50,341	2,229,760
1985	275,566	450,396	53,590	2,329,969
1986	271,818	456,171	44,230	2,369,899
1987	271,080	466,965	50,372	2,380,202
1988	281,731	473,735	50,385	2,374,432
1989 1990	299,865 320,122	461,819	36,550 53,442	2,393,533
1991	273,185	450,319 466,539	49,197	2,399,141 2,345,651
1992	310,084	484,835	48,507	2,398,865
1993	308,495	467,195	49,969	2,366,635
1994	302,135	478,793	48,562	2,375,969
1995	300,832	474,342	47,132	2,394,405
1996	315,395	495,873	49,740	2,456,697
1997	318,101	503,323	51,738	2,552,753
1998	322,057	522,899	53,770	2,643,573
1999	338,261	541,114	65,577	2,695,337
2000	331,090	551,329	66,980	2,747,826
2001	335,404	551,116	67,465	2,665,592
2002	329,749 331,805	554,458 562 107	64,563 66 155	2,667,165
2003	331,805	562,107 549,619	66,155 64,705	2,726,918
2004	335,921	549,619	64,705	2,738,915
2005	331,523	560,520	66,816	2,757,802
2006	328,620	552,642	65,274	2,719,454
2007	333,955	562,062	68,997	2,736,567
2008	327,644	544,089	64,724	2,666,174
2009	330,614	542,678	64,490	2,679,678

#### NYC Tolled Facilities Average Daily Traffic Volumes 1948 - 2009

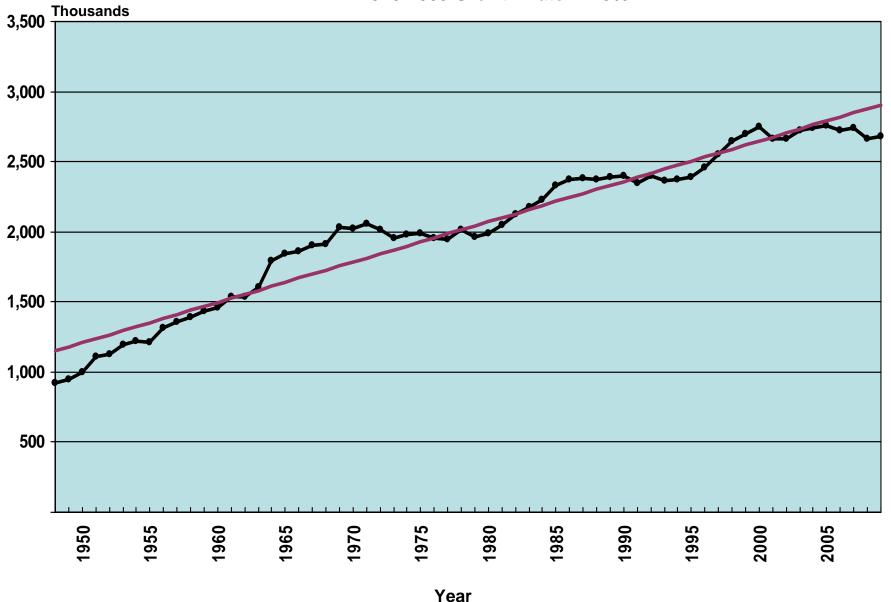
Year	MTABT Manhattan	PANYNJ Manhattan	MTABT Outer Boro	PANYNJ Staten Is	Total
1948 1949	92,977 110,071	115,785 129,943	80,977 97,117	13,214 14,628	302,953 351,759
1950	161,856	146,653	109,454	16,431	434,394
1951	180,272	166,150	124,391	18,335	489,148
1952	194,327	181,253	133,747	19,143	528,470
1953	200,535	194,577	143,873	20,598	559,583
1954	204,616	202,394	153,811	21,554	582,375
1955	216,835	211,926	167,176	22,685	618,622
1956	231,535	213,088	176,644	22,202	643,469
1957	236,343	218,623	176,042	22,614	653,622
1958	232,413	221,494	174,187	21,953	650,047
1959 1960	231,501 230,768	237,021 239,620	183,224 184,606	22,978 22,856	674,724 677,850
1961	227,241	236,833	144,600	25,374	634,048
1962	233,010	250,646	199,418	26,338	709,412
1963	225,100	265,603	213,940	27,398	732,041
1964	236,513	285,824	236,709	29,980	789,026
1965	240,949	293,339	301,459	44,828	880,575
1966	243,107	303,981	316,984	50,978	915,050
1967	244,038	308,153	329,918	54,051	936,160
1968	247,924	320,292	352,823	58,654	979,693
1969	254,863	329,123	365,734	63,053	1,012,773
1970	271,063	347,838	384,121	68,920	1,071,942
1971	286,692	362,063	401,495	74,758	1,125,008
1972	252,871	378,620	388,743	77,018	1,097,252
1973	251,593	397,203	402,096	81,034	1,131,926
1974	242,846	376,547	395,168	80,544	1,095,105
1975	214,120	374,707	381,450	81,060	1,051,337
1976 1977	217,207 229,766	381,250	382,313 384,470	80,864 85,536	1,061,634 1,084,785
1977	241,125	385,013 399,512	398,634	88,998	1,128,269
1979	251,544	393,724	395,516	92,164	1,132,948
1980	255,858	404,734	399,855	97,774	1,158,221
1981	269,854	427,381	417,974	101,644	1,216,853
1982	253,499	433,744	432,273	106,672	1,226,188
1983	263,510	441,164	446,596	113,786	1,265,056
1984	262,985	453,775	457,565	118,928	1,293,253
1985	275,858	468,452	475,782	126,466	1,346,558
1986	274,693	485,751	475,218	138,436	1,374,098
1987	289,642	486,639	482,429	139,734	1,398,444
1988	293,550	490,179	494,073	143,062	1,420,864
1989	275,358 289,066	487,693	475,447 488,042	140,051	1,378,549
1990 1991	295,265	482,243 467,501	488,953	138,340 141,454	1,397,691 1,393,173
1992	300,203	476,872	491,171	145,380	1,413,626
1993	282,159	473,069	478,703	140,775	1,374,706
1994	263,351	473,799	490,288	143,875	1,371,313
1995	293,574	482,098	498,104	143,657	1,417,433
1996	281,116	493,194	493,813	146,565	1,414,688
1997	283,686	504,788	488,923	151,578	1,428,975
1998	293,990	522,512	515,970	156,786	1,489,258
1999	303,966	549,352	522,677	166,890	1,542,885
2000	313,504	548,465	537,334	164,668	1,563,971
2001	257,937	458,944	551,948	177,251	1,446,080
2002	305,300	532,839	554,237	179,140	1,571,516
2003 2004	307,034 312,159	547,449 536,396	547,068 559,962	174,582 174,268	1,576,133 1,582,785
2004	297,411	527,717	530,284	171,653	1,502,765
2005	317,751	537,748	560,727	175,914	1,592,140
2007	312,253	513,974	548,552	170,228	1,545,007
2008	305,993	508,269	555,680	165,776	1,535,718
2009	294,156	504,860	544,642	165,504	1,509,162

PANYNJ one-way tolls initiated 8/12/1970.

PANYNJ toll increases May 1975, Jauary 1984, April 1987, April 1991, March 2001, March 2008. MTABT Toll Increases 1/72, 9/75, 5/80, 4/82, 1/84, 1/86, 2/87, 7/89, 1/93, 3/96, 5/03, 3/05, 3/08, & 7/09.

### **Average Daily Traffic Volumes Total of 47 NYC Toll-Free Bridges**

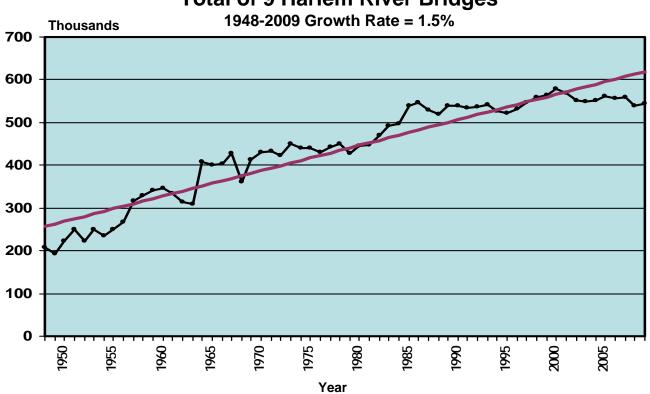
1948-2009 Growth Rate = 1.5%



### **Average Daily Traffic Volumes Total of 4 East River Bridges**



## **Average Daily Traffic Volumes Total of 9 Harlem River Bridges**



## **Average Daily Traffic Volumes Total of 4 Brooklyn-Queens Bridges**



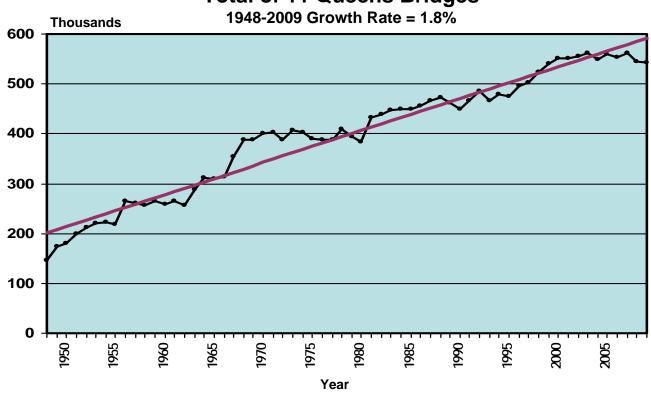
## **Average Daily Traffic Volumes Total of 8 Bronx Bridges**



## **Average Daily Traffic Volumes Total of 10 Brooklyn Bridges**



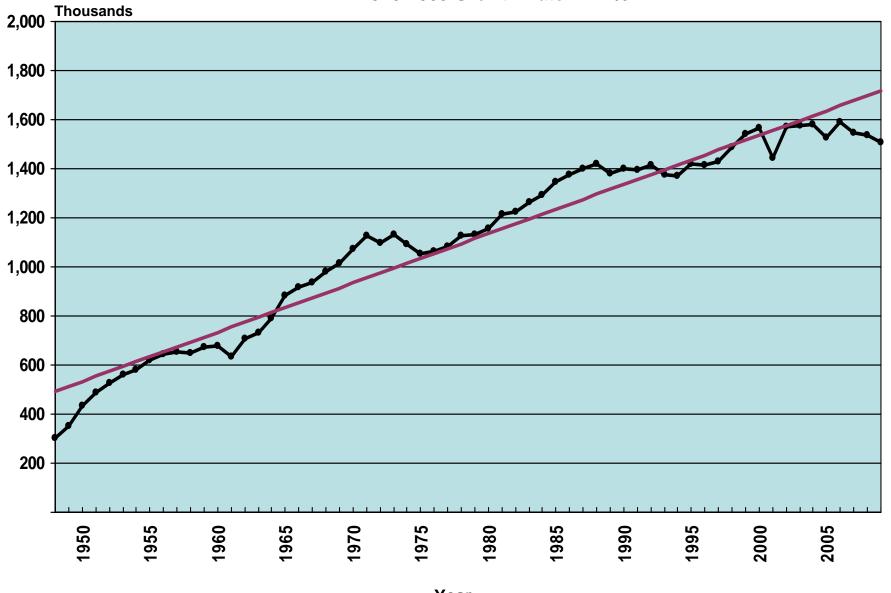
## **Average Daily Traffic Volumes Total of 11 Queens Bridges**



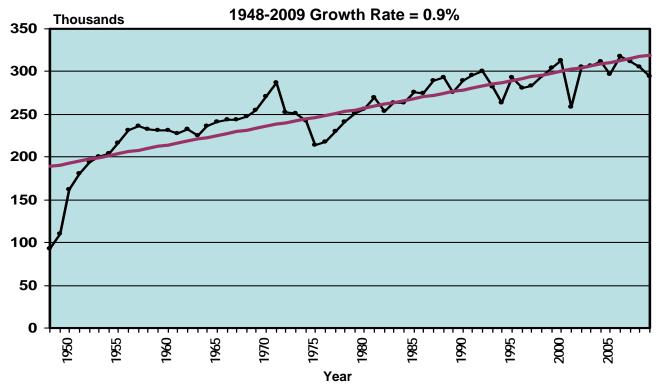
### **Average Daily Traffic Volumes**

#### **Total of 16 NYC Tolled Facilities**

1948-2009 Growth Rate = 2.1%



### Average Daily Traffic Volumes Total of 4 Manhattan M.T.A.B.T. Facilities



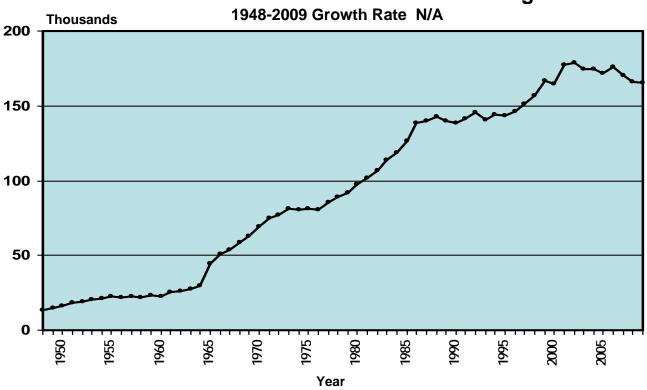
## Average Daily Traffic Volumes Total of 6 Outer Borough M.T.A.B.T. Bridges



### Average Daily Traffic Volumes Total of 3 Manhattan P.A.N.Y.N.J. Facilities



## Average Daily Traffic Volumes Total of 3 Staten Island P.A.N.Y.N.J Bridges



#### 10-Year Traffic Growth Rate Trends N.Y.C. Bridges 1949-2009

Page 1 of 3

East River Bridges	1949-1959	1959-1969	1969-1979	1979-1989	1989-1999	1999-2009
Brooklyn Bridge	10.5%	3.6%	- 0.1%	3.2%	0.7%	0.1%
Manhattan Bridge	- 1.6%	2.2%	- 0.2%	- 0.6%	2.3%	- 1.2%
Queensboro Bridge	1.4%	2.6%	1.0%	2.2%	3.6%	- 0.2%
Williamsburg Bridge	4.4%	- 1.3%	1.4%	3.5%	- 0.6%	0.8%
Total	2.2%	1.8%	0.6%	2.2%	1.6%	- 0.1%
Harlem River Bridges						
Alexander Hamilton Bridge	Opened J	lan. 1963	0.9%	2.4%	- 0.6%	1.1%
Broadway Bridge	4.1%	- 0.3%	1.4%	1.8%	- 0.5%	- 1.1%
Macombs Dam Bridge	7.3%	- 2.6%	- 1.8%	1.9%	- 0.0%	2.6%
Madison Avenue Bridge	4.5%	0.9%	1.4%	1.7%	- 0.7%	0.1%
Third Avenue Bridge	6.9%	- 1.6%	0.5%	1.8%	0.9%	- 1.8%
University Heights Bridge	6.1%	- 3.9%	1.4%	3.0%	3.4%	- 1.4%
Washington Bridge	5.6%	- 8.3%	2.6%	3.2%	0.6%	- 1.7%
Willis Avenue Bridge	4.2%	0.7%	- 1.7%	3.6%	1.8%	- 1.9%
145th Street Bridge	3.4%	- 4.7%	- 1.7%	1.9%	0.5%	- 3.3%
3						
Total	5.3%	2.4%	0.4%	2.4%	0.4%	- 0.4%
Total  Brooklyn-Queens Bridges	5.3%	2.4%	- 7.3%	2.4%	0.4%	- 0.4%
Total  Brooklyn-Queens Bridges Grand Street Bridge						
Total  Brooklyn-Queens Bridges	6.8%	4.6%	- 7.3%	4.3%	0.5%	- 1.6%
Total  Brooklyn-Queens Bridges  Grand Street Bridge  J.J. Byrne Memorial Bridge *	6.8% 3.6%	4.6% 3.1%	- 7.3% - 3.7%	4.3% - 0.8%	0.5% 2.8%	- 1.6% 0.4%
Total  Brooklyn-Queens Bridges  Grand Street Bridge  J.J. Byrne Memorial Bridge *  Kosciuszko Bridge	6.8% 3.6% 7.7%	4.6% 3.1% 2.6%	- 7.3% - 3.7% 1.3%	4.3% - 0.8% 2.3%	0.5% 2.8% 1.3%	- 1.6% 0.4% - 0.6%
Total  Brooklyn-Queens Bridges  Grand Street Bridge  J.J. Byrne Memorial Bridge *  Kosciuszko Bridge  Pulaski Bridge	6.8% 3.6% 7.7% 4.0%	4.6% 3.1% 2.6% 4.6%	- 7.3% - 3.7% 1.3% - 0.9%	4.3% - 0.8% 2.3% 2.5%	0.5% 2.8% 1.3% - 0.0%	- 1.6% 0.4% - 0.6% 0.5%
Total  Brooklyn-Queens Bridges  Grand Street Bridge  J.J. Byrne Memorial Bridge *  Kosciuszko Bridge  Pulaski Bridge  Total	6.8% 3.6% 7.7% 4.0%	4.6% 3.1% 2.6% 4.6%	- 7.3% - 3.7% 1.3% - 0.9%	4.3% - 0.8% 2.3% 2.5%	0.5% 2.8% 1.3% - 0.0%	- 1.6% 0.4% - 0.6% 0.5%
Total  Brooklyn-Queens Bridges Grand Street Bridge J.J. Byrne Memorial Bridge * Kosciuszko Bridge Pulaski Bridge Total  Bronx Bridges	6.8% 3.6% 7.7% 4.0% 5.9%	4.6% 3.1% 2.6% 4.6% 3.2%	- 7.3% - 3.7% 1.3% - 0.9% - 0.0%	4.3% - 0.8% 2.3% 2.5% 2.2%	0.5% 2.8% 1.3% - 0.0% 1.2%	- 1.6% 0.4% - 0.6% 0.5% - 0.4%
Total  Brooklyn-Queens Bridges Grand Street Bridge J.J. Byrne Memorial Bridge * Kosciuszko Bridge Pulaski Bridge  Total  Bronx Bridges City Island Bridge	6.8% 3.6% 7.7% 4.0% 5.9%	4.6% 3.1% 2.6% 4.6% 3.2%	- 7.3% - 3.7% 1.3% - 0.9% - 0.0%	4.3% - 0.8% 2.3% 2.5% 2.2%	0.5% 2.8% 1.3% - 0.0% 1.2%	- 1.6% 0.4% - 0.6% 0.5% - 0.4%
Total  Brooklyn-Queens Bridges Grand Street Bridge J.J. Byrne Memorial Bridge * Kosciuszko Bridge Pulaski Bridge  Total  Bronx Bridges City Island Bridge East 174th Street Bridge	6.8% 3.6% 7.7% 4.0% 5.9%	4.6% 3.1% 2.6% 4.6% 3.2% 5.4% 1.8%	- 7.3% - 3.7% 1.3% - 0.9% - 0.0%	4.3% - 0.8% 2.3% 2.5% 2.2%	0.5% 2.8% 1.3% - 0.0% 1.2%	- 1.6% 0.4% - 0.6% 0.5% - 0.4%
Total  Brooklyn-Queens Bridges Grand Street Bridge J.J. Byrne Memorial Bridge * Kosciuszko Bridge Pulaski Bridge  Total  Bronx Bridges City Island Bridge East 174th Street Bridge Eastchester Bridge	6.8% 3.6% 7.7% 4.0% 5.9%	4.6% 3.1% 2.6% 4.6% 3.2% 5.4% 1.8% 4.1%	- 7.3% - 3.7% 1.3% - 0.9% - 0.0% 1.5% - 4.7% - 0.4%	4.3% - 0.8% 2.3% 2.5% 2.2% 3.6% 6.9% 2.6%	0.5% 2.8% 1.3% - 0.0% 1.2% 0.5% n/a 0.6%	- 1.6% 0.4% - 0.6% 0.5% - 0.4% - 2.3% n/a - 0.9%
Total  Brooklyn-Queens Bridges Grand Street Bridge J.J. Byrne Memorial Bridge * Kosciuszko Bridge Pulaski Bridge Total  Bronx Bridges City Island Bridge East 174th Street Bridge Eastchester Bridge Eastern Blvd Bridge	6.8% 3.6% 7.7% 4.0% 5.9% 2.3% - 2.4% - 1.1% 1.7%	4.6% 3.1% 2.6% 4.6% 3.2% 5.4% 1.8% 4.1% 3.4%	- 7.3% - 3.7% 1.3% - 0.9% - 0.0% - 0.0%	4.3% - 0.8% 2.3% 2.5% 2.2% 3.6% 6.9% 2.6% 2.0%	0.5% 2.8% 1.3% - 0.0% 1.2% 0.5% n/a 0.6% 2.1%	- 1.6% 0.4% - 0.6% 0.5% - 0.4% - 2.3% n/a - 0.9% 1.0%
Brooklyn-Queens Bridges Grand Street Bridge J.J. Byrne Memorial Bridge * Kosciuszko Bridge Pulaski Bridge Total  Bronx Bridges City Island Bridge East 174th Street Bridge Eastchester Bridge Eastern Blvd Bridge Hutchinson River Pkwy Bridge	6.8% 3.6% 7.7% 4.0% 5.9% 2.3% - 2.4% - 1.1% 1.7% 5.6%	4.6% 3.1% 2.6% 4.6% 3.2% 5.4% 1.8% 4.1% 3.4% 6.0%	- 7.3% - 3.7% 1.3% - 0.9% - 0.0% - 0.0%	4.3% - 0.8% 2.3% 2.5% 2.2% 3.6% 6.9% 2.6% 2.0% 5.1%	0.5% 2.8% 1.3% - 0.0% 1.2% 0.5% n/a 0.6% 2.1% 1.3%	- 1.6% 0.4% - 0.6% 0.5% - 0.4% - 2.3% n/a - 0.9% 1.0% 1.7%
Total  Brooklyn-Queens Bridges Grand Street Bridge J.J. Byrne Memorial Bridge * Kosciuszko Bridge Pulaski Bridge  Total  Bronx Bridges City Island Bridge East 174th Street Bridge Eastchester Bridge Eastern Blvd Bridge Hutchinson River Pkwy Bridge Pelham Bridge	6.8% 3.6% 7.7% 4.0% 5.9% 2.3% - 2.4% - 1.1% 1.7% 5.6% 2.3%	4.6% 3.1% 2.6% 4.6% 3.2% 5.4% 1.8% 4.1% 3.4% 6.0% 7.7%	- 7.3% - 3.7% 1.3% - 0.9% - 0.0% - 0.0% - 0.4% - 0.4% 1.4% - 2.0% 1.0%	4.3% - 0.8% 2.3% 2.5% 2.2% 3.6% 6.9% 2.6% 2.0% 5.1% 1.2%	0.5% 2.8% 1.3% - 0.0% 1.2% 0.5% n/a 0.6% 2.1% 1.3% 2.5%	- 1.6% 0.4% - 0.6% 0.5% - 0.4% - 2.3% n/a - 0.9% 1.0% 1.7% - 2.1%

<sup>\*</sup> Also known as Greenpoint Avenue Bridge.

#### 10-Year Traffic Growth Rate Trends N.Y.C. Bridges 1949-2009

Page 2 of 3

Brooklyn Bridges	1949-1959	1959-1969	1969-1979	1979-1989	1989-1999	1999-2009
Carroll Street Bridge	- 3.7%	- 3.3%	- 5.9%	- 4.7%	2.9%	- 2.4%
Cropsey Avenue Bridge	2.5%	3.1%	- 0.3%	4.9%	0.2%	1.6%
Hamilton Avenue Bridge	4.8%	0.7%	- 0.5%	3.9%	3.4%	- 1.7%
Metropolitan Avenue Bridge	2.8%	5.4%	- 2.7%	3.2%	0.5%	- 0.8%
Mill Basin Bridge	8.9%	6.4%	0.2%	1.1%	0.6%	- 0.0%
Ninth Street Bridge	2.6%	0.3%	0.7%	- 0.6%	- 6.5%	8.2%
Stillwell Avenue Bridge	- 0.4%	2.8%	2.1%	Closed 1	983-1989	1.3%
Third Avenue Bridge	- 1.1%	- 1.6%	0.7%	3.7%	- 1.2%	- 2.2%
Third Street Bridge	2.4%	- 4.9%	- 1.2%	- 0.1%	5.8%	- 0.7%
Union Street Bridge	2.9%	- 1.3%	- 5.7%	2.9%	- 2.5%	- 1.2%
Total	4.2%	3.0%	- 0.4%	2.0%	1.0%	- 0.2%
Queens Bridges						
Borden Avenue Bridge	1.1%	0.2%	6.0%	- 1.9%	- 0.9%	Closed 2009
Flushing Bridge	1.2%	2.3%	- 1.1%	4.9%	0.3%	- 1.5%
Hook Creek Bridge	6.4%	3.9%	0.7%	2.5%	1.4%	0.7%
Hunters Point Bridge	- 1.8%	- 1.5%	Closed 1	975-1983	- 2.4%	3.5%
Joseph P. Addabbo Bridge *	3.4%	3.3%	- 1.8%	- 0.2%	0.5%	1.8%
Little Neck Bridge	3.6%	5.0%	0.6%	- 0.3%	4.3%	- 1.5%
Midtown Highway Bridge	6.8%	1.8%	- 0.1%	- 2.3%	0.5%	1.1%
Rikers Island Bridge	Opened 11	/22/1966	4.8%	8.8%	1.6%	0.6%
Roosevelt Avenue Bridge	3.5%	- 2.4%	- 1.2%	2.9%	- 0.3%	- 2.9%
Roosevelt Island Bridge	Opened 5/18/1955	7.4%	2.3%	2.9%	- 0.1%	0.5%
Whitestone Expwy Bridge	6.2%	13.0%	0.5%	2.8%	2.8%	0.4%
Total	4.4%	4.7%	0.0%	1.7%	1.6%	0.0%
Staten Island Bridges						
Fresh Kills Bridge	4.5%	11.5%	4.4%	0.1%	2.8%	- 0.1%
TOLL FREE GRAND TOTAL	4.0%	3.7%	- 0.3%	2.2%	1.2%	0.0%

<sup>\*</sup> Also known as North Channel Bridge.

#### 10-Year Traffic Growth Rate Trends N.Y.C. Tolled Facilities 1949-2009

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Manhattan MTABT Facilities	1949-1959	1959-1969	1969-1979	1979-1989	1989-1999	1999-2009
Brooklyn-Battery Tunnel Ope	ned 5/25/1950	2.9%	- 1.0%	0.3%	- 0.2%	0.5%
Henry Hudson Bridge	1.5%	- 3.3%	- 4.9%	6.5%	1.2%	0.5%
Queens-Midtown Tunnel	7.4%	1.3%	- 0.9%	0.0%	0.5%	1.2%
R. F. K. Memorial Bridge Manhattan Plaza *	6.8%	2.7%	- 0.8%	0.9%	- 0.1%	- 0.7%
Total	5.5%	1.0%	- 1.5%	1.3%	0.3%	0.3%
Manhattan PANYNJ Facilities						
George Washington Bridge	7.1%	7.4%	1.5%	2.3%	1.2%	- 0.9%
Holland Tunnel	1.9%	- 0.8%	1.3%	2.7%	2.0%	1.3%
Lincoln Tunnel	6.1%	1.2%	1.3%	2.0%	0.5%	- 0.4%
Total	5.3%	3.8%	1.4%	2.3%	1.2%	- 0.4%
Outer Borough MTABT Bridges  Bronx-Whitestone Cross Bay Marine Parkway Gil Hodges Memorial Bridge R. F. K. Memorial Bridge Bronx Plaza * Throgs Neck Verrazano-Narrows	7.4% 2.1% 3.1% 6.8% Opened 1/ Opened 11		0.7% - 3.0% - 2.9% - 2.5% 0.4% 2.9%	1.5% 1.5% 2.5% 2.3% 0.9% 3.5%	1.1% 1.1% - 0.4% - 0.1% 0.3% 1.0%	- 0.6% 2.3% 0.6% 0.1% 1.7% - 0.2%
Total	6.2%	9.8%	0.3%	2.2%	0.7%	0.3%
Staten Island PANYNJ Bridges						
Bayonne	1.2%	5.5%	0.6%	1.8%	3.2%	0.7%
Goethals	8.0%	24.5%	- 0.5%	4.5%	0.8%	- 0.7%
Outerbridge Crossing	2.1%	6.6%	20.2%	6.1%	1.8%	0.0%
Total	3.9%	14.2%	3.1%	4.8%	1.5%	- 0.2%

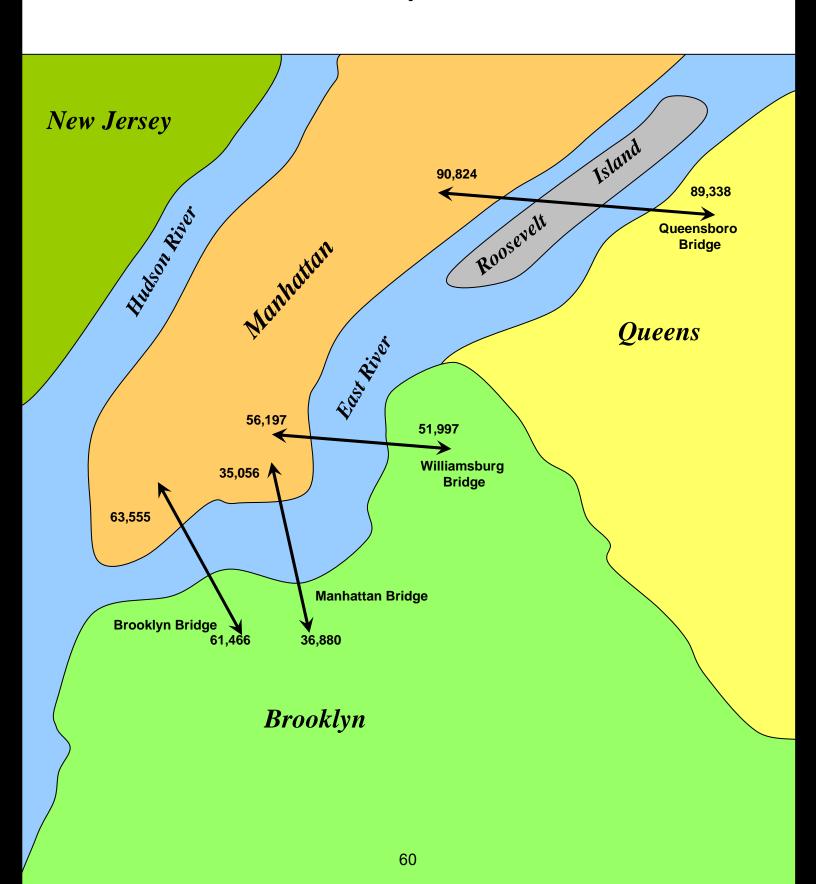
<sup>\*</sup> Formerly Triborough Bridge.

### East River Bridges



### **East River Bridges**

#### 2009 Daily Volumes



#### East River Bridges Average Daily Traffic Volumes 1948 - 2009

Year	Brooklyn Bridge	Manhattan Bridge	Queensboro Bridge	Williamsburg Bridge	Totals
1948	37,011	86,717	83,201	47,139	254,068
1949	37,244	80,420	88,821	54,448	260,933
1950	13,397	84,027	84,863	57,940	240,227
1951	14,865	100,826	90,922	62,739	269,352
1952	16,907	96,476	85,748	62,573	261,704
1953	14,513	94,320	106,391	77,502	292,726
1954	42,455	77,698	101,285	76,465	297,903
1955	53,964	66,968	91,958	80,743	293,633
1956	54,981	69,656	90,786	82,443	297,866
1957	23,852	89,793	93,676	89,707	297,028
1958	43,089	82,128	100,555	78,698	304,470
1959	53,115	74,329	103,522	81,465	312,431
1960	73,486	60,481	107,536	81,157	322,660
1961	68,997	62,797	104,505	80,514	316,813
1962	78,850	51,450	105,930	81,940	318,170
1963	78,770	58,510	116,350	80,250	333,880
1964	80,230	59,250	120,900	80,650	341,030
1965	84,141	71,222	117,588	80,567	353,518
1966 1967	89,124	63,693 75,744	122,896	80,032 65.775	355,745
1967	87,387 72,475	75,741 79,906	124,033	65,775 74,074	352,936
1969	97,565	79,900 75,473	130,777 132,553	74,074 73,825	357,232 379,416
1970	100,050	72,077	126,554	73,062	371,743
1971	102,535	68,681	120,555	72,299	364,070
1972	103,815	73,803	136,455	76,219	390,292
1973	102,834	73,401	138,066	79,989	394,290
1974	99,959	77,198	138,560	78,914	394,631
1975	103,750	74,320	144,252	82,057	404,379
1976	102,590	68,057	145,130	82,471	398,248
1977	104,532	64,835	146,283	82,490	398,140
1978	104,848	74,257	138,415	82,626	400,146
1979	91,319	75,403	133,966	81,340	382,028
1980	103,954	77,914	127,929	82,663	392,460
1981	102,572	79,589	127,864	85,100	395,125
1982	110,991	87,760	136,864	79,369	414,984
1983	115,825	85,222	125,158	86,947	413,152
1984	110,432	89,104	134,107	94,898	428,541
1985	116,929	100,825	150,892	107,386	476,032
1986	126,555	77,784	158,191	107,181	469,711
1987	123,523	77,519	151,688 153,841	107,362	460,092
1988 1989	129,153 131,951	75,221 68,593	153,641	102,643 107,967	460,858 461,102
1990	129,626	69,550	140,063	109,474	448,713
1991	128,491	72,695	131,438	115,345	447,969
1992	125,643	78,117	141,078	98,307	443,145
1993	134,793	74,526	135,964	86,591	431,874
1994	134,837	78,418	151,483	83,525	448,263
1995	131,883	75,126	157,306	100,588	464,903
1996	131,872	81,075	161,965	88,570	463,482
1997	147,898	83,209	184,179	96,124	511,410
1998	144,131	78,172	192,119	109,268	523,690
1999	127,065	92,311	189,190	107,941	516,507
2000	147,767	75,684	182,940	108,376	514,767
2001	95,586	73,064	176,469	82,202	427,321
2002	121,145	66,152	176,419	103,364	467,080
2003	134,444	73,767	184,964	100,243	493,418
2004	137,563	79,129	180,369	110,528	507,589
2005	132,210	80,363	178,610	107,030	498,213
2006	126,805	74,621	186,110	107,040	494,576
2007	131,551	73,205	181,365	110,545	496,666
2008	123,781	70,341	176,306	106,783	477,211
2009	125,761	71,936	180,162	108,783	485,313
2009	125,021	11,930	100,102	100,194	400,313

#### Hourly Vehicular Volumes Brooklyn Bridge - 2009

Eastbound to Brooklyn

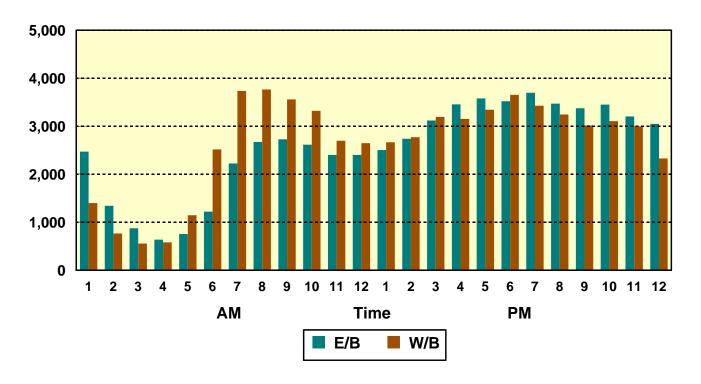
#### Westbound to Manhattan

_													
		Commuter Vans						Commuter Van					
	C	ommercial Var	าร	Single			C	commercial Var	าร	Single			2-Way
	Autos &	Pickups		Unit	Tractor	Total	Autos &	Pickups		Unit	Tractor	Total	Grand
N	Motorcycles	Large SUVs	Buses	Trucks	Trailers	Vehicles	Motorcycles	Large SUVs	Buses	Trucks	Trailers	Vehicles	Totals
FHWA													
Classes ►	1 & 2	3	4	5 - 7	8 - 13		1 & 2	3	4	5 - 7	8 - 13		
12-1am	2,467	1	1	0	0	2,469	1,379	13	0	4	0	1,396	3,865
1-2am	1,333	5	1	0	0	1,339	759	4	0	0	0	763	2,102
2-3am	868	4	0	0	0	872	546	6	0	2	0	554	1,426
3-4am	630	5	1	0	0	636	569	8	0	2	0	579	1,215
4-5am	741	9	2	0	0	752	1,129	7	2	5	0	1,143	1,895
5-6am	1,201	15	1	0	0	1,217	2,434	43	32	7	0	2,516	3,733
6-7am	2,179	32	10	1	0	2,222	3,603	44	85	2	0	3,734	5,956
7-8am	2,617	34	20	1	0	2,672	3,699	24	39	2	0	3,764 **	6,436
8-9am	2,659	43	22	1	0	2,725	3,518	28	9	3	0	3,558	6,283
9-10am	2,539	46	28	1	0	2,614	3,275	27	11	7	0	3,320	5,934
10-11am	2,354	29	17	0	0	2,400	2,659	21	11	6	0	2,697	5,097
11-12am	2,331	45	23	0	0	2,399	2,593	34	13	7	0	2,647	5,046
12-1pm	2,435	44	23	0	0	2,502	2,618	22	23	2	0	2,665	5,167
1-2pm	2,667	40	30	1	0	2,738	2,679	35	49	9	0	2,772	5,510
2-3pm	3,029	41	45	2	0	3,117	3,127	32	31	3	0	3,193	6,310
3-4pm	3,380	36	39	0	0	3,455	3,078	35	36	1	0	3,150	6,605
4-5pm	3,514	37	25	1	0	3,577	3,287	35	18	2	0	3,342	6,919
5-6pm	3,461	38	21	0	0	3,520	3,609	24	17	2	0	3,652	7,172 **
6-7pm	3,623	56	17	1	0	3,697 **	3,385	26	13	2	0	3,426	7,123
7-8pm	3,427	37	6	0	0	3,470	3,220	16	6	0	0	3,242	6,712
8-9pm	3,355	16	2	0	0	3,373	2,994	20	1	1	0	3,016	6,389
9-10pm	3,434	14	1	0	0	3,449	3,076	25	3	1	0	3,105	6,554
10-11pm	3,196	6	1	0	0	3,203	2,971	22	0	3	0	2,996	6,199
11-12pm	3,040	6	2	0	0	3,048	2,302	19	1	3	0	2,325	5,373
Totals	60,480	639	338	9	0	61,466	62,509	570	400	76	0	63,555	125,021
7-10am	7,815	123	70	3	0	8,011	10,492	79	59	12	0	10,642	18,653
10am-1pm	7,120	118	63	0	0	7,301	7,870	77	47	15	0	8,009	15,310
1-4pm	9,076	117	114	3	Ö	9,310	8,884	102	116	13	Ö	9,115	18,425
4-7pm	10,598	131	63	2	0	10,794	10,281	85	48	6	0	10,420	21,214
7am-7pm	34,609	489	310	8	Ö	35,416	37,527	343	270	46	Ö	38,186	73,602

Based on March 2006 Classification Survey Data

<sup>\*\*</sup> Peak Volumes

### Hourly Vehicular Volumes Brooklyn Bridge - 2009



# Average Daily Traffic Volumes Brooklyn Bridge

1948-2009 Growth Rate = 2.2%



#### Hourly Vehicular Volumes Manhattan Bridge - 2009

Eastbound to Brooklyn

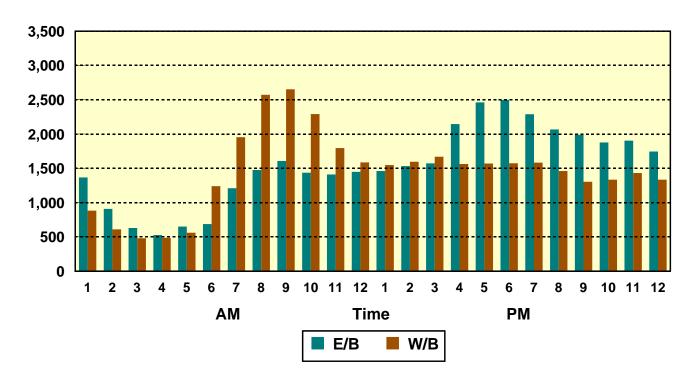
#### Westbound to Manhattan

				DIOOKIYII					Juliu to i		==		
•		Commuter Van				_		Commuter Van	-				
	С	ommercial Var	าร	Single			C	Commercial Vai	ns	Single			2-Way
	Autos &	Pickups		Unit	Tractor	Total	Autos &	Pickups		Unit	Tractor	Total	Grand
	Motorcycles	Large SUVs	Buses	Trucks	Trailers	Vehicles	Motorcycles	Large SUVs	Buses	Trucks	Trailers	Vehicles	Totals
FHWA													
Classes ►	1 & 2	3	4	5 - 7	8 - 13		1 & 2	3	4	5 - 7	8 - 13		
12-1am	1,324	17	7	14	3	1,365	868	9	1	3	0	881	2,246
1-2am	886	12	3	6	1	908	597	9	1	2	0	609	1,517
2-3am	607	9	2	10	1	629	468	5	1	5	0	479	1,108
3-4am	496	10	2	14	4	526	472	7	2	5	0	486	1,012
4-5am	622	6	2	19	1	650	543	5	4	8	0	560	1,210
5-6am	659	6	6	14	1	686	984	20	15	187	33	1,239	1,925
6-7am	1,076	27	30	67	8	1,208	1,538	48	58	272	38	1,954	3,162
7-8am	1,244	42	49	131	8	1,474	2,050	55	64	385	18	2,572	4,046
8-9am	1,356	31	52	156	12	1,607	2,179	46	50	358	20	2,653 **	4,260 **
9-10am	1,159	32	56	177	11	1,435	1,804	43	43	377	24	2,291	3,726
10-11am	1,153	21	49	174	12	1,409	1,368	37	38	325	27	1,795	3,204
11-12am	1,174	32	49	180	12	1,447	1,208	40	28	294	15	1,585	3,032
12-1pm	1,137	38	49	223	12	1,459	1,131	42	36	322	15	1,546	3,005
1-2pm	1,201	42	52	227	10	1,532	1,136	40	46	358	15	1,595	3,127
2-3pm	1,301	29	46	183	13	1,572	1,382	34	39	204	9	1,668	3,240
3-4pm	1,827	46	89	177	6	2,145	1,355	28	32	136	11	1,562	3,707
4-5pm	2,229	54	63	108	7	2,461	1,341	29	35	157	7	1,569	4,030
5-6pm	2,306	43	60	81	9	2,499 **		26	43	126	3	1,573	4,072
6-7pm	2,138	31	53	60	6	2,288	1,403	13	58	104	3	1,581	3,869
7-8pm	1,932	26	55	47	6	2,066	1,319	20	42	78	0	1,459	3,525
8-9pm	1,891	21	36	37	4	1,989	1,201	13	21	66	2	1,303	3,292
9-10pm	1,806	23	22	22	4	1,877	1,266	11	14	41	1	1,333	3,210
10-11pm	1,824	28	22	25	5	1,904	1,380	11	8	31	0	1,430	3,334
11-12pm	1,689	14	14	23	4	1,744	1,311	4	3	14	1	1,333	3,077
Totals	33,037	640	868	2,175	160	36,880	29,679	595	682	3,858	242	35,056	71,936
7-10am	3,759	105	157	464	31	4,516	6,033	144	157	1,120	62	7,516	12,032
10am-1pm		91	147	577	36	4,315	3,707	119	102	941	57	4,926	9,241
1-4pm	4,329	117	187	587	29	5,249	3,873	102	117	698	35	4,825	10,074
4-7pm	6,673	128	176	249	22	7,248	4,119	68	136	387	13	4,723	11,971
7am-7pm		441	667	1,877	118	21,328	17,732	433	512	3,146	167	21,990	43,318

Based on April 2006 Classification Survey Data

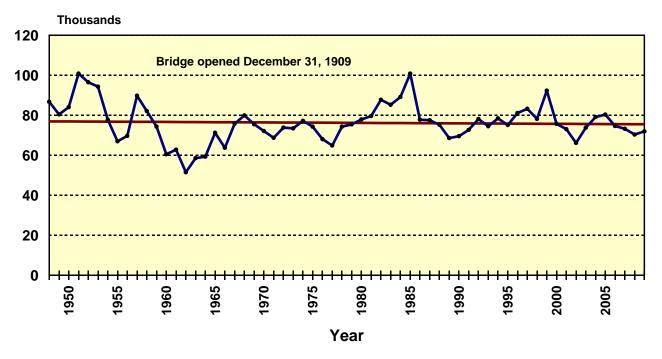
<sup>\*\*</sup> Peak Volumes

## **Hourly Vehicular Volumes Manhattan Bridge - 2009**



# Average Daily Traffic Volumes Manhattan Bridge

1948-2009 Growth Rate = 0.0%



#### Hourly Vehicular Volumes Queensboro Bridge - 2009

Eastbound to Queens

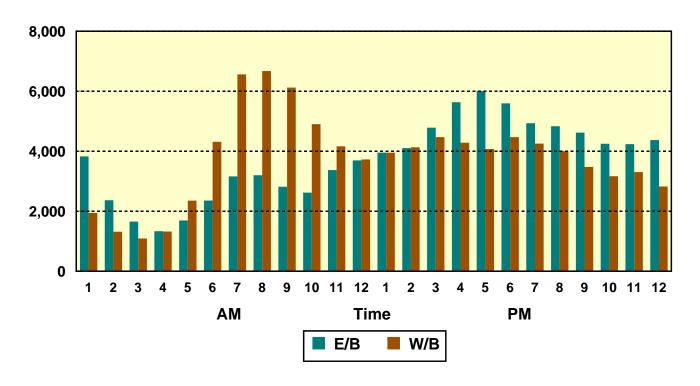
#### Westbound to Manhattan

		24012	ouna to	4400110				7700101	Juna to	namatta	••		
		Commuter Van	S			_		Commuter Van	s				
	С	ommercial Var	าร	Single			С	ommercial Var	ns	Single			2-Way
	Autos &	Pickups		Unit	Tractor	Total	Autos &	Pickups		Unit	Tractor	Total	Grand
	Motorcycles	Large SUVs	Buses	Trucks	Trailers	Vehicles	Motorcycles	Large SUVs	Buses	Trucks	Trailers	Vehicles	Totals
FHWA	•	Ü					·	J					
Classes ►	1 & 2	3	4	5 - 7	8 - 13		1 & 2	3	4	5 - 7	8 - 13		
12-1am	3,717	47	15	44	0	3,823	1,894	18	13	12	2	1,939	5,762
1-2am	2,307	21	9	25	1	2,363	1,273	16	7	15	2	1,313	3,676
2-3am	1,607	8	4	29	1	1,649	1,032	11	5	40	0	1,088	2,737
3-4am	1,279	6	2	43	0	1,330	1,226	8	13	70	1	1,318	2,648
4-5am	1,600	15	13	60	0	1,688	2,149	29	21	148	1	2,348	4,036
5-6am	2,207	36	16	93	1	2,353	3,987	52	28	222	23	4,312	6,665
6-7am	2,926	32	24	173	1	3,156	6,157	83	40	261	17	6,558	9,714
7-8am	2,902	51	28	210	4	3,195	6,193	75	56	313	36	6,673 **	9,868
8-9am	2,518	48	37	204	6	2,813	5,641	80	64	303	30	6,118	8,931
9-10am	2,335	38	35	204	5	2,617	4,516	76	48	223	37	4,900	7,517
10-11am	2,962	62	56	276	11	3,367	3,781	71	36	237	36	4,161	7,528
11-12am	3,319	56	43	266	5	3,689	3,421	56	26	185	36	3,724	7,413
12-1pm	3,542	70	43	286	6	3,947	3,628	41	41	198	37	3,945	7,892
1-2pm	3,673	83	47	295	5	4,103	3,852	55	37	145	41	4,130	8,233
2-3pm	4,364	85	56	271	7	4,783	4,169	72	45	143	38	4,467	9,250
3-4pm	5,196	86	59	284	8	5,633	4,022	50	42	146	22	4,282	9,915
4-5pm	5,609	90	43	255	7	6,004 **	3,880	47	30	102	13	4,072	10,076 **
5-6pm	5,228	74	44	238	10	5,594	4,303	37	35	71	21	4,467	10,061
6-7pm	4,637	61	47	181	6	4,932	4,134	33	25	46	14	4,252	9,184
7-8pm	4,530	77	56	158	9	4,830	3,887	28	31	40	13	3,999	8,829
8-9pm	4,329	83	65	136	4	4,617	3,375	31	23	34	9	3,472	8,089
9-10pm	4,015	63	49	117	3	4,247	3,080	26	17	36	5	3,164	7,411
10-11pm	3,998	61	48	126	1	4,234	3,224	24	21	31	1	3,301	7,535
11-12pm	4,231	54	27	57	2	4,371	2,760	16	19	25	1	2,821	7,192
Totals	83,031	1,307	866	4,031	103	89,338	85,584	1,035	723	3,046	436	90,824	180,162
7-10am	7,755	137	100	618	15	8,625	16,350	231	168	839	103	17,691	26,316
10am-1pm		188	142	828	22	11,003	10,830	168	103	620	109	11,830	22,833
1-4pm	13,233	254	162	850	20	14,519	12,043	177	124	434	101	12,879	27,398
4-7pm	15,474	225	134	674	23	16,530	12,317	117	90	219	48	12,791	29,321
7am-7pm		804	538	2,970	80	50,677	51,540	693	485	2,112	361	55,191	105,868

Based on April 2006 Classification Survey Data

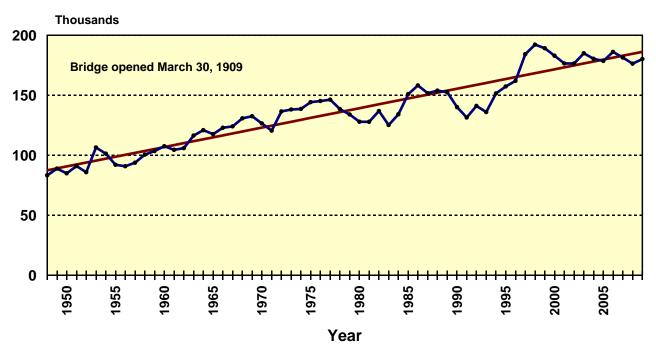
<sup>\*\*</sup> Peak Volumes

### **Hourly Vehicular Volumes Queensboro Bridge - 2009**



# Average Daily Traffic Volumes Queensboro Bridge

1948-2009 Growth Rate = 1.2%



### Hourly Vehicular Volumes Williamsburg Bridge - 2009

Eastbound to Brooklyn

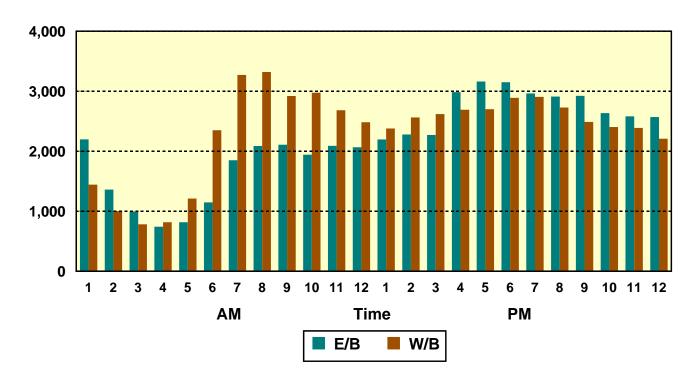
#### Westbound to Manhattan

		Lasib	ound to	БГООКІУП				Westbe	Julia lo I	viaiiiiaila	<u>''                                    </u>		
		Commuter Van		Single				Commuter Van		Single			2-Way
	Autos &	Pickups	15	Unit	Tractor	Total	Autos &	Pickups	15	Unit	Tractor	Total	Grand
		Large SUVs	Buses	Trucks	Trailers	Vehicles	Motorcycles		Buses	Trucks	Trailers	Vehicles	Totals
FHWA	Wotor by blob	2a.go 00 10	Bucco	Tracke	Transis	Vormoioo	Wiotor by Glob	_a.go	Duoco	TTGGRO	Trailoro	VOIMOIGO	701470
Classes ►	1 & 2	3	4	5 - 7	8 - 13		1 & 2	3	4	5 - 7	8 - 13		
12-1am	2,187	7	1	2	0	2,197	1,437	4	1	0	0	1,442	3,639
1-2am	1,353	3	1	0	1	1,358	994	3	1	1	0	999	2,357
2-3am	983	5	3	2	1	994	771	6	1	2	0	780	1,774
3-4am	725	7	3	3	2	740	808	4	0	1	1	814	1,554
4-5am	804	6	2	3	0	815	1,201	6	1	1	1	1,210	2,025
5-6am	1,125	6	8	6	0	1,145	2,333	6	7	1	2	2,349	3,494
6-7am	1,775	14	31	25	3	1,848	3,229	16	17	8	0	3,270	5,118
7-8am	1,974	23	50	38	1	2,086	3,255	31	20	14	0	3,320 **	5,406
8-9am	2,004	23	45	32	3	2,107	2,850	33	21	15	1	2,920	5,027
9-10am	1,831	28	46	32	2	1,939	2,908	29	20	14	3	2,974	4,913
10-11am	1,938	40	67	43	1	2,089	2,619	34	18	9	3	2,683	4,772
11-12am	1,930	33	57	43	2	2,065	2,429	28	17	8	1	2,483	4,548
12-1pm	2,053	57	26	57	2	2,195	2,311	33	16	17	1	2,378	4,573
1-2pm	2,131	65	29	50	3	2,278	2,493	33	20	16	1	2,563	4,841
2-3pm	2,146	49	33	39	3	2,270	2,554	31	15	16	2	2,618	4,888
3-4pm	2,828	64	37	52	3	2,984	2,618	28	20	22	2	2,690	5,674
4-5pm	3,013	60	36	46	5	3,160 **	2,623	37	19	19	1	2,699	5,859
5-6pm	3,024	57	34	32	1	3,148	2,804	41	25	18	1	2,889	6,037 **
6-7pm	2,876	38	24	23	2	2,963	2,834	35	17	17	2	2,905	5,868
7-8pm	2,835	30	24	20	1	2,910	2,671	27	16	13	0	2,727	5,637
8-9pm	2,861	26	20	14	2	2,923	2,462	15	5	4	1	2,487	5,410
9-10pm	2,602	13	12	5	2	2,634	2,381	14	4	3	1	2,403	5,037
10-11pm	2,560	11	4	4	2	2,581	2,367	14	2	3	1	2,387	4,968
11-12pm	2,556	7	2	3	0	2,568	2,191	9	3	3	1	2,207	4,775
Totals	50,114	672	595	574	42	51,997	55,143	517	286	225	26	56,197	108,194
7-10am	5,809	74	141	102	6	6,132	9,013	93	61	43	4	9,214	15,346
10am-1pm		130	150	143	5	6,349	7,359	95	51	34	5	7,544	13,893
1-4pm	7,105	178	99	141	9	7,532	7,665	92	55	54	5	7,871	15,403
4-7pm	8,913	155	94	101	8	9,271	8,261	113	61	54	4	8,493	17,764
7am-7pm	27,748	537	484	487	28	29,284	32,298	393	228	185	18	33,122	62,406

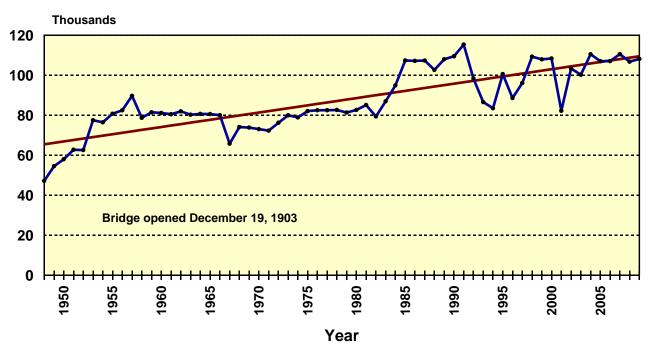
Based on March 2006 Classification Survey Data

<sup>\*\*</sup> Peak Volumes

### **Hourly Vehicular Volumes** Williamsburg Bridge - 2009



### **Average Daily Traffic Volumes** Williamsburg Bridge 1948-2009 Growth Rate = 0.8%

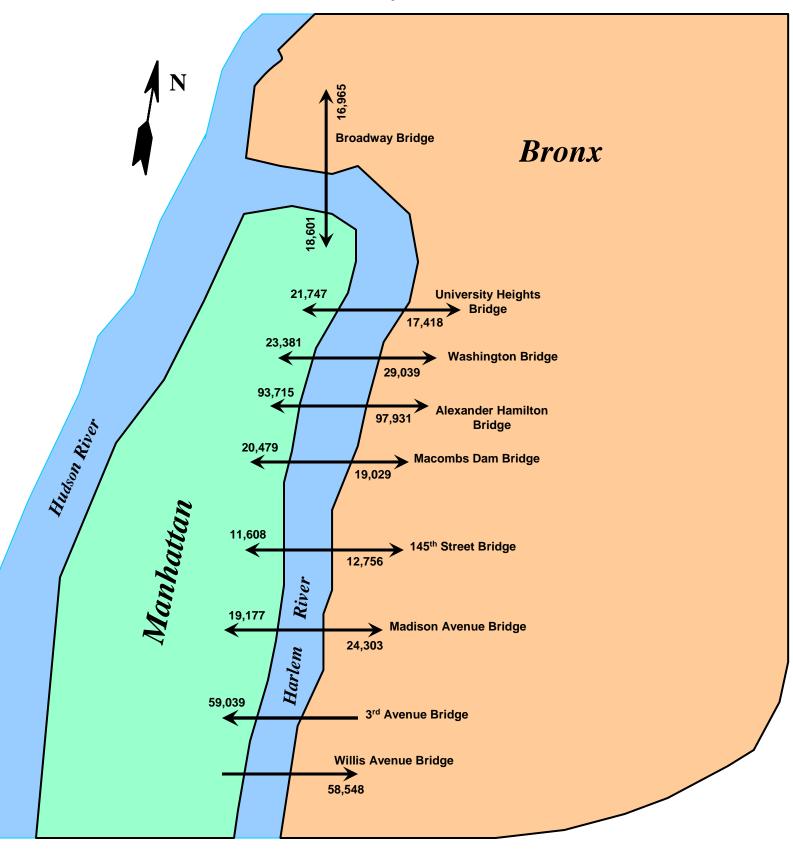


### Harlem River Bridges



### **Harlem River Bridges**

2009 Daily Volumes



#### Harlem River Bridges Average Daily Traffic Volumes 1948 - 2009

Year	Alexander Hamilton	Broadway	Macombs Dam	Madison Avenue	Third
	паннион	-			Avenue
1948		16,020	33,608	27,222	31,403
1949 1950		17,369 15,462	23,854 28,641	17,363 27,933	20,024 34,984
1951	Bridge	16,374	31,072	33,576	51,478
1952	Opened	17,412	36,100	27,468	34,023
1953	Jan. 1963	16,821	35,331	24,382	37,593
1954		15,958	27,911	23,408	33,667
1955		17,046	27,914	34,681	38,201
1956 1957		17,960 20,345	32,761 55,609	46,591 40,860	42,735 47,269
1958		22,132	50,227	33,393	61,367
1959		25,491	48,720	27,967	56,525
1960		23,025	50,865	22,541	68,079
1961		21,097	32,447	28,375	61,584
1962		19,170	39,580	25,400	53,580
1963 1964	87,840	23,110 25,020	43,450 31,050	27,090 31,170	63,840 63,250
1965	125,133	17,555	37,451	26,315	55,644
1966	104,559	22,438	39,922	28,865	70,938
1967	135,803	22,844	35,595	27,683	52,931
1968	92,771	23,621	33,875	27,658	41,243
1969	132,487	22,224	38,845	28,219	57,748
1970 1971	141,609 137,881	23,115 28,232	46,523 40,489	24,941 28,891	48,110 50,548
1972	142,139	25,232 25,178	39,702	26,923	47,454
1973	137,133	24,408	38,349	34,815	60,415
1974	144,909	21,825	40,934	30,425	54,770
1975	134,013	30,638	38,995	29,823	62,079
1976	137,141	26,453	36,065	27,838	54,957
1977 1978	158,710	26,465 25,145	33,539 35,764	29,832 34,938	52,969 54,177
1976	151,342 143,973	25,145 27,673	35,764 37,145	29,036	54,177 54,428
1980	152,852	29,838	37,464	27,476	54,152
1981	148,609	30,485	42,064	29,456	51,483
1982	156,038	30,846	45,178	30,485	60,236
1983	161,772	29,875	42,747	30,715	67,813
1984	164,734	28,338 33,086	46,870	33,101	56,706 59,907
1985 1986	171,602 175,635	32,314	52,497 50,602	37,956 39,809	64,404
1987	180,908	31,934	48,021	31,506	62,089
1988	172,970	33,047	43,318	31,321	62,379
1989	183,661	35,066	43,450	31,688	64,849
1990	192,848	41,705	41,113	32,458	63,516
1991	187,309	40,444	42,393	34,826	65,787
1992 1993	176,279 180,507	35,184 33,752	42,022 39,251	32,907 32,432	66,967 68,812
1994	178,522	32,833	39,876	22,923	66,104
1995	175,279	42,555	41,571	22,739	68,663
1996	176,856	40,040	40,031	17,948	67,206
1997	176,102	34,645	44,033	28,646	71,365
1998 1999	176,632	35,770	42,027	32,922 38,102	70,757
2000	180,201 177,899	35,412 37,990	41,813 21,008	47,583	68,544 73,121
2001	168,605	41,175	39,615	43,331	72,756
2002	168,079	38,287	18,878	49,487	58,949
2003	182,704	36,888	42,254	41,575	43,065
2004	175,323	35,190	40,558	48,723	47,053
2005	181,566	35,698	40,112	48,397	60,152
2006	190,183	33,551	39,878	43,805	61,874
2007	192,651	35,523	40,749	44,663	59,712
2008	189,598	33,266	38,897	41,740	58,510
2009	191,646	35,566	39,508	43,480	59,039
		_	7.4		

# Harlem River Bridges (cont'd) Average Daily Traffic Volumes 1948 - 2009

Year	University Heights	Washington	Willis Avenue	145th Street	Totals
	_	_			
1948 1949	21,706 14,098	29,374 32,122	29,648 42,772	18,196 25,908	207,177 193,510
1950	24,986	29,541	38,708	22,416	222,671
1951	25,270	28,599	35,958	26,872	249,199
1952	21,527	28,270	33,207	24,189	222,196
1953	29,240	37,298	38,579	29,385	248,629
1954 1955	22,979 18,151	39,339 33,988	46,675 44,809	26,119 35,449	236,056 250,239
1956	21,834	30,598	43,752	30,550	266,781
1957	34,077	38,861	51,395	28,114	316,530
1958	37,078	50,100	49,773	25,677	329,747
1959	33,580	51,652	58,705	39,709	342,349
1960	36,763	54,008	59,050	30,868	345,199
1961	43,749	61,542	50,902	33,767	333,463
1962 1963	35,940 26,030	56,110 32,760	55,910 65,290	27,540 27,520	313,230 309,090
1964	31,490	41,410	65,190	31,260	407,680
1965	23,458	35,560	53,219	26,924	401,259
1966	25,700	31,104	53,677	25,284	402,487
1967	26,990	33,921	69,609	22,368	427,744
1968	26,126	35,218	58,730	22,853	362,095
1969	29,941	19,136	60,192	24,200	412,992
1970	26,718	33,661	61,433	23,580 24,401	429,690
1971 1972	29,622 31,620	38,522 36,812	53,609 49,431	23,105	432,195 422,364
1973	33,503	46,079	51,537	23,431	449,670
1974	29,297	42,014	53,322	21,616	439,112
1975	29,111	41,522	52,984	21,189	440,354
1976	34,494	39,058	53,873	19,750	429,629
1977	29,128	38,185	52,484	20,888	442,200
1978	35,883	37,690	54,335	21,484	450,758
1979 1980	31,796 32,562	37,348 38,061	44,851 52,061	21,566 21,826	427,816 446,292
1981	34,454	38,061	52,561	21,150	448,323
1982	25,416	44,168	55,762	22,656	470,785
1983	32,233	42,186	60,296	23,516	491,153
1984	30,485	46,896	66,017	23,802	496,949
1985	37,553	51,302	65,638	28,722	538,263
1986 1987	36,192 37,223	54,935 46,094	66,824 67,558	26,181 24,895	546,896 530,228
1988	38.542	48.025	64,862	25,818	520,282
1989	42,246	49,092	66,012	23,317	539,381
1990	19,768	61,668	62,315	24,172	539,563
1991	18,220	57,526	60,415	26,448	533,368
1992	39,232	51,925	66,522	26,315	537,353
1993	38,895	52,795	70,472	25,390	542,306
1994 1995	38,134 21,238	57,009 56,372	67,344 67,716	23,299 25,749	526,044 521,882
1996	35,280	56,204	70,229	27,156	530,950
1997	39,639	54,708	73,461	24,151	546,750
1998	41,640	57,307	78,145	24,862	560,062
1999	42,287	58,907	71,555	26,361	563,182
2000	45,557	68,075	73,175	34,362	578,770
2001	46,381	57,443	72,901	26,552	568,759
2002	45,311	63,609	73,435	35,796	551,831
2003	50,126	63,154	66,710	23,034	549,510
2004	47,350	57,530	74,700	25,994	552,421
2005	44,938	58,019	66,708	25,802	561,392
2006	42,118	57,689	66,212	21,733	557,043
2007	41,422	56,945	65,113	21,147	557,925
2008	39,340	52,768 52,430	62,167	23,148	539,434
2009	39,165	52,420	58,548 	24,364	543,736

### Hourly Vehicular Volumes Alexander Hamilton Bridge - 2009

Eastbound to Bronx

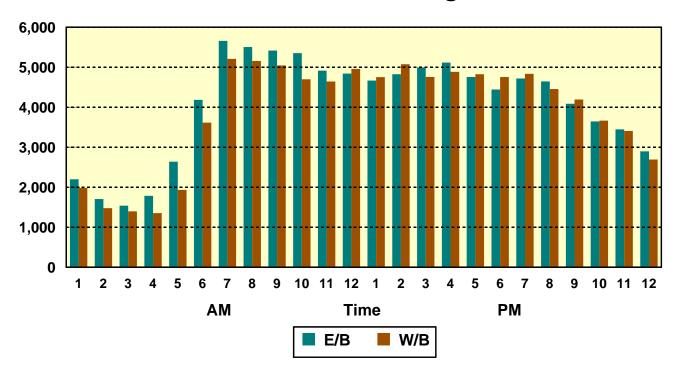
#### Westbound to Manhattan

_		E	สรเมอนกา	וט וט טו גי	IX			Mest	bouria t	O Marina	แเสท		
			Commut	er C	ommerci	al		(	Commut	er C	ommerci	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						2,195						1,980	4,175
1-2am						1,701						1,475	3,176
2-3am						1,535						1,394	2,929
3-4am						1,782						1,350	3,132
4-5am						2,636						1,930	4,566
5-6am						4,182						3,612	7,794
6-7am						5,657 **						5,208 **	10,865 **
7-8am	4,297	14	248	821	124	5,504	4,361	10	93	463	229	5,156	10,660
8-9am	3,936	5	257	989	229	5,416	4,314	35	35	501	159	5,044	10,460
9-10am	3,744	5	240	1,227	135	5,351	3,611	52	30	793	211	4,697	10,048
10-11am	4,409	3	105	345	50	4,912	4,016	28	18	433	146	4,641	9,553
11-12am	3,628	11	260	807	133	4,839	3,511	15	22	1,095	312	4,955	9,794
12-1pm	4,046	0	114	456	50	4,666	4,026	11	10	562	142	4,751	9,417
1-2pm	3,675	8	175	877	87	4,822	3,790	14	27	985	258	5,074	9,896
2-3pm	3,865	6	206	802	113	4,992	3,550	20	43	952	191	4,756	9,748
3-4pm	4,559	8	92	356	100	5,115	4,251	23	17	500	91	4,882	9,997
4-5pm	3,987	6	150	498	114	4,755	3,637	4	42	917	222	4,822	9,577
5-6pm	3,873	5	109	364	90	4,441	3,726	2	30	831	163	4,752	9,193
6-7pm	3,966	9	208	455	80	4,718	4,160	3	24	504	144	4,835	9,553
7-8pm						4,642						4,454	9,096
8-9pm						4,086						4,190	8,276
9-10pm						3,643						3,663	7,306
10-11pm						3,446						3,405	6,851
11-12pm						2,895						2,689	5,584
Totals						97,931						93,715	191,646
7-10am	11,977	24	745	3,037	488	16,271	12,286	97	158	1,757	599	14,897	31,168
10am-1pm	12,083	14	479	1,608	233	14,417	11,553	54	50	2,090	600	14,347	28,764
1-4pm	12,099	22	473	2,035	300	14,929	11,591	57	87	2,437	540	14,712	29,641
4-7pm	11,826	20	467	1,317	284	13,914	11,523	9	96	2,252	529	14,409	28,323
7am-7pm	47,985	80	2,164	7,997	1,305	59,531	46,953	217	391	8,536	2,268	58,365	117,896

Based on 1989 Classification Survey Data

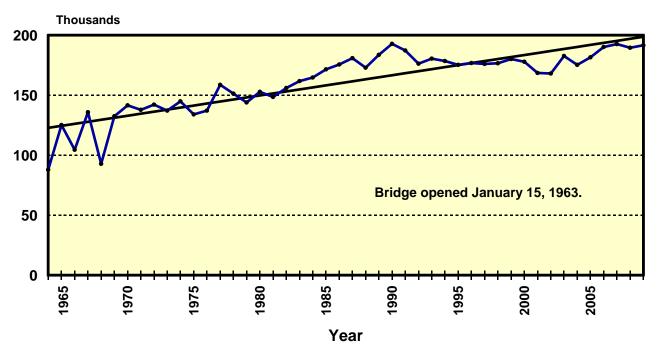
<sup>\*\*</sup> Peak Volumes

### Hourly Vehicular Volumes Alexander Hamilton Bridge - 2009



## **Average Daily Traffic Volumes Alexander Hamilton Bridge**

1964-2009 Growth Rate = 1.1%



#### Hourly Vehicular Volumes Broadway Bridge - 2009

Northbound to Bronx Southbound to Manhattan Commuter Commercial Commuter Commercial 2-Way **Buses Buses** Vans Trucks Vans Totals Autos Vans Trucks Vans Totals **Totals** Autos 12-1am 297 239 536 1-2am 173 170 343 ------2-3am 116 109 225 3-4am 83 101 184 ------4-5am 143 256 113 ---------------------------235 353 5-6am 588 6-7am 487 764 1,251 ---------------------7-8am 639 35 19 64 27 784 1,289 59 41 29 43 1,461 2,245 8-9am 890 64 23 39 30 1.046 1.314 45 30 46 45 1.480 2.526 9-10am 621 21 3 25 55 725 1,003 38 29 59 1,174 1,899 45 2 21 687 776 20 36 852 1,539 10-11am 618 15 31 11 9 11-12am 20 8 26 40 745 704 23 23 50 51 851 1.596 651 5 21 1,666 12-1pm 709 20 20 22 776 837 4 17 11 890 793 24 3 28 875 839 23 9 19 906 1,781 1-2pm 27 16 37 2-3pm 888 25 76 1.027 963 30 23 34 17 1.067 2,094 1 32 3-4pm 1,178 28 10 15 39 1,270 1,134 13 19 10 1,208 2,478 4-5pm 2,526 1.138 40 28 24 56 1,286 1.120 30 21 35 34 1.240 5-6pm 1,275 29 9 12 66 1.391 1.212 31 32 19 25 1,319 2.710 0 1,287 27 6-7pm 1,140 22 13 112 1,127 30 19 9 1,212 2,499 7-8pm 1.109 951 2.060 8-9pm 860 708 1.568 ---------------9-10pm 668 573 1,241 ------------10-11pm 507 459 966 11-12pm 418 371 789 **Totals** 16.965 18.601 35.566 ------7-10am 2,150 2,555 4,115 120 45 128 112 3,606 142 100 134 133 6.670 1,978 15 2,208 38 103 2,593 10am-1pm 55 77 83 2,317 64 71 4,801 1-4pm 2,859 77 14 79 143 3,172 2,936 85 45 72 43 3,181 6,353 4-7pm 3.553 91 37 49 234 3.964 3,459 91 80 73 68 3,771 7,735

Based on 1989 Classification Survey Data

343

111

7am-7pm 10.540

333

572

11.899

25,559

12.318

382

263

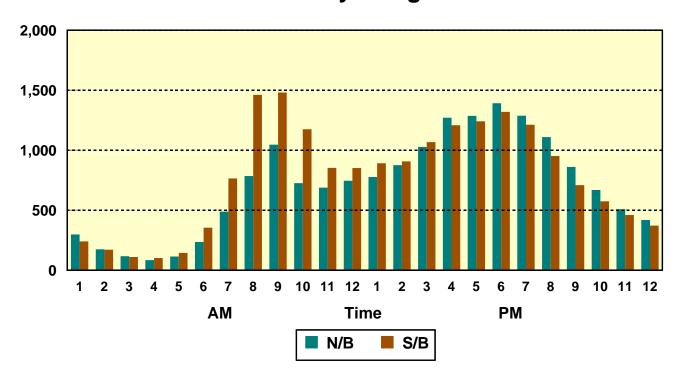
382

315

13.660

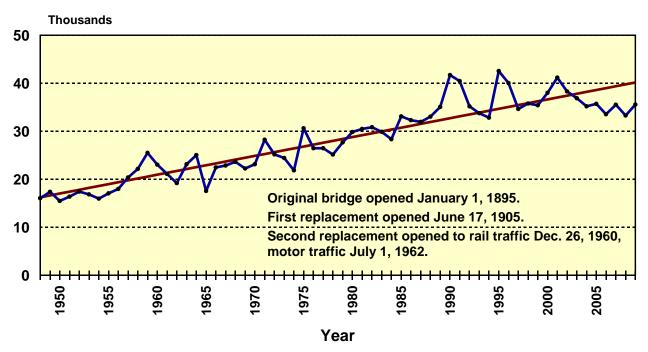
<sup>\*\*</sup> Peak Volumes

#### **Hourly Vehicular Volumes** Broadway Bridge - 2009



# Average Daily Traffic Volumes Broadway Bridge

1948-2009 Growth Rate = 1.5%



### Hourly Vehicular Volumes Macombs Dam Bridge - 2009

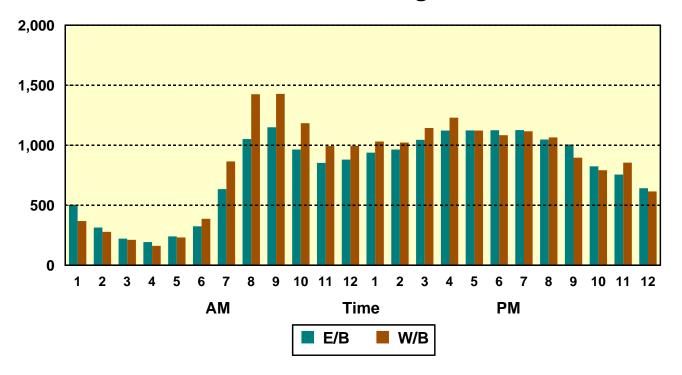
Eastbound to Bronx Westbound to Manhattan

_		Ea	Stbound	to Bron	X			west	bouna t	o wanna	ittan		
		(	Commute	er Co	ommerci	al		(	Commute	er C	ommerci	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						502						367	869
1-2am						313						277	590
2-3am						221						211	432
3-4am						192						161	353
4-5am						239						231	470
5-6am						323						386	709
6-7am						633						864	1,497
7-8am	863	35	22	53	78	1,051	1,098	35	5	78	208	1,424	2,475
8-9am	962	13	17	58	99	1,149 **	1,160	10	2	91	164	1,427 **	2,576 **
9-10am	824	18	14	52	55	963	884	18	12	102	167	1,183	2,146
10-11am	768	7	3	33	41	852	885	8	7	39	53	992	1,844
11-12am	727	9	12	60	71	879	820	7	13	72	81	993	1,872
12-1pm	855	10	6	28	38	937	950	17	3	19	41	1,030	1,967
1-2pm	901	3	6	28	25	963	904	18	7	20	73	1,022	1,985
2-3pm	868	13	21	68	75	1,045	975	21	15	48	84	1,143	2,188
3-4pm	978	20	9	53	62	1,122	1,122	34	10	21	42	1,229	2,351
4-5pm	871	8	28	75	141	1,123	984	9	27	36	66	1,122	2,245
5-6pm	944	8	13	34	125	1,124	994	11	8	16	54	1,083	2,207
6-7pm	1,050	3	6	25	42	1,126	1,001	6	11	22	76	1,116	2,242
7-8pm						1,047						1,064	2,111
8-9pm						1,006						895	1,901
9-10pm						823						791	1,614
10-11pm						755						854	1,609
11-12pm						641						614	1,255
Totals						19,029						20,479	39,508
7-10am	2,649	66	53	163	232	3,163	3,142	63	19	271	539	4,034	7,197
10am-1pm	2,350	26	21	121	150	2,668	2,655	32	23	130	175	3,015	5,683
1-4pm	2,747	36	36	149	162	3,130	3,001	73	32	89	199	3,394	6,524
4-7pm	2,865	19	47	134	308	3,373	2,979	26	46	74	196	3,321	6,694
7am-7pm	10,611	147	157	567	852	12,334	11,777	194	120	564	1,109	13,764	26,098

Based on 1989 Classification Survey Data

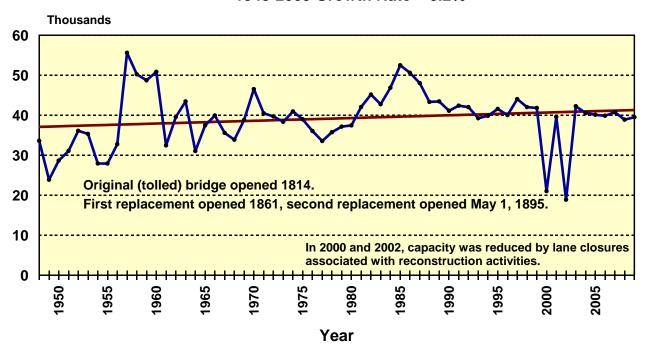
<sup>\*\*</sup> Peak Volumes

## **Hourly Vehicular Volumes Macombs Dam Bridge - 2009**



# Average Daily Traffic Volumes Macombs Dam Bridge

1948-2009 Growth Rate = 0.2%



#### Hourly Vehicular Volumes Madison Avenue Bridge - 2009

Eastbound to Bronx

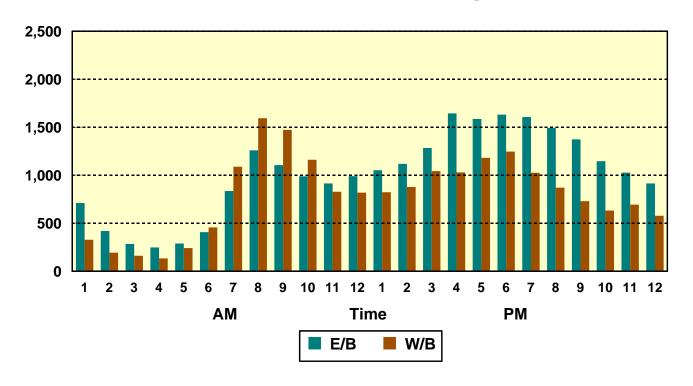
#### Westbound to Manhattan

_			Otocam	a to bion	^				ootooun	a to man	mactan		
_		(	Commut	er Co	ommerci	al			Commute	er Co	ommercia	 I	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						709						327	1,036
1-2am						418						192	610
2-3am						283						160	443
3-4am						247						132	379
4-5am						287						240	527
5-6am						406						455	861
6-7am						834						1,087	1,921
7-8am	980	49	108	64	58	1,259	1,305	104	14	53	117	1,593 **	2,852
8-9am	866	59	77	45	57	1,104	1,166	97	27	62	120	1,472	2,576
9-10am	710	63	91	76	47	987	818	59	33	142	108	1,160	2,147
10-11am	759	34	45	33	42	913	672	56	19	19	61	827	1,740
11-12am	668	27	87	108	99	989	623	24	32	61	78	818	1,807
12-1pm	896	30	36	43	46	1,051	691	30	23	28	50	822	1,873
1-2pm	948	33	35	48	53	1,117	746	51	26	14	40	877	1,994
2-3pm	938	35	82	114	115	1,284	831	70	29	31	80	1,041	2,325
3-4pm	1,417	29	45	80	73	1,644 **	886	61	18	23	40	1,028	2,672
4-5pm	1,182	29	133	110	132	1,586	1,021	63	27	24	45	1,180	2,766
5-6pm	1,303	35	113	92	87	1,630	1,093	49	34	27	42	1,245	2,875 **
6-7pm	1,321	77	52	67	88	1,605	928	37	21	18	20	1,024	2,629
7-8pm						1,493						869	2,362
8-9pm						1,373						728	2,101
9-10pm						1,145						631	1,776
10-11pm						1,026						692	1,718
11-12pm						913						577	1,490
Totals						24,303						19,177	43,480
7-10am	2,556	171	276	185	162	3,350	3,289	260	74	257	345	4,225	7,575
10am-1pm	2,323	91	168	184	187	2,953	1,986	110	74	108	189	2,467	5,420
1-4pm	3,303	97	162	242	241	4,045	2,463	182	73	68	160	2,946	6,991
4-7pm	3,806	141	298	269	307	4,821	3,042	149	82	69	107	3,449	8,270
7am-7pm	11,988	500	904	880	897	15,169	10,780	701	303	502	801	13,087	28,256

Based on 1989 Classification Survey Data

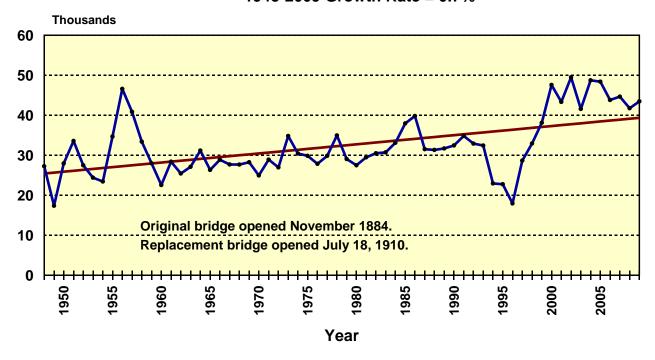
<sup>\*\*</sup> Peak Volumes

## **Hourly Vehicular Volumes Madison Avenue Bridge - 2009**



### Average Daily Traffic Volumes Madison Avenue Bridge

1948-2009 Growth Rate = 0.7%

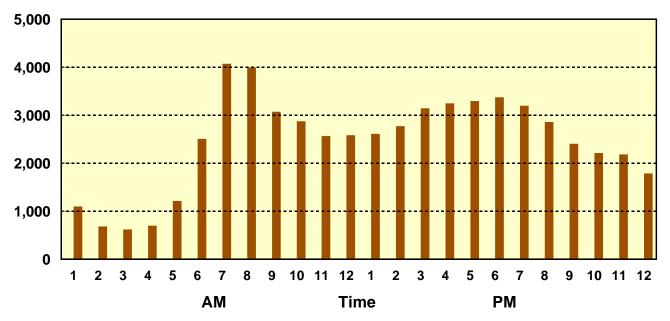


### Hourly Vehicular Volumes Third Avenue Bridge - 2009

		No	rthbound	d to Bron	1X			Sc	outhbour	nd to Ma	nhattan		
_		(	Commute	er Co	mmercia	<u> </u>			Commut	er C	ommerci	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am												1,097	1,097
1-2am												680	680
2-3am												618	618
3-4am												696	696
4-5am		Bridge	is 1-way	southbe	ound							1,212	1,212
5-6am			to Manh	nattan								2,506	2,506
6-7am												4,071 **	4,071 **
7-8am							2,568	53	397	536	442	3,996	3,996
8-9am							2,013	29	199	407	424	3,072	3,072
9-10am							1,919	31	253	374	296	2,873	2,873
10-11am							2,145	26	142	138	114	2,565	2,565
11-12am							1,721	48	279	330	204	2,582	2,582
12-1pm							2,205	66	114	127	98	2,610	2,610
1-2pm							2,069	94	180	158	270	2,771	2,771
2-3pm							2,180	108	272	268	314	3,142	3,142
3-4pm							2,907	86	100	81	72	3,246	3,246
4-5pm							2,774	63	150	143	165	3,295	3,295
5-6pm							2,996	59	124	105	89	3,373	3,373
6-7pm							2,860	58	116	78	85	3,197	3,197
7-8pm												2,857	2,857
8-9pm												2,404	2,404
9-10pm												2,210	2,210
10-11pm												2,181	2,181
11-12pm												1,785	1,785
Totals												59,039	59,039
7-10am							6,500	113	849	1,317	1,162	9,941	9,941
10am-1pm							6,071	140	535	595	416	7,757	7,757
1-4pm							7,156	288	552	507	656	9,159	9,159
4-7pm							8,630	180	390	326	339	9,865	9,865
7am-7pm							28,357	721	2,326	2,745	2,573	36,722	36,722

Based on 1989 Classification Survey Data

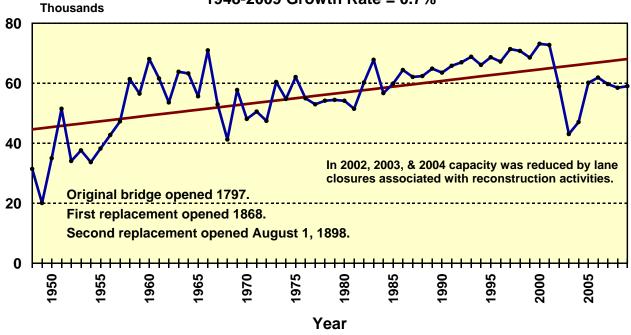
## Hourly Vehicular Volumes Third Avenue Bridge (Harlem River) - 2009



Bridge is 1-way southbound to Manhattan

## **Average Daily Traffic Volumes Third Avenue Bridge (Harlem River)**

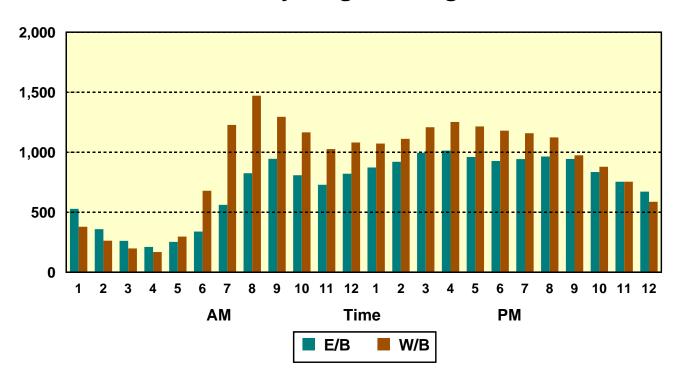
1948-2009 Growth Rate = 0.7%



#### Hourly Vehicular Volumes University Heights Bridge - 2009

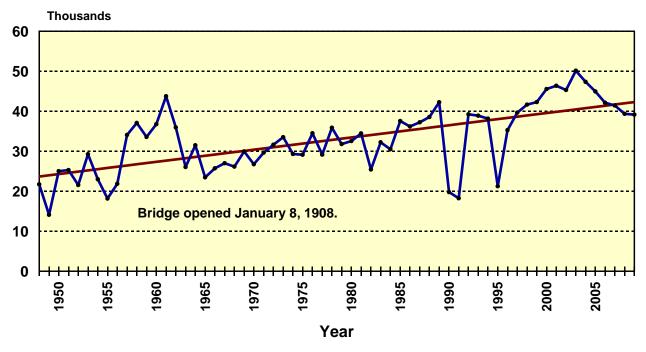
_		Ea	stbound	d to Bron	X			W	estbound	d to Man	hattan		
_			Commut	er Co	ommerci	al		(	Commute	er Co	ommerci	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						527						378	905
1-2am						358						262	620
2-3am						261						197	458
3-4am						210						167	377
4-5am						252						296	548
5-6am						338						678	1,016
6-7am						560						1,227	1,787
7-8am	623	44	79	38	40	824	1,274	21	33	37	105	1,470 **	2,294 **
8-9am	733	8	77	55	71	944	1,123	11	24	45	91	1,294	2,238
9-10am	600	8	60	69	70	807	986	13	16	50	100	1,165	1,972
10-11am	636	3	33	31	25	728	936	4	4	26	56	1,026	1,754
11-12am	632	7	66	77	38	820	919	7	13	58	83	1,080	1,900
12-1pm	786	13	24	27	22	872	990	2	5	27	48	1,072	1,944
1-2pm	789	39	38	30	23	919	1,049	4	4	19	35	1,111	2,030
2-3pm	815	13	69	50	48	995	1,034	10	20	46	98	1,208	2,203
3-4pm	923	16	21	27	26	1,013 **	1,131	40	6	25	50	1,252	2,265
4-5pm	836	4	51	39	29	959	1,080	17	15	22	80	1,214	2,173
5-6pm	812	0	51	25	38	926	1,104	1	13	12	49	1,179	2,105
6-7pm	822	0	51	17	52	942	1,083	6	9	9	51	1,158	2,100
7-8pm						963						1,123	2,086
8-9pm						943						973	1,916
9-10pm						834						878	1,712
10-11pm						753						753	1,506
11-12pm						670						586	1,256
Totals						17,418						21,747	39,165
7-10am	1,956	60	216	162	181	2,575	3,383	45	73	132	296	3,929	6,504
10am-1pm	2,054	23	123	135	85	2,420	2,845	13	22	111	187	3,178	5,598
1-4pm	2,527	68	128	107	97	2,927	3,214	54	30	90	183	3,571	6,498
4-7pm	2,470	4	153	81	119	2,827	3,267	24	37	43	180	3,551	6,378
7am-7pm	9,007	155	620	485	482	10,749	12,709	136	162	376	846	14,229	24,978

### Hourly Vehicular Volumes University Heights Bridge - 2009



# **Average Daily Traffic Volumes University Heights Bridge**

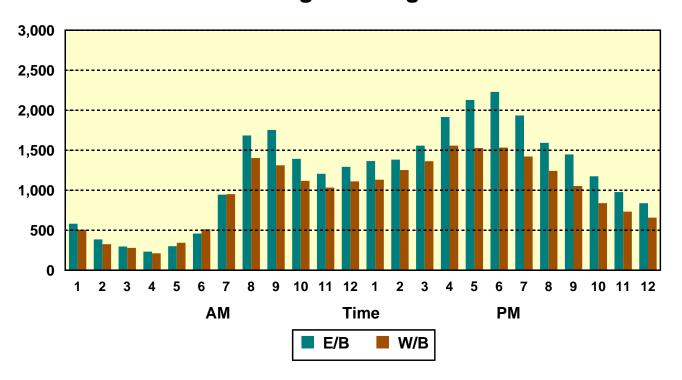
1948-2009 Growth Rate = 1.0%



## Hourly Vehicular Volumes Washington Bridge - 2009

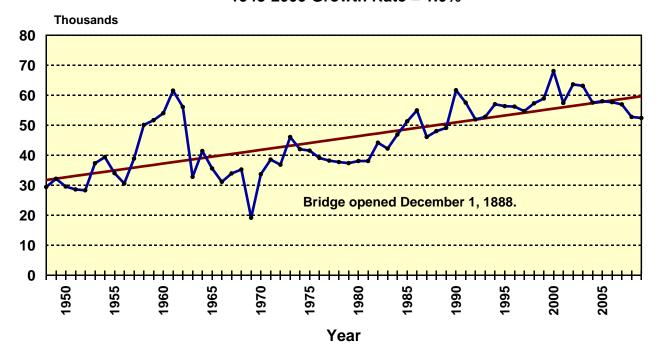
_		Ea	stbound	d to Broi	nx		Westbound to Manhattan						
_		(	Commute	er C	Commercial			Commuter Commercial				al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						580						505	1,085
1-2am						384						324	708
2-3am						295						278	573
3-4am						231						210	441
4-5am						299						342	641
5-6am						457						511	968
6-7am						943						950	1,893
7-8am	1,442	55	31	50	106	1,684	1,183	55	105	34	24	1,401	3,085
8-9am	1,468	45	27	79	134	1,753	1,105	61	67	50	27	1,310	3,063
9-10am	1,151	38	24	91	87	1,391	971	33	49	37	26	1,116	2,507
10-11am	1,095	32	7	30	40	1,204	942	34	10	25	21	1,032	2,236
11-12am	1,115	27	16	62	71	1,291	966	46	29	31	37	1,109	2,400
12-1pm	1,221	41	18	24	59	1,363	1,058	28	9	20	15	1,130	2,493
1-2pm	1,264	31	5	32	48	1,380	1,170	30	17	19	14	1,250	2,630
2-3pm	1,354	33	25	66	78	1,556	1,176	55	41	50	39	1,361	2,917
3-4pm	1,740	41	12	34	88	1,915	1,403	44	44	44	21	1,556 **	3,471
4-5pm	1,770	42	54	65	197	2,128	1,300	37	66	80	44	1,527	3,655
5-6pm	1,993	37	55	39	105	2,229 **	1,391	28	42	32	40	1,533	3,762 **
6-7pm	1,777	23	32	24	78	1,934	1,287	35	52	18	28	1,420	3,354
7-8pm						1,592						1,241	2,833
8-9pm						1,445						1,051	2,496
9-10pm						1,173						837	2,010
10-11pm						976						731	1,707
11-12pm						836						656	1,492
Totals						29,039						23,381	52,420
7-10am	4,061	138	82	220	327	4,828	3,259	149	221	121	77	3,827	8,655
10am-1pm	3,431	100	41	116	170	3,858	2,966	108	48	76	73	3,271	7,129
1-4pm	4,358	105	42	132	214	4,851	3,749	129	102	113	74	4,167	9,018
4-7pm	5,540	102	141	128	380	6,291	3,978	100	160	130	112	4,480	10,771
7am-7pm	17,390	445	306	596	1,091	19,828	13,952	486	531	440	336	15,745	35,573

# **Hourly Vehicular Volumes** Washington Bridge - 2009



# Average Daily Traffic Volumes Washington Bridge

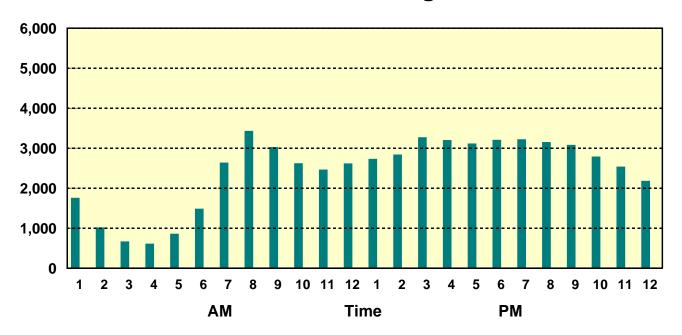
1948-2009 Growth Rate = 1.0%



#### Hourly Vehicular Volumes Willis Avenue Bridge - 2009

_		No	orthboun	d to Bro	nx		Southbound to Manhattan						
-	Commuter Commercial						Commuter Commercial	2-Way					
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos Buses Vans Trucks Vans Totals	Totals					
12-1am						1,758		1,758					
1-2am						1,017		1,017					
2-3am						668		668					
3-4am						613		613					
4-5am						859	Bridge is 1-way northbound	859					
5-6am						1,486	to The Bronx	1,486					
6-7am						2,637		2,637					
7-8am	2,924	87	136	169	118	3,434 **		3,434 **					
8-9am	2,442	104	91	176	215	3,028		3,028					
9-10am	1,959	115	96	235	217	2,622		2,622					
10-11am	2,052	48	66	154	145	2,465		2,465					
11-12am	1,935	34	114	278	257	2,618		2,618					
12-1pm	2,394	41	51	147	100	2,733		2,733					
1-2pm	2,536	23	39	107	134	2,839		2,839					
2-3pm	2,424	29	119	349	352	3,273		3,273					
3-4pm	2,833	52	49	136	132	3,202		3,202					
4-5pm	2,456	28	94	210	330	3,118		3,118					
5-6pm	2,610	46	87	145	321	3,209		3,209					
6-7pm	2,820	27	86	99	190	3,222		3,222					
7-8pm						3,152		3,152					
8-9pm						3,085		3,085					
9-10pm						2,789		2,789					
10-11pm						2,538		2,538					
11-12pm						2,183		2,183					
Totals						58,548		58,548					
7-10am	7,325	306	323	580	550	9,084		9,084					
10am-1pm	6,381	123	231	579	502	7,816		7,816					
1-4pm	7,793	104	207	592	618	9,314		9,314					
4-7pm	7,886	101	267	454	841	9,549		9,549					
7am-7pm	29,385	634	1,028	2,205	2,511	35,763		35,763					

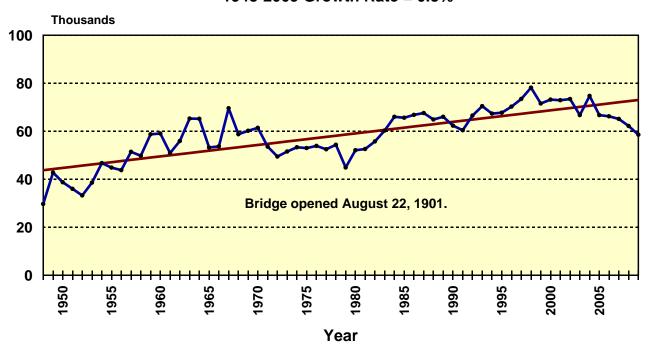
## **Hourly Vehicular Volumes**Willis Avenue Bridge - 2009



Bridge is 1-way northbound to The Bronx

# **Average Daily Traffic Volumes**Willis Avenue Bridge

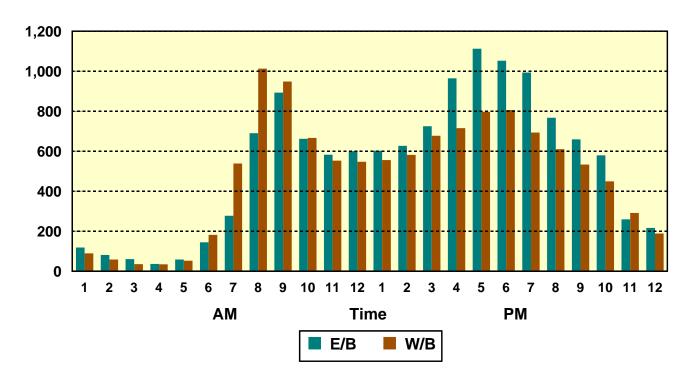
1948-2009 Growth Rate = 0.8%



#### Hourly Vehicular Volumes 145th Street Bridge - 2009

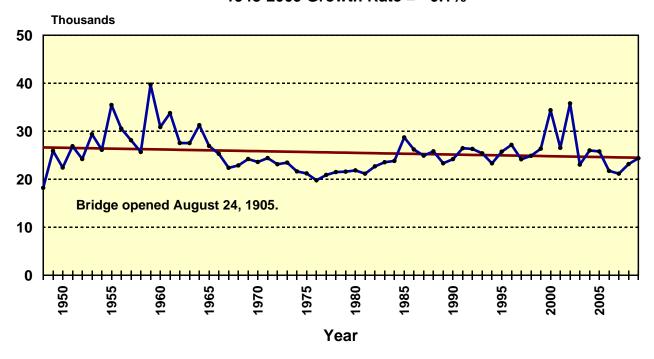
_		Ea	d to Bron		Westbound to Manhattan								
_		(	Commut	er Co	Commercial			Commuter Commercial				al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						118						89	207
1-2am						81						58	139
2-3am						60						35	95
3-4am						36						34	70
4-5am						58						52	110
5-6am						144						181	325
6-7am						277						538	815
7-8am	579	28	37	37	9	690	881	41	18	38	35	1,013 **	1,703
8-9am	744	27	45	49	28	893	812	28	32	27	49	948	1,841
9-10am	534	12	36	57	23	662	534	18	32	25	57	666	1,328
10-11am	510	9	14	24	25	582	440	15	30	23	44	552	1,134
11-12am	456	15	27	62	40	600	405	10	41	42	49	547	1,147
12-1pm	522	11	16	37	16	602	514	10	10	8	13	555	1,157
1-2pm	541	11	31	28	16	627	524	26	10	13	8	581	1,208
2-3pm	546	16	30	93	40	725	566	22	27	25	37	677	1,402
3-4pm	849	22	23	41	29	964	666	26	7	6	10	715	1,679
4-5pm	886	14	58	99	55	1,112 **	739	16	14	8	20	797	1,909 **
5-6pm	858	10	49	71	64	1,052	756	16	13	9	12	806	1,858
6-7pm	865	27	30	23	48	993	655	21	5	3	9	693	1,686
7-8pm						767						610	1,377
8-9pm						659						533	1,192
9-10pm						579						449	1,028
10-11pm						259						291	550
11-12pm						216						188	404
Totals						12,756						11,608	24,364
7-10am	1,857	67	118	143	60	2,245	2,227	87	82	90	141	2,627	4,872
10am-1pm	1,488	35	57	123	81	1,784	1,359	35	81	73	106	1,654	3,438
1-4pm	1,936	49	84	162	85	2,316	1,756	74	44	44	55	1,973	4,289
4-7pm	2,609	51	137	193	167	3,157	2,150	53	32	20	41	2,296	5,453
7am-7pm	7,890	202	396	621	393	9,502	7,492	249	239	227	343	8,550	18,052

### Hourly Vehicular Volumes 145th Street Bridge - 2009

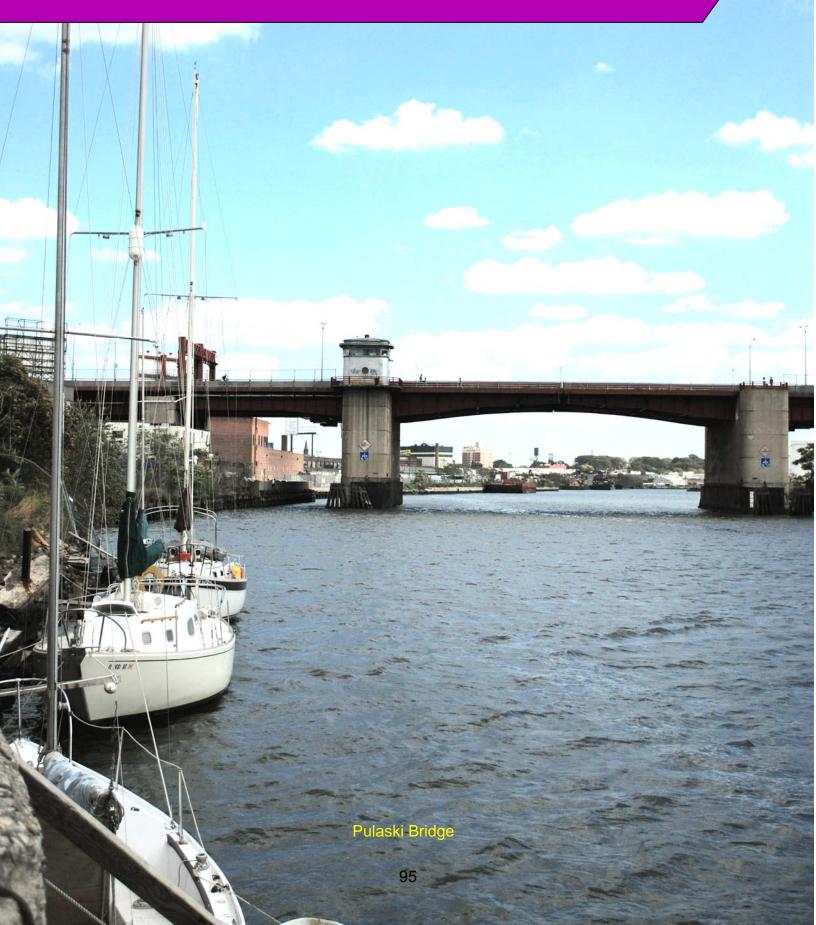


### **Average Daily Traffic Volumes** 145th Street Bridge

1948-2009 Growth Rate = - 0.1%

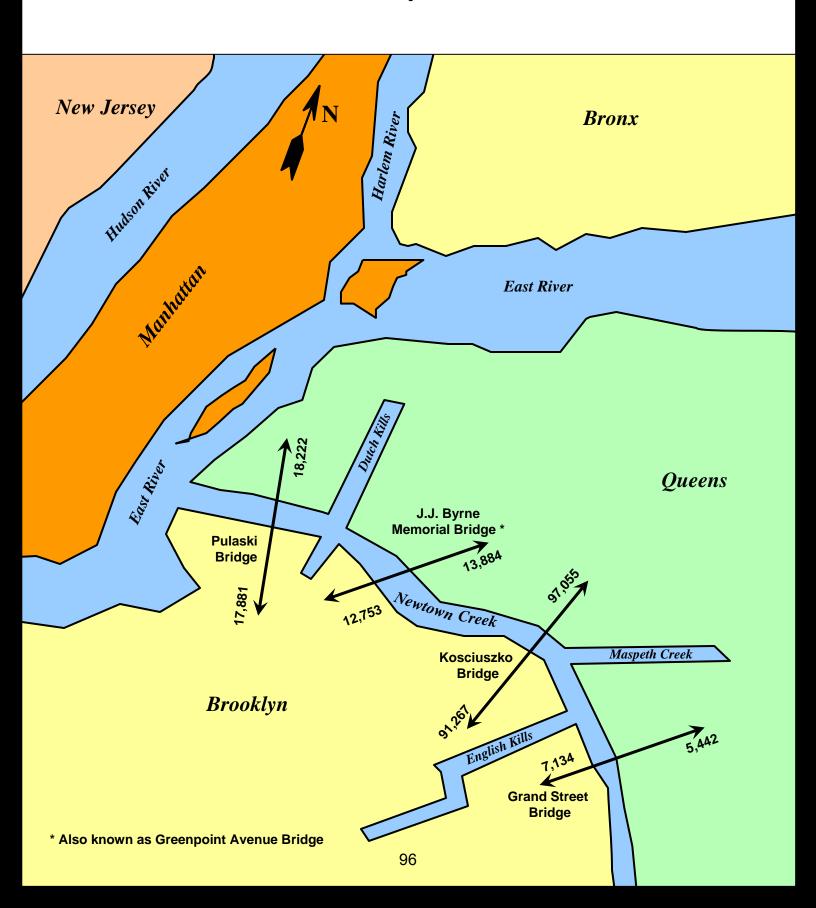


## Brooklyn-Queens Bridges



### **Brooklyn-Queens Bridges**

### 2009 Daily Volumes



### Brooklyn - Queens Bridges ~ Average Daily Traffic Volumes 1948 - 2009

	Grand	Greenpoint			
Year	Street	Avenue *	Kosciuszko	Pulaski	Totals
1948	5,447	15,314	32,761	23,362	76,884
1949	6,007	14,499	30,827	14,445	65,778
1950	6,455	17,822	40,782	13,939	78,998
1951	6,295	21,594	44,886	22,705	95,480
1952	7,053	22,862	49,738	28,716	108,369
1953 1954	7,685 8,467	24,360 24,680	53,213 65,154	23,460 19,898	108,718 118,199
1955	8,040	22,055	53,563	32,360	116,018
1956	7,043	22,393	66,932	24,513	120,881
1957	6,408	23,801	78,216	29,185	137,610
1958	13,537	33,276	39,093	24,191	110,097
1959	11,373	18,702	92,192	21,870	144,137
1960	9,209	18,914	86,322	20,614	135,059
1961	10,843	18,028	93,055	23,935	145,861
1962	11,520	17,450	103,530	28,040	160,540
1963	12,020	17,630	102,190	28,560	160,400
1964	13,570	19,180	106,790	33,030	172,570
1965	8,065 14,333	21,965	110,764	30,585	171,379
1966 1967	13,437	21,806 23,827	131,298 132,586	31,447 27,845	198,884 197,695
1968	18,703	20,890	71,500	35,931	147,024
1969	14,148	24,549	126,858	33,474	199,029
1970	12,121	20,998	136,335	25,255	194,709
1971	11,710	19,189	139,912	29,813	200,624
1972	14,564	34,562	121,443	29,630	200,199
1973	11,723	26,798	99,044	30,472	168,037
1974	8,889	21,195	120,949	29,738	180,771
1975	4,271	19,669	140,882	29,712	194,534
1976	7,280	19,171	140,407	23,843	190,701
1977	8,052	16,513	142,185	25,682	192,432
1978	7,206 8,912	18,708 17,914	144,408	24,399	194,721
1979 1980	10,062	18,681	141,154 142,513	33,334 24,763	201,314 196,019
1981	8,898	15,470	153,985	23,134	201,487
1982	9,203	17,898	129,553	23,134	179,788
1983	10,787	16,528	165,958	28,430	221,703
1984	11,378	18,668	164,865	29,298	224,209
1985	13,791	Closed	168,680	42,579	225,050
1986	11,413	14,338	168,314	30,751	224,816
1987	12,838	14,066	181,056	31,015	238,975
1988	12,845	18,478	158,978	32,570	222,871
1989	13,041	17,473	176,288	33,087	239,889
1990	13,880	20,295 24,375	176,940	32,293	243,408
1991 1992	13,940 13,900	24,375 24,093	166,340 166,980	31,817 26,224	236,472 231,197
1993	12,448	24,093 25,701	166,592	25,279	230,020
1994	13,175	26,329	166,354	25,799	231,657
1995	13,250	26,936	168,639	28,480	237,305
1996	12,382	26,528	170,504	30,338	239,752
1997	12,875	24,937	189,210	31,563	258,585
1998	15,328	25,604	195,192	32,200	268,324
1999	14,390	26,613	194,784	30,975	266,762
2000	15,508	26,143	200,872	37,421	279,944
2001	13,895	26,766	196,565	39,062	276,288
2002	13,088	26,306	184,379	38,348	262,121
2003	14,139	28,755	194,497	38,346	275,737
2004	13,459	28,437	193,612	40,146	275,654
2005	13,016	29,449	198,813	38,911	280,189
2006	12,893	29,840	184,341	38,224	265,298
2007	12,585	27,027	186,493	37,221	263,326
2008	13,031	26,926	181,783	37,019	258,759
2009	12,576	26,637	188,322	36,103	263,638

<sup>\*</sup> Greenpoint Avenue Bridge also known as J.J. Byrne Memorial Bridge.

#### Hourly Vehicular Volumes Grand Street Bridge - 2009

Eastbound to Queens Westbound to Brooklyn 2-Way Commercial Commercial Commuter Commuter **Buses** Vans Trucks **Totals Buses** Vans Trucks **Totals** Autos Vans Autos Vans Totals 12-1am 1-2am ---2-3am 3-4am 4-5am 5-6am ---------------6-7am 7-8am 594 \*\* 8-9am 9-10am 10-11am 11-12am 12-1pm 1-2pm 2-3pm 3-4pm 4-5pm 5-6pm 6-7pm 7-8pm 8-9pm 9-10pm ---10-11pm 11-12pm **Totals** 5,442 7,134 12,576 7-10am 1.018 1.721 2.465 1,255 10am-1pm 2,166 1.134 1,287 2,421 1-4pm 4-7pm 1,074 1,339 1,152 2,491

Based on 1989 Classification Survey Data

4,128

3,105

7am-7pm

9,543

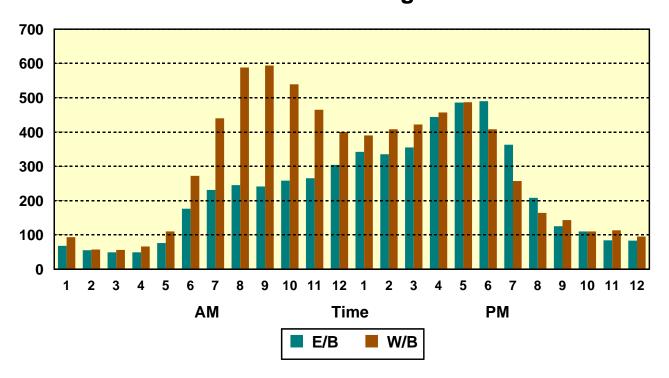
5,415

3,701

1,069

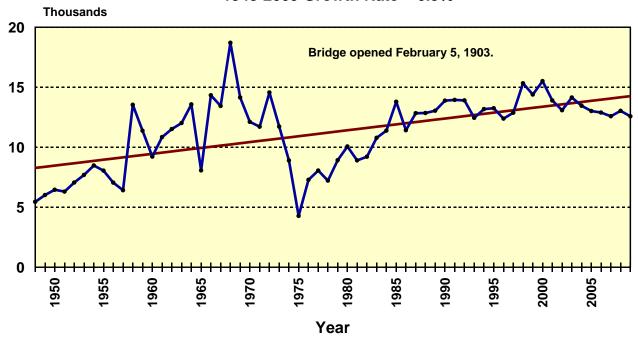
<sup>\*\*</sup> Peak Volumes

### **Hourly Vehicular Volumes Grand Street Bridge - 2009**



# **Average Daily Traffic Volumes Grand Street Bridge**

1948-2009 Growth Rate = 0.9%



#### Hourly Vehicular Volumes Greenpoint Avenue Bridge - 2009 (J.J. Byrne Memorial Bridge)

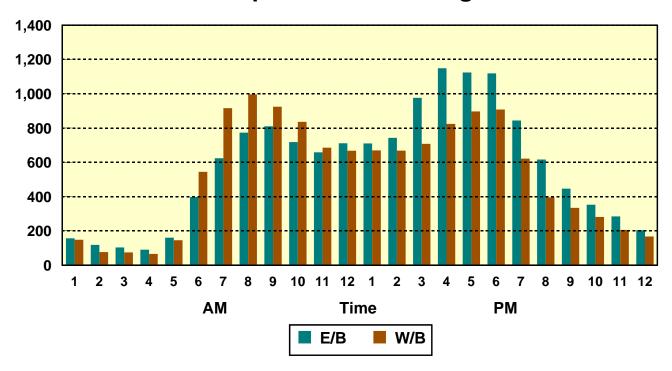
Eastbound to Queens

Westbound to Brooklyn

_	Eastbound to Queens						westbound to Brooklyn						
	Commuter Commercial					ıl		(	Commute	er Co	ommercia	ıl	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						156						148	304
1-2am						118						76	194
2-3am						103						74	177
3-4am						90						65	155
4-5am						160						145	305
5-6am						397						544	941
6-7am						623						916	1,539
7-8am	578	11	19	124	41	773	655	10	51	200	80	996 **	1,769
8-9am	525	15	24	200	46	810	625	11	31	178	79	924	1,734
9-10am	405	7	27	209	70	718	415	13	51	250	107	836	1,554
10-11am	535	3	7	78	35	658	475	4	24	136	46	685	1,343
11-12am	428	11	18	179	75	711	303	5	18	220	121	667	1,378
12-1pm	584	3	12	83	28	710	466	5	26	114	58	669	1,379
1-2pm	610	11	15	86	21	743	462	15	36	115	40	668	1,411
2-3pm	643	7	28	201	97	976	164	10	87	324	123	708	1,684
3-4pm	994	10	11	95	39	1,149 **	671	6	23	96	28	824	1,973
4-5pm	846	13	37	141	87	1,124	704	9	31	105	48	897	2,021
5-6pm	866	9	34	134	76	1,119	707	9	53	78	61	908	2,027 **
6-7pm	666	14	19	85	60	844	488	14	21	60	38	621	1,465
7-8pm						616						395	1,011
8-9pm						446						334	780
9-10pm						352						281	633
10-11pm						284						205	489
11-12pm						204						167	371
Totals						13,884						12,753	26,637
7-10am	1,508	33	70	533	157	2,301	1,695	34	133	628	266	2,756	5,057
10am-1pm	1,547	17	37	340	138	2,079	1,244	14	68	470	225	2,021	4,100
1-4pm	2,247	28	54	382	157	2,868	1,297	31	146	535	191	2,200	5,068
4-7pm	2,378	36	90	360	223	3,087	1,899	32	105	243	147	2,426	5,513
7am-7pm	7,680	114	251	1,615	675	10,335	6,135	111	452	1,876	829	9,403	19,738

<sup>\*\*</sup> Peak Volumes

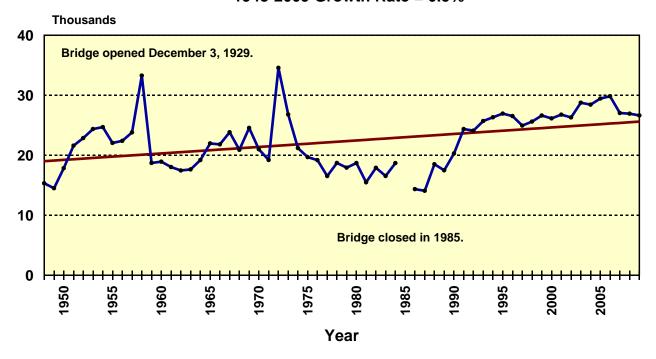
# **Hourly Vehicular Volumes Greenpoint Avenue Bridge - 2009**



Note: Greenpoint Avenue Bridge also known as J.J. Byrne Memorial Bridge.

# Average Daily Traffic Volumes Greenpoint Avenue Bridge

1948-2009 Growth Rate = 0.5%



#### Hourly Vehicular Volumes Kosciuszko Bridge - 2009

Eastbound to Queens Westbound to Brooklyn 2-Way Commuter Commercial Commuter Commercial **Buses** Vans Trucks **Totals Buses** Vans Trucks Autos Vans Autos Vans Totals **Totals** 12-1am 2,767 1,561 4,328 1-2am 1.775 1,183 2,958 ------2-3am 1,280 992 2,272 ---3-4am 1,213 1,124 2,337 4-5am 1.812 1.957 3.769 7,308 5-6am 2,966 4,342 ------------------------6-7am 4,819 5,312 10,131 ---7-8am 4,332 57 117 454 294 5,254 4.483 13 60 355 335 5.246 10,500 5,261 \*\* 8-9am 4,308 20 137 478 318 3,675 12 31 348 304 4,370 9,631 9-10am 3,882 39 112 425 328 4,786 3,519 13 55 459 328 4,374 9,160 4,321 10-11am 3.666 20 102 244 191 4.223 7 36 255 167 4.786 9.009 4,534 3,694 7 11-12am 3,369 182 564 408 71 570 303 4,645 9,179 11 4,223 4,202 12-1pm 72 270 189 4,765 8 72 335 168 4,785 9,550 11 3.799 38 10 86 1-2pm 119 512 426 4.894 3.641 594 396 4.727 9.621 2-3pm 3,790 20 161 490 436 4,897 3,873 15 79 578 401 4,946 9,843 3-4pm 4.140 14 67 96 196 4.513 4.093 17 22 218 158 4.508 9.021 4-5pm 4,129 22 117 212 386 4,866 4,107 16 66 330 267 4.786 9,652 9,895 8 5-6pm 4,443 18 87 313 277 5,138 4,090 47 316 296 4,757 5,234 6-7pm 4.755 11 77 107 284 4.255 8 18 215 279 4.775 10.009 7-8pm 5,225 4,395 9.620 8-9pm 4,978 3,926 8,904 9-10pm 4,394 3,853 8,247 10-11pm 4,010 3,370 7,380 ---11-12pm 3,451 2,547 5,998 **Totals** 97,055 91,267 188,322 ---7-10am 12.522 116 1.357 940 15.301 11.677 38 146 967 13.990 29.291 366 1.162 10am-1pm 11,258 42 12,217 22 14,216 356 1,078 788 13,522 179 1,160 638 27,738 28,485 11,729 72 347 1,098 1.058 14,304 11,607 42 1,390 955 14.181 1-4pm 187 32 4-7pm 13,327 51 281 632 947 15,238 12,452 131 861 842 14,318 29,556

Based on 1989 Classification Survey Data

281

1,350

4,165

3,733

58,365

7am-7pm 48,836

115,070

47,953

134

643

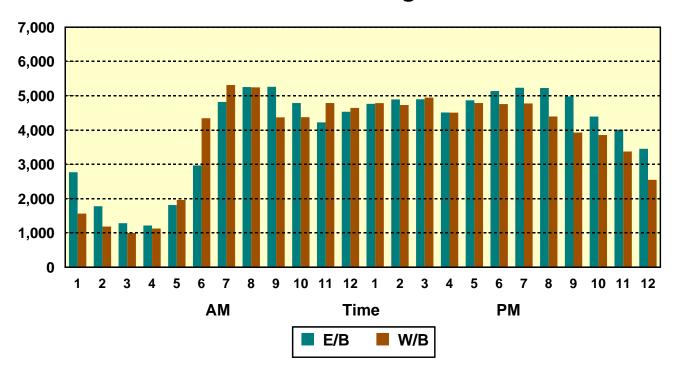
4,573

3,402

56,705

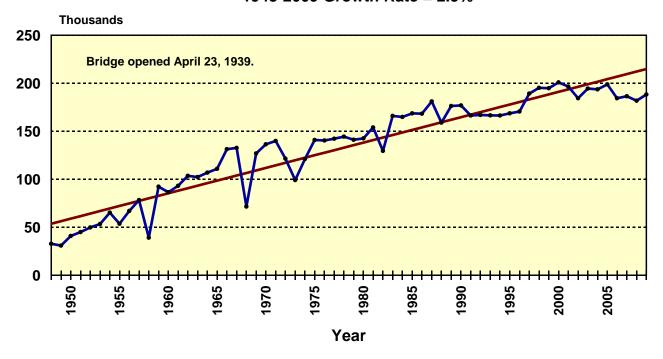
<sup>\*\*</sup> Peak Volumes

### **Hourly Vehicular Volumes** Kosciuszko Bridge - 2009



### Average Daily Traffic Volumes Kosciuszko Bridge

1948-2009 Growth Rate = 2.3%

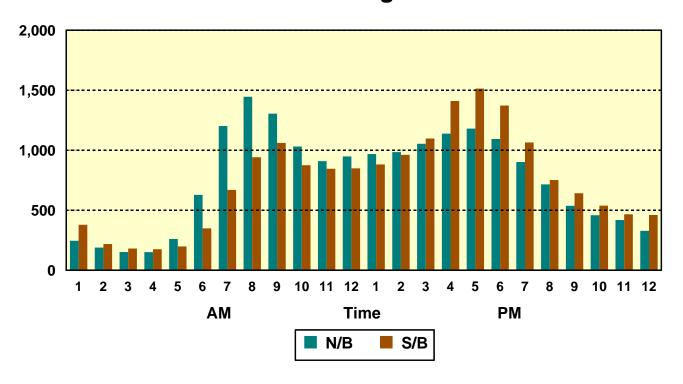


#### Hourly Vehicular Volumes Pulaski Bridge - 2009

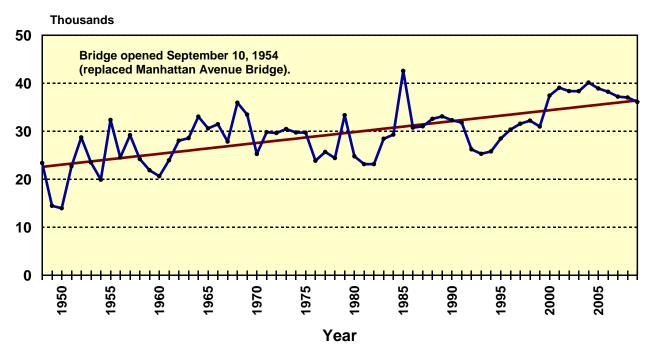
Northbound to Queens Southbound to Brooklyn Commercial Commuter 2-Way Commuter Commercial Vans Trucks **Buses** Vans Trucks Autos **Buses** Vans **Totals** Autos Vans **Totals Totals** 12-1am 245 378 623 1-2am 188 217 405 ------------2-3am 180 331 151 3-4am 150 174 324 4-5am 259 197 456 ---------------------------627 975 5-6am 348 6-7am 1,201 668 1,869 ------7-8am 1.068 23 50 163 141 1.445 624 13 25 174 105 941 2.386 8-9am 944 16 37 175 133 1,305 674 13 34 189 150 1,060 2,365 9-10am 653 15 41 189 132 1,030 531 15 24 172 132 874 1,904 10-11am 696 12 22 103 75 908 670 10 18 87 60 845 1,753 11-12am 529 11 42 215 150 947 484 13 34 192 125 848 1,795 12-1pm 753 9 19 106 80 967 708 11 15 91 56 881 1.848 738 20 26 83 983 760 20 28 99 54 961 1,944 1-2pm 116 37 652 36 1,097 2-3pm 642 17 204 153 1,053 14 288 107 2,150 3-4pm 926 76 1.166 20 1.410 2.548 20 16 100 1.138 27 113 84 4-5pm 887 10 38 113 132 1.180 1.159 11 47 161 135 1.513 2.693 5-6pm 899 8 1,128 9 2,465 41 40 105 1,093 31 100 104 1,372 6-7pm 712 34 58 84 900 894 10 23 1,064 1,964 12 64 73 7-8pm 715 751 1,466 8-9pm 536 641 1,177 9-10pm 457 537 994 ------------------------------10-11pm 417 465 882 11-12pm 327 459 786 18,222 17,881 Totals 36,103 7-10am 2,665 54 527 406 3,780 1,829 83 535 387 2,875 6.655 128 41 10am-1pm 1,978 32 83 424 305 2,822 1,862 34 67 370 241 2,574 5,396 1-4pm 2.306 57 79 420 312 3.174 2.578 54 91 500 245 3.468 6.642 2.498 30 113 211 321 3,173 3,181 30 101 325 312 3,949 7,122 4-7pm 1,344 7am-7pm 9,447 173 403 1,582 12,949 9,450 159 342 1,730 1,185 12,866 25,815

<sup>\*\*</sup> Peak Volumes

### **Hourly Vehicular Volumes** Pulaski Bridge - 2009



## **Average Daily Traffic Volumes** Pulaski Bridge 1948-2009 Growth Rate = 0.8%

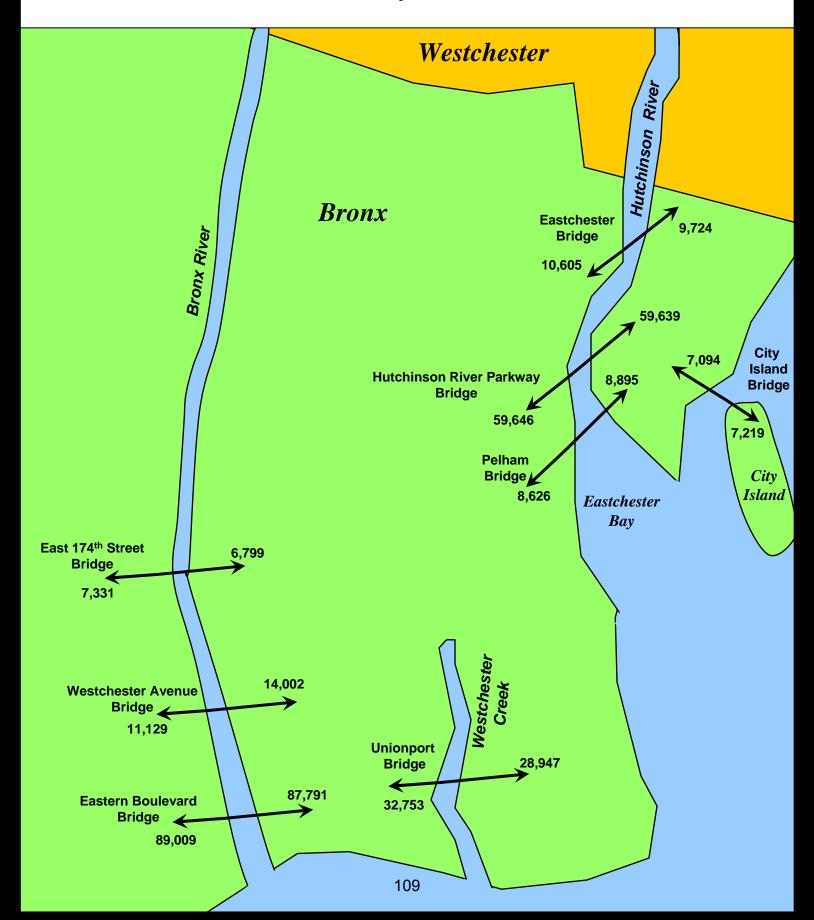


## Bronx Bridges



## **Bronx Bridges**

2009 Daily Volumes



#### Bronx Bridges Average Daily Traffic Volumes 1948 - 2009

Vasu	City	East 174th	Faatabaatau	Eastern	Hutchinson
Year	Island	Street	Eastchester	Boulevard	River Pky
1948	4,249	8,995	15,012	44,563	15,085
1949 1950	4,078 3,712	8,287 10,607	11,322 13,715	42,615 48,184	20,087 21,513
1951	3,588	11,187	14,992	46,804	21,237
1952	3,474	11,588	15,964	68,245	24,247
1953	4,850	9,996	14,341	58,492	32,805
1954	3,969	11,299	15,079	78,010	24,706
1955	3,855	11,533	14,087	60,892	27,337
1956 1957	5,377 5,301	8,329 8,873	14,715 13,163	63,449 60,323	37,155 33,533
1958	3,925	6,927	11,192	56,647	34,067
1959	4,442	8,539	11,728	50,787	31,559
1960	6,071	9,259	9,527	67,082	33,048
1961	7,167	12,863	5,491	71,734	34,858
1962 1963	6,030 7,210	12,420 9,190	8,590 10,840	85,070 80,840	28,330 35,690
1964	8,930	10,540	11,480	94,660	37,790
1965	9,909	10,272	12,853	94,167	48,870
1966	7,512	10,867	12,000	88,510	52,483
1967	8,269	12,583	12,000	70,612	47,693
1968 1969	8,508 9,267	12,296 11,034	11,472	82,581 93,850	50,427
1970	8,996	10,924	13,940 15,977	106,685	48,629 42,887
1971	8,724	10,473	26,743	126,757	49,136
1972	9,433	10,676	22,801	145,755	47,487
1973	12,481	11,909	21,800	104,293	51,137
1974	10,009	9,994	20,724	124,668	47,737
1975 1976	11,836 10,112	9,356 9,632	20,599 17,351	123,389 124,087	51,629 52,498
1977	10,112	7,493	17,935	114,478	52,498 51,613
1978	10,559	7,967	19,595	122,745	68,239
1979	10,355	6,203	16,893	128,836	47,187
1980	9,922	6,328	17,644	126,040	57,192
1981 1982	10,216 10,447	6,037 6,641	17,723 18,848	125,133 125,945	59,824 69,091
1983	11,056	10,252	18,162	130,492	59,615
1984	11,715	10,134	21,448	136,387	69,925
1985	10,180	Closed	20,955	138,725	59,455
1986	14,063	9,632	20,571	147,789	78,211
1987 1988	12,639 13,444	10,489 10,659	22,870 23,275	154,741 154,385	79,179 80,904
1989	13,843	11,574	19,307	136,008	85,410
1990	16,240	13,702	20,559	117,384	91,280
1991	15,299	14,587	20,520	122,414	76,794
1992	13,960	15,558	20,783	123,097	76,641
1993 1994	13,938 13,867	13,734 12,876	20,825 19,997	128,713 125,592	78,053 80,773
1995	14,911	12,428	18,872	130,647	85,985
1996	14,062	12,719	20,172	133,517	84,158
1997	14,264	11,955	21,001	133,278	85,703
1998	14,954	13,758	21,415	151,238	93,304
1999	16,863	5,667	21,510	157,987	98,700
2000 2001	18,844 20,012	11,838 12,093	22,583 22,810	163,954 169,437	105,792 108,191
2002	16,637	12,786	22,255	178,983	110,141
2003	14,617	14,229	24,193	170,735	117,195
2004	14,528	12,184	22,480	178,724	119,029
2005	15,297	13,632	22,318	183,743	118,387
2006	15,339	13,662	20,890	182,579	120,599
2007	15,188	14,436	21,431	180,128	117,660
2008	15,955	14,158	20,842	174,597	121,499
2009	14,313	14,130	20,329	176,800	119,285

#### Bronx Bridges (cont'd) Average Daily Traffic Volumes 1948 - 2009

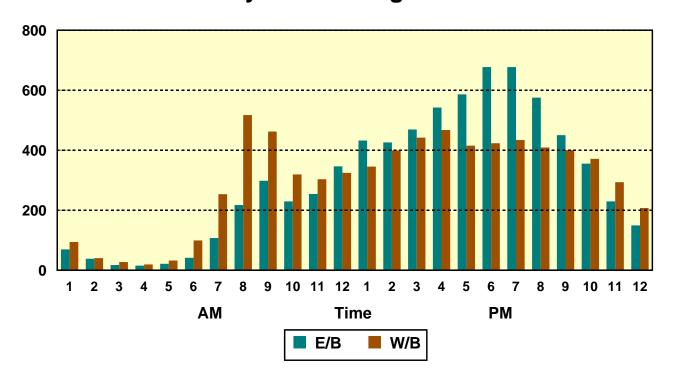
			Westchester	
Year	Pelham	Unionport	Avenue	Totals
1948	5,084	37,359	10,900	141,247
1949	5,252	30,278	13,763	135,682
1950	5,872	32,969	14,401	150,973
1951	4,357	30,100	12,962	145,227
1952	4,511	40,854	14,570	183,453
1953 1954	4,331 5,998	38,468 28,890	14,716 15,106	177,999 183,057
1955	4,122	45,292	13,131	180,249
1956	6,908	47,992	13,884	197,809
1957	6,824	45,010	11,004	184,031
1958	5,599	69,044	9,547	196,948
1959	5,731	62,198	13,547	188,531
1960	6,844	59,433	14,493	205,757
1961	9,857	107,115	10,820	259,905
1962	6,410	104,820	11,350	263,020
1963	9,780	113,680	24,010	291,240
1964	11,010	134,200	19,580	328,190
1965	13,345	139,724	22,218	351,358
1966 1967	10,064 11,025	149,176 149,032	23,417 26,768	354,029 337,982
1968	15,521	177,024	31,690	389,519
1969	11,624	168,297	22,213	378,854
1970	11,320	146,748	23,067	366,604
1971	13,098	135,254	20,855	391,040
1972	16,440	70,659	22,291	345,542
1973	10,852	30,459	29,185	272,116
1974	12,963	33,528	22,386	282,009
1975	12,992	34,648	20,323	284,772
1976	13,284	29,903	23,448	280,315
1977	12,177	33,289	21,422	268,480
1978 1979	14,866 12,978	36,515 34,574	20,762 20,640	301,248 277,666
1980	16,327	28,702	22,228	284,383
1981	13,210	34,492	21,298	287,933
1982	Closed	37,935	22,693	291,600
1983	10,740	38,676	22,693	301,686
1984	14,862	41,548	Closed	306,019
1985	12,603	42,915	26,239	311,072
1986	15,753	45,382	24,856	356,257
1987	14,498	45,450	22,624	362,490
1988	15,144	41,573	25,186	364,570
1989	15,644	43,696	29,445	354,927
1990 1991	18,728 20,917	38,541 37,842	27,140 30,548	343,574 338,921
1992	23,895	40,348	29,462	343,744
1993	20,235	40,385	20,893	336,776
1994	23,960	41,910	21,540	340,515
1995	23,598	39,811	21,757	348,009
1996	24,807	47,953	24,117	361,505
1997	22,963	47,941	25,741	362,846
1998	23,264	48,975	25,863	392,771
1999	21,430	50,563	31,214	403,934
2000 2001	23,007 22,694	49,006 52,418	29,922 31,584	424,946 439,239
2002	15,663	51,347	29,551	437,363
2002	18,023	60,993	28,201	448,186
2004	18,292	60,908	26,861	453,006
2005	17,972	60,605	27,195	459,149
2006	16,749	61,262	24,921 25,846	456,001 453,636
2007	19,041	59,906	25,846 25,780	453,636 454,313
2008	19,131	62,342	25,789 25,131	454,313
2009	17,521	61,700	25,131	449,209

### Hourly Vehicular Volumes City Island Bridge - 2009

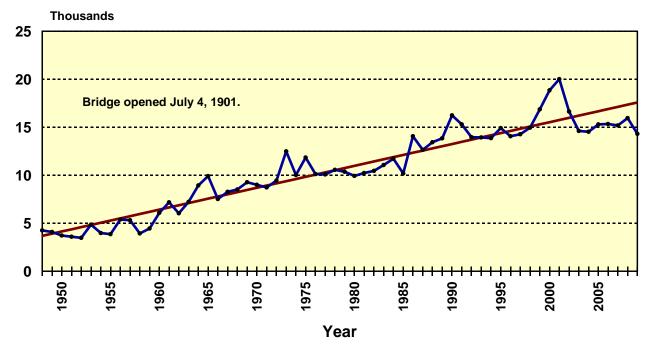
_			Eastb	ound					Westb	ound			
_	Autos	Buses	Commut Vans		ommercia Vans	l Totals	Autos	Buses	Commute Vans	er Co Trucks	ommercia Vans	al Totals	2-Way Totals
12-1am						69						94	163
1-2am						38						40	78
2-3am						17						27	44
3-4am						15						19	34
4-5am						21						32	53
5-6am						41						99	140
6-7am						107						253	360
7-8am	181	7	10	4	15	217	468	10	0	19	20	517 **	734
8-9am	233	13	11	7	34	298	403	14	0	14	31	462	760
9-10am	191	4	4	6	24	229	288	4	0	9	18	319	548
10-11am	237	0	4	6	7	254	290	3	1	7	2	303	557
11-12am	295	5	9	6	31	346	313	6	0	2	3	324	670
12-1pm	399	2	8	3	20	432	331	8	0	4	2	345	777
1-2pm	398	2	1	6	19	426	374	2	0	5	18	399	825
2-3pm	393	9	12	18	37	469	381	10	2	20	29	442	911
3-4pm	507	10	6	7	12	542	439	14	0	5	9	467	1,009
4-5pm	511	2	22	10	41	586	383	2	0	7	23	415	1,001
5-6pm	627	7	12	8	23	677 **	394	4	0	9	16	423	1,100
6-7pm	639	5	6	10	17	677 **	411	6	0	7	10	434	1,111 **
7-8pm						575						409	984
8-9pm						450						400	850
9-10pm						355						371	726
10-11pm						229						293	522
11-12pm						149						207	356
Totals						7,219						7,094	14,313
7-10am	605	24	25	17	73	744	1,159	28	0	42	69	1,298	2,042
10am-1pm	931	7	21	15	58	1,032	934	17	1	13	7	972	2,004
1-4pm	1,298	21	19	31	68	1,437	1,194	26	2	30	56	1,308	2,745
4-7pm	1,777	14	40	28	81	1,940	1,188	12	0	23	49	1,272	3,212
7am-7pm	4,611	66	105	91	280	5,153	4,475	83	3	108	181	4,850	10,003

<sup>\*\*</sup> Peak Volumes

### **Hourly Vehicular Volumes** City Island Bridge - 2009



## **Average Daily Traffic Volumes** City Island Bridge 1948-2009 Growth Rate = 2.6%

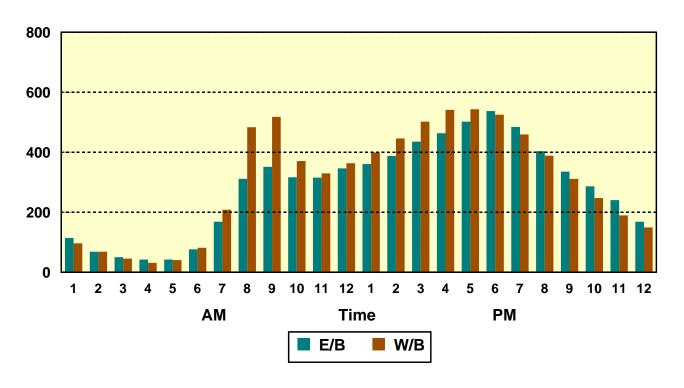


### Hourly Vehicular Volumes East 174th Street Bridge - 2009

	Eastbound						Westbound						
_	Autos	Buses	Commute Vans	er Co Trucks	ommercial Vans	Totals	Autos	Buses	Commute Vans	er Co Trucks	ommercia Vans	al Totals	2-Way Totals
12-1am						114						96	210
1-2am						68						68	136
2-3am						50						45	95
3-4am						42						31	73
4-5am						42						40	82
5-6am						76						81	157
6-7am						168						208	376
7-8am	257	23	8	11	12	311	413	22	15	6	27	483	794
8-9am	267	40	8	26	10	351	434	23	20	10	31	518	869
9-10am	251	24	9	15	17	316	310	14	10	8	28	370	686
10-11am	272	16	5	13	9	315	295	25	4	4	1	329	644
11-12am	247	21	21	31	26	346	292	13	4	24	30	363	709
12-1pm	311	10	10	15	14	360	357	20	5	8	9	399	759
1-2pm	341	10	11	11	14	387	403	18	7	6	12	446	833
2-3pm	334	28	22	32	19	435	396	38	15	20	33	502	937
3-4pm	403	28	10	11	11	463	465	39	9	2	26	541	1,004
4-5pm	425	11	20	25	21	502	466	18	15	15	29	543 **	1,045
5-6pm	475	12	13	19	18	537 **	470	18	13	1	23	525	1,062 **
6-7pm	432	19	6	11	16	484	415	13	13	3	15	459	943
7-8pm						403						388	791
8-9pm						335						311	646
9-10pm						286						247	533
10-11pm						240						189	429
11-12pm						168						149	317
Totals						6,799						7,331	14,130
7-10am	775	87	25	52	39	978	1,157	59	45	24	86	1,371	2,349
10am-1pm	830	47	36	59	49	1,021	944	58	13	36	40	1,091	2,112
1-4pm .	1,078	66	43	54	44	1,285	1,264	95	31	28	71	1,489	2,774
4-7pm	1,332	42	39	55	55	1,523	1,351	49	41	19	67	1,527	3,050
7am-7pm	4,015	242	143	220	187	4,807	4,716	261	130	107	264	5,478	10,285

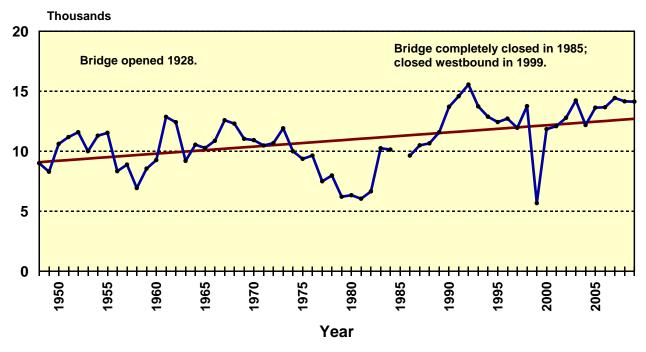
<sup>\*\*</sup> Peak Volumes

# **Hourly Vehicular Volumes East 174th Street Bridge - 2009**



# **Average Daily Traffic Volumes East 174th Street Bridge**

1948-2009 Growth Rate = 0.6%

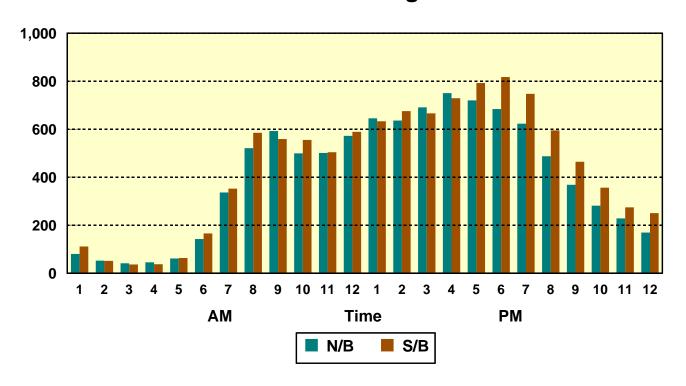


## **Hourly Vehicular Volumes Eastchester Bridge - 2009**

_			North	bound			Southbound						
_	Autos	Buses	Commut Vans	er Co Trucks	ommercia Vans	al Totals	Autos	Buses	Commute Vans	er Co Trucks	ommerci Vans	al Totals	2-Way Totals
12-1am						80						111	191
1-2am						52						51	103
2-3am						41						36	77
3-4am						45						37	82
4-5am						61						63	124
5-6am						142						165	307
6-7am						336						352	688
7-8am	459	15	0	27	20	521	483	8	8	67	19	585	1,106
8-9am	501	12	0	44	35	592	440	11	13	72	23	559	1,151
9-10am	421	14	0	35	29	499	366	17	19	113	40	555	1,054
10-11am	458	6	0	20	17	501	436	7	13	32	16	504	1,005
11-12am	500	5	0	31	36	572	453	8	15	78	35	589	1,161
12-1pm	605	8	0	11	21	645	576	6	6	28	17	633	1,278
1-2pm	600	7	0	12	17	636	616	7	4	37	11	675	1,311
2-3pm	623	14	0	33	21	691	522	10	13	96	25	666	1,357
3-4pm	700	13	0	19	18	750 **	653	15	9	41	11	729	1,479
4-5pm	657	8	0	22	33	720	709	8	15	40	20	792	1,512 **
5-6pm	621	8	0	22	33	684	732	9	12	37	27	817 **	1,501
6-7pm	589	10	0	11	13	623	681	17	8	33	8	747	1,370
7-8pm						487						595	1,082
8-9pm						368						464	832
9-10pm						281						356	637
10-11pm						228						274	502
11-12pm						169						250	419
Totals						9,724						10,605	20,329
7-10am	1,381	41	0	106	84	1,612	1,289	36	40	252	82	1,699	3,311
10am-1pm	1,563	19	0	62	74	1,718	1,465	21	34	138	68	1,726	3,444
1-4pm	1,923	34	0	64	56	2,077	1,791	32	26	174	47	2,070	4,147
4-7pm	1,867	26	0	55	79	2,027	2,122	34	35	110	55	2,356	4,383
7am-7pm	6,734	120	0	287	293	7,434	6,667	123	135	674	252	7,851	15,285

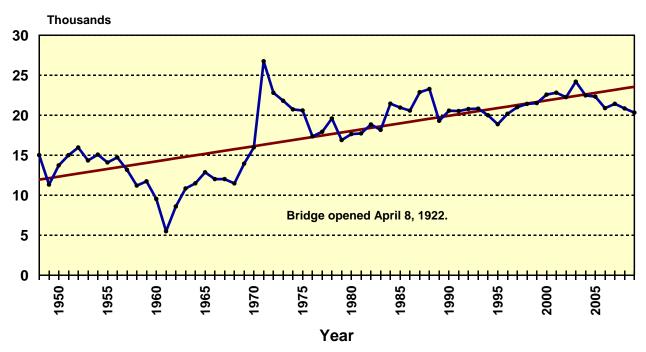
<sup>\*\*</sup> Peak Volumes

## Hourly Vehicular Volumes Eastchester Bridge - 2009



### Average Daily Traffic Volumes Eastchester Bridge

1948-2009 Growth Rate = 1.1%

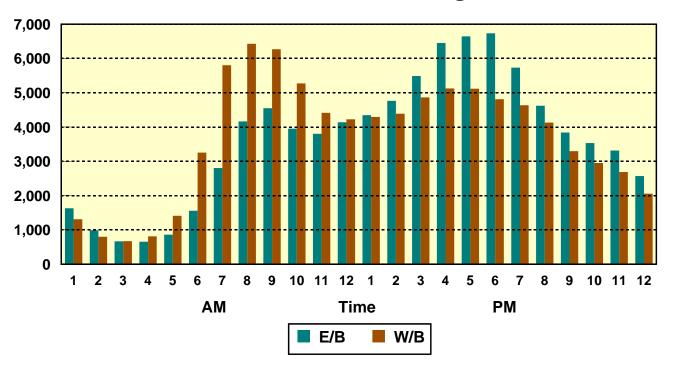


## Hourly Vehicular Volumes Eastern Boulevard Bridge - 2009

Eastbound Westbound Commercial Commercial 2-Way Commuter Commuter **Buses** Vans Trucks Autos **Buses** Vans Trucks Vans **Totals** Autos Vans **Totals Totals** 12-1am 1,629 1,308 2,937 1-2am 988 799 1,787 ---------1,335 2-3am 665 670 3-4am 653 809 1.462 4-5am 858 1,409 2,267 ---------------5-6am 1,556 3,253 4,809 6-7am 2,803 5,804 8,607 ---6,427 \*\* 5,582 7-8am 3.521 53 66 395 129 4.164 101 121 359 264 10,591 8-9am 3,617 105 97 513 217 4,549 5,308 75 142 452 291 6,268 10,817 9-10am 3,042 96 109 509 197 3,953 4,567 47 85 332 242 5,273 9,226 3,349 49 275 105 3,802 4,070 35 53 161 96 4,415 8,217 10-11am 24 3,622 4,225 11-12am 3,272 16 149 438 264 4,139 25 101 280 197 8,364 12-1pm 3.916 21 70 215 125 4.347 3.975 26 32 167 95 4.295 8.642 4,387 1-2pm 4,485 29 158 90 4,763 4,056 53 55 165 58 9,150 4,959 279 4,865 2-3pm 44 0 206 5,488 4,181 114 91 346 133 10,353 3-4pm 6.140 164 4.774 69 5.125 11.576 44 0 103 6.451 43 186 53 4-5pm 6,084 39 0 321 202 6.646 4.419 107 127 293 172 5.118 11.764 6,382 66 0 6,733 4,389 34 4,810 11,543 5-6pm 100 185 133 169 85 6-7pm 5,396 0 4,370 38 10,369 44 149 144 5,733 79 88 61 4,636 7-8pm 4,620 4,130 8,750 8-9pm 3,839 3,295 7,134 9-10pm 3,532 2.948 6,480 ---------------10-11pm 3,313 2,686 5,999 11-12pm 2,567 2,054 4,621 89,009 **Totals** 87,791 176,800 7-10am 10,180 254 543 12,666 15,457 223 797 17,968 30,634 272 1,417 348 1,143 12,935 10am-1pm 10,537 61 268 928 494 12,288 11,667 86 186 608 388 25,223 1-4pm 15.584 1 601 399 16.702 13.011 236 189 697 244 14.377 31,079 117 17.862 0 570 531 19.112 13,178 179 339 550 318 14,564 4-7pm 149 33,676 7am-7pm 54,163 581 541 3,516 1,967 60,768 53,313 724 1,062 2,998 1,747 59,844 120,612

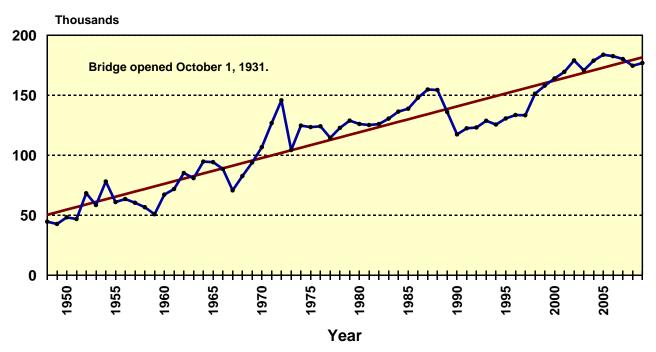
<sup>\*\*</sup> Peak Volumes

# **Hourly Vehicular Volumes Eastern Boulevard Bridge - 2009**



# **Average Daily Traffic Volumes Eastern Boulevard Bridge**

1948-2009 Growth Rate = 2.1%

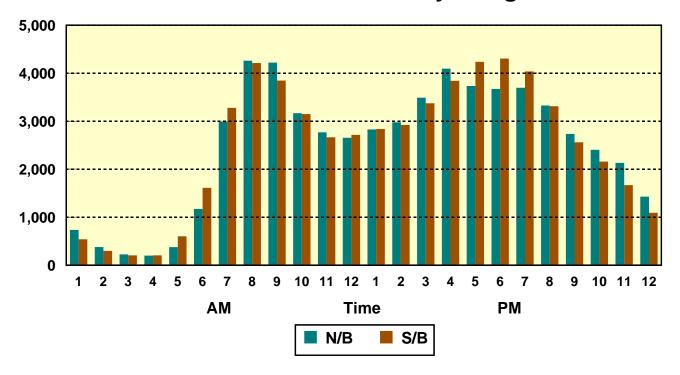


#### Hourly Vehicular Volumes Hutchinson River Parkway Bridge - 2009

_	Northbound						Southbound						
•		(	Commute	er Co	ommercia	al		(	Commute	r Co	ommercia	 iI	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						732						538	1,270
1-2am						376						297	673
2-3am						223						203	426
3-4am						198						203	401
4-5am						375						599	974
5-6am						1,170						1,610	2,780
6-7am						2,994						3,279	6,273
7-8am	3,934	4	101	147	73	4,259 **	4,068	1	20	10	112	4,211	8,470 **
8-9am	3,952	7	70	136	54	4,219	3,756	2	6	7	75	3,846	8,065
9-10am	2,915	1	82	103	65	3,166	3,027	7	13	12	89	3,148	6,314
10-11am	2,635	3	36	60	33	2,767	2,621	3	6	6	28	2,664	5,431
11-12am	2,375	0	109	104	67	2,655	2,573	0	9	11	122	2,715	5,370
12-1pm	2,710	0	33	57	27	2,827	2,790	0	3	3	40	2,836	5,663
1-2pm	2,814	7	51	71	33	2,976	2,846	6	8	0	62	2,922	5,898
2-3pm	3,120	5	123	174	67	3,489	3,235	6	14	6	112	3,373	6,862
3-4pm	3,920	3	59	76	37	4,095	3,752	12	3	3	71	3,841	7,936
4-5pm	3,368	1	79	211	74	3,733	4,143	0	18	0	76	4,237	7,970
5-6pm	3,411	1	76	127	56	3,671	4,191	0	11	9	94	4,305 **	7,976
6-7pm	3,466	0	71	100	59	3,696	3,937	0	16	2	82	4,037	7,733
7-8pm						3,325						3,311	6,636
8-9pm						2,734						2,559	5,293
9-10pm						2,402						2,156	4,558
10-11pm						2,130						1,666	3,796
11-12pm						1,427						1,090	2,517
Totals						59,639						59,646	119,285
7-10am	10,801	12	253	386	192	11,644	10,851	10	39	29	276	11,205	22,849
10am-1pm	7,720	3	178	221	127	8,249	7,984	3	18	20	190	8,215	16,464
1-4pm	9,854	15	233	321	137	10,560	9,833	24	25	9	245	10,136	20,696
4-7pm	10,245	2	226	438	189	11,100	12,271	0	45	11	252	12,579	23,679
7am-7pm	38,620	32	890	1,366	645	41,553	40,939	37	127	69	963	42,135	83,688

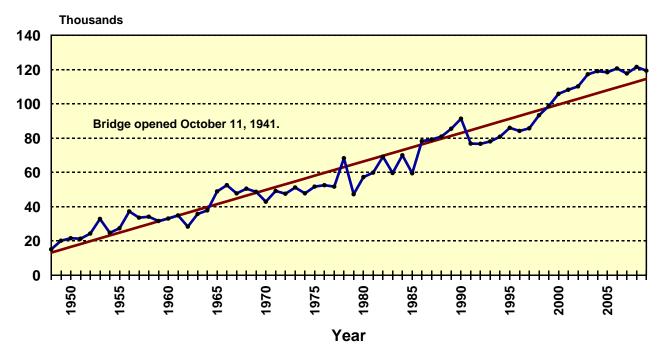
<sup>\*\*</sup> Peak Volumes

# Hourly Vehicular Volumes Hutchinson River Parkway Bridge - 2009



## **Average Daily Traffic Volumes Hutchinson River Parkway Bridge**

1948-2009 Growth Rate = 3.6%

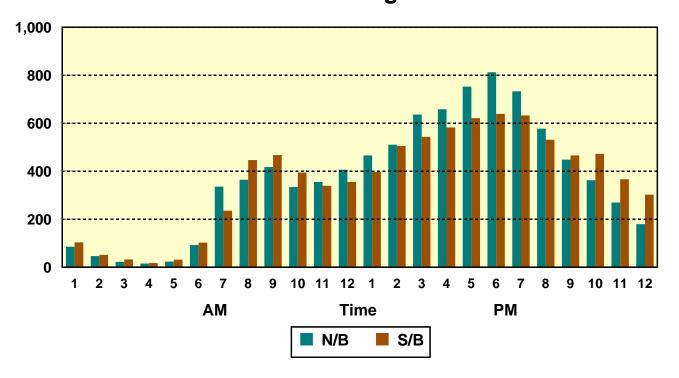


#### Hourly Vehicular Volumes Pelham Bridge - 2009

_	Northbound						Southbound						
_		C	Commute	er Co	ommercia			(	Commute	r Co	mmercia	 	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						85						103	188
1-2am						46						51	97
2-3am						22						32	54
3-4am						15						17	32
4-5am						23						31	54
5-6am						92						102	194
6-7am						335						235	570
7-8am	302	14	11	22	15	364	388	13	10	18	17	446	810
8-9am	341	15	5	30	26	417	375	15	12	33	32	467	884
9-10am	281	6	2	21	24	334	326	5	8	34	21	394	728
10-11am	302	2	3	27	21	355	292	7	9	9	22	339	694
11-12am	347	4	5	21	29	406	266	4	10	52	23	355	761
12-1pm	433	10	2	5	15	465	368	11	2	9	6	396	861
1-2pm	480	7	0	14	9	510	461	9	7	17	11	505	1,015
2-3pm	541	21	9	31	34	636	477	12	6	29	19	543	1,179
3-4pm	605	14	1	15	23	658	528	22	5	17	10	582	1,240
4-5pm	685	7	5	17	38	752	574	8	3	19	17	621	1,373
5-6pm	737	10	4	23	38	812 **	565	15	16	13	30	639 **	1,451 **
6-7pm	686	10	4	5	28	733	575	9	14	20	14	632	1,365
7-8pm						577						531	1,108
8-9pm						448						465	913
9-10pm						362						472	834
10-11pm						269						366	635
11-12pm						179						302	481
Totals						8,895						8,626	17,521
7-10am	924	35	18	73	65	1,115	1,089	33	30	85	70	1,307	2,422
10am-1pm	1,082	16	10	53	65	1,226	926	22	21	70	51	1,090	2,316
1-4pm	1,626	42	10	60	66	1,804	1,466	43	18	63	40	1,630	3,434
4-7pm	2,108	27	13	45	104	2,297	1,714	32	33	52	61	1,892	4,189
7am-7pm	5,740	120	51	231	300	6,442	5,195	130	102	270	222	5,919	12,361

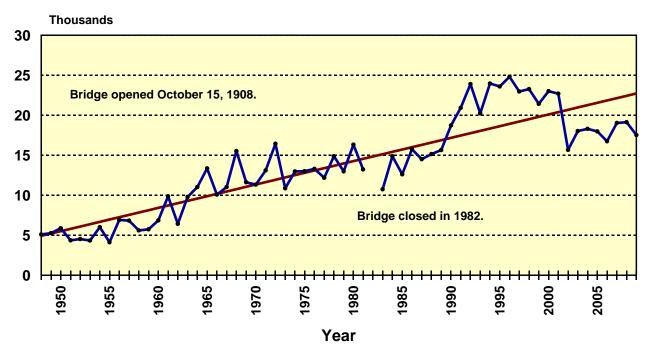
<sup>\*\*</sup> Peak Volumes

### Hourly Vehicular Volumes Pelham Bridge - 2009



# Average Daily Traffic Volumes Pelham Bridge

1948-2009 Growth Rate = 2.5%

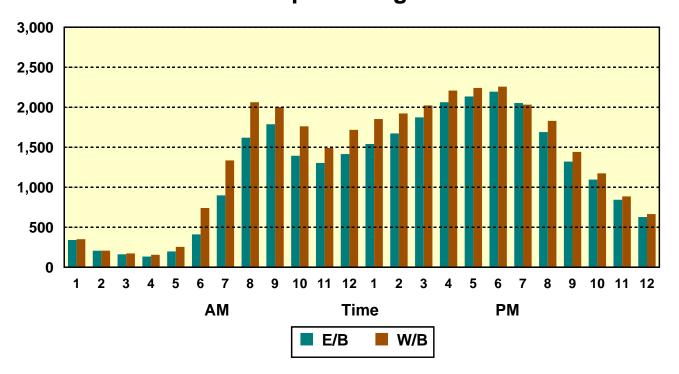


#### Hourly Vehicular Volumes Unionport Bridge - 2009

_	Eastbound						Westbound						
-			Commute	er Co	ommercia	 al			Commute	r Co	ommercia	 al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						339						349	688
1-2am						205						206	411
2-3am						160						171	331
3-4am						132						154	286
4-5am						196						253	449
5-6am						409						739	1,148
6-7am						897						1,334	2,231
7-8am	1,405	37	21	118	38	1,619	1,924	37	2	41	58	2,062	3,681
8-9am	1,507	36	47	129	68	1,787	1,866	23	0	65	47	2,001	3,788
9-10am	1,115	31	55	118	73	1,392	1,628	22	0	47	63	1,760	3,152
10-11am	1,149	17	18	75	43	1,302	1,402	20	0	17	51	1,490	2,792
11-12am	1,108	15	57	157	76	1,413	1,486	18	0	96	116	1,716	3,129
12-1pm	1,369	14	30	87	40	1,540	1,764	12	0	40	35	1,851	3,391
1-2pm	1,365	12	45	162	88	1,672	1,654	25	2	120	120	1,921	3,593
2-3pm	1,603	18	48	145	59	1,873	1,776	29	0	107	110	2,022	3,895
3-4pm	1,926	15	18	64	38	2,061	2,036	51	0	49	72	2,208	4,269
4-5pm	1,856	19	39	148	72	2,134	1,986	31	0	75	148	2,240	4,374
5-6pm	1,938	25	49	141	41	2,194 **	2,065	33	0	72	87	2,257 **	4,451 **
6-7pm	1,820	36	50	108	38	2,052	1,914	21	0	36	60	2,031	4,083
7-8pm						1,689						1,829	3,518
8-9pm						1,319						1,440	2,759
9-10pm						1,094						1,172	2,266
10-11pm						842						884	1,726
11-12pm						626						663	1,289
Totals						28,947						32,753	61,700
7-10am	4,027	104	123	365	179	4,798	5,418	82	2	153	168	5,823	10,621
10am-1pm	3,626	46	105	319	159	4,255	4,652	50	0	153	202	5,057	9,312
1-4pm	4,894	45	111	371	185	5,606	5,466	105	2	276	302	6,151	11,757
4-7pm	5,614	80	138	397	151	6,380	5,965	85	0	183	295	6,528	12,908
7am-7pm	18,161	275	477	1,452	674	21,039	21,501	322	4	765	967	23,559	44,598

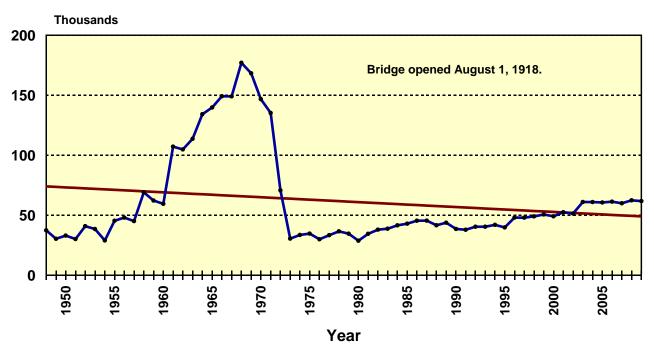
<sup>\*\*</sup> Peak Volumes

### Hourly Vehicular Volumes Unionport Bridge - 2009



# Average Daily Traffic Volumes Unionport Bridge

1948-2009 Growth Rate = - 0.7%

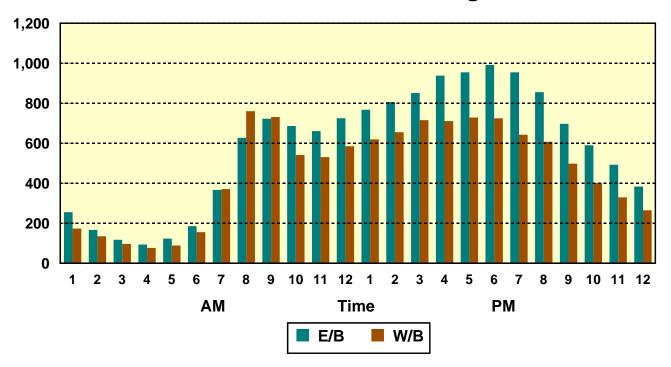


### Hourly Vehicular Volumes Westchester Avenue Bridge - 2009

_			Eastb	ound					Wes	tbound			
_		C	Commute	er Co	ommercia	 al	'-		Commute	r Co	mmercia	 ul	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						255						173	428
1-2am						166						134	300
2-3am						117						96	213
3-4am						93						76	169
4-5am						123						88	211
5-6am						185						155	340
6-7am						366						370	736
7-8am	533	33	16	24	21	627	663	30	1	18	48	760 **	1,387
8-9am	613	52	8	25	24	722	635	34	1	25	36	731	1,453
9-10am	611	31	13	13	18	686	463	12	0	21	45	541	1,227
10-11am	600	32	4	10	14	660	495	16	0	11	8	530	1,190
11-12am	613	28	8	34	42	725	473	17	0	37	57	584	1,309
12-1pm	720	22	2	8	15	767	546	21	0	26	26	619	1,386
1-2pm	722	43	9	16	16	806	595	22	0	11	27	655	1,461
2-3pm	716	52	6	31	46	851	616	31	0	22	46	715	1,566
3-4pm	847	65	1	14	11	938	657	24	0	13	16	710	1,648
4-5pm	861	35	20	20	18	954	639	29	0	21	39	728	1,682
5-6pm	909	21	11	19	31	991 **	622	18	0	19	65	724	1,715 **
6-7pm	876	28	2	9	39	954	572	9	0	2	59	642	1,596
7-8pm						855						607	1,462
8-9pm						697						497	1,194
9-10pm						589						401	990
10-11pm						492						329	821
11-12pm						383						264	647
Totals						14,002						11,129	25,131
7-10am	1,757	116	37	62	63	2,035	1,761	76	2	64	129	2,032	4,067
10am-1pm	1,933	82	14	52	71	2,152	1,514	54	0	74	91	1,733	3,885
1-4pm	2,285	160	16	61	73	2,595	1,868	77	0	46	89	2,080	4,675
4-7pm	2,646	84	33	48	88	2,899	1,833	56	0	42	163	2,094	4,993
7am-7pm	8,621	442	100	223	295	9,681	6,976	263	2	226	472	7,939	17,620

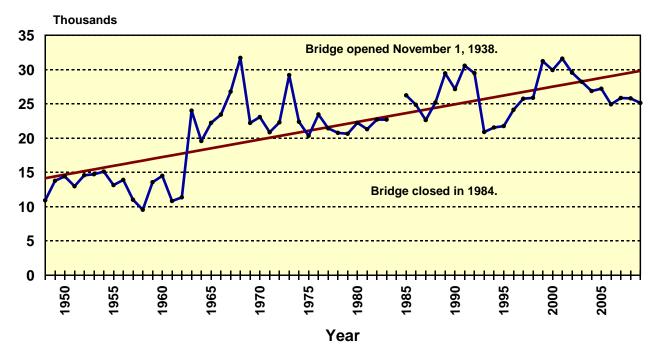
<sup>\*\*</sup> Peak Volumes

### Hourly Vehicular Volumes Westchester Avenue Bridge - 2009



# **Average Daily Traffic Volumes**Westchester Avenue Bridge

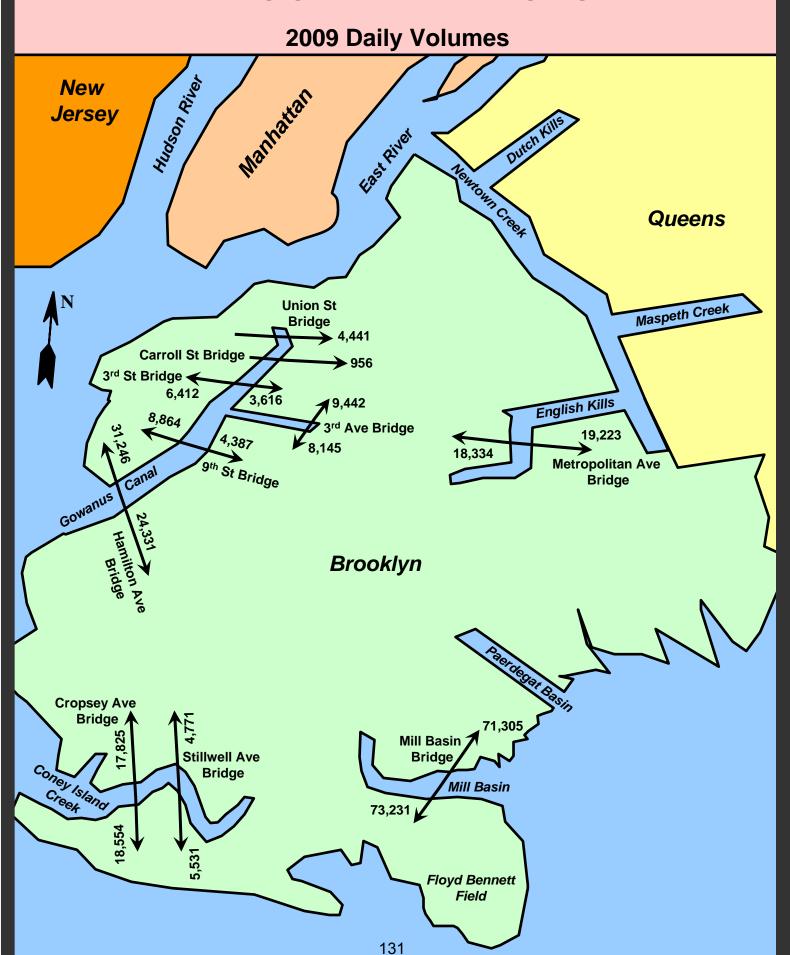
1948-2009 Growth Rate = 1.2%



## Brooklyn Bridges



## **BROOKLYN BRIDGES**



### Brooklyn Bridges Average Daily Traffic Volumes 1948 - 2009

Year	Carroll Street	Cropsey Avenue	Hamilton Avenue	Metropolitan Avenue	Mill Basin
1948	1,401	11,745	12,135	8,739	21,773
1949	4,805	12,913	16,071	12,476	23,357
1950	1,203	15,024	20,149	14,285	32,787
1951	1,444	10,362	24,893	15,496	44,285
1952	1,192	11,495	23,642	15,150	38,025
1953	2,951	12,278	33,379	13,843	36,209
1954	1,962	13,945	36,121	18,208	40,604
1955	2,831	13,184	24,415	15,536	43,011
1956 1957	2,574 1,917	15,832 11,836	29,676 22,862	11,637 12,293	57,515 63,310
1958	1,805	17,462	31,543	25,777	60,384
1959	1,706	15,671	35,085	15,507	61,730
1960	2,553	15,417	42,584	18,892	58,929
1961	7,628	16,968	43,232	20,446	64,142
1962	6,360	18,060	41,380	21,120	71,540
1963	2,120	17,620	36,530	24,130	75,610
1964	2,959	15,240	39,970	23,850	80,270
1965 1966	3,798 6,364	21,902 17,443	35,795 42,426	22,742 21,634	110,566 90,769
1967	1,948	20,440	40,733	25,101	75,168
1968	2,762	18,774	42,869	31,457	105,979
1969	1,965	22,292	42,400	28,604	111,694
1970	2,671	20,257	38,078	29,977	102,964
1971	1,939	21,147	33,847	27,803	110,834
1972	1,207	23,597	39,219	31,130	102,346
1973	1,191	22,986	36,136	23,374	98,553
1974 1975	1,224 1,108	22,755 21,808	37,097 39,784	27,719 22,148	107,455 102,628
1976	1,245	19,503	39,321	23,287	106,744
1977	1,382	21,040	34,602	26,732	103,508
1978	1,126	22,068	36,443	21,457	104,174
1979	1,565	21,254	38,412	24,152	118,242
1980	Closed	21,462	36,084	29,717	109,782
1981	1,112	21,504	35,510	30,190	106,378
1982 1983	1,467	21,005	43,044	34,135	114,600
1984	1,980 1,432	27,847 32,770	44,047 48,204	31,444 40,936	112,211 110,458
1985	1,876	30,960	54,612	43,173	108,974
1986	Closed	31,998	48,274	35,372	114,876
1987	Closed	30,134	43,715	34,830	122,013
1988	Closed	32,341	51,721	37,682	114,287
1989	606	30,967	54,063	35,446	134,708
1990	1,153	30,592	52,170	37,289	142,142
1991 1992	1,175 1,387	25,542 28,230	39,911 56,227	39,576 37,510	134,410 130,737
1993	1,125	27,878	56,655	36,538	130,805
1994	1,132	27,181	50,309	36,026	134,605
1995	1,164	29,015	51,646	37,581	134,540
1996	1,244	26,933	70,385	39,662	132,853
1997	1,215	28,590	69,144	37,966	135,482
1998	1,270	30,323	59,211	38,271	146,940
1999 2000	1,248 1,265	31,076	67,259 59,557	38,752 41,238	147,347
2000	1,280	30,334 33,725	59,557 60,808	39,930	145,070 146,602
2002	1,248	33,325	60,075	39,944	142,105
2003	1,150	35,137	59,108	40,284	141,212
2004	1,099	35,104	60,240	38,529	145,760
2005	1,101	36,132	59,885	35,113	143,158
2006	1,068	35,398	55,526	38,130	143,917
2007 2008	1,116 1 103	36,395 35,881	54,632 52,731	37,332 38 587	148,802 144,010
2009	1,103 956	35,881 36,379	52,731 55,577	38,587 37,557	144,010 144,536
_555	000	55,575	55,577	0.,50.	,555

#### Brooklyn Bridges (cont'd) Average Daily Traffic Volumes 1948 - 2009

Year	Ninth Street	Stillwell Avenue	Third Avenue	Third Street	Union Street	Totals
1948	6,006	4,295	17,220	3,438	5,165	91,917
1949	5,640	4,293	19,048	5,716	6,502	111,439
1950	6,895	5,832	13,068	4,976	7,839	122,058
1951	7,159	5,312	19,114	4,852	7,207	140,124
1952	7,376	5,094	14,303	3,711	7,062	127,050
1953	10,329	4,142	15,517	3,463	9,617	141,728
1954	9,904	4,788	17,630	3,215	8,500	154,877
1955	7,704	5,706	15,144	5,907	7,469	140,907
1956	8,715	5,418	14,112	4,401	7,878	157,758
1957	8,897	4,523	14,113	4,742 5.814	9,263	153,756 170,537
1958 1959	8,347 7,906	4,903 5,239	15,098 16,808	5,814 6,887	8,404 9,969	179,537 176,508
1960	7,465	5,511	14,821	6,227	9,596	181,995
1961	13,330	5,462	16,794	9,747	9,524	207,273
1962	14,170	6,340	15,260	13,550	9,452	217,232
1963	13,270	6,280	17,700	7,970	9,380	210,610
1964	11,430	6,410	16,230	6,850	10,260	213,469
1965	9,540	6,887	15,196	5,992	9,152	241,570
1966	9,418	6,874	14,008	5,682	8,898	223,516
1967	9,871	6,708	16,560	5,570	9,208	211,307
1968	12,484	6,661	13,141	5,680	8,860	248,667
1969 1970	9,363 8,855	7,070 7,091	13,798 14,413	5,527 5,650	8,402 8,064	251,115 238,020
1971	9,952	7,091	13,473	5,991	8,786	241,116
1972	9,581	6,577	12,794	5,806	7,834	240,091
1973	8,939	6,983	13,477	6,124	8,845	226,608
1974	8,752	7,245	15,000	5,792	7,723	240,762
1975	9,313	9,925	14,576	5,145	8,188	234,623
1976	9,634	9,568	14,752	5,361	8,001	237,416
1977	11,123	6,868	13,692	4,328	4,842	228,117
1978	8,892	7,591	14,743	5,425	4,708	226,627
1979	10,095	8,764	14,448	5,629	4,457	247,018
1980 1981	11,485 9,726	7,629 7,595	14,444 17,780	6,420 5,759	5,659	242,682
1982	9,726 11,350	7,595 7,541	16,865	Closed	4,555 8,277	240,109 258,284
1983	10,893	Closed	16,521	Closed	8,415	253,358
1984	12,578	Closed	18,787	Closed	9,418	274,583
1985	9,438	Closed	17,304	Closed	9,229	275,566
1986	12,263	Closed	15,235	2,426	11,374	271,818
1987	8,762	Closed	20,029	5,626	5,971	271,080
1988	11,005	Closed	20,971	7,189	6,535	281,731
1989	9,571	Closed	22,230	6,232	6,042	299,865
1990	13,062	5,334	24,548	7,745	6,087	320,122
1991 1992	11,444 11,059	8,574 8,730	Closed 23,610	7,411 6,072	5,142 5,633	273,185 310,084
1992	9,358	9,367	24,055	6,972 7,743	5,622 4,971	308,495
1994	9,666	9,186	21,745	7,978	4,307	302,135
1995	Closed	9,889	22,639	9,556	4,802	300,832
1996	Closed	9,044	21,664	9,048	4,562	315,395
1997	Closed	9,602	21,129	10,400	4,573	318,101
1998	Closed	9,243	20,597	11,378	4,824	322,057
1999	5,544	9,478	21,647	10,849	5,061	338,261
2000	7,355	9,103	22,084	10,231	4,853	331,090
2001	7,898	9,246	21,461	9,855	4,599	335,404
2002 2003	8,399 9,406	9,534	20,538	10,146	4,435 4,843	329,749 331,805
2003	9,406 10,216	10,138 10,436	20,517 20,292	10,010 9,846	4,843 4,399	331,805 335,921
2004	11,393	10,436	20,292	10,108	4,421	331,523
2006	11,143	11,158	18,403	9,487	4,390	328,620
2007	11,903	10,085	19,410	9,937	4,343	333,955
2008	13,362	10,197	17,901	9,482	4,390	327,644
2009	13,251	10,302	17,587	10,028	4,441	330,614

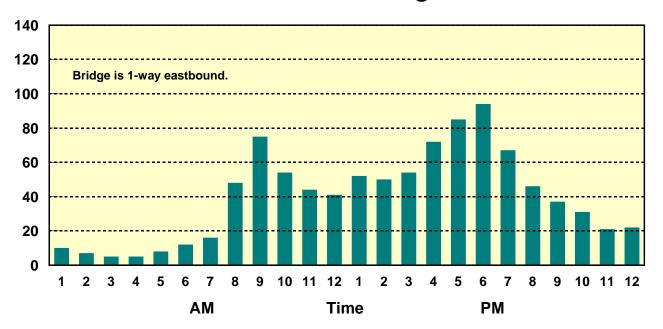
#### Hourly Vehicular Volumes Carroll Street Bridge - 2009

			Eastb	ound					Westb	ound			
_		(	Commut	er C	ommercia	al			Commute	er C	ommercia	al	Grand
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						10							10
1-2am						7							7
2-3am						5							5
3-4am						5							5
4-5am						8		Bridge is	s 1-way e	eastboui	nd		8
5-6am						12			-				12
6-7am						16							16
7-8am	18	0	9	12	9	48							48
8-9am	21	3	8	23	20	75							75
9-10am	20	0	6	20	8	54							54
10-11am	22	0	0	13	9	44							44
11-12am	15	0	4	12	10	41							41
12-1pm	10	0	10	15	17	52							52
1-2pm	14	0	7	9	20	50							50
2-3pm	2	0	11	27	14	54							54
3-4pm	58	0	2	7	5	72							72
4-5pm	64	0	3	7	11	85							85
5-6pm	76	0	7	4	7	94 **							94 **
6-7pm	58	0	4	1	4	67							67
7-8pm						46							46
8-9pm						37							37
9-10pm						31							31
10-11pm						21							21
11-12pm						22							22
Totals						956						0	956
7-10am	59	3	23	55	37	177							177
10am-1pm	47	0	14	40	36	137							137
1-4pm '	74	0	20	43	39	176							176
4-7pm	198	0	14	12	22	246							246
7am-7pm	378	3	71	150	134	736							736

Based on 1989 Classification Survey Data

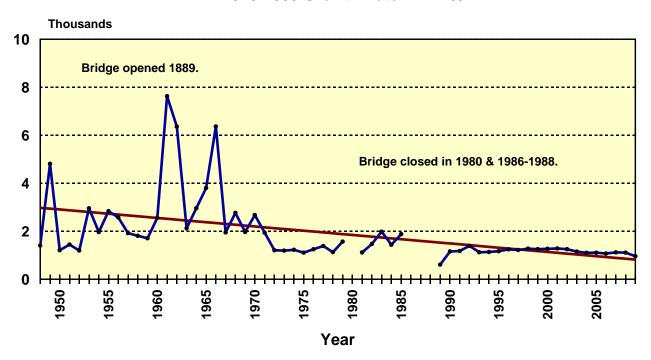
<sup>\*\*</sup> Peak Volumes

### **Hourly Vehicular Volumes** Carroll Street Bridge - 2009



# **Average Daily Traffic Volumes Carroll Street Bridge**

1948-2009 Growth Rate = - 2.1%



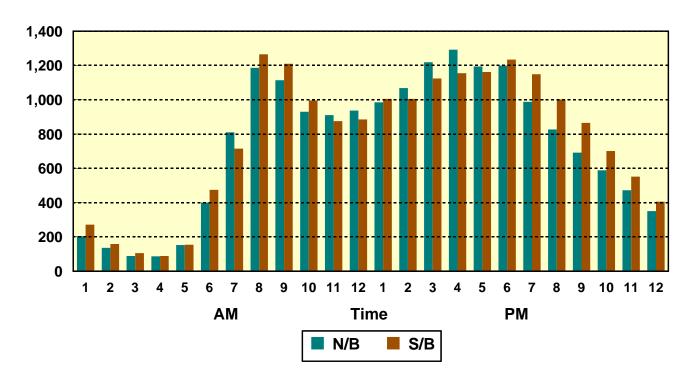
#### Hourly Vehicular Volumes Cropsey Avenue Bridge - 2009

_			North	bound			Southbound						
_		(	Commut	er Co	ommerci	 al		(	Commute	er Co	ommerci	 al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						203						271	474
1-2am						136						158	294
2-3am						88						105	193
3-4am						86						88	174
4-5am						152						154	306
5-6am						400						474	874
6-7am						810						715	1,525
7-8am	956	84	2	50	94	1,186	1,049	112	0	61	43	1,265 **	2,451 **
8-9am	930	61	3	57	63	1,114	1,029	83	2	56	40	1,210	2,324
9-10am	743	49	1	49	88	930	770	92	4	55	75	996	1,926
10-11am	797	45	0	28	40	910	774	26	0	35	40	875	1,785
11-12am	776	27	0	71	63	937	705	26	1	74	79	885	1,822
12-1pm	865	47	0	32	41	985	920	32	0	29	24	1,005	1,990
1-2pm	918	68	0	35	47	1,068	907	35	1	23	39	1,005	2,073
2-3pm	963	93	3	73	87	1,219	931	53	0	63	77	1,124	2,343
3-4pm	1,106	104	1	36	45	1,292 **	993	79	2	26	55	1,155	2,447
4-5pm	1,011	46	0	61	76	1,194	986	56	0	27	93	1,162	2,356
5-6pm	1,041	13	0	66	79	1,199	1,045	22	10	49	108	1,234	2,433
6-7pm	882	22	0	36	48	988	1,048	8	0	17	76	1,149	2,137
7-8pm						827	,					1,002	1,829
8-9pm						691						865	1,556
9-10pm						588						701	1,289
10-11pm						472						551	1,023
11-12pm						350						405	755
Totals						17,825						18,554	36,379
7-10am	2,629	194	6	156	245	3,230	2,848	287	6	172	158	3,471	6,701
10am-1pm	2,438	119	0	131	144	2,832	2,399	84	1	138	143	2,765	5,597
1-4pm	2,987	265	4	144	179	3,579	2,831	167	3	112	171	3,284	6,863
4-7pm	2,934	81	0	163	203	3,381	3,079	86	10	93	277	3,545	6,926
7am-7pm	10,988	659	10	594	771	13,022	11,157	624	20	515	749	13,065	26,087

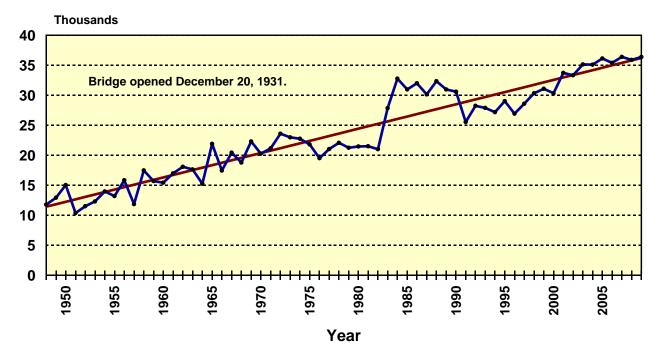
Based on 1989 Classification Survey Data

<sup>\*\*</sup> Peak Volumes

### **Hourly Vehicular Volumes Cropsey Avenue Bridge - 2009**



## **Average Daily Traffic Volumes** Cropsey Avenue Bridge 1948-2009 Growth Rate = 1.9%



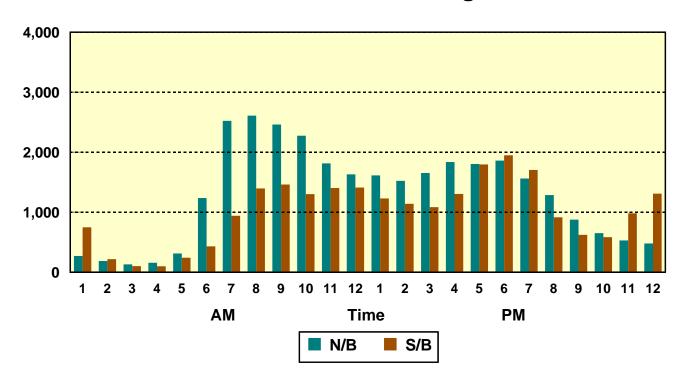
## Hourly Vehicular Volumes Hamilton Avenue Bridge - 2009

_			North	bound			Southbound						
_		(	Commut	er C	ommerc	al			Commut	er C	ommerc	ial	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						270						746	1,016
1-2am						185						216	401
2-3am						129						99	228
3-4am						156						97	253
4-5am						311						240	551
5-6am						1,234						430	1,664
6-7am						2,522						938	3,460
7-8am	2,115	30	39	195	230	2,609 **	495	51	208	426	215	1,395	4,004 **
8-9am	1,939	11	36	216	259	2,461	819	47	79	328	186	1,459	3,920
9-10am	1,751	25	31	234	233	2,274	531	50	92	446	181	1,300	3,574
10-11am	1,553	12	14	120	113	1,812	984	36	58	208	116	1,402	3,214
11-12am	1,252	14	17	176	171	1,630	609	24	142	367	267	1,409	3,039
12-1pm	1,455	8	8	75	66	1,612	935	6	61	134	92	1,228	2,840
1-2pm	1,327	21	8	100	65	1,521	823	12	47	156	100	1,138	2,659
2-3pm	1,225	43	18	190	176	1,652	458	12	106	271	236	1,083	2,735
3-4pm	1,555	59	9	113	99	1,835	1,045	14	61	99	84	1,303	3,138
4-5pm	1,435	48	13	149	158	1,803	1,302	12	133	172	176	1,795	3,598
5-6pm	1,534	15	14	162	133	1,858	1,555	8	99	106	178	1,946 **	3,804
6-7pm	1,341	6	13	73	126	1,559	1,409	9	100	76	109	1,703	3,262
7-8pm						1,284						913	2,197
8-9pm						874						621	1,495
9-10pm						650						583	1,233
10-11pm						528						980	1,508
11-12pm						477						1,307	1,784
Totals						31,246						24,331	55,577
7-10am	5,805	66	106	645	722	7,344	1,845	148	379	1,200	582	4,154	11,498
10am-1pm	4,260	34	39	371	350	5,054	2,528	66	261	709	475	4,039	9,093
1-4pm	4,107	123	35	403	340	5,008	2,326	38	214	526	420	3,524	8,532
4-7pm	4,310	69	40	384	417	5,220	4,266	29	332	354	463	5,444	10,664
7am-7pm	18,482	292	220	1.803	1.829	22,626	10.965	281	1.186	2.789	1.940	17.161	39,787

Based on 1989 Classification Survey Data

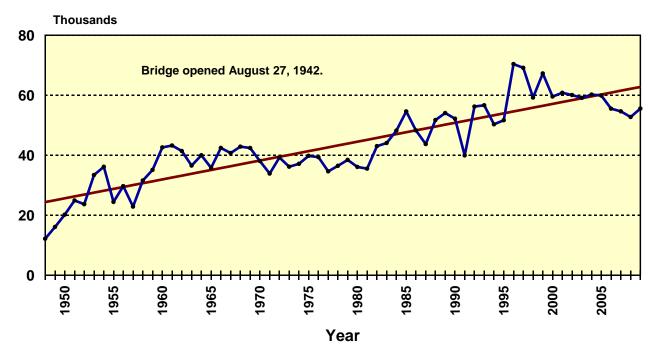
<sup>\*\*</sup> Peak Volumes

# **Hourly Vehicular Volumes Hamilton Avenue Bridge - 2009**



# **Average Daily Traffic Volumes Hamilton Avenue Bridge**

1948-2009 Growth Rate = 1.6%



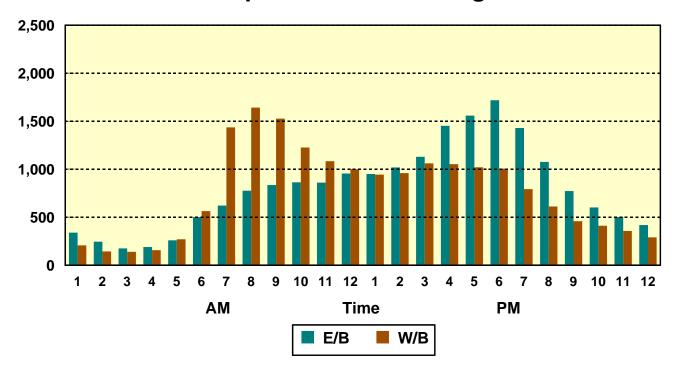
## Hourly Vehicular Volumes Metropolitan Avenue Bridge - 2009

Eastbound Westbound Commercial Commercial 2-Way Commuter Commuter **Buses** Totals Buses Totals **Totals** Autos Vans Trucks Vans Autos Vans Trucks Vans 338 12-1am 206 544 1-2am 244 143 387 ------2-3am 174 138 312 3-4am 188 156 344 4-5am 258 269 527 500 562 1,062 5-6am ---620 6-7am 1,436 2,056 ------------------------7-8am 580 15 125 775 1,213 35 232 93 1,641 2.416 15 40 68 8-9am 537 16 22 173 86 834 1,073 17 49 273 1,527 2,361 115 9-10am 444 38 23 255 102 862 742 35 40 301 107 1.225 2.087 10-11am 703 8 99 38 859 897 20 27 103 35 1.082 1.941 11 27 954 627 999 1,953 11-12am 561 16 268 82 17 45 231 79 1,891 780 16 103 32 949 766 15 103 942 12-1pm 18 24 34 827 797 20 37 958 1,976 1-2pm 28 9 103 51 1,018 21 83 781 204 97 1,060 2-3pm 14 32 1,128 728 18 31 195 88 2,188 3-4pm 1,217 16 31 128 59 1,451 863 21 17 101 50 1,052 2,503 4-5pm 1,151 38 64 176 129 1,558 777 13 27 136 66 1,019 2,577 1,304 1,718 1,005 2,723 5-6pm 16 81 177 140 785 9 52 86 73 6-7pm 1.134 13 62 126 94 1,429 661 11 37 43 39 791 2,220 7-8pm 1,075 611 1,686 ---8-9pm 771 457 1.228 ---------601 410 1.011 9-10pm 10-11pm 501 356 857 ---418 289 707 11-12pm ------------**Totals** 19,223 18,334 37,557 7-10am 2,471 1,561 69 60 553 228 3,028 87 157 806 315 4,393 6,864 2,044 2,762 5,785 10am-1pm 40 56 470 152 2,290 52 96 437 148 3,023 2,388 1-4pm 2,825 58 72 435 207 3,597 60 68 379 175 3,070 6,667 4-7pm 3,589 67 207 479 363 4,705 2,223 33 116 265 178 2,815 7,520 7am-7pm 10.019 234 395 1.937 950 13.535 9.929 232 437 1.887 816 13.301 26.836

Based on 1989 Classification Survey Data

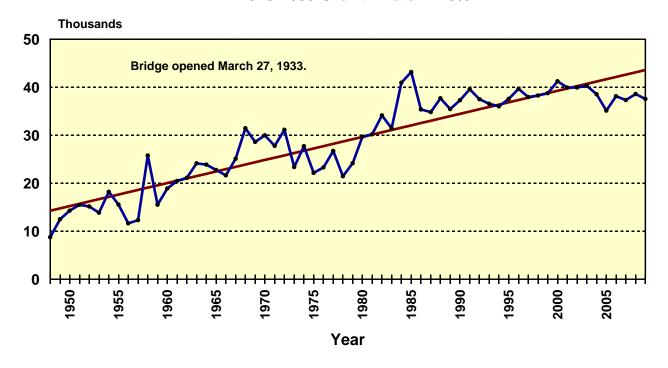
<sup>\*\*</sup> Peak Volumes

### Hourly Vehicular Volumes Metropolitan Avenue Bridge - 2009



# **Average Daily Traffic Volumes Metropolitan Avenue Bridge**

1948-2009 Growth Rate = 1.8%

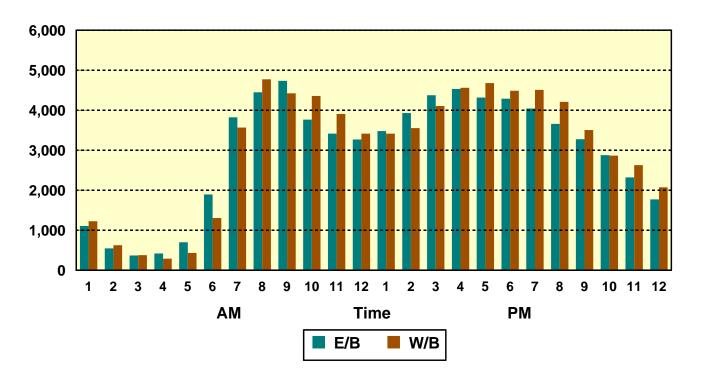


#### Hourly Vehicular Volumes Mill Basin Bridge - 2009

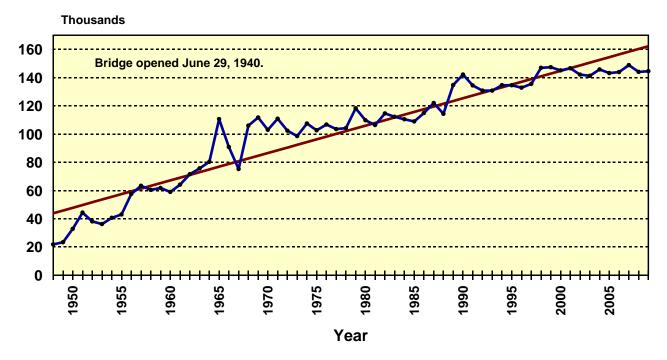
Eastbound	Westbound

_			Lusta	ourra					77 O O CK	ound			
		(	Commut	er C	ommerci	al		(	Commut	er Co	ommercia	al	2-Way
	Autos	Buses	Vans		Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						1,104						1,223	2,327
1-2am						545						623	1,168
2-3am						366						374	740
3-4am						416						286	702
4-5am						696						430	1,126
5-6am						1,891						1,303	3,194
6-7am						3,820						3,566	7,386
7-8am	4,138	58	21	5	225	4,447	4,443	20	0	139	169	4,771 **	9,218 **
8-9am	4,478	18	16	17	204	4,733 **	4,045	52	0	117	206	4,420	9,153
9-10am	3,467	9	17	23	248	3,764	3,954	77	1	120	204	4,356	8,120
10-11am	3,289	8	11	14	90	3,412	3,777	19	0	40	69	3,905	7,317
11-12am	2,890	4	63	30	281	3,268	3,084	0	5	163	162	3,414	6,682
12-1pm	3,321	5	21	15	116	3,478	3,215	0	0	75	123	3,413	6,891
1-2pm	3,677	101	15	13	122	3,928	3,424	10	0	38	79	3,551	7,479
2-3pm	3,965	41	27	16	324	4,373	3,803	7	0	116	177	4,103	8,476
3-4pm	4,327	25	16	6	156	4,530	4,281	77	0	84	117	4,559	9,089
4-5pm	4,018	13	38	7	240	4,316	4,296	43	2	134	203	4,678	8,994
5-6pm	4,053	6	18	14	196	4,287	4,151	31	3	134	166	4,485	8,772
6-7pm	3,822	4	15	5	195	4,041	4,228	3	1	112	163	4,507	8,548
7-8pm						3,657						4,207	7,864
8-9pm						3,274						3,503	6,777
9-10pm						2,874						2,860	5,734
10-11pm						2,317						2,625	4,942
11-12pm						1,768						2,069	3,837
Totals						71,305						73,231	144,536
7-10am	12,083	85	54	45	677	12,944	12,442	149	1	376	579	13,547	26,491
10am-1pm	9,500	17	95	59	487	10,158	10,076	19	5	278	354	10,732	20,890
1-4pm	11,969	167	58	35	602	12,831	11,508	94	0	238	373	12,213	25,044
4-7pm	11,893	23	71	26	631	12,644	12,675	77	6	380	532	13,670	26,314
7am-7pm	45,445	292	278	165	2,397	48,577	46,701	339	12	1,272	1,838	50,162	98,739

### **Hourly Vehicular Volumes** Mill Basin Bridge - 2009



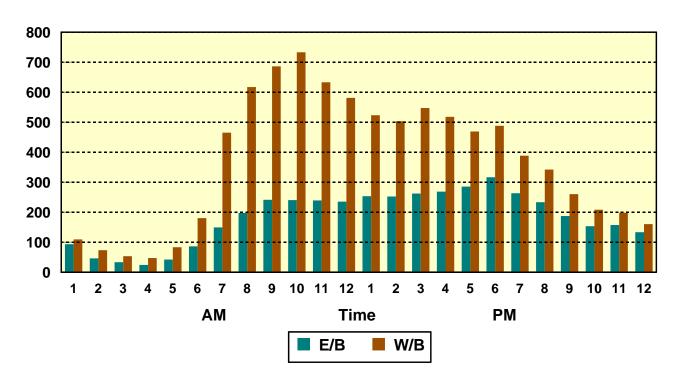
## **Average Daily Traffic Volumes** Mill Basin Bridge 1948-2009 Growth Rate = 2.2%



## **Hourly Vehicular Volumes Ninth Street Bridge - 2009**

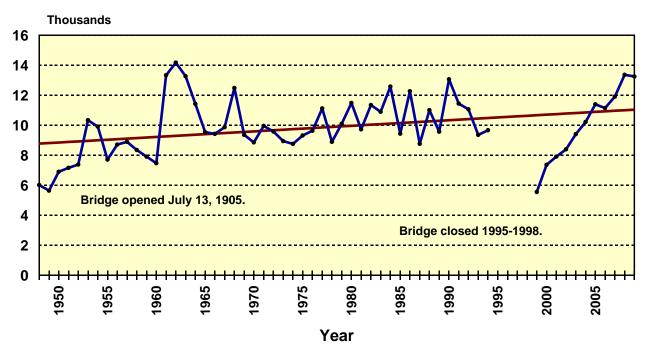
_			Eastb	ound					We	stbound			
		(	Commut	er Co	ommercia	al		(	Commut	er Co	ommercia	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						93						109	202
1-2am						46						73	119
2-3am						33						53	86
3-4am						24						47	71
4-5am						42						83	125
5-6am						86						180	266
6-7am						149						465	614
7-8am	144	20	5	17	11	197	499	13	0	57	48	617	814
8-9am	149	21	9	47	15	241	574	6	0	59	47	686	927
9-10am	152	18	4	45	21	240	616	15	0	63	39	733 **	973 **
10-11am	186	18	4	20	11	239	571	14	0	26	22	633	872
11-12am	157	14	10	44	10	235	365	40	0	121	55	581	816
12-1pm	194	12	11	25	11	253	345	36	0	96	46	523	776
1-2pm	121	15	16	84	16	252	380	9	50	32	32	503	755
2-3pm	161	17	12	52	20	262	423	24	20	46	34	547	809
3-4pm	217	13	2	21	15	268	434	25	0	37	22	518	786
4-5pm	215	12	6	31	21	285	362	16	0	56	35	469	754
5-6pm	244	20	1	37	14	316 **	412	28	0	28	20	488	804
6-7pm	180	17	1	47	18	263	351	11	0	16	10	388	651
7-8pm						233						342	575
8-9pm						187						260	447
9-10pm						153						208	361
10-11pm						157						198	355
11-12pm						133						160	293
Totals						4,387						8,864	13,251
7-10am	445	59	18	109	47	678	1,689	34	0	179	134	2,036	2,714
10am-1pm	537	44	25	89	32	727	1,281	90	0	243	123	1,737	2,464
1-4pm	499	45	30	157	51	782	1,237	58	70	115	88	1,568	2,350
4-7pm	639	49	8	115	53	864	1,125	55	0	100	65	1,345	2,209
7am-7pm	2,120	197	81	470	183	3,051	5,332	237	70	637	410	6,686	9,737

# **Hourly Vehicular Volumes Ninth Street Bridge - 2009**



# Average Daily Traffic Volumes Ninth Street Bridge

1948-2009 Growth Rate = 0.4%

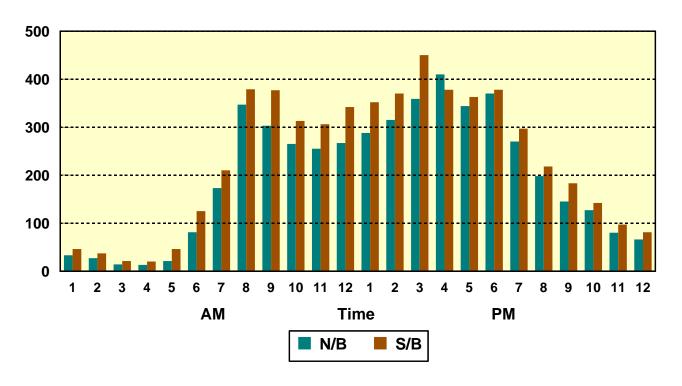


## Hourly Vehicular Volumes Stillwell Avenue Bridge - 2009

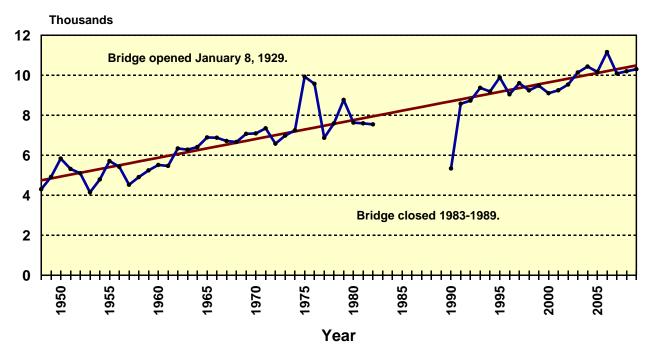
Northbound Southbound

_			Norun	Journa									
		(	Commut	er Co	ommercia	l		(	Commute	er Co	ommercial	I	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						33						46	79
1-2am						27						37	64
2-3am						14						21	35
3-4am						13						20	33
4-5am						21						46	67
5-6am						81						125	206
6-7am						173						210	383
7-8am	276	26	0	45	0	347	294	64	0	21	0	379	726
8-9am	230	31	0	42	0	303	312	41	0	24	0	377	680
9-10am	198	31	0	36	0	265	204	19	0	90	0	313	578
10-11am	182	28	0	45	0	255	220	24	0	62	0	306	561
11-12am	200	11	0	56	0	267	274	17	0	51	0	342	609
12-1pm	202	13	0	73	0	288	283	20	0	49	0	352	640
1-2pm	212	24	0	79	0	315	269	23	0	78	0	370	685
2-3pm	257	31	0	71	0	359	294	34	0	122	0	450 **	809 **
3-4pm	317	43	0	50	0	410 **	308	20	0	50	0	378	788
4-5pm	265	36	0	43	0	344	294	22	0	47	0	363	707
5-6pm	323	25	0	22	0	370	322	20	0	36	0	378	748
6-7pm	233	25	0	12	0	270	261	24	0	12	0	297	567
7-8pm						198						218	416
8-9pm						145						183	328
9-10pm						127						142	269
10-11pm						80						97	177
11-12pm						66						81	147
Totals						4,771						5,531	10,302
7-10am	704	88	0	123	0	915	810	124	0	135	0	1,069	1,984
10am-1pm	584	52	0	174	0	810	777	61	0	162	0	1,000	1,810
1-4pm	786	98	0	200	0	1,084	871	77	0	250	0	1,198	2,282
4-7pm	821	86	0	77	0	984	877	66	0	95	0	1,038	2,022
7am-7pm	2,895	324	0	574	0	3,793	3,335	328	0	642	0	4,305	8,098

### **Hourly Vehicular Volumes** Stillwell Avenue Bridge - 2009



## **Average Daily Traffic Volumes** Stillwell Avenue Bridge 1948-2009 Growth Rate = 1.3%



#### **Hourly Vehicular Volumes** Third Avenue Bridge - 2009

Northbound Southbound Commercial 2-Way Commuter Commercial Commuter **Buses** Trucks **Buses** Trucks **Totals** Vans Vans Totals Autos Vans Vans **Totals** Autos 12-1am 1-2am 2-3am ---3-4am ---------4-5am 5-6am 6-7am ---------841 \*\* 7-8am 1,118 8-9am 1,169 1,129 9-10am 10-11am 1,020 11-12am 1,032 12-1pm 1.019 1-2pm 2-3pm 1,102 657 \*\* 1,374 \*\* 3-4pm 4-5pm 1,216 657 \*\* 5-6pm 1,220 6-7pm 1.002 7-8pm ---8-9pm ---9-10pm ---10-11pm ------11-12pm **Totals** 9,442 8,145 17,587 2,412 7-10am 1.813 1.004 3.416 1.425 1.714 1.119 1.357 3.071 10am-1pm 1,364 1,398 1-4pm 1,795 1,664 3,459 4-7pm 1,259 1,506 1,627 1,932 3,438 5,957

7,427

5,861

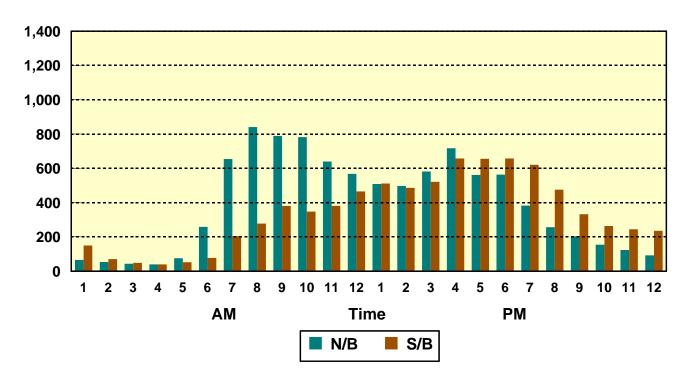
7am-7pm

13,384

4.868

Based on 1989 Classification Survey Data

### **Hourly Vehicular Volumes** Third Avenue Bridge (Brooklyn) - 2009



## **Average Daily Traffic Volumes** Third Avenue Bridge (Brooklyn) 1948-2009 Growth Rate = 0.7%

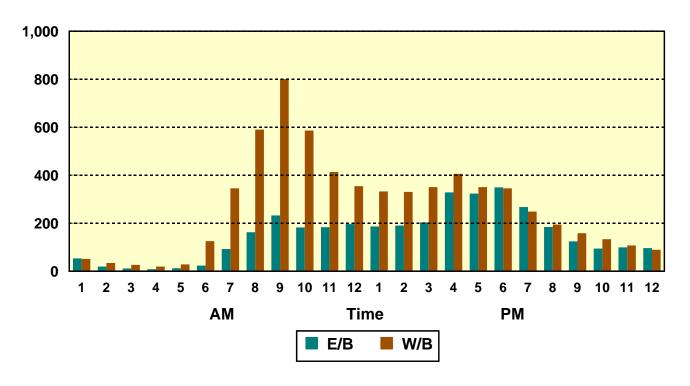


#### Hourly Vehicular Volumes Third Street Bridge - 2009

Eastbound Westbound Commercial 2-Way Commercial Commuter Commuter **Buses** Trucks **Totals Buses** Trucks **Totals** Vans Vans Autos Vans Vans **Totals** Autos 12-1am 1-2am 2-3am ------3-4am ---4-5am 5-6am 6-7am ------------7-8am 1,032 \*\* 8-9am 9-10am 10-11am 11-12am 12-1pm 1-2pm 2-3pm 3-4pm 4-5pm 349 \*\* 5-6pm 6-7pm 7-8pm ---8-9pm ---9-10pm 10-11pm 11-12pm **Totals** 3,616 6,412 10,028 7-10am 1,686 1.976 2.552 10am-1pm 1.099 1.664 1-4pm 1,085 1,806 4-7pm 1,882 7am-7pm 2,488 2.801 4.177 5.103 7,904

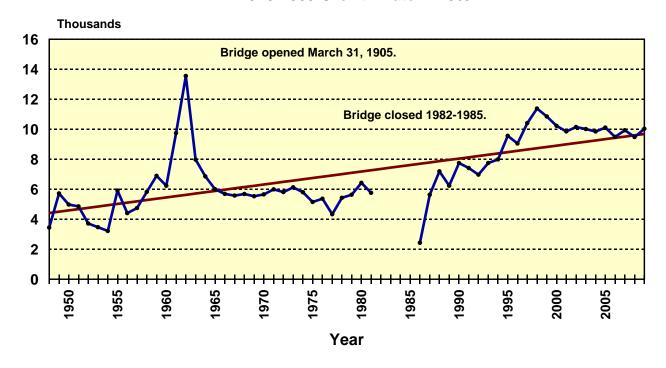
Based on 1989 Classification Survey Data

# **Hourly Vehicular Volumes Third Street Bridge - 2009**



# **Average Daily Traffic Volumes**Third Street Bridge

1948-2009 Growth Rate = 1.3%



## Hourly Vehicular Volumes Union Street Bridge - 2009

_			Eastb	ound			Westbound
_		(	Commute	er Co	ommercia	ıl	Commuter Commercial Grand
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos Buses Vans Trucks Vans Totals Totals
12-1am						71	71
1-2am						39	39
2-3am						23	23
3-4am						20	20
4-5am						24	Bridge is 1-way eastbound 24
5-6am						44	44
6-7am						88	88
7-8am	125	7	0	12	13	157	157
8-9am	176	8	0	24	22	230	230
9-10am	158	4	0	17	33	212	212
10-11am	221	5	0	8	11	245	245
11-12am	204	2	0	23	25	254	254
12-1pm	224	1	0	10	21	256	256
1-2pm	225	5	0	14	14	258	258
2-3pm	224	4	0	41	30	299	299
3-4pm	303	3	0	15	12	333	333
4-5pm	311	2	0	20	26	359 **	359
5-6pm	326	1	0	6	17	350	350
6-7pm	277	1	0	15	20	313	313
7-8pm						246	246
8-9pm						197	197
9-10pm						160	160
10-11pm						139	139
11-12pm						124	124
Totals						4,441	4,441

1,022

3,266

2,774

7-10am

1-4pm

4-7pm

10am-1pm

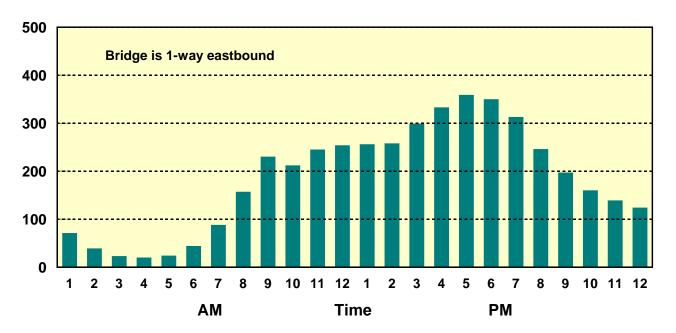
7am-7pm

---

1,022

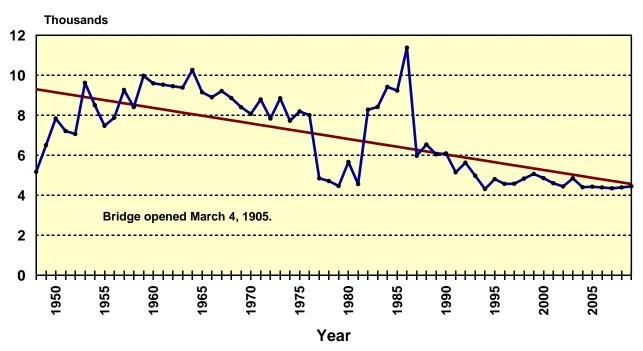
3,266

### Hourly Vehicular Volumes Union Street Bridge - 2009



# **Average Daily Traffic Volumes Union Street Bridge**

1948-2009 Growth Rate = - 1.2%

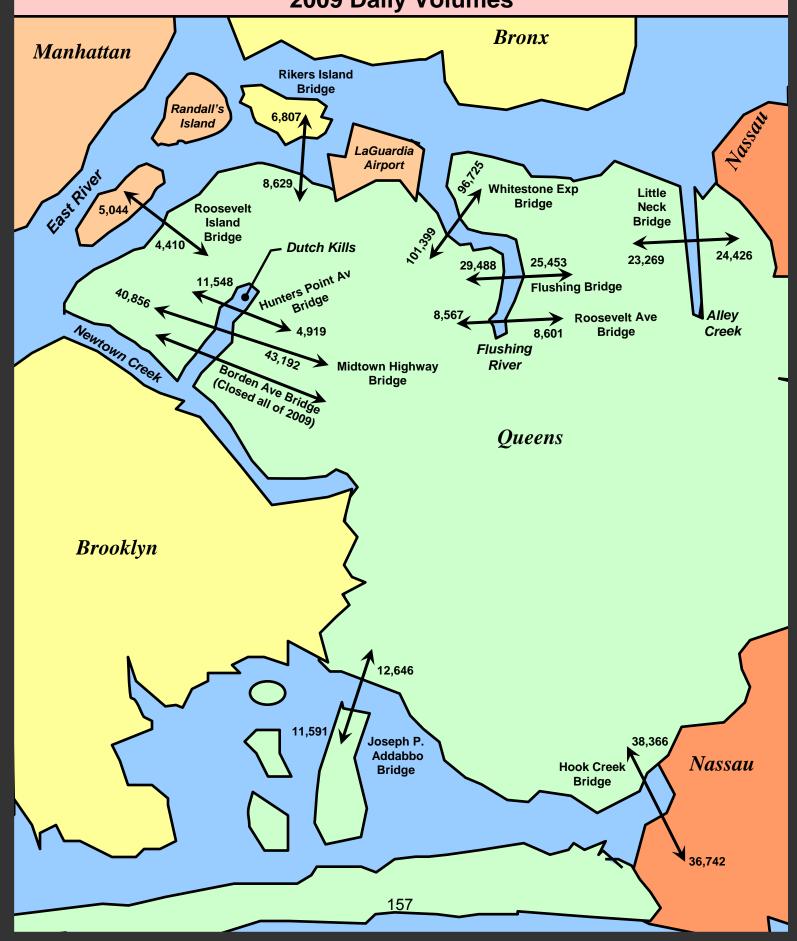


## Queens Bridges



### **QUEENS BRIDGES**

2009 Daily Volumes



## Queens Bridges ~ Average Daily Traffic Volumes 1948 - 2009

Year	Borden Avenue Bridge	Flushing Bridge	Hook Creek Bridge	Hunters Point Bridge	Joseph P. Addabbo Bridge *	Little Neck Bridge
1948	4,846	26,276	9,620	5,500	8,521	22,255
1949	11,052	29,949	14,969	9,482	8,855	21,190
1950 1951	6,222 5,930	30,836 50,918	18,240	6,751	7,361	19,549
1951	6,155	40,589	16,064 16,856	6,000 5,688	9,868 8,952	30,873 31,544
1953	7,473	46,952	17,218	6,575	10,941	29,266
1954	5,997	39,837	23,389	7,611	10,661	35,614
1955	6,793	34,201	19,481	2,984	11,315	30,428
1956	7,612	47,985	20,796	6,267	10,216	43,761
1957	7,759	53,836	18,691	7,018	6,192	38,387
1958	7,833	43,075	28,031	5,735	12,763	30,029
1959	9,992	28,616	30,663	7,603	13,453	27,072
1960 1961	9,739 9,030	37,833 36,383	33,549 34,598	7,753 7,337	14,923 13,165	23,718 24,851
1962	8,860	35,370	36,590	7,150	15,900	26,670
1963	9,480	46,210	37,450	7,170	19,730	30,040
1964	16,530	40,220	38,620	5,110	18,020	27,980
1965	8,026	40,484	35,185	6,652	20,629	33,504
1966	9,461	42,613	38,742	6,882	18,890	33,383
1967	9,348	32,479	38,995	6,206	17,748	37,097
1968	8,761	38,664	44,000	6,601	18,258	36,281
1969 1970	11,083 10,318	47,945 47,311	51,067 44,588	7,073 6,544	18,957 20,937	38,901 42,606
1971	11,721	48,238	44,185	7,072	22,426	44,528
1972	11,201	50,499	45,365	6,825	20,342	38,604
1973	11,276	54,597	50,681	8,515	17,885	44,193
1974	12,272	48,909	53,120	5,899	19,541	39,506
1975	17,135	53,431	48,089	Closed	18,971	37,741
1976	17,883	47,569	55,722	Closed	15,231	39,382
1977 1978	17,072 16,769	49,420 48,491	44,370 47,286	Closed Closed	16,228 18,456	43,122 42,052
1979	16,055	35,518	52,650	Closed	19,004	46,197
1980	15,068	48,856	45,169	Closed	19,156	38,735
1981	18,630	42,040	50,566	Closed	15,931	41,135
1982	21,793	54,661	52,193	Closed	15,931	41,470
1983	22,123	51,237	54,087	Closed	15,392	44,436
1984 1985	18,724 18,723	54,323	50,681	4,044	16,323	47,623
1986	14,714	64,382 64,371	50,458 56,735	4,755 5,870	21,619 18,480	42,737 44,125
1987	15.067	62,811	57,634	5,938	16,620	45,069
1988	14,907	62,956	61,083	6,549	17,032	43,826
1989	14,698	61,756	63,406	6,746	17,242	36,085
1990	18,430	61,248	57,660	10,849	18,115	28,746
1991	16,122	58,189	57,442	10,279	19,267	42,895
1992	13,146	61,306 54,005	64,502 60,517	10,997	19,666	48,388
1993 1994	15,074 14,412	54,005 58,837	60,517 64,545	8,138 6,804	17,699 16,516	48,906 48,314
1995	14,074	59,543	66,517	7,594	17,388	50,034
1996	16,661	61,211	66,151	7,781	17,519	49,640
1997	14,293	59,792	63,618	7,275	18,991	51,718
1998	15,182	60,864	66,123	7,024	19,114	52,876
1999	14,156	63,348	70,555	8,509	19,337	52,846
2000	15,063	66,243	74,130	8,475	20,673	49,504
2001	15,780 15,788	62,364 64.301	72,027 69,963	8,261 7,822	20,785 22,779	53,423 58 520
2002 2003	16,035	64,301 62,644	69,963 72,562	7,622 7,412	23,958	58,529 60,033
2003	15,765	62,644 61,685	72,562 73,932	6,885	23,956 21,855	54,165
2005	16,362	62,692	73,344	7,390	24,035	52,475
2006	16,157	61,143	73,767	7,262	23,254	48,345
2007	15,747	57,437	77,759	7,705	24,433	48,208
2008	15,002	56,179	75,460	7,165	22,346	45,405
2009	Closed	54,941	75,108	16,467	24,237	47,695
		•	•	•	•	•

<sup>\*</sup> North Channel Bridge.

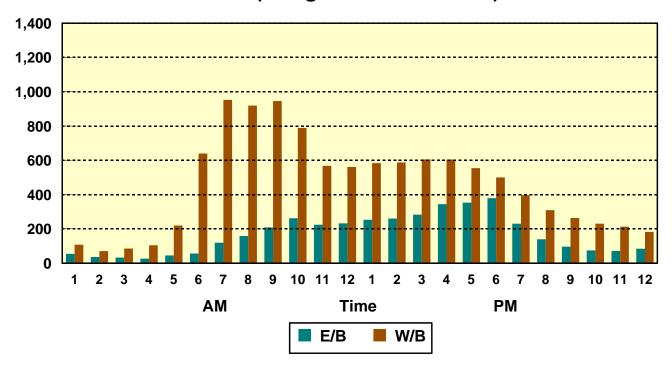
## Queens Bridges (cont'd) ~ Average Daily Traffic Volumes 1948 - 2009

Year	Midtown Highway Bridge	Rikers Island Bridge	Rooseveli Avenue Bridge	Rooseveli Island Bridge	Whitestone Expressway Bridge	Totals
1948	28,754	Bridge	14,044	Bridge	27,290	147,106
1949	27,963	opened	18,907	opened	31,558	173,925
1950	32,429	11/22/1966	20,451	05/18/1955	38,771	180,610
1951	31,812	,,	9,330		39,368	200,163
1952	35,088		23,596		44,219	212,687
1953	34,513		20,473		47,455	220,866
1954	30,495		18,007	0.444	50,089	221,700
1955 1956	39,650 49,944		20,123 17,987	2,144 2,689	51,577 57,982	218,696
1957	49,944 47,481		20,984	2,009 2,157	58,606	265,239 261,111
1958	45,593		19,653	3,137	60,687	256,536
1959	55,665		29,616	2,760	58,761	264,201
1960	62,051		18,153	3,014	48,615	259,348
1961	62,520		21,475	2,947	53,542	265,848
1962	57,600		24,440	3,220	41,340	257,140
1963	57,770		29,500	3,220	47,620	288,190
1964 1965	60,610 60,973		18,110 20,143	3,440 3,791	83,450 81,201	312,090 310,588
1966	68,752		18,728	4,133	71,795	313,379
1967	72,962	1,973	21,493	5,973	110,363	354,637
1968	69,058	2,809	21,352	4,987	136,741	387,512
1969	62,712	2,983	19,588	4,675	122,162	387,146
1970	84,844	3,543	21,656	6,201	111,833	400,381
1971	75,706	3,594	21,587	6,182	117,614	402,853
1972 1973	65,481 73,292	3,680 4,850	20,754 20,910	7,007 7,944	118,050 113,395	387,808 407,538
1974	68,127	4,794	19,545	8,656	123,204	407,538
1975	67,933	4,784	19,256	6,417	116,750	390,507
1976	64,438	4,891	17,351	7,031	118,164	387,662
1977	60,501	4,423	18,776	7,809	125,682	387,403
1978	85,223	4,728	19,058	6,851	121,123	410,037
1979	70,893	5,491	19,980	6,838	121,123	393,749
1980 1981	74,334 100,182	6,066 6,085	19,090 17,911	7,501 8,383	110,606 132,023	384,581 432,886
1982	100,182	6,946	16,944	8,064	120,944	439,128
1983	88,132	7,807	15,051	8,940	139,721	446,926
1984	89,000	9,487	20,292	8,787	129,834	449,118
1985	73,315	6,019	25,548	8,190	134,650	450,396
1986	71,938	8,056	23,219	9,199	139,464	456,171
1987 1988	70,079 71.761	12,386 12,070	19,567 22,567	8,754 10,207	153,040 150,777	466,965 473,735
1989	65,160	12,070	24,440	9,501	151,292	461,819
1990	66,269	11,195	23,285	9,275	145,247	450,319
1991	74,328	12,491	23,466	10,236	141,824	466,539
1992	72,144	15,579	23,687	9,751	145,669	484,835
1993	64,368	14,206	28,012	9,830	146,440	467,195
1994	66,633	12,494 12,213	24,631	9,638	155,969	478,793
1995 1996	67,810 69,394	11,906	22,758 22,543	9,382 9,489	147,029 163,578	474,342 495,873
1997	69,273	12,461	24,566	9,302	172,034	503,323
1998	70,486	15,672	22,994	10,048	182,516	522,899
1999	72,749	14,240	23,784	9,491	192,099	541,114
2000	79,662	13,150	22,749	9,198	192,482	551,329
2001	82,431	14,503	22,856	9,655	189,031	551,116
2002	81,392	13,447	22,235	9,444	188,758	554,458
2003	84,243	16,966	20,281	9,203	188,770	562,107
2004	82,732	14,979	19,652	9,100	188,869	549,619
2005	89,559	13,811	19,360	9,929	191,563	560,520
2006	83,379	13,146	19,420	9,685	197,084	552,642
2007	85,997 84.760	13,496 15,621	18,975	9,895 10,161	202,410	562,062 544,080
2008 2009	84,769 84,048	15,621 15,436	18,859 17,168	10,161 9,454	193,122 198,124	544,089 542,678
2009	04,040	15,436	17,100	3,40 <del>4</del>	130,124	542,678

#### Hourly Vehicular Volumes Borden Avenue Bridge - 2009

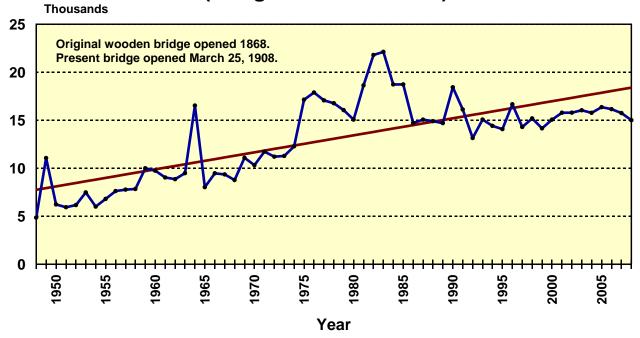
			Easth	oound			Westbound						
	Autos		Commut Vans	er Co Trucks	ommercia Vans	l Totals	Autos	Buses	Commute Vans	er Co Trucks	ommercia Vans	al Totals	2-Way Totals
12-1am													
1-2am													
2-3am		<b>.</b>											
3-4am		Bridge cl	osed in l	both direct	tions for								
4-5am 5-6am		reconstru	iction thi	roughout 2	2009.								
6-7am													
7-8am													
8-9am													
9-10am													
10-11am													
11-12am													
12-1pm													
1-2pm													
2-3pm 3-4pm													
4-5pm													
5-6pm													
6-7pm													
7-8pm													
8-9pm													
9-10pm													
10-11pm													
11-12pm													
Totals													
7-10am													
10am-1pm													
1-4pm													
4-7pm 7am-7pm													
ram-rpm													

#### Hourly Vehicular Volumes Borden Avenue Bridge - 2008 (Bridge Closed All 2009)



# Average Daily Traffic Volumes Borden Avenue Bridge

1948-2008 Growth Rate = 1.5% (Bridge Closed All 2009)



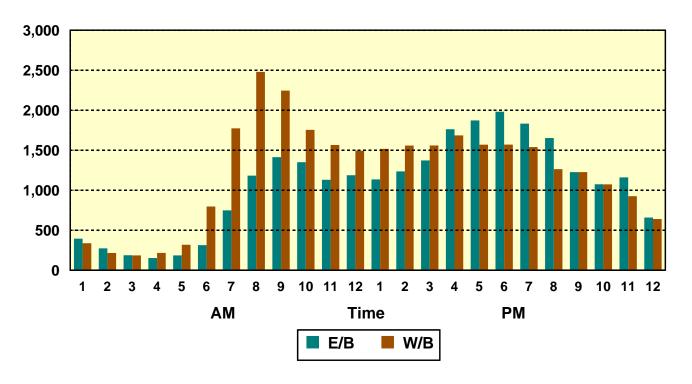
## Hourly Vehicular Volumes Flushing Bridge - 2009

_			Eastb	ound									
_		(	Commut	er C	Commerci	al		(	Commute	er C	ommerci	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						393						336	729
1-2am						272						214	486
2-3am						186						184	370
3-4am						151						215	366
4-5am						184						317	501
5-6am						312						795	1,107
6-7am						747						1,773	2,520
7-8am	940	41	7	81	112	1,181	2,086	13	53	99	228	2,479 **	3,660 **
8-9am	1,134	27	17	109	125	1,412	1,820	22	45	119	239	2,245	3,657
9-10am	1,104	12	28	119	86	1,349	1,334	9	53	136	222	1,754	3,103
10-11am	990	13	14	51	61	1,129	1,388	12	14	70	81	1,565	2,694
11-12am	904	6	35	89	152	1,186	1,208	2	23	113	146	1,492	2,678
12-1pm	1,006	5	18	41	64	1,134	1,349	6	6	70	86	1,517	2,651
1-2pm	1,059	15	12	48	100	1,234	1,420	13	21	64	40	1,558	2,792
2-3pm	966	21	25	103	256	1,371	1,297	20	52	100	90	1,559	2,930
3-4pm	1,514	18	16	47	167	1,762	1,542	29	21	50	43	1,685	3,447
4-5pm	1,504	13	28	59	268	1,872	1,387	11	30	56	85	1,569	3,441
5-6pm	1,661	13	15	48	243	1,980 **	1,379	6	45	51	89	1,570	3,550
6-7pm	1,588	8	9	34	193	1,832	1,428	8	15	37	51	1,539	3,371
7-8pm	, 					1,652	,					1,262	2,914
8-9pm						1,225						1,225	2,450
9-10pm						1,073						1,072	2,145
10-11pm						1,159						924	2,083
11-12pm						657						639	1,296
Totals						25,453						29,488	54,941
7-10am	3,178	80	52	309	323	3,942	5,240	44	151	354	689	6,478	10,420
10am-1pm	2,900	24	67	181	277	3,449	3,945	20	43	253	313	4,574	8,023
1-4pm	3,539	54	53	198	523	4,367	4,259	62	94	214	173	4,802	9,169
4-7pm	4,753	34	52	141	704	5,684	4,194	25	90	144	225	4,678	10,362
7am-7pm	14,370	192	224	829	1,827	17,442	17,638	151	378	965	1,400	20,532	37,974

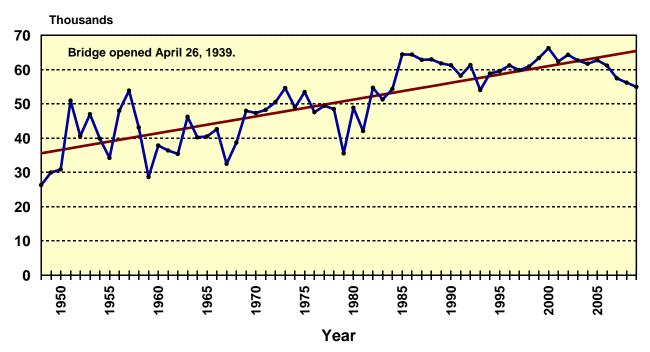
Based on 1989 Classification Survey Data

<sup>\*\*</sup> Peak Volumes

### **Hourly Vehicular Volumes** Flushing Bridge - 2009



## **Average Daily Traffic Volumes** Flushing Bridge 1948-2009 Growth Rate = 1.0%



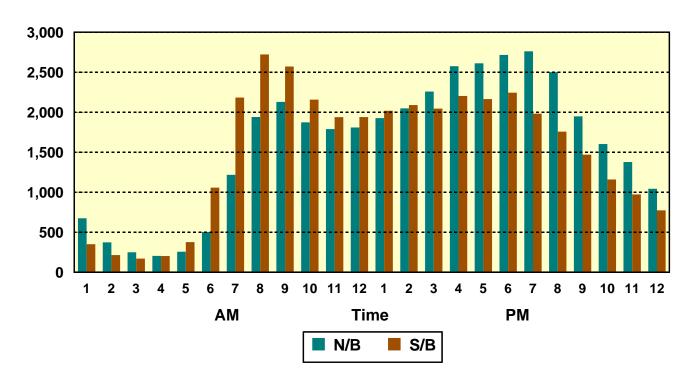
#### Hourly Vehicular Volumes Hook Creek Bridge - 2009

_			North	bound			Southbound							
-	Commuter Commercial							2-Way						
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals	
12-1am						673						349	1,022	
1-2am						372						213	585	
2-3am						248						169	417	
3-4am						203						201	404	
4-5am						255						375	630	
5-6am						501						1,056	1,557	
6-7am						1,216						2,183	3,399	
7-8am	1,797	13	43	56	31	1,940	2,167	19	196	196	144	2,722 **	4,662	
8-9am	1,885	15	70	101	58	2,129	2,108	11	160	185	106	2,570	4,699	
9-10am	1,626	6	56	125	60	1,873	1,820	8	91	145	93	2,157	4,030	
10-11am	1,687	2	12	48	40	1,789	1,808	3	13	62	52	1,938	3,727	
11-12am	1,510	9	40	171	79	1,809	1,724	2	14	110	89	1,939	3,748	
12-1pm	1,814	9	25	57	20	1,925	1,934	0	12	45	27	2,018	3,943	
1-2pm	1,869	13	42	72	52	2,048	1,842	6	64	125	52	2,089	4,137	
2-3pm	2,022	17	50	89	80	2,258	1,852	3	30	87	73	2,045	4,303	
3-4pm	2,473	40	13	31	18	2,575	2,111	3	17	33	39	2,203	4,778	
4-5pm	2,473	13	31	52	41	2,610	2,024	3	35	47	55	2,164	4,774	
5-6pm	2,503	15	47	48	102	2,715	2,090	6	50	34	64	2,244	4,959 **	
6-7pm	2,625	16	59	33	27	2,760 **	1,892	3	39	28	20	1,982	4,742	
7-8pm						2,500						1,756	4,256	
8-9pm						1,948						1,468	3,416	
9-10pm						1,601						1,158	2,759	
10-11pm						1,376						971	2,347	
11-12pm						1,042						772	1,814	
Totals						38,366						36,742	75,108	
7-10am	5,308	34	169	282	149	5,942	6,095	38	447	526	343	7,449	13,391	
10am-1pm	5,011	20	77	276	139	5,523	5,466	5	39	217	168	5,895	11,418	
1-4pm	6,364	70	105	192	150	6,881	5,805	12	111	245	164	6,337	13,218	
4-7pm	7,601	44	137	133	170	8,085	6,006	12	124	109	139	6,390	14,475	
7am-7pm	24,284	168	488	883	608	26,431	23,372	67	721	1,097	814	26,071	52,502	

Based on 1989 Classification Survey Data

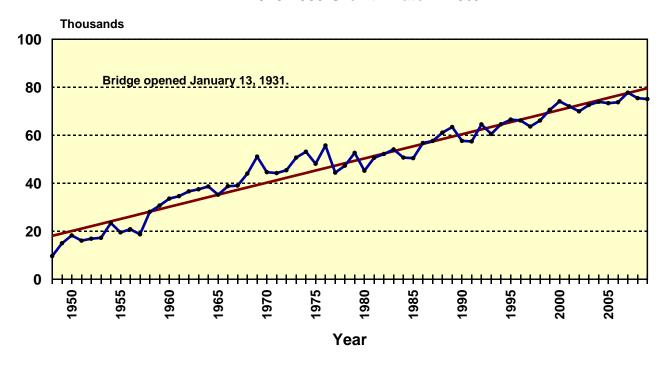
<sup>\*\*</sup> Peak Volumes

### **Hourly Vehicular Volumes Hook Creek Bridge - 2009**



# **Average Daily Traffic Volumes Hook Creek Bridge**

1948-2009 Growth Rate = 2.5%



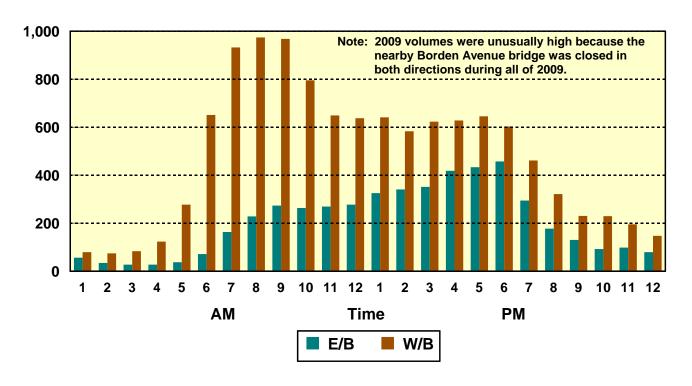
#### Hourly Vehicular Volumes Hunters Point Bridge - 2009

Volumes unusually high because the nearby Borden Avenue Bridge was closed in both directions throughout 2009.

Eastbound Westbound Commuter Commercial Commercial 2-Way Commuter Vans Trucks **Totals** Vans Trucks Totals Totals Autos Buses Vans Autos Buses Vans 12-1am 1-2am ------2-3am 3-4am 4-5am 5-6am 1.095 6-7am 974 \*\* 7-8am 1.202 1,241 \*\* 8-9am 9-10am 1.058 10-11am 11-12am 12-1pm 1-2pm 2-3pm 1,046 3-4pm 4-5pm 1,078 457 \*\* 5-6pm 1.060 6-7pm 7-8pm 8-9pm 9-10pm 10-11pm 11-12pm **Totals** 4,919 11,548 16,467 7-10am 2,107 2,737 3,501 10am-1pm 1.514 1.927 2.798 1.500 1.834 2.943 1-4pm 1.109 4-7pm 1,184 1,340 1,709 2,893 12,135 7am-7pm 2.861 3,928 6.461 8,207

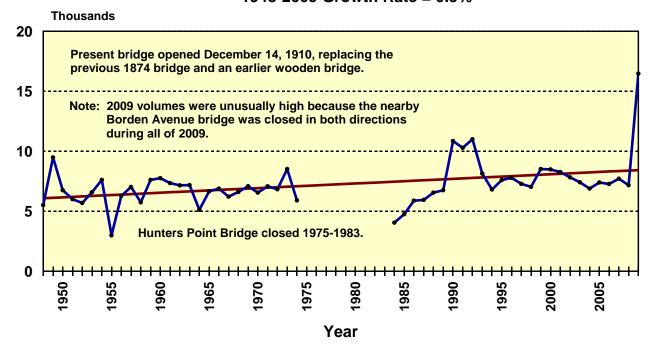
Based on 1989 Classification Survey Data

### **Hourly Vehicular Volumes Hunters Point Bridge - 2009**



# **Average Daily Traffic Volumes Hunters Point Bridge**

1948-2009 Growth Rate = 0.5%



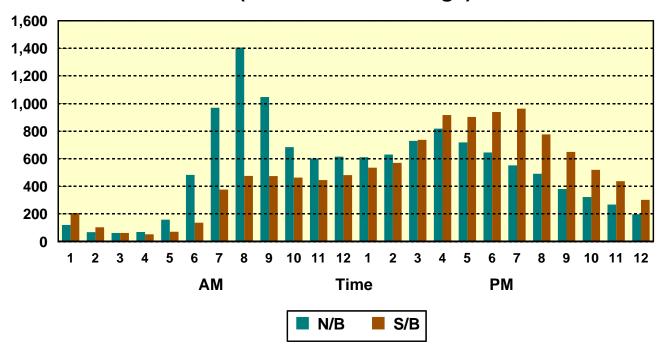
# Hourly Vehicular Volumes Joseph P. Addabbo Memorial Bridge - 2009 (North Channel Bridge)

Northbound Southbound

_	Northbound							Southbound						
	Commuter Commercial							Commuter Commercial						
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals	
12-1am						120						206	326	
1-2am						68						103	171	
2-3am						62						62	124	
3-4am						69						52	121	
4-5am						158						71	229	
5-6am						483						136	619	
6-7am						970						376	1,346	
7-8am	1,284	36	22	25	39	1,406 **	346	24	6	37	62	475	1,881 **	
8-9am	886	30	20	42	69	1,047	350	25	1	39	59	474	1,521	
9-10am	566	9	7	64	38	684	320	18	3	57	65	463	1,147	
10-11am	547	11	8	27	9	602	386	11	0	18	30	445	1,047	
11-12am	489	9	9	59	49	615	351	8	0	51	71	481	1,096	
12-1pm	529	16	0	34	32	611	479	11	0	18	27	535	1,146	
1-2pm	585	4	4	20	17	630	521	6	0	14	29	570	1,200	
2-3pm	600	22	11	52	44	729	589	30	4	30	84	737	1,466	
3-4pm	735	25	12	22	24	818	801	26	0	26	64	917	1,735	
4-5pm	597	32	13	44	32	718	767	10	2	31	93	903	1,621	
5-6pm	565	10	16	29	25	645	856	6	0	19	58	939	1,584	
6-7pm	464	8	19	24	37	552	866	7	4	12	74	963 **	1,515	
7-8pm						491						776	1,267	
8-9pm						380						649	1,029	
9-10pm						322						519	841	
10-11pm						268						437	705	
11-12pm						198						302	500	
Totals						12,646						11,591	24,237	
7-10am	2,736	75	49	131	146	3,137	1,016	67	10	133	186	1,412	4,549	
10am-1pm	1,565	36	17	120	90	1,828	1,216	30	0	87	128	1,461	3,289	
1-4pm	1,920	51	27	94	85	2,177	1,911	62	4	70	177	2,224	4,401	
4-7pm	1,626	50	48	97	94	1,915	2,489	23	6	62	225	2,805	4,720	
7am-7pm	7,847	212	141	442	415	9,057	6,632	182	20	352	716	7,902	16,959	

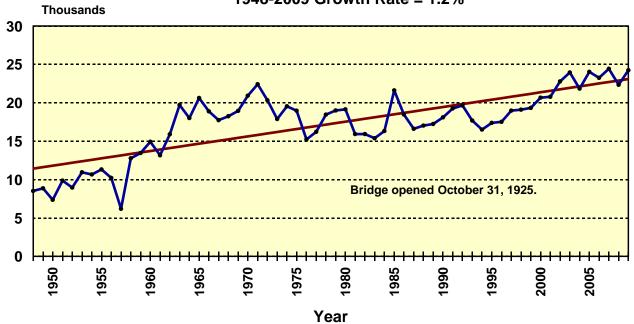
### **Hourly Vehicular Volumes**

Joseph P. Addabbo Memorial Bridge - 2009 (North Channel Bridge)



# Average Daily Traffic Volumes Joseph P. Addabbo Memorial Bridge (North Channel Bridge)

1948-2009 Growth Rate = 1.2%

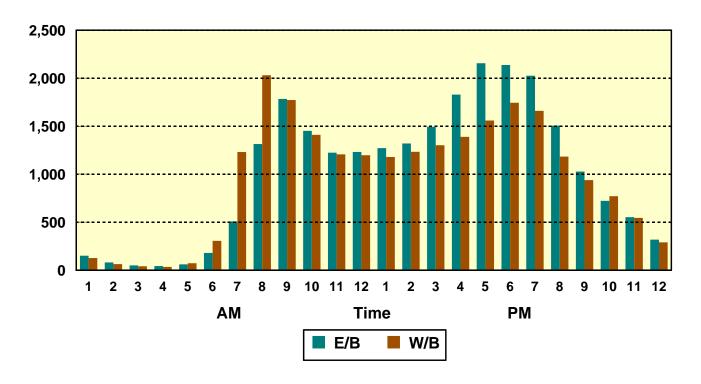


#### Hourly Vehicular Volumes Little Neck Bridge - 2009

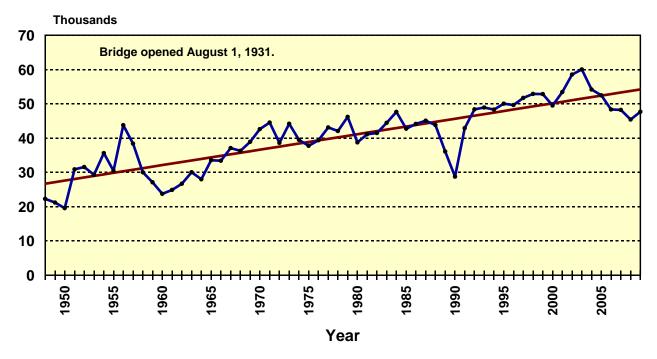
Eastbound Westbound

_			Eastb	ouna			Westbound						
		(	Commute		ommerci	al		(	Commute		ommerci	al	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						150						126	276
1-2am						80						62	142
2-3am						49						40	89
3-4am						42						33	75
4-5am						60						72	132
5-6am						179						305	484
6-7am						507						1,230	1,737
7-8am	1,070	34	60	93	57	1,314	1,818	75	6	37	94	2,030 **	3,344
8-9am	1,572	24	73	66	49	1,784	1,621	45	2	34	70	1,772	3,556
9-10am	1,279	19	58	70	26	1,452	1,294	8	0	37	71	1,410	2,862
10-11am	1,115	9	27	43	29	1,223	1,140	10	0	25	31	1,206	2,429
11-12am	1,080	12	27	62	50	1,231	1,068	7	0	66	56	1,197	2,428
12-1pm	1,195	13	9	42	12	1,271	1,100	10	0	26	42	1,178	2,449
1-2pm	1,221	10	22	33	34	1,320	1,174	3	0	22	33	1,232	2,552
2-3pm	1,271	16	62	83	62	1,494	1,167	10	0	42	83	1,302	2,796
3-4pm	1,728	21	19	39	22	1,829	1,317	10	0	15	47	1,389	3,218
4-5pm	1,813	16	83	147	97	2,156 **	1,400	16	0	42	101	1,559	3,715
5-6pm	1,914	21	58	48	96	2,137	1,659	12	0	10	63	1,744	3,881 **
6-7pm	1,866	19	57	45	38	2,025	1,586	9	0	7	58	1,660	3,685
7-8pm						1,505						1,182	2,687
8-9pm						1,027						937	1,964
9-10pm						722						770	1,492
10-11pm						552						544	1,096
11-12pm						317						289	606
Totals						24,426						23,269	47,695
7-10am	3,921	77	191	229	132	4,550	4,733	128	8	108	235	5,212	9,762
10am-1pm	3,390	34	63	147	91	3,725	3,308	27	0	117	129	3,581	7,306
1-4pm	4,220	47	103	155	118	4,643	3,658	23	0	79	163	3,923	8,566
4-7pm	5,593	56	198	240	231	6,318	4,645	37	0	59	222	4,963	11,281
7am-7pm	17,124	214	555	771	572	19,236	16,344	215	8	363	749	17,679	36,915

### **Hourly Vehicular Volumes** Little Neck Bridge - 2009



## **Average Daily Traffic Volumes** Little Neck Bridge 1948-2009 Growth Rate = 1.2%

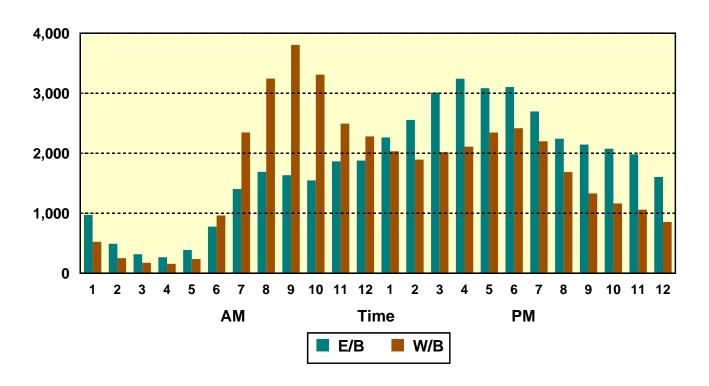


#### Hourly Vehicular Volumes Midtown Highway Bridge - 2009

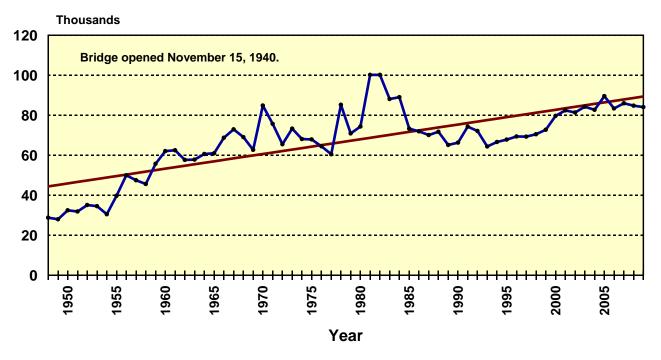
Eastbound Westbound

_			Eastb	ound			Westbound						
		(	Commut	er C	ommerci	al			Commut	er C	ommerci	ial	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						969						521	1,490
1-2am						490						249	739
2-3am						315						172	487
3-4am						264						154	418
4-5am						386						234	620
5-6am						774						959	1,733
6-7am						1,401						2,345	3,746
7-8am	1,378	70	15	136	89	1,688	2,653	145	67	118	261	3,244	4,932
8-9am	1,312	106	15	113	86	1,632	3,211	75	73	149	297	3,805 **	5,437
9-10am	1,176	127	11	138	93	1,545	2,663	79	114	187	266	3,309	4,854
10-11am	1,676	60	3	54	70	1,863	2,275	29	33	66	90	2,493	4,356
11-12am	1,623	44	6	106	97	1,876	1,907	18	105	118	132	2,280	4,156
12-1pm	2,045	27	20	82	88	2,262	1,830	8	62	70	62	2,032	4,294
1-2pm	2,019	34	75	160	266	2,554	1,507	18	119	128	120	1,892	4,446
2-3pm	2,572	16	65	155	203	3,011	1,601	77	96	135	108	2,017	5,028
3-4pm	2,992	30	34	57	127	3,240 **	1,826	71	73	57	82	2,109	5,349
4-5pm	2,594	23	74	93	300	3,084	1,790	186	150	51	167	2,344	5,428
5-6pm	2,758	23	21	53	247	3,102	1,986	102	114	104	109	2,415	5,517 **
6-7pm	2,458	9	26	57	145	2,695	1,994	31	58	54	61	2,198	4,893
7-8pm						2,241						1,684	3,925
8-9pm						2,144						1,328	3,472
9-10pm						2,074						1,162	3,236
10-11pm						1,979						1,057	3,036
11-12pm						1,603						853	2,456
Totals						43,192						40,856	84,048
7-10am	3,866	303	41	387	268	4,865	8,527	299	254	454	824	10,358	15,223
10am-1pm	5,344	131	29	242	255	6,001	6,012	55	200	254	284	6,805	12,806
1-4pm	7,583	80	174	372	596	8,805	4,934	166	288	320	310	6,018	14,823
4-7pm	7,810	55	121	203	692	8,881	5,770	319	322	209	337	6,957	15,838
7am-7pm	24,603	569	365	1,204	1,811	28,552	25,243	839	1,064	1,237	1,755	30,138	58,690

#### **Hourly Vehicular Volumes** Midtown Highway Bridge - 2009



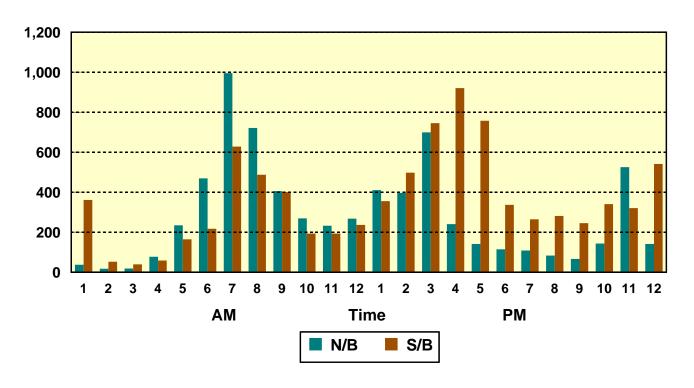
## **Average Daily Traffic Volumes** Midtown Highway Bridge 1948-2009 Growth Rate = 1.2%



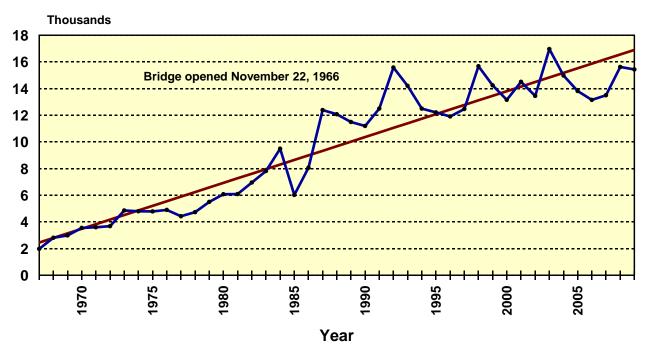
## Hourly Vehicular Volumes Rikers Island Bridge - 2009

_			North	bound					Sou	ıthbound			
		(	Commut	er Co	ommercia	al		(	Commut	er Co	ommercia	al .	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						37						361	398
1-2am						17						52	69
2-3am						18						39	57
3-4am						77						58	135
4-5am						234						164	398
5-6am						469						217	686
6-7am						995 **						628	1,623 **
7-8am	597	9	3	39	73	721	422	29	15	15	6	487	1,208
8-9am	348	7	1	21	28	405	325	17	21	27	10	400	805
9-10am	187	27	1	24	30	269	139	15	4	27	8	193	462
10-11am	178	14	0	19	21	232	157	16	4	14	2	193	425
11-12am	187	15	3	28	34	267	155	25	16	28	12	236	503
12-1pm	357	17	2	12	22	410	309	13	15	11	7	355	765
1-2pm	339	31	2	9	15	396	434	18	23	15	7	497	893
2-3pm	617	16	1	19	46	699	644	19	36	30	16	745	1,444
3-4pm	214	9	1	5	11	240	860	16	27	16	1	920 **	1,160
4-5pm	121	9	1	3	7	141	700	11	29	17	0	757	898
5-6pm	92	9	1	0	12	114	303	10	16	3	4	336	450
6-7pm	70	23	3	5	7	108	223	7	28	6	0	264	372
7-8pm						83						281	364
8-9pm						66						245	311
9-10pm						143						340	483
10-11pm						525						320	845
11-12pm						141						541	682
Totals						6,807						8,629	15,436
7-10am	1,132	43	5	84	131	1,395	886	61	40	69	24	1,080	2,475
10am-1pm	722	46	5	59	77	909	621	54	35	53	21	784	1,693
1-4pm	1,170	56	4	33	72	1,335	1,938	53	86	61	24	2,162	3,497
4-7pm	283	41	5	8	26	363	1,226	28	73	26	4	1,357	1,720
7am-7pm	3,307	186	19	184	306	4,002	4,671	196	234	209	73	5,383	9,385

### **Hourly Vehicular Volumes** Rikers Island Bridge - 2009



## **Average Daily Traffic Volumes** Rikers Island Bridge 1967-2009 Growth Rate = 4.7%

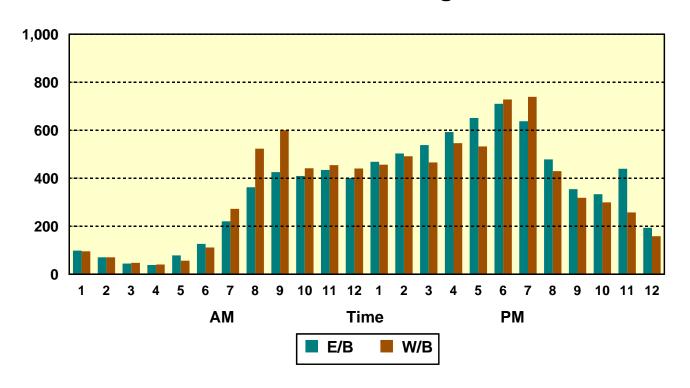


#### Hourly Vehicular Volumes Roosevelt Avenue Bridge - 2009

Eastbound Westbound

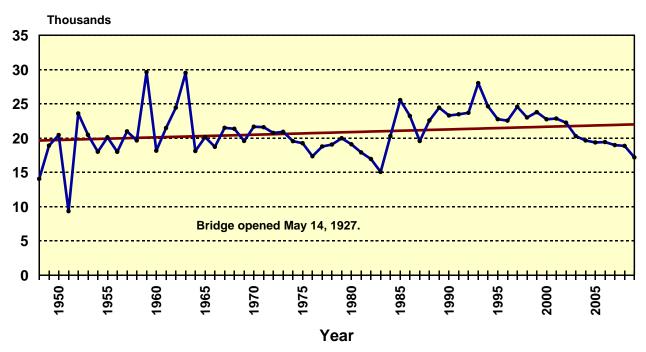
_			Eastb	ouna			westbound						
		(	Commute		ommercia	l		(	Commute	er Co	ommercia	ıl	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						98						95	193
1-2am						70						70	140
2-3am						44						47	91
3-4am						38						40	78
4-5am						78						56	134
5-6am						126						111	237
6-7am						220						272	492
7-8am	284	24	10	27	17	362	443	4	13	33	30	523	885
8-9am	333	14	9	33	36	425	530	15	9	18	28	600	1,025
9-10am	323	6	9	33	38	409	354	38	8	19	22	441	850
10-11am	380	5	9	18	22	434	423	7	2	16	6	454	888
11-12am	317	9	9	30	36	401	398	14	3	17	8	440	841
12-1pm	430	5	7	14	12	468	439	9	1	3	4	456	924
1-2pm	446	28	2	8	19	503	472	12	0	2	5	491	994
2-3pm	409	27	13	47	42	538	434	7	2	12	10	465	1,003
3-4pm	522	11	8	23	28	592	463	64	1	8	10	546	1,138
4-5pm	491	9	26	48	77	651	498	12	3	9	10	532	1,183
5-6pm	584	5	20	26	75	710 **	693	9	3	14	9	728	1,438 **
6-7pm	541	4	14	23	55	637	674	34	6	13	12	739 **	1,376
7-8pm						478						429	907
8-9pm						354						318	672
9-10pm						333						299	632
10-11pm						439						257	696
11-12pm						193						158	351
Totals						8,601						8,567	17,168
7-10am	940	44	28	93	91	1,196	1,327	57	30	70	80	1,564	2,760
10am-1pm	1,127	19	25	62	70	1,303	1,260	30	6	36	18	1,350	2,653
1-4pm	1,377	66	23	78	89	1,633	1,369	83	3	22	25	1,502	3,135
4-7pm	1,616	18	60	97	207	1,998	1,865	55	12	36	31	1,999	3,997
7am-7pm	5,060	147	136	330	457	6,130	5,821	225	51	164	154	6,415	12,545

#### **Hourly Vehicular Volumes** Roosevelt Avenue Bridge - 2009



# **Average Daily Traffic Volumes**Roosevelt Avenue Bridge

1948-2009 Growth Rate = 0.2%



### Hourly Vehicular Volumes Roosevelt Island Bridge - 2009

Eastbound Westbound 2-Way Commuter Commercial Commuter Commercial **Buses** Trucks **Buses** Trucks **Totals** Vans Vans Totals Autos Vans Vans **Totals** Autos 12-1am 1-2am 2-3am 3-4am 4-5am 5-6am 6-7am ---588 \*\* 887 \*\* 7-8am 8-9am 9-10am 10-11am 11-12am 12-1pm 1-2pm 2-3pm 3-4pm 4-5pm 5-6pm 6-7pm 7-8pm 8-9pm ---9-10pm 10-11pm ---11-12pm **Totals** 5,044 4,410 9,454 1,221 7-10am 1.100 2.010 10am-1pm 1.094 1-4pm 1,712 4-7pm 1,033 1,734

3.213

2,838

7am-7pm

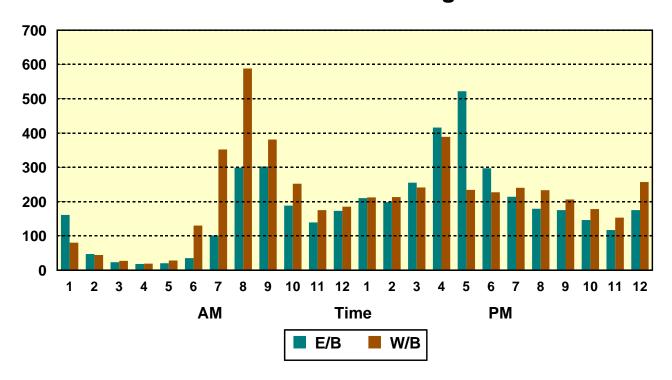
6,550

2.978

3.337

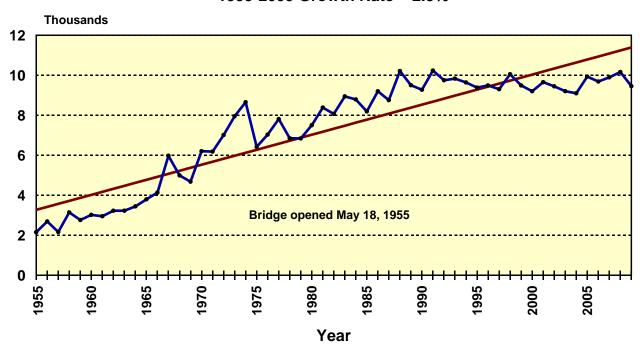
Based on 1989 Classification Survey Data

### **Hourly Vehicular Volumes** Roosevelt Island Bridge - 2009



# Average Daily Traffic Volumes Roosevelt Island Bridge

1955-2009 Growth Rate = 2.3%

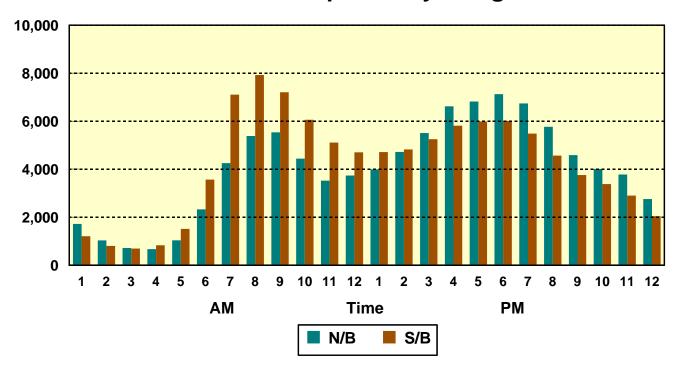


#### Hourly Vehicular Volumes Whitestone Expressway Bridge - 2009

Northbound Southbound

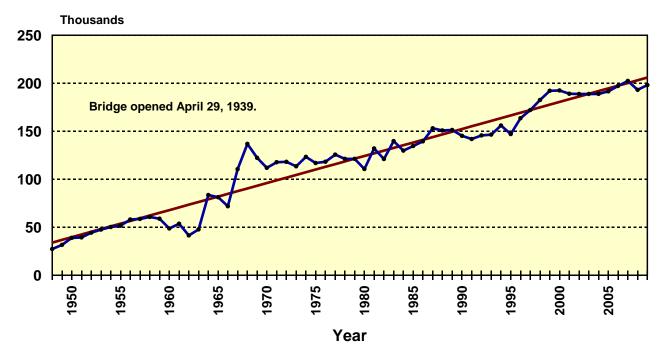
_	Northbound									Soi	ithbound				
			Commute	er C	Commercia	al				Commut	er C	ommerc	ial		2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals		Autos	Buses	Vans	Trucks	Vans	Totals		Totals
12-1am						1,716							1,205		2,921
1-2am						1,029							799		1,828
2-3am						712							691		1,403
3-4am						666							827		1,493
4-5am						1,032							1,511		2,543
5-6am						2,323							3,563		5,886
6-7am						4,248							7,103		11,351
7-8am	4,532	86	164	279	322	5,383		6,326	66	258	564	709	7,923	**	13,306 **
8-9am	4,598	71	274	366	226	5,535		5,980	78	204	508	434	7,204		12,739
9-10am	3,567	70	167	421	210	4,435		4,749	82	214	559	457	6,061		10,496
10-11am	3,080	31	73	210	128	3,522		4,633	22	115	217	123	5,110		8,632
11-12am	2,843	24	140	482	243	3,732		3,763	24	203	463	246	4,699		8,431
12-1pm	3,526	62	57	230	115	3,990		4,182	31	101	235	162	4,711		8,701
1-2pm	4,273	58	42	223	120	4,716		4,220	62	96	271	170	4,819		9,535
2-3pm	4,464	63	135	459	383	5,504		4,211	75	169	492	301	5,248		10,752
3-4pm	6,026	29	84	238	242	6,619		5,214	95	117	225	162	5,813		12,432
4-5pm	5,892	25	164	335	402	6,818		5,023	60	218	392	293	5,986		12,804
5-6pm	6,240	35	169	271	410	7,125	**	5,442	26	158	224	163	6,013		13,138
6-7pm	6,025	52	167	171	325	6,740		5,054	10	171	104	144	5,483		12,223
7-8pm						5,764							4,562		10,326
8-9pm						4,583							3,755		8,338
9-10pm						4,006							3,375		7,381
10-11pm						3,776							2,897		6,673
11-12pm						2,751							2,041		4,792
Totals						96,725							101,399		198,124
7-10am	12,697	227	605	1,066	758	15,353		17,055	226	676	1,631	1,600	21,188		36,541
10am-1pm	9,449	117	270	922	486	11,244		12,578	77	419	915	531	14,520		25,764
1-4pm	14,763	150	261	920	745	16,839		13,645	232	382	988	633	15,880		32,719
4-7pm	18,157	112	500	777	1,137	20,683		15,519	96	547	720	600	17,482		38,165
7am-7pm	55,066	606	1,636	3,685	3,126	64,119		58,797	631	2,024	4,254	3,364	69,070		133,189

#### Hourly Vehicular Volumes Whitestone Expressway Bridge - 2009



# **Average Daily Traffic Volumes**Whitestone Expressway Bridge

1948-2009 Growth Rate = 3.0%

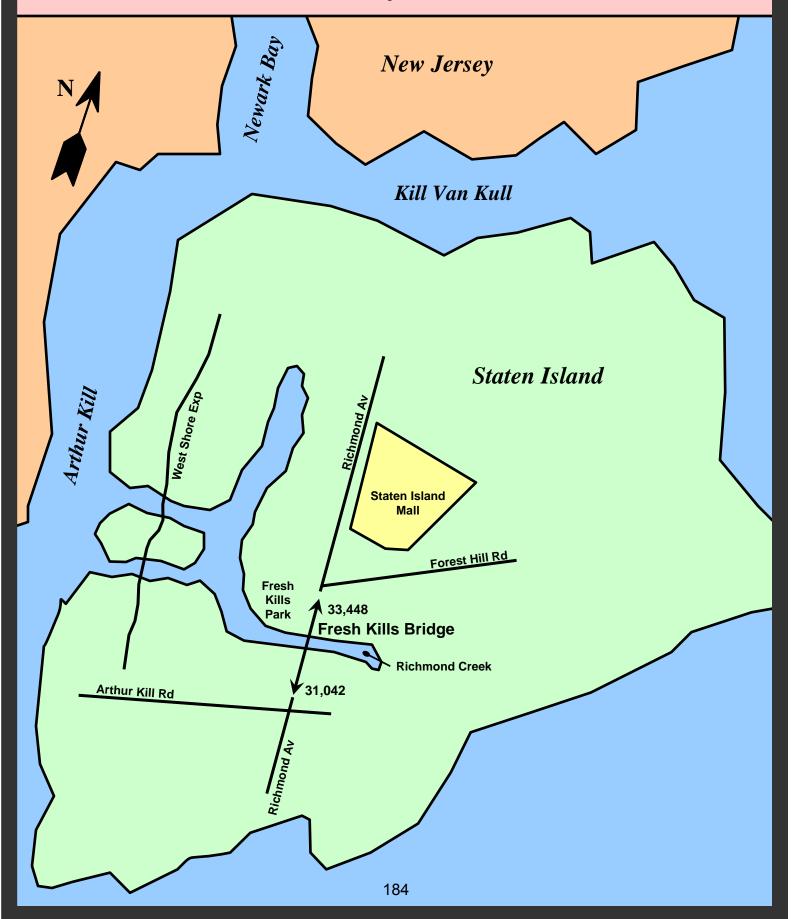


## Staten Island ~ Fresh Kills Bridge



## Staten Island ~ Fresh Kills Bridge

2009 Daily Volumes



#### Staten Island Bridges Average Daily Traffic Volumes 1948 - 2009

Voor	Fresh Kills
Year	
1948 1949	5,597 5,759
1950	6,250
1951	8,023
1952	7,891
1953 1954	7,858 9,098
1955	9,841
1956	9,415
1957	9,897
1958 1959	10,121 8,573
1960	8,147
1961	10,270
1962	9,400
1963 1964	12,450 15,010
1965	15,539
1966	17,175
1967	17,309
1968 1969	19,789 22,379
1970	21,631
1971	26,744
1972 1973	28,455
1973	37,213 36,207
1975	38,684
1976	34,675
1977 1978	30,295
1979	34,467 36,806
1980	41,604
1981	46,947
1982 1983	68,481 46,450
1984	50,341
1985	53,590
1986	44,230
1987 1988	50,372 50,385
1989	36,550
1990	53,442
1991	49,197
1992 1993	48,507 49.969
1994	48,562
1995	47,132
1996	49,740 51,739
1997 1998	51,738 53,770
1999	65,577
2000	66,980
2001	67,465
2002	64,563 66,155
2003 2004	66,155 64,705
2004	66,816
2006	65,274
2007	68,997
2008	64,724
2009	64,490

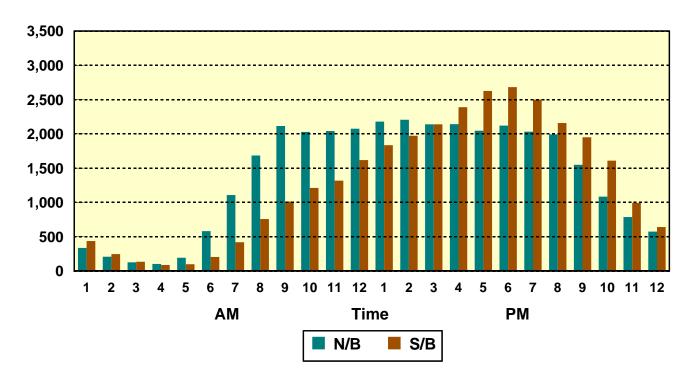
## Hourly Vehicular Volumes Fresh Kills Bridge - 2009

			North	bound					South	bound			
=			Commut	er Co	ommerci	al		(	Commute	er Co	ommerci	ial	2-Way
	Autos	Buses	Vans	Trucks	Vans	Totals	Autos	Buses	Vans	Trucks	Vans	Totals	Totals
12-1am						336						437	773
1-2am						208						246	454
2-3am						126						135	261
3-4am						103						88	191
4-5am						193						98	291
5-6am						581						205	786
6-7am						1,107						420	1,527
7-8am	885	92	268	297	141	1,683	662	44	4	26	22	758	2,441
8-9am	908	199	393	480	135	2,115	903	19	3	59	29	1,013	3,128
9-10am	1,451	25	213	287	53	2,029	1,059	19	4	87	42	1,211	3,240
10-11am	1,783	40	80	117	22	2,042	1,230	15	0	46	26	1,317	3,359
11-12am	1,479	78	187	294	37	2,075	1,403	15	2	129	68	1,617	3,692
12-1pm	1,821	30	99	193	36	2,179	1,658	37	0	92	48	1,835	4,014
1-2pm	1,936	58	77	90	45	2,206 **	1,800	75	0	70	28	1,973	4,179
2-3pm	1,619	93	154	247	26	2,139	1,769	63	0	202	105	2,139	4,278
3-4pm	1,856	94	87	91	14	2,142	2,175	39	5	89	81	2,389	4,531
4-5pm	1,679	47	129	156	35	2,046	2,320	27	4	168	107	2,626	4,672
5-6pm	1,673	97	172	154	25	2,121	2,294	34	4	211	139	2,682 **	4,803 **
6-7pm	1,582	144	157	114	35	2,032	2,166	31	15	163	125	2,500	4,532
7-8pm						1,993						2,159	4,152
8-9pm						1,548						1,951	3,499
9-10pm						1,084						1,609	2,693
10-11pm						786						993	1,779
11-12pm						574						641	1,215
Totals						33,448						31,042	64,490
7-10am	3,244	316	874	1,064	329	5,827	2,624	82	11	172	93	2,982	8,809
10am-1pm	5,083	148	366	604	95	6,296	4,291	67	2	267	142	4,769	11,065
1-4pm	5,411	245	318	428	85	6,487	5,744	177	5	361	214	6,501	12,988
4-7pm	4,934	288	458	424	95	6,199	6,780	92	23	542	371	7,808	14,007
7am-7pm	18,672	997	2,016	2,520	604	24,809	19,439	418	41	1,342	820	22,060	46,869

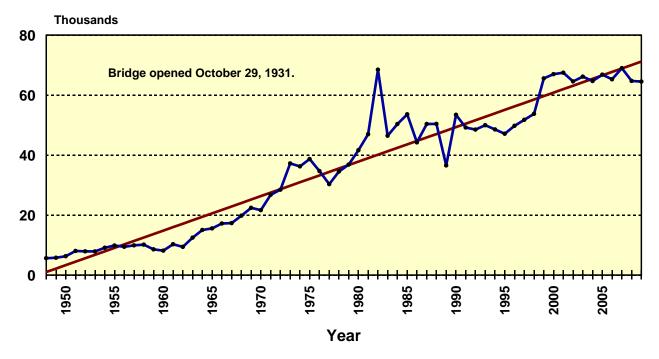
Based on 1989 Classification Survey Data

<sup>\*\*</sup> Peak Volumes

#### **Hourly Vehicular Volumes** Fresh Kills Bridge - 2009

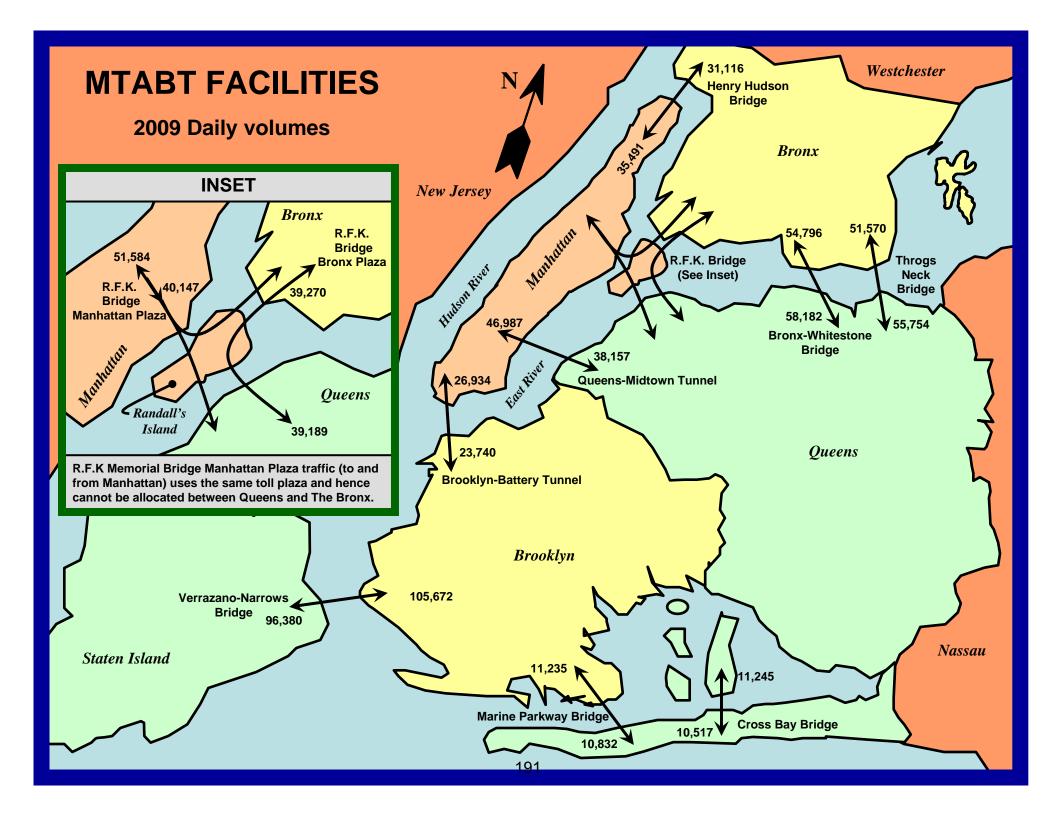


## **Average Daily Traffic Volumes** Fresh Kills Bridge 1948-2009 Growth Rate = 7.2%



## **MTABT Facilities**





## MTABT Manhattan Facilities ~ Average Daily Traffic Volumes 1948 - 2009

Robert F. Kennedy Memorial Bridge

			_	Bridge	
	Brooklyn-	Henry	Queens-	Manh. Plz.	
Year	Battery Tunnel	Hudson Bridge	Midtown Tunnel	(Triborough Bridge)	Manhattan Totals
		_			
1948	Opened 05/25/1950	40,050	26,462 30,045	26,465	92,977
1949 1950	37,258	47,472 53,559	34,044	32,554 36,995	110,071 161,856
1951	41,253	57,700	36,680	44,639	180,272
1952	45,366	61,592	38,866	48,503	194,327
1953	47,999	65,432	38,509	48,595	200,535
1954	45,120	69,025	38,185	52,286	204,616
1955	45,843	71,240	39,839	59,913	216,835
1956	48,054	69,477	49,544	64,460	231,535
1957	54,490 53,780	62,865	54,311	64,677	236,343
1958 1959	53,789 49,468	57,321 56,529	58,321 61,115	62,982 64,389	232,413 231,501
1960	48,970	56,675	62,008	63,115	230,768
1961	48,197	57,140	62,301	59,603	227,241
1962	48,173	59,548	65,038	60,251	233,010
1963	48,271	52,803	63,038	60,988	225,100
1964	51,893	50,768	67,713	66,139	236,513
1965	56,455	45,353	69,386	69,755	240,949
1966	57,674	44,043	69,850	71,540	243,107
1967	57,611	43,409	69,416	73,602	244,038
1968	60,652	44,908	66,432	75,932	247,924
1969 1970	62,116 62,042	45,382 46,720	68,884 77,180	78,481 85,121	254,863 271,063
1971	64,032	50,541	81,747	90,372	286,692
1972	52,065	45,818	74,936	80,052	252,871
1973	49,916	41,871	74,214	85,592	251,593
1974	46,620	38,331	75,219	82,676	242,846
1975	45,636	30,603	65,315	72,566	214,120
1976	52,444	30,557	65,881	68,325	217,207
1977	53,500	31,840	71,150	73,276	229,766
1978	58,252	33,605	72,696	76,572	241,125
1979 1980	60,445 62,386	33,387 31,817	69,827 73,216	87,885 88,439	251,544 255,858
1981	58,657	36,625	81,211	93,361	269,854
1982	56,189	30,923	78,229	88,158	253,499
1983	61,130	31,279	78,134	92,967	263,510
1984	58,032	34,898	74,808	95,247	262,985
1985	63,469	41,680	76,065	94,644	275,858
1986	60,778	49,005	71,478	93,432	274,693
1987	63,256	52,778	77,813	95,795	289,642
1988	62,959 50.254	54,910 50,556	76,243	99,438	293,550
1989 1990	59,254 60,512	50,556 57,528	72,828 71,186	92,720 99,840	275,358 289,066
1991	63,883	56,279	80,616	94,487	295,265
1992	62,510	58,660	81,835	97,198	300,203
1993	57,561	54,650	77,288	92,660	282,159
1994	57,013	58,291	68,511	79,536	263,351
1995	61,097	62,899	73,882	95,696	293,574
1996	57,091	58,759	72,285	92,981	281,116
1997 1998	54,690 64,004	59,660	78,023	91,313	283,686
1998	61,091 63,307	59,339 61,165	79,697 80,941	93,863 98,553	293,990 303,966
2000	63,242	66,304	80,879	103,079	313,504
2001	13,762	69,087	72,864	102,224	257,937
2002	56,976	70,731	82,834	94,759	305,300
2003	56,271	72,209	85,377	93,177	307,034
2004	54,488	73,114	86,599	97,958	312,159
2005	49,043	70,407	86,063	91,898	297,411
2006	57,436	71,761	89,972	98,582	317,751
2007 2008	56,539 55,037	70,094 69,101	88,379 86,709	97,241 95,146	312,253 305,993
2008	50,674	66,607	85,144	91,731	294,156
2000	30,01 -1	00,007	00,144	01,701	201,100

MTABT Toll Increases: 1/72, 9/75, 5/80, 4/82, 1/84, 1/86, 2/87, 7/89, 1/93, 3/96, 5/03, 3/05, 3/08, & 7/09.

## MTABT Outer Borough Bridges ~ Average Daily Traffic Volumes 1948 - 2009

Robert F. Kennedy Memorial

				obert F. Kenned	iy		
			Marine	Memorial			
			Parkway	Bridge			
	Bronx-	Cross	Gil Hodges	Bronx Plz.	Throgs	Verrazano-	Outer
	Whitestone	Bay	Memorial	(Triborough	Neck	Narrows	Boroughs
Year	Bridge	Bridge	Bridge	Bridge)	Bridge	Bridge	Totals
i eai	bridge	briuge	Briage	Bridge)	Bridge	Bridge	iolais
1948	33,343	11,421	10,216	25,997	Opened	Opened	80,977
1949	41,485	12,579	11,743	31,310	01/11/1961	11/21/1964	97,117
1950	47,900	13,002	12,971	35,581			109,454
1951	54,565	13,443	13,449	42,934			124,391
1952	59,269	13,706	13,995	46,777			133,747
1953	66,055	15,460	15,620	46,738			143,873
1954	72,061	15,348	16,113	50,289			153,811
1955	77,352	15,630	16,571	57,623			167,176
1956	82,643	15,557	16,277	62,167			176,644
1957	82,199	15,465	16,172	62,206			176,042
1958	83,022	14,895	15,694	60,576			174,187
1959	88,731	15,589	16,975	61,929			183,224
1960	91,956	15,175	16,605	60,870			184,606
1961	55,100	15,518	16,657	57,325			144,600
1962	47,532	15,939	17,301	57,949	60,697		199,418
1963	45,352	16,421	17,978	58,657	75,532		213,940
1964	64,573	16,594	18,145	61,152	76,245		236,709
1965	72,053	16,864	18,855	67,090	77,755	48,842	
							301,459
1966	71,382	17,684	19,745	68,806	80,647	58,720	316,984
1967	73,931	17,448	19,904	70,791	81,237	66,607	329,918
1968	78,773	18,367	21,424	73,232	83,634	77,393	352,823
1969	79,416	17,608	21,406	75,482	85,708	86,114	365,734
1970	81,582	17,908	22,076	81,868	83,734	96,953	384,121
1971	86,573	18,399	22,426	83,804	84,279	106,014	401,495
1972	80,704	16,813	20,956	74,777	89,595	105,898	388,743
1973	81,548	16,783	21,502	75,552	95,326	111,385	402,096
1974	82,699	16,769	19,734	76,673	89,622	109,671	395,168
1975	81,081	15,019	18,715	70,338	87,725	108,572	381,450
1976	82,060	14,281	17,804	67,887	89,520	110,761	382,313
1977							
	81,992	14,489	16,724	67,590	90,635	113,040	384,470
1978	86,537	13,955	17,750	64,746	89,847	125,799	398,634
1979	90,394	13,690	17,404	63,046	86,315	124,667	395,516
1980	88,346	13,903	16,472	63,219	87,011	130,904	399,855
1981	84,475	11,583	16,510	76,200	91,511	137,695	417,974
1982	90,312	13,072	17,119	74,092	93,867	143,811	432,273
1983	97,945	13,412	18,003	78,885	97,706	140,645	446,596
1984	97,636	14,835	19,749	79,300	90,153	155,892	457,565
1985	109,012	15,279	20,595	83,747	84,517	162,632	475,782
1986	102,567	15,162	19,965	80,703	94,395	162,426	475,218
1987	102,115	14,289	20,512	81,424	93,770	170,319	482,429
1988	98,235	14,989	21,098	83,002	102,333	174,416	494,073
1989	95,762	14,466	19,666	78,877	94,147	172,529	475,447
1990	104,377	14,645	21,489	80,346	91,237	175,948	488,042
1991	99,054	14,925	20,893	81,364	94,377	178,340	488,953
1992	96,830	14,821	21,042	77,125	98,135	183,218	491,171
1993	93,712	14,578	20,137	70,458	101,402	178,416	478,703
1994	104,819	14,442	20,623	71,777	97,471	181,156	490,288
1995	108,185	15,423	20,568	72,012	97,282	184,634	498,104
1996	101,048	14,845	21,212	74,522	97,629	184,557	493,813
1997	93,018	14,221	19,782	76,937	102,094	182,871	488,923
1998	104,125	16,286	19,583	81,913	99,471	194,592	515,970
1999	120,170	16,975	19,904	80,019	90,986	194,623	522,677
2000	117,583	17,962	21,609	79,243	98,357	202,580	537,334
2001	111,764	19,626	19,527	77,631	104,429	218,971	551,948
2001							
	123,258	20,010	21,684	72,259	104,535	212,491	554,237
2003	113,441	20,233	21,745	74,113	111,092	206,444	547,068
2004	117,591	20,460	21,556	82,810	112,001	205,544	559,962
2005	105,059	19,852	19,456	77,257	114,973	193,687	530,284
2006	110,708	22,036	22,363	81,840	116,427	207,353	560,727
2007	111,739	22,337	21,356	79,019	112,985	201,116	548,552
2008	117,015	21,876	21,357	77,606	114,319	203,507	555,680
2009	112,978	21,762	22,067	78,459	107,324	202,052	544,642
			•				•

MTABT Toll Increases: 1/72, 9/75, 5/80, 4/82, 1/84, 1/86, 2/87, 7/89, 1/93, 3/96, 5/03, 3/05, 3/08, & 7/09.

# Hourly Vehicular Volumes Metropolitan Transportation Authority Bridges & Tunnels 2009

Robert F. Kennedy Memorial Bridge

			wiemonal Bridge							
	Brookly	n-Battery	Henry I	Hudson	Queens-	Midtown	(Triborou	gh Bridge)	Tot	als
	Tu	nnel	Bri	dge	Tun	nel	Mahatta	nn Plaza	Entering	Leaving
	N/B	S/B	S/B	N/B	W/B	E/B	W/B	E/B	Manhattan	Manhattan
12-1am	161	436	117	432	412	793	437	465	1,127	2,126
1-2am	85	193	71	218	168	391	187	234	511	1,036
2-3am	37	101	43	100	127	241	122	141	329	583
3-4am	39	64	48	67	158	183	121	164	366	478
4-5am	144	72	103	86	252	348	256	401	755	907
5-6am	640	131	426	128	923	691	961	917	2,950	1,867
6-7am	1,981	364	2,039	527	2,403	1,238	3,041	1,642	9,464	3,771
7-8am	2,853	567	3,389 **	1,359	3,302	1,339	4,091 **	1,982	13,635	5,247
8-9am	2,910 **	727	3,364	1,800	4,196 **	1,290	4,091 **	2,184	14,561 **	6,001
9-10am	2,595	725	2,748	1,152	4,013	1,288	3,668	1,964	13,024	5,129
10-11am	1,543	750	2,127	992	2,951	1,444	3,263	1,776	9,884	4,962
11-12am	1,403	804	1,794	993	2,726	1,668	2,686	1,870	8,609	5,335
12-1pm	1,386	936	1,623	1,128	2,389	1,985	2,494	2,078	7,892	6,127
1-2pm	1,424	977	1,470	1,235	2,312	2,259	2,516	2,246	7,722	6,717
2-3pm	1,526	1,358	1,630	1,717	2,409	2,609	2,842	2,549	8,407	8,233
3-4pm	1,487	1,810	2,240	2,211	2,738	2,797	3,220	2,865	9,685	9,683
4-5pm	1,334	2,204	2,455	2,646	2,836	2,870 **	3,174	2,937	9,799	10,657
5-6pm	1,364	2,558 **	2,940	3,015	2,956	2,846	3,308	2,955 **	10,568	11,374 **
6-7pm	1,127	2,387	2,663	3,078 **	2,788	2,651	3,166	2,793	9,744	10,909
7-8pm	905	1,834	1,634	2,306	1,989	2,156	2,516	2,379	7,044	8,675
8-9pm	636	1,599	975	1,840	1,563	2,060	1,815	1,865	4,989	7,364
9-10pm	508	1,287	782	1,719	1,349	2,006	1,538	1,615	4,177	6,627
10-11pm	393	1,173	546	1,523	1,209	1,855	1,209	1,327	3,357	5,878
11-12pm	453	683	264	844	818	1,149	862	798	2,397	3,474
Totals	26,934	23,740	35,491	31,116	46,987	38,157	51,584	40,147	160,996	133,160
7-10am	8,358	2,019	9,501	4,311	11,511	3,917	11,850	6,130	41,220	16,377
10am-1pm	4,332	2,490	5,544	3,113	8,066	5,097	8,443	5,724	26,385	16,424
1-4pm	4,437	4,145	5,340	5,163	7,459	7,665	8,578	7,660	25,814	24,633
4-7pm	3,825	7,149	8,058	8,739	8,580	8,367	9,648	8,685	30,111	32,940
7am-7pm	20,952	15,803	28,443	21,326	35,616	25,046	38,519	28,199	123,530	90,374

<sup>\*\*</sup> Peak Volumes

# Hourly Vehicular Volumes Metropolitan Transportation Authority Bridges & Tunnels 2009

							Robert F	. Kennedy				
					Marine	e Parkway	Memor	ial Bridge				
	Bronx-W	hitestone	Cross	Bav	Gil	Hodges		gh Bridge)	Throa	s Neck	Verrazano	-Narrows
		idge	Bria	•		al Bridge	•	x Plaza		dge	Bria	
	N/B	S/B	N/B	S/B	N/B	S/B	N/B	S/B	N/B	S/B	E/B	W/B
12-1am	797	775	79	182	58	121	595	474	473	675	2,733	1,702
1-2am	441	450	40	88	27	62	343	291	338	467	1,417	942
2-3am	316	376	39	49	23	43	224	256	231	330	771	616
3-4am	347	404	45	38	22	23	255	304	306	310	622	509
4-5am	576	858	139	40	60	35	451	564	652	471	635	611
5-6am	1,502	1,799	431	134	275	109	927	1,192	1,975	1,018	1,023	1,151
6-7am	3,188	3,353	949	363	805	347	1,923	2,465	4,163	2,250	3,517	2,786
7-8am	4,044	3,471	1,388 **	486	1,528 **	414	2,775	2,424	4,512 **	2,941	8,642	4,045
8-9am	4,186 **	3,478	978	465	1,166	469	2,890 **	2,377	3,987	3,172	10,055 **	4,594
9-10am	3,347	2,986	613	411	768	395	2,265	2,305	3,556	2,696	8,190	4,328
10-11am	2,624	2,594	516	416	607	385	2,013	2,122	2,952	2,450	6,280	3,751
11-12am	2,338	2,561	549	407	535	454	1,890	1,980	2,589	2,377	5,008	3,861
12-1pm	2,157	2,633	564	437	497	492	1,839	2,025	2,414	2,438	4,424	4,117
1-2pm	2,317	2,851	551	503	516	526	2,065	2,056	2,408	2,787	4,205	4,739
2-3pm	2,772	3,149	650	640	595	639	2,352	2,313	2,648	3,530	4,430	6,068
3-4pm	3,403	3,891	717	798	654	904	2,617	2,546	2,713	4,495	4,922	8,042
4-5pm	3,585	3,910	655	848	701	1,025	2,716	2,629 **	2,836	4,633	5,888	7,688
5-6pm	3,497	4,148 **	555	914 **	684	1,041 **	2,487	2,460	2,772	4,689 **	6,279	8,430 **
6-7pm	3,221	3,740	504	898	565	1,000	2,150	2,087	2,587	4,232	6,277	7,413
7-8pm	2,715	3,356	371	747	392	735	1,824	1,766	2,212	3,082	5,542	6,188
8-9pm	2,217	2,383	300	567	256	576	1,482	1,400	1,755	2,131	4,505	4,849
9-10pm	2,154	2,086	254	451	200	482	1,234	1,205	1,468	1,979	3,654	4,221
10-11pm	1,729	1,805	201	394	165	348	1,052	1,219	1,168	1,570	3,361	3,324
11-12pm	1,323	1,125	157	241	136	207	901	729	855	1,031	3,292	2,405
Totals	54,796	58,182	11,245	10,517	11,235	10,832	39,270	39,189	51,570	55,754	105,672	96,380
7-10am	11,577	9,935	2,979	1,362	3,462	1,278	7,930	7,106	12,055	8,809	26,887	12,967
10am-1pm	7,119	7,788	1,629	1,260	1,639	1,331	5,742	6,127	7,955	7,265	15,712	11,729
1-4pm	8,492	9,891	1,918	1,941	1,765	2,069	7,034	6,915	7,769	10,812	13,557	18,849
4-7pm	10,303	11,798	1,714	2,660	1,950	3,066	7,353	7,176	8,195	13,554	18,444	23,531
7am-7pm	37,491	39,412	8,240	7,223	8,816	7,744	28,059	27,324	35,974	40,440	74,600	67,076

<sup>\*\*</sup> Peak Volumes

#### Hourly Vehicular Volumes Brooklyn Battery Tunnnel - 2009

Southbound to Brooklyn

Commuter Vans Commuter Vans Commercial Vans Commercial Vans 2-Wav Single Single Autos & **Pickups** Unit Tractor Total Autos & **Pickups** Unit Tractor Total Grand Motorcycles Large SUVs Buses Trucks Trailers Vehicles Motorcycles Large SUVs Buses Trucks Trailers Vehicles **Totals FHWA** 5 - 7 Classes ▶ 1 & 2 8 - 13 1 & 2 5 - 7 8 - 13 12-1am 1-2am 2-3am 3-4am 4-5am 5-6am 1.769 1.981 2,345 6-7am 7-8am 2,505 2,853 3,420 8-9am 2.543 2.910 3,637 2,369 2.595 3,320 9-10am 1,543 10-11am 1,404 2,293 11-12am 1,300 1.403 2,207 12-1pm 1,276 1,386 2,322 1-2pm 1,287 1,424 2,401 2-3pm 1,371 1,526 1,242 1,358 2,884 3,297 3-4pm 1,328 1,487 1.650 1.810 4-5pm 1,163 1,334 1,999 2,204 3,538 5-6pm 1,215 1,364 2,275 2,558 3,922 \*\* 6-7pm 1.047 1.127 2.192 2.387 3.514

1,729

1.494

1,216

1,127

21,384

1,496

2,242

3.774

6,466

13,978

1,929

1.509

1,834

1.599

1,287

1,173

23,740

2,019

2,490

4.145

7,149

15,803

Based on May 2006 Classification Survey Data.

24,243

7,417

3,980

3.986

3,425

18,808

7-8pm

8-9pm

9-10pm

10-11pm

11-12pm

7-10am

1-4pm

4-7pm

10am-1pm

7am-7pm

Totals

Northbound to Manhattan

2,121

1.692

26,934

8,358

4,332

4,437

3,825

20,952

2,739

2.235

1,795

1,566

1,136

50.674

10.377

6,822

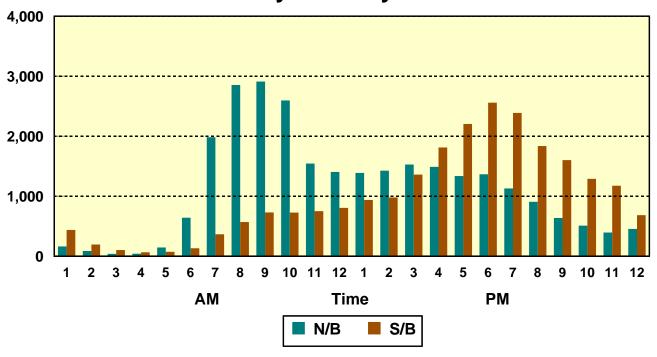
8,582

10,974

36,755

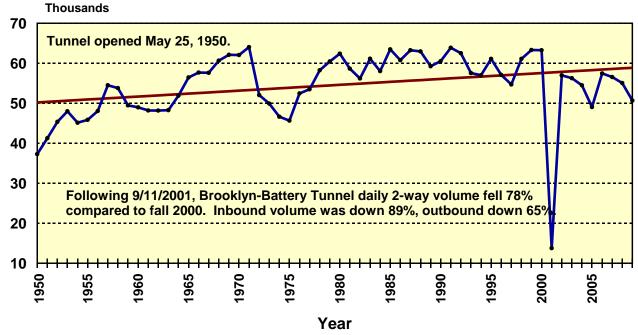
<sup>\*\*</sup> Peak Volumes

## **Hourly Vehicular Volumes Brooklyn-Battery Tunnel - 2009**



#### Average Daily Traffic Volumes Brooklyn-Battery Tunnel

1950-2009 Growth Rate = 0.3%



Hourly Vehicular Volumes Queens-Midtown Tunnel - 2009

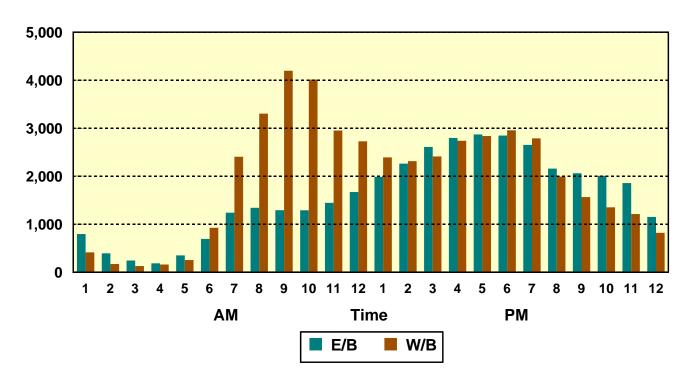
Westbound to Manhattan Eastbound to Queens

	C		Commuter Vans Commercial Vans Single							2-Way				
	Autos &	ommercial Var Pickups	13	Single Unit	Tractor	Total	Autos		Pickups	13	Unit	Tractor	Total	Grand
		Large SUVs	Buses	Trucks	Trailers	Vehicles			Large SUVs	Buses	Trucks	Trailers	Vehicles	Totals
FHWA		3						,	3					
Classes ►	1 & 2	3	4	5 - 7	8 - 13		1 8	. 2	3	4	5 - 7	8 - 13		
12-1am	398	2	3	9	0	412		65	7	1	20	0	793	1,205
1-2am	161	1	0	6	0	168		72	4	0	15	0	391	559
2-3am	118	1	1	7	0	127		25	5	0	11	0	241	368
3-4am	143	1	3	11	0	158		63	9	0	11	0	183	341
4-5am	202	5	14	31	0	252		87	24	3	33	1	348	600
5-6am	805	9	46	63	0	923		15	18	11	47	0	691	1,614
6-7am	2,053	84	152	114	0	2,403	1,1		34	48	35	0	1,238	3,641
7-8am	2,847	117	208	129	1	3,302	1,1		51	63	34	0	1,339	4,641
8-9am	3,773	118	148	157	0	4,196 **	1,1		41	78	44	0	1,290	5,486
9-10am	3,617	102	181	109	4	4,013	1,1		49	66	44	0	1,288	5,301
10-11am	2,679	82	99	89	2	2,951	1,2		58	69	64	0	1,444	4,395
11-12am	2,527	68	64	67	0	2,726	1,4		56	72	59	0	1,668	4,394
12-1pm	2,215	37	55	82	0	2,389	1,7		64	55	89	0	1,985	4,374
1-2pm	2,108	66	69	69	0	2,312	2,0		103	57	93	0	2,259	4,571
2-3pm	2,187	58	110	54	0	2,409	2,4	18	75	45	71	0	2,609	5,018
3-4pm	2,435	56	178	69	0	2,738	2,5	86	63	64	84	0	2,797	5,535
4-5pm	2,592	35	173	36	0	2,836	2,6	47	78	67	78	0	2,870 **	5,706
5-6pm	2,777	19	136	24	0	2,956	2,6	85	45	73	43	0	2,846	5,802 **
6-7pm	2,665	19	78	26	0	2,788	2,5		32	60	39	0	2,651	5,439
7-8pm	1,916	13	45	15	0	1,989	2,0	57	21	58	20	0	2,156	4,145
8-9pm	1,486	20	28	29	0	1,563	1,9	58	24	38	40	0	2,060	3,623
9-10pm	1,297	12	16	24	0	1,349	1,9	24	20	21	40	1	2,006	3,355
10-11pm	1,159	8	12	30	0	1,209	1,7	89	19	10	37	0	1,855	3,064
11-12pm	794	7	3	14	0	818	1,1	19	3	3	24	0	1,149	1,967
Totals	42,954	940	1,822	1,264	7	46,987	35,2	15	903	962	1,075	2	38,157	85,144
7-10am	10,237	337	537	395	5	11,511	3,4		141	207	122	0	3,917	15,428
10am-1pm	,	187	218	238	2	8,066	4,5		178	196	212	0	5,097	13,163
1-4pm	6,730	180	357	192	0	7,459	7,0		241	166	248	0	7,665	15,124
4-7pm	8,034	_73	387	86	0	8,580	7,8		155	200	160	0	8,367	16,947
7am-7pm	32,422	777	1,499	911	7	35,616	22,8	20	715	769	742	0	25,046	60,662

Based on May 2006 Classification Survey Data.

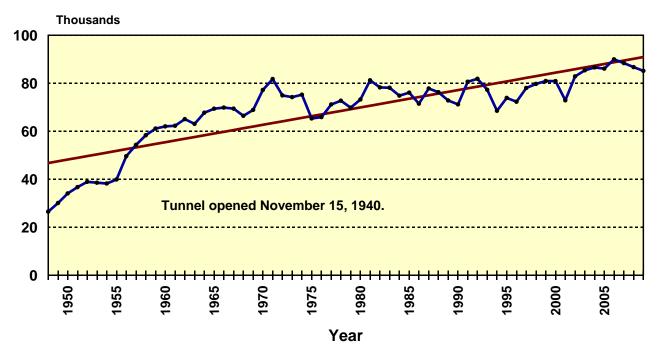
<sup>\*\*</sup> Peak Volumes

## **Hourly Vehicular Volumes Queens-Midtown Tunnel - 2009**

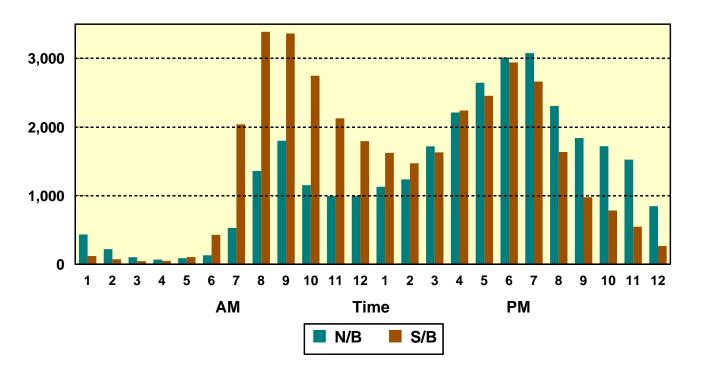


## **Average Daily Traffic Volumes**Queens-Midtown Tunnel

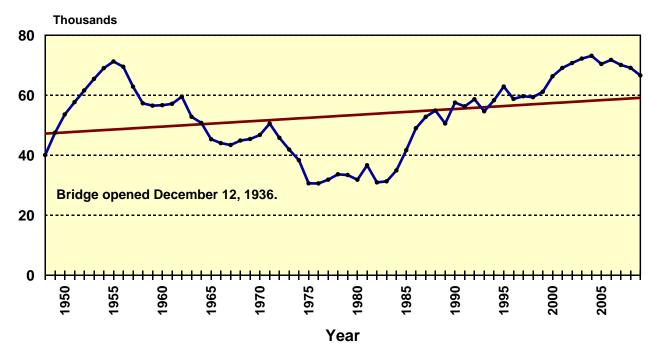
1948-2009 Growth Rate = 1.1%



#### **Hourly Vehicular Volumes Henry Hudson Bridge - 2009**

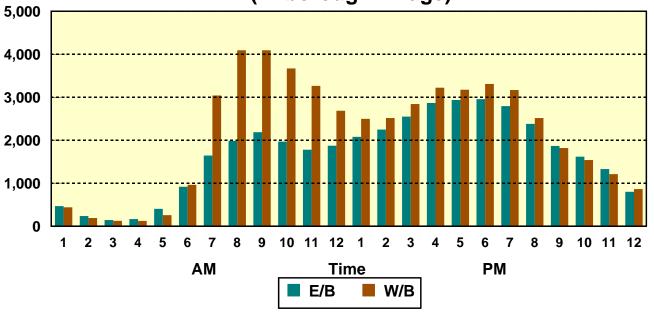


## **Average Daily Traffic Volumes** Henry Hudson Bridge 1948-2009 Growth Rate = 0.4%



### Hourly Vehicular Volumes

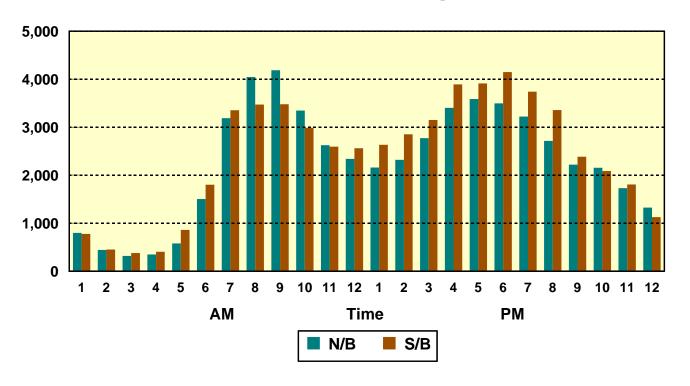
Robert F. Kennedy Memorial Bridge, Manhattan Plaza - 2009 (Triborough Bridge)



# Average Daily Traffic Volumes Robert F. Kennedy Memorial Bridge, Manhattan Plaza (Triborough Bridge)

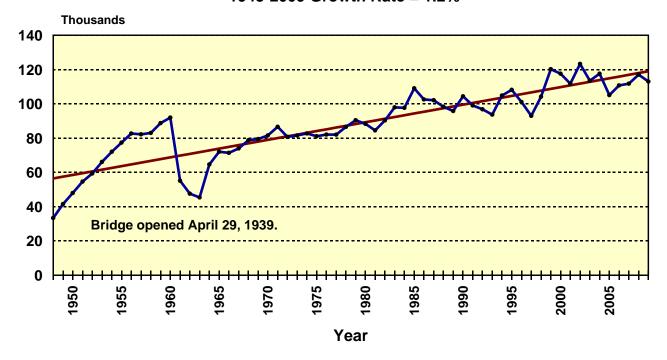


## **Hourly Vehicular Volumes Bronx-Whitestone Bridge - 2009**

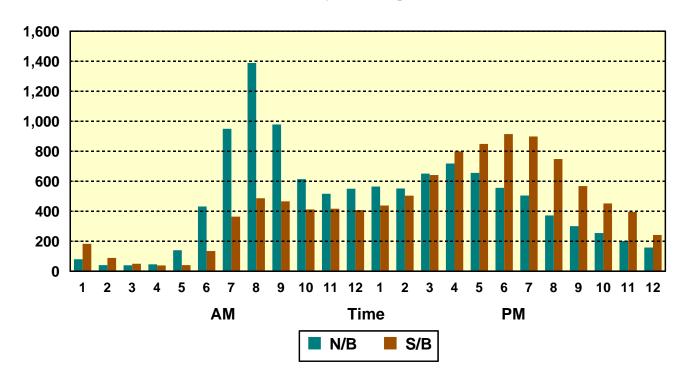


# **Average Daily Traffic Volumes Bronx-Whitestone Bridge**

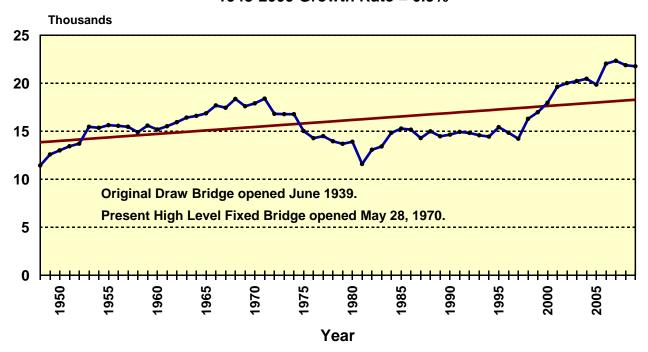
1948-2009 Growth Rate = 1.2%



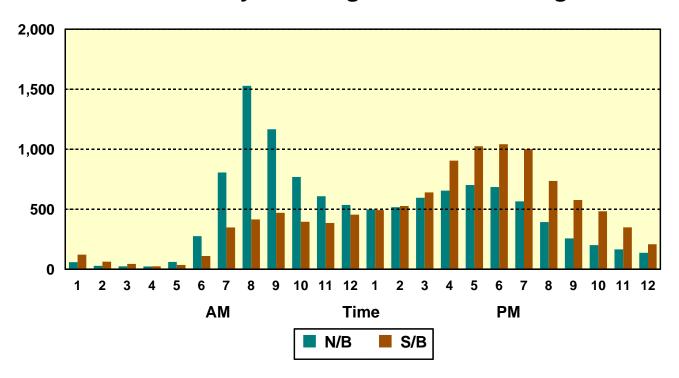
#### **Hourly Vehicular Volumes** Cross Bay Bridge - 2009



## **Average Daily Traffic Volumes** Cross Bay Bridge 1948-2009 Growth Rate = 0.5%



# Hourly Vehicular Volumes Marine Parkway Gil Hodges Memorial Bridge - 2009



# Average Daily Traffic Volumes Marine Parkway Gil Hodges Memorial Bridge

1948-2009 Growth Rate = 0.6%

25

20

Bridge opened July 3, 1937.

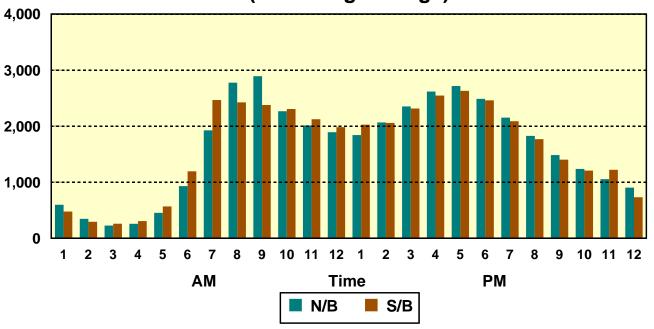
5

O

Year

Hourly Vehicular Volumes

Robert F. Kennedy Memorial Bridge, Bronx Plaza - 2009 (Triborough Bridge)

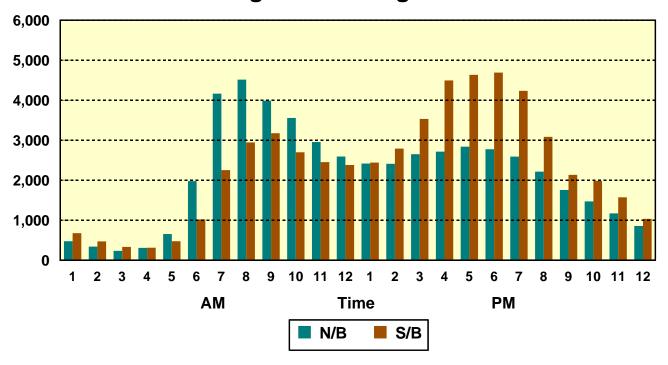


## **Average Daily Traffic Volumes**

Robert F. Kennedy Memorial Bridge, Bronx Plaza (Triborough Bridge)

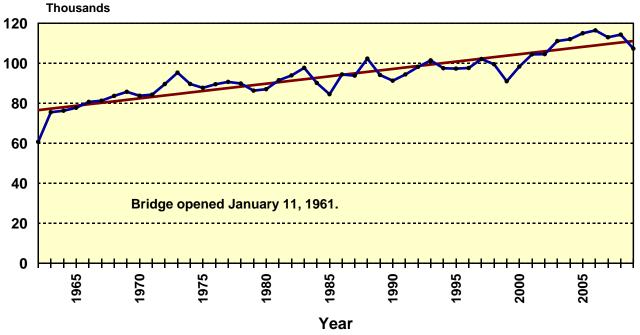
100
80
Bridge opened July 11, 1936. Renamed November 19, 2008.
20
Year

## **Hourly Vehicular Volumes** Throgs Neck Bridge - 2009

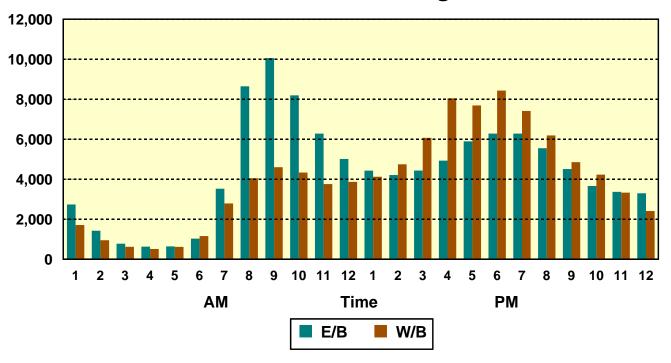


# **Average Daily Traffic Volumes**Throgs Neck Bridge

1962-2009 Growth Rate = 0.8%

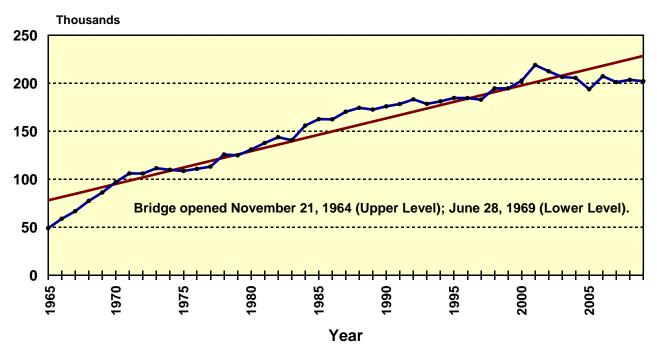


## Hourly Vehicular Volumes Verrazano-Narrows Bridge - 2009



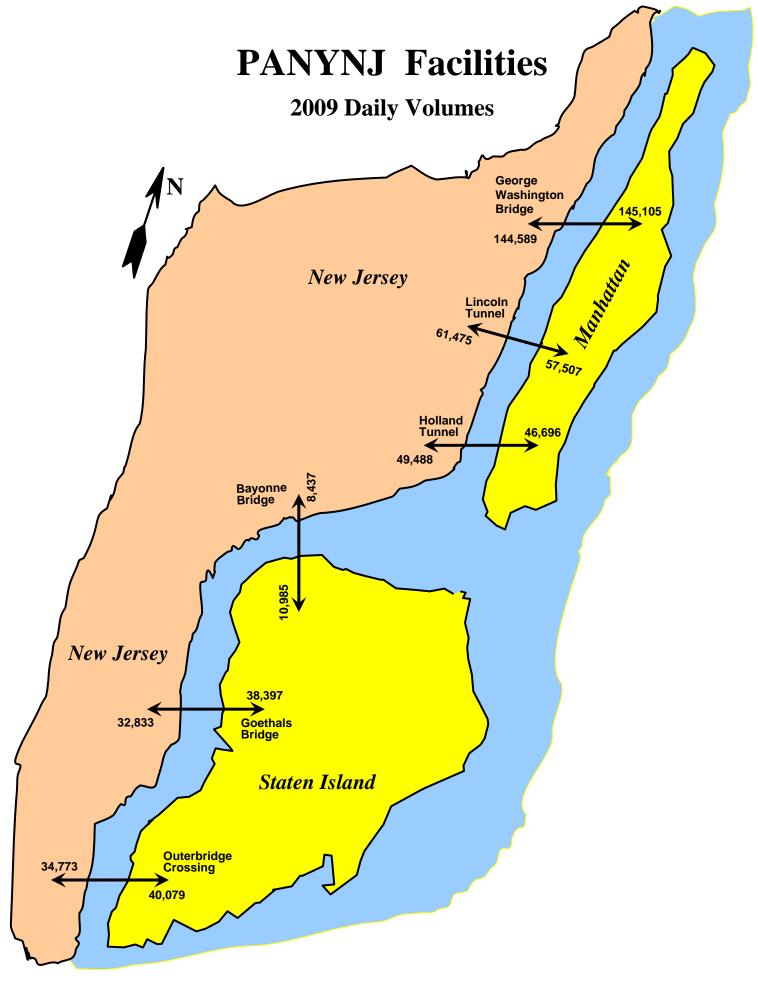
## **Average Daily Traffic Volumes** Verrazano-Narrows Bridge

1965-2009 Growth Rate = 2.5%



# **PANYNJ** Facilities





#### PANYNJ Manhattan - New Jersey Facilities Average Daily Traffic Volumes 1948 - 2009

	George	1010 200	-	
	Washington	Holland	Lincoln	
Year	Bridge	Tunnel	Tunnel	Totals
	_			
1948 1949	42,306	42,623	30,856	115,785
1950	49,261 54,437	45,167 49,660	35,515 42,556	129,943 146,653
1951	64,516	53,792	47,842	166,150
1952	76,446	51,317	53,490	181,253
1953	84,398	53,270	56,909	194,577
1954	90,306	54,560	57,528	202,394
1955	98,013	55,445	58,468	211,926
1956	97,059	56,961	59,068	213,088
1957	98,110	56,801	63,712	218,623
1958	97,435	55,881	68,178	221,494
1959	105,334	57,926	73,761	237,021
1960	106,245	57,678	75,697	239,620
1961 1962	104,107 111,090	56,277 58,518	76,449 81,038	236,833 250,646
1963	127,452	58,814	79,337	265,603
1964	143,193	59,702	82,929	285,824
1965	155,967	55,060	82,312	293,339
1966	167,304	55,559	81,118	303,981
1967	173,093	54,181	80,879	308,153
1968	182,934	53,962	83,396	320,292
1969	189,817	54,438	84,868	329,123
1970	194,910	58,574	94,354	347,838
1971	210,749	57,968	93,346	362,063
1972	221,172	61,485	95,963	378,620
1973	232,686	64,731	99,786	397,203
1974 1975	211,955 215,927	64,765 62,381	99,827 96,399	376,547 374,707
1976	215,136	64,663	101,451	381,250
1977	222,897	63,015	99,101	385,013
1978	229,666	66,405	103,441	399,512
1979	232,739	61,403	99,582	393,724
1980	235,615	64,417	104,702	404,734
1981	250,804	68,750	107,827	427,381
1982	249,294	73,997	110,453	433,744
1983	254,728	76,226	110,210	441,164
1984	258,723	71,819	123,233	453,775
1985	275,934	76,121	116,397	468,452
1986 1987	286,398 288,642	77,300 73,655	122,053 124,342	485,751 486,639
1988	284,984	84,626	120,569	490,179
1989	281,812	84,429	121,452	487,693
1990	272.556	87,976	121,711	482,243
1991	262,491	87,502	117,508	467,501
1992	268,007	90,206	118,659	476,872
1993	260,732	92,685	119,652	473,069
1994	259,863	94,637	119,299	473,799
1995	266,029	96,310	119,759	482,098
1996	275,469	96,798	120,927	493,194
1997 1998	282,293	100,986	121,509 124,452	504,788 522,512
1999	297,188 317,640	100,872 103,020	128,692	549,352
2000	317,618	103,020	129,710	548,465
2001	309,310	43,377	106,257	458,944
2002	310,771	92,557	129,511	532,839
2003	319,029	101,097	127,323	547,449
2004	315,066	96,171	125,159	536,396
2005	304,302	96,960	126,455	527,717
2006	312,078	98,425	127,245	537,748
2007	291,391	100,491	122,092	513,974
2008	293,059	97,057	118,153	508,269
2009	289,694	96,184	118,982	504,860
	•		•	•

PANYNJ one-way tolls initiated 8/12/1970.

PANYNJ toll increases May 1975, January 1984, April, 1987, April 1991, March 2001, March 2008.

#### PANYNJ Staten Island - New Jersey Bridges Average Daily Traffic Volumes 1948 - 2009

	Bayonne	Goethals	Outerbridge	
Year	Bridge	Bridge	Crossing	Totals
1948	5,241	4,283	3,690	13,214
1949	5,754	4,641 5,215	4,233	14,628
1950 1951	6,360 6,314	6,028	4,856 5,993	16,431 18,335
1952	7,035	6,865	5,243	19,143
1953	7,385	7,938	5,275	20,598
1954	7,452	8,323	5,779	21,554
1955	7,546	9,043	6,096	22,685
1956 1957	7,136 6,899	9,335 9,553	5,731 6,162	22,202 22,614
1958	6,711	9,703	5,539	21,953
1959	6,780	10,441	5,757	22,978
1960	6,519	10,331	6,006	22,856
1961	6,986	12,028	6,360	25,374
1962 1963	7,532 7,806	11,973 12,478	6,833 7,114	26,338 27,398
1964	8,012	14,182	7,786	29,980
1965	8,333	27,239	9,256	44,828
1966	9,349	32,007	9,622	50,978
1967	9,897	34,870	9,284	54,051
1968 1969	10,349	38,564	9,741	58,654
1970	10,807 11,034	41,838 47,949	10,408 9,937	63,053 68,920
1971	11,304	52,862	10,592	74,758
1972	11,704	54,574	10,740	77,018
1973	12,458	56,850	11,726	81,034
1974	12,418	53,964	14,162	80,544
1975 1976	11,860 11,418	53,206 51,554	15,994 17,892	81,060 80,864
1977	11,704	45,816	28,016	85,536
1978	11,508	44,748	32,742	88,998
1979	11,926	44,910	35,328	92,164
1980	12,984	46,352	38,438	97,774
1981 1982	13,166 13,622	46,962 48,310	41,516 44,740	101,644 106,672
1983	13,924	51,350	48,512	113,786
1984	14,058	53,962	50,908	118,928
1985	14,490	57,708	54,268	126,466
1986	15,906	64,634	57,896	138,436
1987 1988	14,890	65,452	59,392 62,250	139,734
1988	14,676 13,838	66,136 63,367	62,250 62,846	143,062 140,051
1990	12,246	63,549	62,545	138,340
1991	12,408	63,547	65,499	141,454
1992	13,342	64,469	67,569	145,380
1993	13,979	60,424	66,372 67,199	140,775
1994 1995	14,212 14,536	62,464 63,040	66,081	143,875 143,657
1996	14,389	63,601	68,575	146,565
1997	15,903	65,207	70,468	151,578
1998	16,846	67,076	72,864	156,786
1999	17,603	70,863	78,424	166,890
2000 2001	18,493 23,631	72,791 78,196	73,384 75,424	164,668 177,251
2002	21,327	81,384	76,429	179,140
2003	20,208	75,724	78,650	174,582
2004	22,510	71,532	80,226	174,268
2005	21,755	68,790	81,108	171,653
2006	24,230	65,378	86,306	175,914
2007	21,451	72,999	75,778	170,228
2008	20,058	72,834	72,884	165,776
2009	19,422	71,230	74,852	165,504

PANYNJ one-way tolls initiated 8/12/1970.

PANYNJ toll increases May 1975, January 1984, April, 1987, April 1991, March 2001, March 2008.

Hourly Vehicular Volumes
Port Authority of New York & New Jersey
2009

							Totals	
	George Was	hington Bridge	Hollan	d Tunnel	Lincol	n Tunnel	Entering	Leaving
	E/B	W/B	E/B	W/B	E/B	W/B	Manhattan	Manhattan
12-1am	1,984	2,050	717	1,106	947	1,679	3,648	4,835
1-2am	1,267	1,851	455	778	540	912	2,262	3,541
2-3am	1,085	1,184	302	676	427	574	1,814	2,434
3-4am	1,255	981	335	789	478	492	2,068	2,262
4-5am	2,164	1,319	529	1,112	871	558	3,564	2,989
5-6am	6,043	2,319	1,873	1,393	2,691	841	10,607	4,553
6-7am	10,759 **	4,501	3,167 **	2,189	4,932 **	1,449	18,858 **	8,139
7-8am	9,855	6,806	2,986	2,808	4,621	2,108	17,462	11,722
8-9am	8,937	7,679	2,849	2,620	4,331	2,266	16,117	12,565
9-10am	8,863	6,736	2,860	2,225	4,007	1,991	15,730	10,952
10-11am	7,781	6,029	2,494	2,073	3,488	2,007	13,763	10,109
11-12am	7,056	6,359	2,112	1,997	3,031	2,277	12,199	10,633
12-1pm	6,673	6,399	1,989	2,115	2,690	2,495	11,352	11,009
1-2pm	6,722	6,692	1,987	2,496	2,675	2,818	11,384	12,006
2-3pm	7,157	7,806	2,098	2,835	2,720	3,386	11,975	14,027
3-4pm	7,869	9,665	2,456	2,968 **	2,810	3,816	13,135	16,449
4-5pm	8,403	10,207	2,740	2,356	2,360	4,699	13,503	17,262
5-6pm	8,683	9,865	2,886	1,986	1,904	4,781	13,473	16,632
6-7pm	8,388	10,249 **	2,878	2,137	2,268	4,968 **	13,534	17,354 **
7-8pm	7,032	9,824	2,565	2,517	2,426	3,052	12,023	15,393
8-9pm	5,480	8,397	1,923	2,877	2,043	3,175	9,446	14,449
9-10pm	4,672	6,630	1,639	2,651	1,945	4,690	8,256	13,971
10-11pm	3,995	5,975	1,638	2,525	1,802	3,948	7,435	12,448
11-12pm	2,982	5,066	1,218	2,259	1,500	2,493	5,700	9,818
Totals	145,105	144,589	46,696	49,488	57,507	61,475	249,308	255,552
7-10am	27,655	21,221	8,695	7,653	12,959	6,365	49,309	35,239
10am-1pm	21,510	18,787	6,595	6,185	9,209	6,779	37,314	31,751
1-4pm	21,748	24,163	6,541	8,299	8,205	10,020	36,494	42,482
4-7pm	25,474	30,321	8,504	6,479	6,532	14,448	40,510	51,248
7am-7pm	96,387	94,492	30,335	28,616	36,905	37,612	163,627	160,720

<sup>\*\*</sup> Peak Volumes

Note: NYC DOT uses the averages of vehicular volumes from selected representative fall weekdays. Publications from other sources may be based on alternative computation methodologies, yielding different results for some facilities, notably the tolled bridges and tunnels.

Hourly Vehicular Volumes
Port Authority of New York & New Jersey
2009

							Tot	tals
	Bayonne	Bridge	Goetha	ls Bridge	Outerbridg	e Crossing	То	То
	S/B	N/B	E/B	W/B	E/B	W/B	Staten Island	New Jersey
12-1am	158	70	630	299	487	416	1,275	785
1-2am	95	48	391	206	304	255	790	509
2-3am	80	38	301	191	273	175	654	404
3-4am	77	40	297	202	302	182	676	424
4-5am	119	59	473	329	659	252	1,251	640
5-6am	221	247	1,127	894	1,729	528	3,077	1,669
6-7am	397	652	1,802	1,669	2,675	1,171	4,874	3,492
7-8am	509	1,163 **	1,847	2,450	2,629	2,334	4,985	5,947
8-9am	523	1,048	1,875	2,647 **	2,297	2,443	4,695	6,138 **
9-10am	456	510	1,895	2,117	2,219	1,964	4,570	4,591
10-11am	418	429	1,779	1,992	1,834	1,816	4,031	4,237
11-12am	417	401	1,778	1,759	1,767	1,698	3,962	3,858
12-1pm	436	324	1,834	1,734	1,825	1,633	4,095	3,691
1-2pm	498	350	2,053	1,749	1,950	1,643	4,501	3,742
2-3pm	617	398	2,219	1,885	2,115	2,056	4,951	4,339
3-4pm	779	446	2,486	2,251	2,313	2,774 **	5,578	5,471
4-5pm	936	442	2,654	2,255	2,567	2,460	6,157	5,157
5-6pm	1,203 **	423	2,877 **	2,485	2,870 **	2,536	6,950 **	5,444
6-7pm	1,100	357	2,714	1,736	2,505	2,281	6,319	4,374
7-8pm	671	294	2,244	1,083	1,999	1,984	4,914	3,361
8-9pm	418	226	1,757	1,033	1,599	1,459	3,774	2,718
9-10pm	324	227	1,425	755	1,335	1,165	3,084	2,147
10-11pm	302	164	1,114	613	1,066	897	2,482	1,674
11-12pm	231	81	825	499	760	651	1,816	1,231
Totals	10,985	8,437	38,397	32,833	40,079	34,773	89,461	76,043
7-10am	1,488	2,721	5,617	7,214	7,145	6,741	14,250	16,676
10am-1pm	1,271	1,154	5,391	5,485	5,426	5,147	12,088	11,786
1-4pm	1,894	1,194	6,758	5,885	6,378	6,473	15,030	13,552
4-7pm	3,239	1,222	8,245	6,476	7,942	7,277	19,426	14,975
7am-7pm	7,892	6,291	26,011	25,060	26,891	25,638	60,794	56,989

<sup>\*\*</sup> Peak Volumes

Note: NYC DOT uses the averages of vehicular volumes from selected representative fall weekdays. Publications from other sources may b based on alternative computation methodologies, yielding different results for some facilities, notably the tolled bridges and tunnels.

## Hourly Vehicular Volumes George Washington Bridge - 2009

Eastbound to Manhattan Westbound to New Jersey 2-Wav Small Large Total Small Large Total Grand Trucks Vehicles Autos Vehicles **Totals** Autos Buses Trucks **Buses** Trucks Trucks 12-1am 1.625 16 58 285 1.984 1,791 5 52 202 2.050 4.034 1-2am 881 10 62 314 1,267 1,851 3,118 2-3am 646 5 75 359 1,085 1,184 2,269 3-4am 695 9 91 460 1,255 981 2,236 4-5am 1,380 13 603 2.164 3.483 168 1.319 5-6am 4,937 37 326 743 6,043 1,683 5 149 482 2,319 8,362 6-7am 9,682 81 437 559 10,759 \*\* 3,850 40 203 408 4,501 15,260 9.855 7-8am 9.029 101 355 370 5.959 85 328 434 6.806 16.661 8,103 8,937 7,679 8-9am 102 360 372 6,853 81 382 363 16,616 7,971 69 597 9-10am 94 374 424 8,863 5,727 343 6,736 15,599 10-11am 6,903 76 354 448 7,781 4,939 54 340 696 6,029 13,810 7,056 25 11-12am 6,239 69 326 422 5,169 353 812 6.359 13,415 5,917 38 12-1pm 74 298 384 6,673 5,152 407 802 6,399 13,072 1-2pm 6,022 71 290 339 6,722 5,386 42 538 726 6,692 13,414 6,486 7,157 23 14,963 2-3pm 81 268 322 6,680 460 643 7.806 7,245 234 276 7,869 8,756 38 383 488 9,665 17,534 3-4pm 114 4-5pm 7,845 123 202 233 8,403 9,272 43 221 671 10,207 18,610 5-6pm 8,235 100 151 197 8,683 9,188 37 214 426 9.865 18,548 6-7pm 7.967 92 119 210 8,388 9.717 23 88 421 10,249 \*\* 18.637 \*\* 7-8pm 6,612 86 100 234 7,032 9,290 28 114 392 9,824 16,856 8-9pm 5,075 68 79 258 5,480 7,764 29 173 431 8,397 13,877 4,275 9-10pm 49 79 269 4,672 6.175 44 35 376 6,630 11,302 10-11pm 3.612 35 58 290 3.995 5.464 10 70 431 5.975 9.970 2,632 25 45 280 2,982 17 54 399 5,066 11-12pm 4,596 8,048 Totals 130,014 1.531 4.909 8.651 145,105 144,589 289,694 7-10am 25,103 297 1,089 1,166 27,655 18,539 235 1,053 1,394 21,221 48,876 10am-1pm 19,059 219 978 1,254 21,510 15,260 117 1,100 2,310 18.787 40,297 1-4pm 19,753 266 792 937 21,748 20,822 103 1,381 1,857 24,163 45,911 4-7pm 24,047 315 472 640 25,474 28,177 103 523 1,518 30,321 55,795

Classification based on October 2009 Data

1.097

3.331

3.997

96.387

87.962

7am-7pm

190.879

7,079

94.492

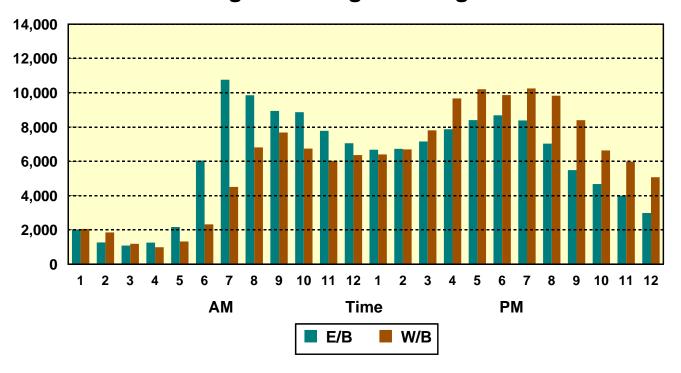
4.057

82.798

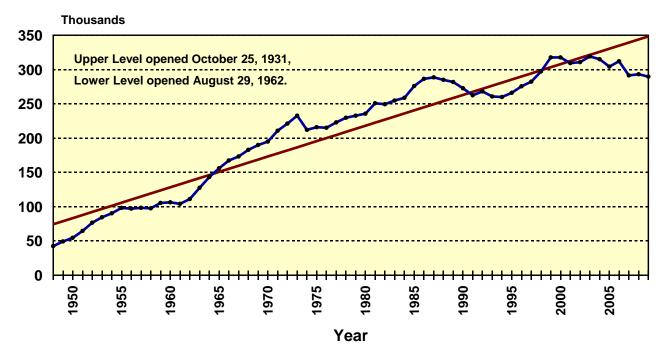
558

<sup>\*\*</sup> Peak Volumes

## **Hourly Vehicular Volumes George Washington Bridge - 2009**



# **Average Daily Traffic Volumes** George Washington Bridge 1948-2009 Growth Rate = 2.6%



## Hourly Vehicular Volumes Holland Tunnel - 2009

Eastbound to Manhattan

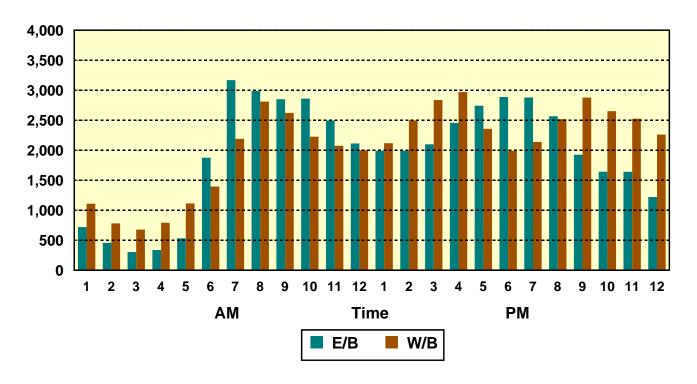
#### Westbound to New Jersey

	Eastbourid to Marinattan					westbo	σατία το τ	vew Jers	ey		_		
-								Commuter Van	-				
							C	ommercial Vai	ns	Single			2-Way
							Autos &	Pickups		Unit	Tractor	Total	Grand
							Motorcycles	Large SUVs	Buses	Trucks	Trailers	Vehicles	Totals
			Small	Large	Total	FHWA	•	Ü					
	Autos	Buses	Trucks	Trucks	Vehicles	Classes ▶	1 & 2	3	4	5 - 7	8 - 13		
12-1am	697	11	9	0	717		1,096	4	0	6	0	1,106	1,823
1-2am	432	5	18	0	455		766	5	2	5	0	778	1,233
2-3am	276	4	22	0	302		653	10	1	12	0	676	978
3-4am	289	4	42	0	335		727	24	5	33	0	789	1,124
4-5am	489	6	34	0	529		996	36	12	67	1	1,112	1,641
5-6am	1,849	15	9	0	1,873		1,312	53	13	15	0	1,393	3,266
6-7am	3,103	57	7	0	3,167	**	2,049	93	36	11	0	2,189	5,356
7-8am	2,912	65	9	0	2,986		2,635	109	51	13	0	2,808	5,794 **
8-9am	2,779	61	9	0	2,849		2,488	75	48	9	0	2,620	5,469
9-10am	2,804	47	9	0	2,860		2,134	59	26	6	0	2,225	5,085
10-11am	2,449	30	15	0	2,494		1,993	43	29	8	0	2,073	4,567
11-12am	2,075	25	11	1	2,112		1,930	41	20	6	0	1,997	4,109
12-1pm	1,956	27	6	0	1,989		2,058	39	5	13	0	2,115	4,104
1-2pm	1,953	29	5	0	1,987		2,411	57	15	13	0	2,496	4,483
2-3pm	2,055	39	4	0	2,098		2,746	64	6	19	0	2,835	4,933
3-4pm	2,395	56	5	0	2,456		2,891	41	15	21	0	2,968 **	5,424
4-5pm	2,649	86	5	0	2,740		2,288	27	24	17	0	2,356	5,096
5-6pm	2,796	86	4	0	2,886		1,911	35	23	17	0	1,986	4,872
6-7pm	2,805	69	4	0	2,878		2,065	39	17	16	0	2,137	5,015
7-8pm	2,524	37	4	0	2,565		2,454	30	18	15	0	2,517	5,082
8-9pm	1,892	24	7	0	1,923		2,826	37	8	6	0	2,877	4,800
9-10pm	1,612	20	6	1	1,639		2,597	40	5	7	2	2,651	4,290
10-11pm	1,612	20	6	0	1,638		2,463	54	4	3	1	2,525	4,163
11-12pm	1,204	11	3	0	1,218		2,201	53	2	3	0	2,259	3,477
Totals	45.607	834	253	2	46.696		47,690	1,068	385	341	4	49,488	96,184
Totals	45,007	034	255	2	40,090		47,090	1,000	363	341	4	49,400	90,184
7-10am	8,495	173	27	0	8,695		7,257	243	125	28	0	7,653	16,348
10am-1pm	6,480	82	32	1	6,595		5,981	123	54	27	0	6,185	12,780
1-4pm	6,403	124	14	0	6,541		8,048	162	36	53	0	8,299	14,840
4-7pm	8,250	241	13	0	8,504		6,264	101	64	50	0	6,479	14,983
7am-7pm	29,628	620	86	1	30,335		27,550	629	279	158	0	28,616	58,951

Based on October 2009 Classification Survey Data (Eastbound) and April 2006 Classification Survey Data (Westbound).

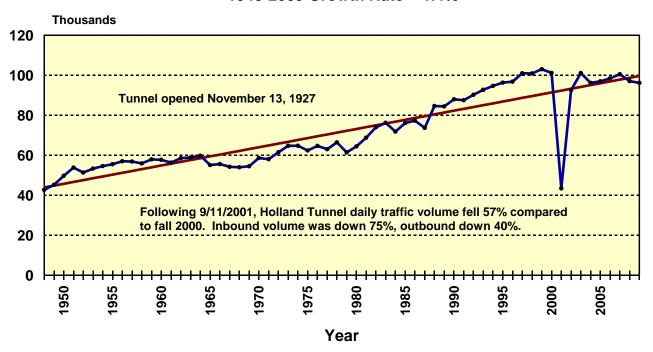
<sup>\*\*</sup> Peak Volumes

## Hourly Vehicular Volumes Holland Tunnel - 2009



# **Average Daily Traffic Volumes Holland Tunnel**

1948-2009 Growth Rate = 1.4%



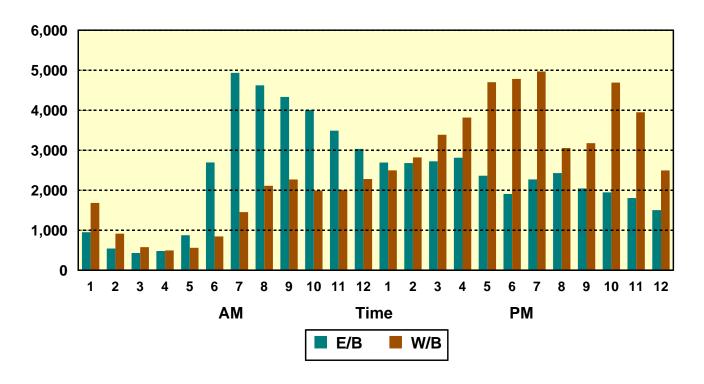
#### Hourly Vehicular Volumes Lincoln Tunnel - 2009

	Eastbound to Manhattan							Westbo	und to Nev	w Jersey		
PANYNJ	Single Rear Wheels Autos, Vans, Pickups, Motorcycles, Rec. Vehs.	All Buses & Minibuses	2 Axles Dual Rear Wheels	3 & 4 Axles Single Units & Trailers	5 or more Axles	Total Vehicles	Autos	Buses	Small Trucks	Large Trucks	Total Vehicles	2-Way Grand Totals
Classes ►	1, 7, & 11	8 & 9	2	3 & 4	5 & 6							
12-1am	808	58	23	43	15	947	1,505	80	64	30	1,679	2,626
1-2am	444	26	19	36	15	540	,				912	1,452
2-3am	337	9	21	43	17	427					574	1,001
3-4am	334	13	57	52	22	478					492	970
4-5am	591	23	129	87	41	871					558	1,429
5-6am	2,044	133	313	128	73	2,691	655	40	72	74	841	3,532
6-7am	4,002	405	359	118	48	4,932	1,051	243	105	50	1,449	6,381
7-8am	3,453	771	327	51	19	4,621	1,417	557	93	41	2,108	6,729
8-9am	3,118	862	299	41	11	4,331	1,364	753	114	35	2,266	6,597
9-10am	3,102	538	294	54	19	4,007	1,269	533	148	41	1,991	5,998
10-11am	2,938	259	223	51	17	3,488	1,470	288	220	29	2,007	5,495
11-12am	2,603	191	166	53	18	3,031	1,933	148	134	62	2,277	5,308
12-1pm	2,288	176	157	51	18	2,690	2,056	171	225	43	2,495	5,185
1-2pm	2,252	209	167	35	12	2,675	2,321	174	276	47	2,818	5,493
2-3pm	2,289	249	147	23	12	2,720	2,915	162	283	26	3,386	6,106
3-4pm	2,314	362	106	22	6	2,810	3,350	210	220	36	3,816	6,626
4-5pm	1,784	475	79	18	4	2,360	3,987	445	240	27	4,699	7,059
5-6pm	1,470	372	47	13	2	1,904	3,924	642	189	26	4,781	6,685
6-7pm	1,812	387	50	14	5	2,268	4,148	660	100	60		* 7,236
7-8pm	2,053	303	44	23	3	2,426	2,536	407	72	37	3,052	5,478
8-9pm	1,763	205	29	39	7	2,043	2,800	264	90	21	3,175	5,218
9-10pm	1,710	149	33	46	7	1,945	4,346	214	90	40	4,690	6,635
10-11pm	1,596	120	30	49	7	1,802	3,669	168	80	31	3,948	5,750
11-12pm	1,325	90	36	34	15	1,500	2,283	130	47	33	2,493	3,993
Totals	46,430	6,385	3,155	1,124	413	57,507					61,475	118,982
7-10am	9,673	2,171	920	146	49	12,959	4,050	1,843	355	117	6,365	19,324
10am-1pm		626	546	155	53	9,209	5,459	607	579	134	6,779	15,988
1-4pm	6,855	820	420	80	30	8,205	8,586	546	779	109	10,020	18,225
4-7pm	5,066	1,234	176	45	11	6,532	12,059	1,747	529	113	14,448	20,980
7am-7pm	29,423	4,851	2,062	426	143	36,905	30,154	4,743	2,242	473	37,612	74,517

Based on April 2006 Classification Survey Data (eastbound), and October 2009 classification data (westbound).

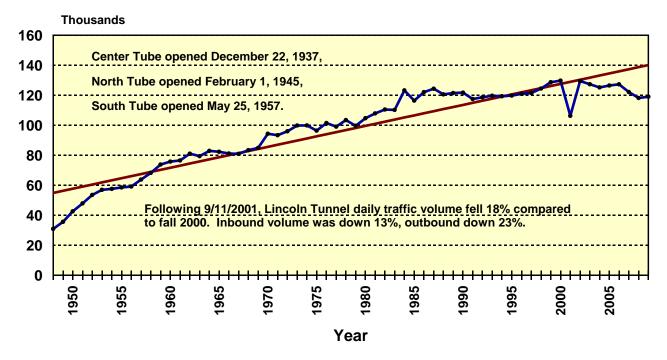
<sup>\*\*</sup> Peak Volumes

## Hourly Vehicular Volumes Lincoln Tunnel - 2009



# **Average Daily Traffic Volumes**Lincoln Tunnel

1948-2009 Growth Rate = 1.5%



Hourly Vehicular Volumes Bayonne Bridge - 2009

Southbound to Staten Island

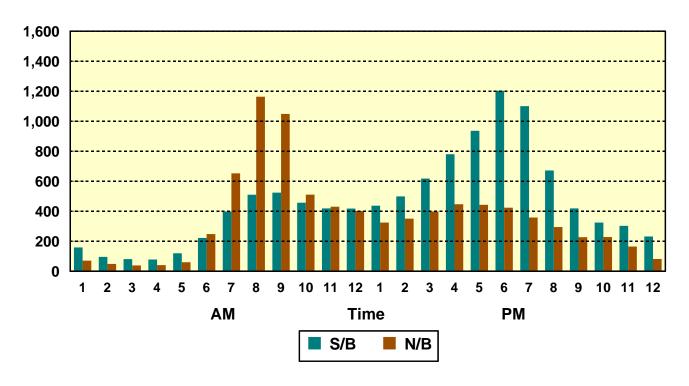
Northbound to New Jersey

	Southbound to Staten Island					Northbol	ina to new	Jersey			
_	Autos	Buses	Small Trucks	Large Trucks	Total Vehicles	Autos	Buses	Small Trucks	Large Trucks	Total Vehicles	2-Way Grand Totals
12-1am	141	2	8	7	158	53	0	12	5	70	228
1-2am	80	3	7	5	95					48	143
2-3am	63	2	9	6	80					38	118
3-4am	60	1	8	8	77					40	117
4-5am	83	1	16	19	119					59	178
5-6am	163	1	20	37	221	224	1	11	11	247	468
6-7am	307	6	34	50	397	625	4	7	16	652	1,049
7-8am	407	14	37	51	509	1,103	7	16	37	1,163 **	1,672 **
8-9am	422	8	41	52	523	976	4	37	31	1,048	1,571
9-10am	344	14	46	52	456	441	1	31	37	510	966
10-11am	318	7	40	53	418	344	0	31	54	429	847
11-12am	318	3	43	53	417	328	1	37	35	401	818
12-1pm	349	2	38	47	436	258	3	27	36	324	760
1-2pm	415	2	39	42	498	277	2	28	43	350	848
2-3pm	535	3	39	40	617	317	0	32	49	398	1,015
3-4pm	717	4	34	24	779	363	3	47	33	446	1,225
4-5pm	887	8	25	16	936	380	4	31	27	442	1,378
5-6pm	1,156	9	25	13	1,203 **	389	6	17	11	423	1,626
6-7pm	1,059	9	19	13	1,100	337	5	9	6	357	1,457
7-8pm	645	6	9	11	671	280	0	4	10	294	965
8-9pm	395	4	11	8	418	213	0	4	9	226	644
9-10pm	303	3	9	9	324	216	0	0	11	227	551
10-11pm	282	3	8	9	302	156	1	1	6	164	466
11-12pm	216	3	5	7	231	71	1	3	6	81	312
Totals	9,665	118	570	632	10,985					8,437	19,422
7-10am	1,173	36	124	155	1,488	2,520	12	84	105	2,721	4,209
10am-1pm	985	12	121	153	1,271	930	4	95	125	1,154	2,425
1-4pm	1,667	9	112	106	1,894	957	5	107	125	1,194	3,088
4-7pm	3,102	26	69	42	3,239	1,106	15	57	44	1,222	4,461
7am-7pm	6,927	83	426	456	7,892	5,513	36	343	399	6,291	14,183

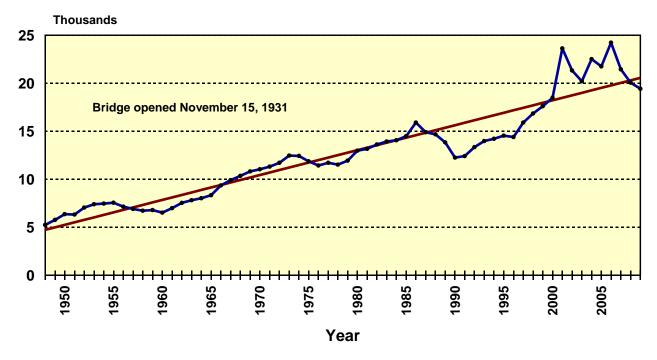
Classification based on October 2009 survey data.

<sup>\*\*</sup> Peak Volumes

## **Hourly Vehicular Volumes Bayonne Bridge - 2009**



# **Average Daily Traffic Volumes** Bayonne Bridge 1948-2009 Growth Rate = 2.4%



# Hourly Vehicular Volumes Goethals Bridge - 2009

Eastbound to Staten Island

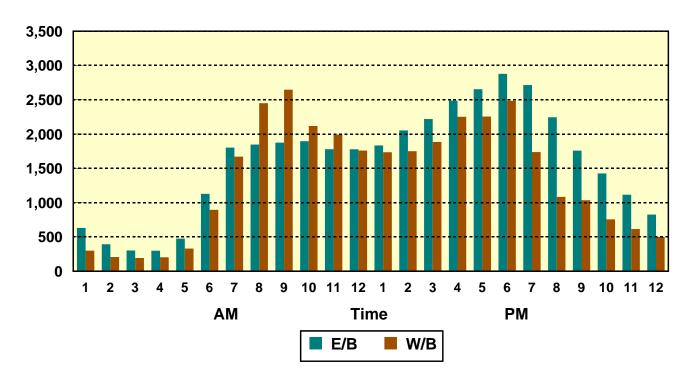
#### Westbound to New Jersey

		Lasiboui	iu io Sialei	i isiaiiu			Westbou	na to new	Jersey		
_	Autos	Buses	Small Trucks	Large Trucks	Total Vehicles	Autos	Buses	Small Trucks	Large Trucks	Total Vehicles	2-Way Grand Totals
12-1am	574	3	11	42	630					299	929
1-2am	326	5	11	49	391					206	597
2-3am	224	3	15	59	301					191	492
3-4am	188	2	26	81	297					202	499
4-5am	292	3	49	129	473					329	802
5-6am	820	6	98	203	1,127	783	15	39	57	894	2,021
6-7am	1,422	14	141	225	1,802	1,501	27	62	79	1,669	3,471
7-8am	1,464	26	148	209	1,847	2,200	59	49	142	2,450	4,297
8-9am	1,520	32	142	181	1,875	2,317	35	126	169	2,647 **	4,522
9-10am	1,499	44	147	205	1,895	1,785	17	165	150	2,117	4,012
10-11am	1,408	26	142	203	1,779	1,582	8	146	256	1,992	3,771
11-12am	1,424	15	142	197	1,778	1,406	5	158	190	1,759	3,537
12-1pm	1,508	11	128	187	1,834	1,387	5	120	222	1,734	3,568
1-2pm	1,747	9	128	169	2,053	1,363	10	135	241	1,749	3,802
2-3pm	1,937	12	122	148	2,219	1,524	14	161	186	1,885	4,104
3-4pm	2,249	18	116	103	2,486	1,855	6	216	174	2,251	4,737
4-5pm	2,490	26	84	54	2,654	1,918	5	155	177	2,255	4,909
5-6pm	2,725	42	59	51	2,877 **	2,260	5	104	116	2,485	5,362 **
6-7pm	2,571	48	52	43	2,714	1,620	2	19	95	1,736	4,450
7-8pm	2,122	34	41	47	2,244	1,006	0	15	62	1,083	3,327
8-9pm	1,661	16	31	49	1,757	961	2	26	44	1,033	2,790
9-10pm	1,350	4	25	46	1,425	721	1	13	20	755	2,180
10-11pm	1,054	4	18	38	1,114	564	2	15	32	613	1,727
11-12pm	773	5	11	36	825	458	2	9	30	499	1,324
Totals	33,348	408	1,887	2,754	38,397					32,833	71,230
7-10am	4,483	102	437	595	5,617	6,302	111	340	461	7,214	12,831
10am-1pm	4,340	52	412	587	5,391	4,375	18	424	668	5,485	10,876
1-4pm	5,933	39	366	420	6,758	4,742	30	512	601	5,885	12,643
4-7pm	7,786	116	195	148	8,245	5,798	12	278	388	6,476	14,721
7am-7pm	22,542	309	1,410	1,750	26,011	21,217	171	1,554	2,118	25,060	51,071

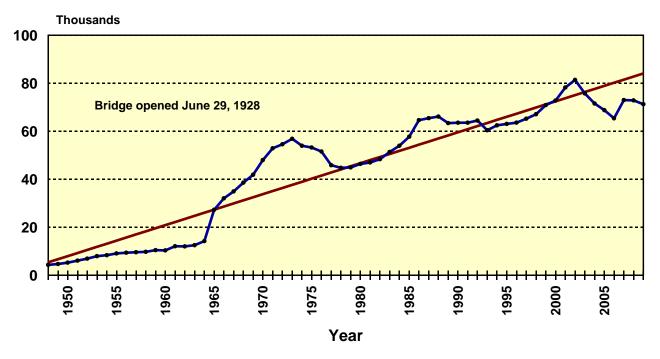
Classification based on October 2009 survey data.

<sup>\*\*</sup> Peak Volumes

## **Hourly Vehicular Volumes Goethals Bridge - 2009**



# **Average Daily Traffic Volumes** Goethals Bridge 1948-2009 Growth Rate = 4.6%



Hourly Vehicular Volumes Outerbridge Crossing - 2009

Eastbound to Staten Island

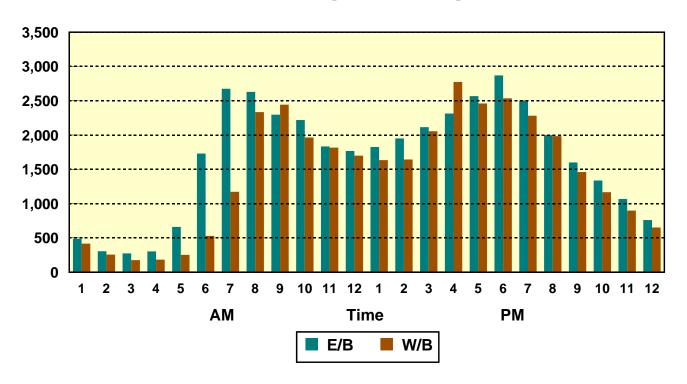
Westbound to New Jersey

		Easibour	iu io Stateri	isianu			westbou	na to new .	Jersey		
_	Autos	Buses	Small Trucks	Large Trucks	Total Vehicles	Autos	Buses	Small Trucks	Large Trucks	Total Vehicles	2-Way Grand Totals
12-1am	416	4	14	53	487	379	0	16	21	416	903
1-2am	225	2	14	63	304					255	559
2-3am	186	1	16	70	273					175	448
3-4am	185	1	26	90	302					182	484
4-5am	462	2	51	144	659					252	911
5-6am	1,484	8	94	143	1,729	460	2	24	42	528	2,257
6-7am	2,464	6	102	103	2,675	1,086	2	38	45	1,171	3,846
7-8am	2,455	4	92	78	2,629	2,156	5	86	87	2,334	4,963
8-9am	2,117	5	99	76	2,297	2,319	3	59	62	2,443	4,740
9-10am	2,007	4	97	111	2,219	1,781	20	74	89	1,964	4,183
10-11am	1,644	4	81	105	1,834	1,650	12	95	59	1,816	3,650
11-12am	1,593	4	76	94	1,767	1,517	2	64	115	1,698	3,465
12-1pm	1,656	6	76	87	1,825	1,458	1	108	66	1,633	3,458
1-2pm	1,798	6	69	77	1,950	1,479	2	86	76	1,643	3,593
2-3pm	1,968	5	77	65	2,115	1,896	3	50	107	2,056	4,171
3-4pm	2,188	4	76	45	2,313	2,673	1	48	52	2,774 **	5,087
4-5pm	2,467	6	63	31	2,567	2,391	0	28	41	2,460	5,027
5-6pm	2,782	9	47	32	2,870 **	2,465	0	34	37	2,536	5,406 **
6-7pm	2,427	13	35	30	2,505	2,220	1	36	24	2,281	4,786
7-8pm	1,920	18	25	36	1,999	1,939	2	19	24	1,984	3,983
8-9pm	1,522	12	24	41	1,599	1,408	4	16	31	1,459	3,058
9-10pm	1,273	4	17	41	1,335	1,100	8	16	41	1,165	2,500
10-11pm	1,009	3	12	42	1,066	857	0	16	24	897	1,963
11-12pm	696	3	15	46	760	611	1	14	25	651	1,411
Totals	36,944	134	1,298	1,703	40,079					34,773	74,852
7-10am	6,579	13	288	265	7,145	6,256	28	219	238	6,741	13,886
10am-1pm	4,893	14	233	286	5,426	4,625	15	267	240	5,147	10,573
1-4pm	5,954	15	222	187	6,378	6,048	6	184	235	6,473	12,851
4-7pm	7,676	28	145	93	7,942	7,076	1	98	102	7,277	15,219
7am-7pm	25,102	70	888	831	26,891	24,005	50	768	815	25,638	52,529

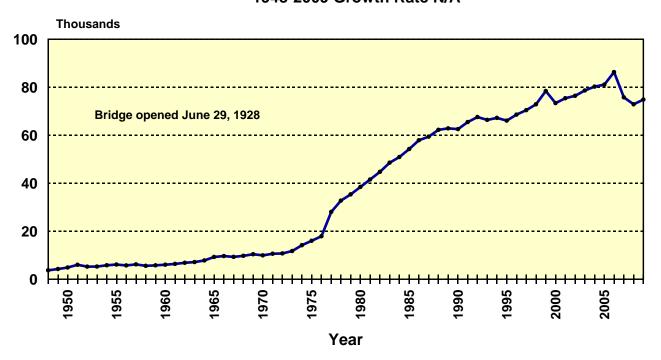
Classification based on October 2009 survey data.

<sup>\*\*</sup> Peak Volumes

## **Hourly Vehicular Volumes Outerbridge Crossing - 2009**



# **Average Daily Traffic Volumes** Outerbridge Crossing 1948-2009 Growth Rate N/A



# **APPENDIX** 2009 Bridge and Tunnel Reconstruction

#### **APPENDIX**

#### **Major Bridge Reconstruction In 2009**

#### Brooklyn Bridge

Eastbound lane closures were in effect as follows:

All 2009:	11:00pm–6:00am	Mon–Fri	1 e/b lane closed intermittently,
	10:00am-3:00pm	Mon–Fri	1 e/b lane closed intermittently,
	2:00am-2:00pm	Sat–Sun	1 e/b lane closed intermittently.

The Park Row entrance to the bridge was closed from 11:00pm to 5:00am Tuesday night June 2 and Thursday night June 4.

#### Manhattan Bridge

#### Manhattan Bridge Operation: All 2009.

North bikeway and south walkway open.

#### • 6:00am – 10:00am Weekdays.

- Five lanes open westbound: two lanes on the north upper roadway (no trucks), and three lanes on the lower roadway for all vehicle types.
- Left lane of the north upper roadway reserved for **buses and HOVs**.
- Two lanes open eastbound on the south upper roadway.

#### • 10:00am – 2:00pm Weekdays.

- Three lanes open westbound: one or two lanes on the north upper roadway (no trucks), and one or two lanes on the lower roadway for all vehicle types.
- Two lanes open eastbound on the south upper roadway.

#### • 2:00pm – 3:00pm Weekdays.

- Two lanes open westbound on the north upper roadway.
- Two lanes open eastbound on the south upper roadway.
- Lower roadway closed for reversal.

#### • 3:00pm – 5:00am Weekdays.

- Two lanes open westbound on the north upper roadway.
- Five lanes open eastbound: two lanes on the south upper roadway, and three lanes on the lower roadway.

#### • 9:00pm Friday – 10:00am Monday.

- Five lanes open westbound: two lanes on the north upper roadway, and three lanes on the lower roadway.
- Two lanes open eastbound on the south upper roadway.

#### • Lower Roadway.

- Available to all vehicle types at all times.
- Manhattan-bound 5:00am 2:00pm weekdays, and 9:00pm Friday to 5:00am Monday.
- Closed for reversal approximately 2:00pm 3:00pm weekdays.
- Brooklyn-bound 3:00pm 5:00am weekdays.
- Manhattan-bound trucks required to use the lower roadway weekdays 5:00am 2:00pm.
- Access to westbound Canal Street in Manhattan.
- Off-peak lane closures as needed on the lower roadway.

#### • North Upper Roadway.

- Manhattan-bound all hours.
- No trucks weekdays 5:00am 2:00pm.
- Left lane reserved for **buses and HOVs** weekdays 6:00am –10:00am. Access to the HOV lane is from Brooklyn–Queens Expressway eastbound exit 29A, from Nassau Street, and from Flatbush Avenue–Tillary Street.
- Single–occupant cars permitted only in the right lane weekdays 6:00am–10:00am, with access from Brooklyn–Queens Expressway eastbound exit 29A and from Nassau Street. Single–occupant cars are not permitted to access the north upper roadway from Flatbush Avenue–Tillary Street during these hours.
- When the lower roadway is Manhattan-bound, access in Manhattan from the north upper roadway is to northbound Chrystie Street and eastbound Canal Street only, with no access to westbound Canal Street from the north upper roadway during these hours. Drivers seeking access to westbound Canal Street during these hours must use the lower roadway.
- Overnight and weekend lane closures as needed on the Manhattan-bound north upper roadway.
- **As of July 26,** the right turn lane from the North Upper Roadway onto eastbound Canal Street was closed 9:00pm to 5:00am Sunday nights to Friday mornings (9:00pm to 2:00pm as of September 27), and was also closed as needed from 9:00pm Friday to 5:00am Monday. Passenger cars were still permitted to turn right from the center lane onto eastbound Canal Street. Trucks and buses were prohibited from turning right onto eastbound Canal Street, and were advised to follow the posted detour via Chrystie Street, Grand Street, and Allen Street for access to eastbound Canal Street.

#### • South Upper Roadway.

- Brooklyn-bound all hours for all vehicle types.
- Off-peak lane closures as needed on the south upper roadway.
- On Sunday, October 4, from 6:00am to noon, this roadway was completely closed. During this time there were three lanes Brooklyn-bound on the Lower Roadway, and two lanes Manhattan-bound on the North Upper Roadway.

#### Queensboro Bridge

Throughout 2009, **trucks** were permitted only on the two Lower Inner Roadways.

Throughout 2009, a **High Occupancy Vehicle (HOV) facility** was in effect on the Queensboro Bridge. The normally Queens—bound South Upper Roadway was reversed between 6:00am and 10:00am on weekdays to accommodate Manhattan—bound HOVs (no trucks) carrying two or more occupants.

Throughout 2009, the North Outer Roadway was reserved for bicyclists and pedestrians.

The North Upper Roadway was closed intermittently as follows:

```
01/01 – 03/06: 1:00am – 5:00am Mon–Fri,
1:00am – 6:00am Sat,
1:00am – 7:00am Sun.
```

The North Outer Roadway was closed intermittently as follows:

```
All 2009: 10:00pm – 5:00am All Days. Shuttle bus provided for pedestrians and bicyclists during closures.
```

The South Upper Roadway was closed intermittently as follows:

```
01/01 – 06/19: 1:00am – 5:30am Mon–Fri,
2:00am – 7:00am Sat,
2:00am – 8:00am Sun.
```

The South Outer Roadway was closed intermittently as follows:

```
01/01 – 06/19: 1:00am – 6:00am Mon–Fri,
1:00am – 7:00am Sat.
```

The South Outer Roadway was closed completely as follows:

```
06/06 – 06/19: 1:00am – 9:00am Sat,
1:00am – Noon Sun.
```

The entrance to the North Upper Roadway from 21<sup>st</sup>. Street in Queens was closed from 10:00pm Fridays until 10:00pm Sundays during all weekends in March 2009. During these times, access to the North Upper Roadway was from Queens Plaza South at 11th Street.

#### Queensboro Bridge Operation: All 2009.

North Inner Roadway: W/B all times; W/B trucks required to use this roadway. South Inner Roadway: E/B all times; E/B trucks required to use this roadway.

North Upper Roadway: W/B all times.

South Upper Roadway: Closed for reversal 5:30–6:00am weekdays,

W/B HOVs 6:00-10:00am weekdays,

Closed for reversal 10:00–11:00am weekdays,

E/B all other times.

North Outer Roadway: Bicyclists and pedestrians all times. South Outer Roadway: E/B all times (passenger cars only).

Throughout 2009, there were additional intermittent closings of single lanes on individual roadways of the Queensboro Bridge during off-peak hours.

#### Williamsburg Bridge

Throughout 2009, trucks were permitted only on the outer roadways.

Pedestrian and bicycle access was maintained on the bridge at all times throughout 2009.

#### Williamsburg Bridge Operation: All 2009, Except certain weekends as noted below.

• Mon-Fri 6:00am - 10:00am.

Manhattan-bound: 4 lanes. Brooklyn-bound: 2 lanes.

• Mon-Fri 10:00am - 3:00pm.

Manhattan-bound: 3 lanes. Brooklyn-bound: 2 lanes.

All other times.

Manhattan-bound: 4 lanes. Brooklyn-bound: 4 lanes.

#### Weekend Williamsburg Bridge Operation: June 6 – 7, 2009

• Sat. 5:00am - 6:00pm.

Manhattan-bound: 4 lanes. Brooklyn-bound: 2 lanes.

• Sat 3:00pm - Sun 8:00pm.

Manhattan-bound: 4 lanes. Brooklyn-bound: 3 lanes.

## Weekend Williamsburg Bridge Operation: Aug. 29 – 30, Sep. 12 – 13, Sep. 26 - 27

• Sat &Sun 5:00am – 3:00pm.

Manhattan-bound: 4 lanes. Brooklyn-bound: 2 lanes.

One lane closed on North Inner & North Outer Roadways; South Inner Roadway reversed to Manhattan-bound.

3:00am - 8:00pm.

Manhattan-bound: 2 lanes. Brooklyn-bound: 4 lanes.

One lane closed on North Inner & North Outer Roadways;

All other hours.

Manhattan-bound: 4 lanes. Brooklyn-bound: 4 lanes.

#### Saturday Williamsburg Bridge Operation: Saturday, Nov. 21

#### 5:00am – 3:00pm.

Manhattan-bound: 4 lanes. Brooklyn-bound: 2 lanes.

One lane closed on North Inner & North Outer Roadways; South Inner Roadway reversed to Manhattan-bound.

3:00am – 8:00pm.

Manhattan-bound: 2 lanes. Brooklyn-bound: 4 lanes.

One lane closed on North Inner & North Outer Roadways;

#### All other hours.

Manhattan-bound: 4 lanes. Brooklyn-bound: 4 lanes.

#### Macombs Dam Bridge

The bridge was completely closed as follows to facilitate NYCDOT bridge maintenance and inspection work.

02/07:	12:01am – 5:00am	Saturday.	Entire bridge closed.
08/28:	12:01am – 5:00am	Friday.	Entire bridge closed.
09/18-09/24:	12:01am – 5:00am	Weeknights;	Entire bridge

12:01am – 6:00am Sat. & Sun. closed.

#### Madison Avenue Bridge

The bridge was closed westbound (to Manhattan) as follows to facilitate NYCDOT milling and resurfacing.

```
10/01–10/06: 11:00pm – 5:00am Weeknights. No closures during Yankee home night games.
```

#### Willis Avenue Bridge

Throughout 2009, one of four lanes on the north side of the bridge was closed round-the-clock, and motorists in the left lane could only proceed onto the northbound Major Deegan Expressway. The right and center lanes continued to Willis Avenue or Bruckner Boulevard.

Two of four lanes on the main bridge were closed intermittently as follows.

```
All 2009: 12:01am – 6:00am Weeknights; 1:00am – 7:00am Sat.
```

On October 20, from 1:00am to 5:00am, the exit from the bridge to the northbound Major Deegan Expressway was closed.

Throughout 2009, the pedestrian access at First Avenue and East 125<sup>th</sup> Street was closed, and a temporary access stairway was available at First Avenue and East 127<sup>th</sup> Street. The temporary staircase was not accessible to disabled persons unable to climb or descend stairs; they were encouraged to use Third Avenue Bridge as alternate.

### 145<sup>th</sup> Street Bridge

The entire bridge was fully closed intermittently as follows for testing operations to complete the NYC DOT bridge reconstruction project:

```
01/01–08/07: 10:00pm – 6:00am Weeknights. No closures on this bridge during closures on the Macombs Dam Bridge, or within 2 hours of Yankee home games.
```

```
08/08–12/31: 10:00pm – 6:00am Weeknights; 12:01am – 7:00am Sat-Sun.
```

No closures on this bridge during closures on the Macombs Dam Bridge, or within 2 hours of Yankee home games.

Throughout 2009, there were additional closures of single lanes in each direction on the 145<sup>th</sup> Street Bridge and its approach ramps during off–peak hours.

#### Kosciuszko Bridge

From August 10 to August 14, there were intermittent closures of one of three lanes (one direction at a time) on weeknights between 11:00pm and 5:00am.

#### Hamilton Avenue Bridge

From January 1 to March 27, one of four northbound (inbound) lanes was closed during off-peak hours, and one of four southbound (outbound) lanes was closed round-the-clock.

From January 13 to January 24, one half the bridge was closed as needed nightly from 9:00pm to 5:00am, with two-way traffic maintained on the open half

From May 9 to May 29, between Columbia Street and 14<sup>th</sup> Street, one lane was open in each direction 9:00pm to 5:00am Sunday nights to Friday mornings.

From November 28 to December 9, one lane was open in each direction 9:00pm to 5:00am weeknights as needed, and 12:01am to 7:00am as needed Saturday and Sunday.

Throughout 2009, there were intermittent closures of single lanes as needed during off-peak hours.

#### Mill Basin Bridge

From June 13 to June 20, two of three eastbound lanes were closed as needed 12:01am to 5:00am Tuesday to Saturday.

From July 18 to November 6, one of three lanes was closed in each direction 11:00pm to 1:00am, and two of three lanes closed in each direction 1:00am to 5:00am Sunday nights to Friday mornings.

From November 7 to November 13, one of three westbound lanes was closed 11:00pm to 1:00am, and two of three westbound lanes closed 1:00am to 5:00am Sunday nights to Friday mornings.

From November 14 to December 31, one of three lanes was closed in one direction at a time 11:00pm to 1:00am, and two of three lanes closed in one direction at a time 1:00am to 5:00am Sunday nights to Friday mornings.

#### Borden Avenue Bridge

This bridge was closed for repairs on December 31, 2008 and remained closed throughout 2009.

#### Hook Creek Bridge

From January 26 to February 13, there were periodic closures of one of three lanes in each direction on Rockaway Boulevard approaching the bridge southbound (to Nassau County) 10:00am – 3:00pm weekdays.

#### Roosevelt Avenue Bridge

From February 14 to December 31, the bridge was closed eastbound as needed 9:00pm to 5:00am nightly. There were no closures during New York Mets home games.

#### Roosevelt Island Bridge

This bridge was closed overnight 12:30am to 5:30am on April 15, 16, 17, 21, and 22, 2009, and July 7 through July 10, 2009.

#### Whitestone Expressway Bridge

Throughout 2009, intermittent lane closures were in effect on the Whitestone Expressway and the bridge during off-peak hours.

#### Brooklyn-Battery Tunnel

Throughout 2009, the inbound **exit to Trinity Place** was closed weekdays between 6:00-10:00am, and between 3:00–7:00pm.

Throughout 2009, between 6:00am and 10:00am on weekdays, there were three lanes inbound and one lane outbound.

Throughout 2009, on weekdays between 4:00pm and 7:00pm, there were two lanes outbound to Brooklyn in the south tube, plus one outbound contra—flow lane in the north tube.

Throughout 2009, one tube was closed intermittently as needed Sunday to Thursday nights from 10:00pm to 5:30am the following morning, with two-way traffic maintained in the other tube.

Throughout 2009, there were additional intermittent closures of single lanes in both directions during off-peak hours.

#### Henry Hudson Bridge

One of four southbound (Manhattan-bound) lanes was closed as follows.

All 2009: Round–the–clock All Days. 1 Manhattan–bound lane closed. 2<sup>nd</sup> Manhattan–bound lane closed intermittently during off-peak hours.

Northbound (Bronx-bound) lane closures were in effect as follows.

01/01–05/15: Round-the-clock All Days 1 Bronx–bound lane closed.

05/16–12/31: Off Peak Hours Weekdays 1 Bronx–bound lane closed as needed.

#### Queens-Midtown Tunnel

Throughout 2009, there were intermittent closures of single lanes in both directions during off-peak hours.

One tube was closed as follows.

11/08-11/16: 1:00am Sunday – 5:30am Monday. One tube closed. 2-way traffic maintained in the other tube, with truck traffic restricted from the tunnel.

#### Robert F. Kennedy Bridge (formerly Triborough Bridge)

From January 1 to January 23, the following closures were in effect.

At the Harlem lift span, one lane closed as needed to Manhattan 10:00am to 2:30pm, and to Queens/Bronx 6:00am to 2:30pm daily. Two lanes closed as needed from Queens to The Bronx 9:00pm to 5:00am Monday through Wednesday.

At the suspension bridge and viaduct, one of four lanes closed as needed to Queens 6:00am to 2:00pm weekdays; and 8:00pm to 6:00am Wednesday nights to Saturday mornings (two of four lanes closed as needed 11:00pm to 5:00am) and three of four lanes closed as needed 11:00pm to 5:00am Wednesday nights to Saturday mornings. One of four lanes closed as needed to Manhattan/Bronx 10:00am to 3:00pm weekdays, and two of four lanes closed as needed 9:00pm to 5:00am Tuesday to Friday.

From January 24 to August 21, the following closures were in effect.

At the Harlem lift span, one lane closed as needed to Queens 6:00am to 2:30pm.

At the suspension bridge and viaduct, one of four lanes closed as needed to Queens 10:00am to 3:00pm weekdays (two of four lanes closed as needed 9:00pm to 5:00am Sunday to Thursday nights, and 10:00pm to 8:00am Friday and Saturday nights). Three of four lanes closed as needed 12:01am to 4:00am Sunday through Thursday, and 12:01am to 5:00am Friday and Saturday. One of four lanes to Bronx and Manhattan closed as needed 10:00am to 3:00pm weekdays, and two of four lanes closed as needed 9:00pm to 5:00am Tuesday to Friday.

NOTE: Lane closures restricted during Throgs Neck Bridge emergency repairs during summer 2009.

From August 4 to August 17, the following additional closures were in effect.

To accommodate NYCDOT roadwork on the FDR Drive southbound from East 125<sup>th</sup> Street to East 96<sup>th</sup> Street, the RFK (formerly Triborough) Bridge off-ramp from the Harlem span onto the FDR Drive southbound was closed Tuesday to Friday 12:01am to 5:00am, and Saturday and Sunday 1:00am to 9:00am. Motorists could use 2<sup>nd</sup> Avenue or Lexington Avenue as an alternate route southbound.

NOTE: The RFK Bridge and 3<sup>rd</sup> Avenue Bridge ramps were not closed simultaneously.

From August 22 to December 31, the following closures were in effect.

At the Harlem lift span, one lane closed as needed to Manhattan 10:00am to 2:30pm daily, and two lanes closed as needed 10:00pm to 5:00am Monday to Friday. One lane closed as needed to Bronx/Queens 6:00am to 2:30pm daily, and two lanes closed as needed 10:00pm to 5:00am.

At the suspension bridge and viaduct, two of four lanes closed as needed to Queens 9:00pm to midnight Monday to Friday. Three of four lanes to Queens closed as needed 12:01am to 6:00am Tuesday, and 12:01am to 5:00am Friday and Saturday. One of four lanes to Bronx and Manhattan closed as needed 10:00am to 3:00pm weekdays, and two

of four lanes closed as needed 9:00pm to midnight Monday to Friday, and three of four lanes 12:01am to 6:00am.

#### **Bronx-Whitestone Bridge**

Northbound (Bronx-bound) lane closures were in effect as follows.

```
01/01–08/07: 10:00am – 3:00pm Mon-Thu 1 N/B lane closed as needed; 10:00am – 2:30pm Fri 1 N/B lane closed as needed; 6:00am – Noon Sat-Sun 1 N/B lane closed as needed.
```

*NOTE:* Lane closures restricted during Throgs Neck Bridge emergency repairs during summer 2009.

12:01am – 6:00am Sat-Sun 2 N/B lanes closed as needed.

Southbound (Queens-bound) lane closures were in effect as follows.

```
01/01–07/24: 10:00am – 3:00pm

10:00am – 2:30pm

6:00am – Noon

10:00pm – 6:00am

10:00pm – 6:00am

11:00pm-6:00am

Mon-Thu 1 S/B lane closed as needed;

Sat-Sun 1 S/B lane closed as needed.

Mon night to Fri morning,

2 S/B lanes closed as needed.

Fri night to Sun morning,
```

2 S/B lanes closed as needed.

NOTE: Lane closures restricted during Throgs Neck Bridge emergency repairs during summer 2009.

```
07/25–08/07: 10:00am – 3:00pm
10:00am – 2:30pm
6:00am – Noon
10:00pm – 6:00am
```

11:00pm- 6:00am Fri night to Sun morning, 1 S/B lane closed as needed.

NOTE: Lane closures restricted during Throgs Neck Bridge emergency repairs during summer 2009.

NOTE: Lane closures restricted during Throgs Neck Bridge emergency repairs during summer 2009.

```
10/01–12/11: 9:30am – 2:30pm Mon- Fri 1 S/B lane closed as needed; 6:00am – Noon Sat-Sun 1 S/B lane closed as needed.
```

12/12–12/31:	9:30am - 2:30pm	Mon- Fri	1 S/B lane closed as needed;
	11:00 pm - 5:00 am	Mon-Fri	1 S/B lane closed as needed,
	12:01am – Noon	Sat-Sun	1 S/B lane closed as needed.

#### Cross Bay Bridge

Northbound lane closures (to Queens) were in effect on the bridge according to the following schedule.

All 2009:	Round-the-clock	All Days	1 of 3 N/B lanes closed.
	8:30am - 4:30pm	Weekdays	2 <sup>nd</sup> N/B lane closed as needed.

Southbound lane closures (to Rockaway) were in effect on the bridge according to the following schedule.

01/01–11/01:			1 of 3 S/B lanes closed. 2 <sup>nd</sup> S/B lane closed as needed.
11/02–12/31:	6:00am – 4:00pm	Weekdays	1 S/B lane closed as needed.

From January 1 to May 22, the northbound ramp from Beach Channel Drive East to the bridge was closed round-the-clock.

From February 23 to May 22, the southbound ramps from the bridge onto Beach Channel Drive east (toward Rockaways) and Rockaway Freeway/Shore Front Parkway were closed. Motorists traveling east were required to exit onto Beach Channel Drive via the Riis Park ramp and follow posted detour.

#### Marine Parkway Bridge (Gil Hodges Memorial Bridge)

There were intermittent closures of single lanes in both directions during off-peak hours.

Northbound (to Brooklyn), intermittent lane closures were in effect as follows.

01/01-01/23:	9:00am – 4:30pm	Mon-Fri	1 of 2 N/B lanes closed as needed.
01/24-06/05:	8:00am – 4:30pm	Mon-Fri	1 of 2 N/B lanes closed as needed.
06/06–12/11:	9:00am – 4:30pm	Mon-Fri	1 of 2 N/B lanes closed as needed.
12/12–12/30:	9:30am – 3:00pm 10:00am – 3:00pm	Mon-Fri Mon-Fri	1 of 2 N/B lanes closed as needed, All lanes also subject to 20 minute intermittent closures as needed.

Southbound (to Rockaway), intermittent lane closures were in effect as follows.

01/01–06/05:	8:00am – 4:30pm	Mon-Fri	1 of 2 S/B lanes closed as needed.
06/06–12/11:	7:00am – 4:30pm	Mon-Fri	1 of 2 N/B lanes closed as needed.
12/12–12/30:	7:00am – 3:00pm 10:00am – 3:00pm	Mon-Fri Mon-Fri	1 of 2 N/B lanes closed as needed. All lanes also subject to 20 minute intermittent closures as needed.

From September 8 to September 25, and from October 10 to October 12, the Breezy Point exit ramp was closed, with traffic detoured onto Beach Channel Drive eastbound, and turnaround just west of Beach 149th Street.

#### Throgs Neck Bridge

The Cross Island Parkway ramp leading Bronx-bound motorists onto the bridge from Queens was closed from July 16 to August 10. Motorists were advised to consider the Bronx-Whitestone Bridge or use the Clearview Expressway as alternate route to the Throgs Neck Bridge.

From July 18 to July 25, due to emergency repairs, two lanes were maintained northbound to The Bronx, with no trucks permitted.

As of July 25, the ban on most northbound trucks was lifted, including State divisible load permitted trucks weighing up to 105,000 pounds. Two lanes northbound continued to be maintained on the bridge. Trucks were required to enter the bridge from the left lane of the northbound Clearview Expressway and remain in the left lane until the bridge expands to three lanes.

As of August 10, the third northbound lane was reopened on the bridge. All three northbound lanes were narrowed to enable work to continue.

Also on August 10, one of two lanes on the Cross Island Parkway ramp leading Bronx-bound motorists onto the bridge from Queens was reopened.

Repair work was completed December 11.

Throughout 2009, there were additional intermittent closures of single lanes on the Throgs Neck Bridge during off-peak hours.

#### Verrazano-Narrows Bridge

Throughout 2009, **trucks** were required to use the upper level.

#### Verrazano Bridge Operation: January 1 to August 20, 2009

One Lower Level eastbound lane (To Brooklyn) was closed 10:00am – 6:00pm Weekdays.

The entire eastbound Lower Level (to Brooklyn) was closed as needed according to the following schedule.

```
9:00pm – 5:00am Monday nights to Friday mornings, 12:01am – 8:00am Sat. E/B lower level closed as needed.
```

One Lower Level westbound lane (To Staten Island) was closed according to the following schedule.

```
6:00am – 2:00pm Mon-Thu,
6:00am – 1:00pm Fri.
1 W/B lower level lane closed as needed.
```

The entire westbound Lower Level (to Staten Island) was closed as needed according to the following schedule.

```
9:00pm – 6:00am Monday nights to Friday mornings, 12:01am – 8:00am Sat. W/B lower level closed as needed.
```

#### Verrazano Bridge Operation: August 21 to December 31, 2009

One eastbound lane (to Brooklyn) was closed on each level 10:00am – 6:00pm Mon – Thu.

One entire eastbound level (to Brooklyn) was closed as needed according to the following schedule.

```
9:00pm – 5:00am Mon – Fri,
12:01am – 8:00am Sat.
1 eastbound level closed as needed.
```

One westbound lane (to Staten Island) was closed as needed on each level 6:00am to 2:00pm Mon – Fri.

One entire westbound level (to Staten Island) was closed as needed according to the following schedule.

```
9:00pm – 6:00am Mon – Thu,
12:01am – 8:00am Sat.
I westbound level closed as needed.
```

From September 29 to October 30, the westbound Belt Parkway exit to the bridge was closed 11:00pm to 4:00am Monday nights to Saturday mornings. One of two lanes on the ramp was closed as needed 10:00am to 2:00pm, and 11:00pm-5:00am.

Throughout 2009, there were additional intermittent closures of single lanes in both directions on the Verrazano-Narrows Bridge roadways during off-peak hours.

#### George Washington Bridge

Throughout 2009, there were additional intermittent closures of single lanes during off-peak hours to facilitate PANYNJ maintenance work.

#### Holland Tunnel

Throughout 2009, all eastbound (to Manhattan) commercial traffic was banned from the Holland Tunnel.

Throughout 2009, the tunnel was open westbound to New Jersey for passenger cars, buses, and two-axle and three-axle single unit trucks. Tractor trailers, and single unit trucks with more than three axles, were not permitted.

Westbound (to New Jersey) lane closures were in effect in the Holland Tunnel as follows.

```
01/01-04/10: 11:30pm – 5:30am Mon–Fri. 1 w/b lane closed. 12:01am – 8:00am Sat. 1 w/b lane closed. 04/11-08/16: 11:30pm – 5:30am Mon–Fri. 1 w/b lane closed. 08/17-12/31: 11:30pm – 5:30am Mon–Fri. 1 w/b lane closed. 12:01am – 8:00am Sat. 1 w/b lane closed.
```

The tunnel was completely closed westbound (to New Jersey) as follows:

04/11-08/16: 1:00am – 8:00am Sat-Sun. Tunnel completely closed W/B.

No closures on legal holiday weekends or during inclement weather.

12/05-12/13: 2:00am – 8:00am Sat, Tunnel completely closed W/B.

1:00am - 8:00am Sun.

No closures on legal holiday weekends or during inclement weather.

The tunnel was completely closed eastbound (to New York) as follows:

08/22-11/22: 1:00am – 8:00am Sat-Sun. Tunnel completely closed E/B. *No closures on legal holiday weekends or during inclement weather.* 

From April 13 to August 21, the approach roadways of Varick Street, Watts Street, and Canal Street leading to the tunnel were closed one at a time for repaving between 9:00am and 2:00pm on weekdays.

Throughout 2009, there were also additional intermittent lane closures during off-peak hours.

#### Lincoln Tunnel

One of the three tubes of the Lincoln Tunnel was closed as follows.

All 2009: 11:00pm – 5:00am Mon–Fri. Two tubes open, providing two

1:00am – 9:00am Sat. traffic lanes in each direction.

1:00am - 10:00am Sun.

#### Outerbridge Crossing

Throughout 2009, there were intermittent closures of one of the two lanes in either or both directions during off–peak hours.