

*STATE of the SUBWAYS  
REPORT CARD*



*NYPIRG Straphangers Campaign  
Summer 2012*

**A NYPIRG Straphangers Campaign Report**

**STATE OF THE SUBWAYS REPORT CARD**

**Summer 2012**

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## I. Findings

What do subway riders want?

They want short waits, trains that arrive regularly, a chance for a seat, a clean car and understandable announcements that tell them what they need to know. That's what MTA New York City Transit's own polling of rider satisfaction measures.<sup>1</sup>

This "State of the Subways" Report Card tells riders how their lines do on these key aspects of service. We look at six measures of subway performance for the city's 20 major subway lines, using recent data compiled by MTA New York City Transit.<sup>2</sup> Some of the information has not been released publicly before on a line-by-line basis. Most of the measures are for all or the last half of 2011.

Our Report Card has three parts:

First, is a comparison of service on 20 lines, as detailed in the attached tables.

Second, we give an overall "MetroCard Rating"<sup>3</sup> to 19 of the 20 major lines.<sup>4</sup>

Third, the report contains one-page profiles on each of the 20 lines. These are intended to provide riders, officials and communities with an easy-to-use summary of how their line performs compared to others.

This is the fifteenth Subway Report Card by the Straphangers Campaign since 1997.<sup>5</sup>

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<sup>1</sup> New York City Residents' Perceptions of New York City Transit Service, 2010 Citywide Survey, prepared for MTA New York City Transit.

<sup>2</sup> The measures are: frequency of scheduled service; how regularly trains arrive; delays due to car mechanical problems; chance to get a seat at peak period; car cleanliness; and in-car announcements. Regularity of service is reported in an indicator called *wait assessment*, a measure of gaps in service or bunching together of trains.

<sup>3</sup> We derived the MetroCard Ratings with the help of independent transportation experts. Descriptions of the methodology can be found in Section II and Appendix I. The rating was developed in two steps. First, we decided how much weight to give each of the six measures of transit service. Then we placed each line on a scale that permits fair comparisons. Under a formula we derived, a line whose performance fell exactly at the 50th percentile in this baseline would receive a MetroCard rating of \$1.25 in this report. Any line at the 90th percentile of this range would receive a rating of \$2.25, the current base fare.

<sup>4</sup> We were unable to give an overall MetroCard Rating to the system's three permanent shuttle lines — the Franklin Avenue Shuttle, the Rockaway Park Shuttle, and the Times Square Shuttle — because data is not available. The G line does not receive a MetroCard Rating as reliable data on crowding for that line is not available.

<sup>5</sup> We did not issue a report in 2002. Because of the severe impact on the subways from the World Trade Center attack, ratings based on service at the end of 2001 would not have been appropriate.

Our findings show the following picture of how New York City's subways are doing:

**1. The best subway line in the city was the Q with a “MetroCard Rating” of \$1.60. The Q ranked number one in the system for the first time since 2001.** The Q ranked highest because it tied for best in the system on announcements – and also performed above average on three measures: delays caused by mechanical breakdowns, seat availability at the most crowded point during rush hour, and subway car cleanliness. The line did not get a higher rating because it performed below average on the amount of scheduled service and average on regularity of service. The Q runs between Coney Island-Stillwell Avenue in Brooklyn and Astoria-Ditmars Boulevard in Queens.

**2. For the fourth year in a row, the C was ranked the worst subway line, with a MetroCard Rating of 85 cents.** The C line performed worst or next to worst in the system on four measures: amount of scheduled service, delays caused by mechanical breakdowns, subway car cleanliness and announcements. The line did not get a lower rating as it performed above average in the system on regularity of service and on chance of getting a seat at rush hour. The C operates between East New York in Brooklyn and Washington Heights in Manhattan.

**3. The subways are a story of winners and losers.** Riders on the best line – the Q – have much more reliable cars, frequent service and subway car cleanliness and car announcements than riders on the worst, the C. Sharp disparities among subway lines can be seen throughout the system.

- **Breakdowns:** The E had the best record on delays caused by car mechanical failures: once every 816,935 miles. The C was worst, with a car breakdown rate more than twelve times higher: every 64,324 miles.

- **Cleanliness:** The 1 was the cleanest line, with only 3% of cars having moderate or heavy dirt, while the dirtiest line — the C — had 25% of its cars rated moderately or heavily dirty, a rate more than eight times higher.

- **Chance of getting a seat:** We rate a rider's chance of getting a seat at the most congested point on the line. We found the best chance is on the R, where riders had a 71% chance of getting a seat during rush hour at the most crowded point. The 5 ranked worst and was much more overcrowded, with riders having only a 23% chance of getting a seat, three times worse.

- **Amount of scheduled service:** The 6 line had the most scheduled service, with two-and-a-half minute intervals between trains during the morning and evening rush hours. The C ranked worst, with nine- or ten-minute intervals between trains all through the day.

- **Regularity of service:** The J/Z line had the greatest regularity of service, arriving within 25% of its scheduled interval 82% of the time. The most irregular line was the 5, which performed with regularity only 70% of the time.

- **Announcements:** The 4 and Q lines had a perfect performance for adequate announcements made in subway cars, missing no announcements and reflecting the automation of announcements. The 7 line was worst, missing announcements 29% of the time.

**4. System-wide, for twenty lines, we found the following on three of six measures that we can compare over time: car breakdowns, car cleanliness and announcements.** (We cannot compare the three remaining measures due to changes in definitions by New York City Transit.)

- **The car breakdown rate improved slightly from an average mechanical failure every 170,217 miles to 172,700 miles during the 12-month period ending December 2011 – a gain of 1.5%.** This positive trend reflects the arrival of new model subway cars in recent years and better maintenance of Transit’s aging fleet. We found eleven lines improved (1, 2, 3, 5, 6, C, E, F, G, N, and Q), while nine lines worsened (4, 7, A, B, D, J/Z, L, M, and R).

- **Subway cars went from 94% rated clean in our last report to 90% in our current report – a decline of 4.3%.** We found that fifteen lines declined (2, 3, 4, 6, B, C, D, E, F, J/Z, L, M, N, Q, and R), four improved (1, 7, A, and G) and one remained unchanged (5).

- **Accurate and understandable subway car announcements improved, going from 87% in our last report to 90% in the current report – an increase of 3.4%.** We found ten lines improved (1, 2, 4, B, C, D, F, G, J/Z, and N) six declined (3, 5, 7, A, E, and M) and four did not change (6, L, Q, and R).

Table One

## BEST to WORST: 2012 STRAPHANGERS CAMPAIGN METROCARD RATINGS

Q	\$1.60
7	\$1.55
J&Z	\$1.55
1	\$1.50
L	\$1.45
6	\$1.45
E	\$1.40
F	\$1.40
M	\$1.25
R	\$1.20
N	\$1.20
3	\$1.20
D	\$1.20
2	\$1.15
B	\$1.15
A	\$1.15
4	\$1.15
5	\$1.10
C	85¢

Table Two

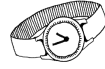
# HOW DOES YOUR SUBWAY LINE RATE?



Straphangers Campaign  
MetroCard  
Rating



Scheduled Frequency



Regularity of Service



Breakdowns



Seat Availability



Cleanliness



Announcements

*Scheduled minutes between trains during morning rush*

*Scheduled minutes between trains at noon*

*Scheduled minutes between trains during evening rush*

*How often trains arrive without bunching or gaps in service*

*Number of miles traveled between car breakdowns*

*Chance of getting a seat during rush hour*

*Percentage of subway cars with clean seats and floors*

*Percentage of in-car announcements which are accurate and understandable*

<b>1</b>	\$1.50	3:00	6:00	4:00	78%	every 101,573 miles	54%	97%	80%
<b>2</b>	\$1.15	5:00	8:00	5:00	72%	276,697	33%	90%	99%
<b>3</b>	\$1.20	5:00	8:00	5:00	76%	194,288	44%	89%	80%
<b>4</b>	\$1.15	4:00	8:00	4:00	72%	160,930	23%	89%	100%
<b>5</b>	\$1.10	4:00	8:00	4:00	70%	243,614	23%	93%	98%
<b>6</b>	\$1.45	2:30	4:00	2:30	75%	147,475	31%	94%	99%
<b>7</b>	\$1.55	2:30	6:00	2:30	77%	177,366	71%	96%	71%
<b>A</b>	\$1.15	4:45	10:00	4:45	74%	83,956	46%	90%	85%
<b>B</b>	\$1.15	7:15	10:00	8:00	79%	165,743	57%	87%	83%
<b>C</b>	85¢	9:15	10:00	10:00	81%	64,324	54%	75%	75%
<b>D</b>	\$1.20	6:00	10:00	6:00	79%	139,041	44%	85%	84%
<b>E</b>	\$1.40	4:00	7:30	4:00	72%	816,935	30%	94%	99%
<b>F</b>	\$1.40	4:00	7:30	4:00	73%	783,735	41%	81%	99%
<b>G</b>	*	6:30	10:00	10:00	81%	79,858	*	95%	85%
<b>J&amp;Z</b>	\$1.55	5:00	10:00	5:00	82%	321,861	44%	89%	97%
<b>L</b>	\$1.45	3:30	7:30	4:00	81%	212,812	32%	87%	98%
<b>M</b>	\$1.25	8:00	10:00	8:45	79%	459,456	53%	87%	99%
<b>N</b>	\$1.20	7:00	10:00	7:00	78%	441,674	36%	85%	99%
<b>Q</b>	\$1.60	6:00	10:00	6:00	79%	690,702	53%	94%	100%
<b>R</b>	\$1.20	6:00	10:00	6:30	77%	78,220	71%	87%	78%
<b>System Average</b>		5:10	8:32	5:33	79%	172,700	44%	90%	90%

\*G line receives no MetroCard Rating as comparable crowding data is not available.

Table Three




































## BEST to WORST SUBWAY LINES by SERVICE/PERFORMANCE MEASURE

Rank (from Best to Worst)	Amount of Scheduled Service	Regularity of Service	Breakdown Rate	Chance of Getting a Seat	Interior Cleanliness	In-Car Announcements
1	6	J&Z	E	R	1	4 Q
2	7	G	F	7	7	2 6 E
3	1	C	Q	B	G	F M N
4	L	L	M	C	6 E Q	
5	E F	D	N	1		
6		Q	J&Z	Q		
7	4 5	B	2	M	5	
8		M	5	A	2 A	
9	2 3	1	L	3		5 L
10		N	3	J&Z	3 4 J&Z	
11	A	R	7	D		J&Z
12	J&Z	7	B	F		A G
13	D Q	3	4	N	B L M R	
14		6	6	2		D
15	R	A	D	L		B
16	N	F	1	6		1 3
17	B	E	A	E	D N	
18	G	4	G	4		R
19	M	2	R	5	F	C
20	C	5	C		C	7



Table Four

**BEST and WORST:  
STRAPHANGERS CAMPAIGN METROCARD RATINGS  
1997-2012**

	<u>BEST</u>	<u>WORST</u>
2012		
2011		 
2010		
2009		
2008		
2007		 
2006		 
2005		
2004		
2003		
2001		
2000		
1999		  
1998		
1997		

## II. Summary of Methodology

The NYPIRG Straphangers Campaign reviewed extensive MTA New York City Transit data on the quality and quantity of service on 20 subway lines. We used the latest comparable data available, largely from 2011.<sup>6</sup> Several of the data items have not been publicly released before on a line-by-line basis. MTA New York City Transit does not conduct a comparable rider count on the G line, which is the only major line not to go into Manhattan. As a result, we could not give the G line a MetroCard Rating, although we do issue a profile for the line.

We then calculated a MetroCard Rating — intended as a shorthand tool to allow comparisons among lines — for 19 subway lines, as follows:

First, we formulated a scale of the relative importance of measures of subway service. This was based on a survey we conducted of a panel of transit experts and riders, and an official survey of riders by MTA New York City Transit. The six measures were weighted as follows:

Amount of service	
• <i>scheduled amount of service</i>	30%
Dependability of service	
• <i>percent of trains arriving at regular intervals</i>	22.5%
• <i>breakdown rate</i>	12.5%
Comfort/usability	
• <i>chance of getting a seat</i>	15%
• <i>interior cleanliness</i>	10%
• <i>adequacy of in-car announcements</i>	10%

Second, for each measure, we compared each line's performance to the best- and worst-performing lines in this rating period.

A line equaling the system best in 2011 would receive a score of 100 for that indicator, while a line matching the system low in 2011 would receive a score of 0. Under this rating scale, a small difference in performance between two lines translates to a small difference between scores.

These scores were then multiplied by the percentage weight of each indicator, and added up to reach an overall raw score. Below is an illustration of calculations for a line, in this case the 4.

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<sup>6</sup> See Appendix I for a complete list of MTA New York City Transit data cited in this report.

**Figure 1**

Indicator	4 line value including best and worst in system for 5 indicators	4 line score out of 100	Percentage weight	4 line adjusted raw score
Scheduled service	AM rush—4 min; noon—8 min; PM rush—4 min	71	30%	21
Service regularity	72% (best—82%; worst—70%)	18	22.5%	4
Breakdown rate	160,930 miles (best—816,935 miles; worst—64,324 miles)	13	12.5%	2
Crowding	23% seated (best—71%; worst—23%)	1	15%	0
Cleanliness	89% clean (best—97%; worst—75%)	64	10%	6
Announcements	100% adequate (best—100%; worst—71%)	100	10%	10
Adjusted score total				<b>4 line—43 pts.</b>

Third, the summed totals were then placed on a scale that emphasizes the relative differences between scores nearest the top and bottom of the scale. (See Appendix I.)

Finally, we converted each line’s summed raw score to a MetroCard Rating. We created a formula with assistance from independent transit experts. A line scoring, on average, at the 50th percentile of the lines for all six measures would receive a MetroCard Rating of \$1.25. A line that matched the 90th percentile of this range would be rated \$2.25, the current base fare. The 4 line, as shown above, falls at a weighted 43rd percentile over six measures, corresponding to a MetroCard Rating of \$1.15.

New York City Transit officials reviewed the profiles and ratings in 1997. They concluded: "Although it could obviously be debated as to which indicators are most important to the transit customer, we feel that the measures that you selected for the profiles are a good barometer in generally representing a route’s performance characteristics... Further, the format of your profiles... is clear and should cause no difficulty in the way the public interprets the information."

Their full comments can be found in Appendix I, which presents a more detailed description of our methodology. Transit officials were also sent an advance summary of the findings for this year’s State of the Subways Report Card.

For our first five surveys, we used 1996 — our first year for calculating MetroCard Ratings — as a baseline. As we said in our 1997 report, our ratings “will allow us to use the same formula for ranking service on subway lines in the future. As such, it will be a fair and objective barometer for gauging whether service has improved, stayed the same, or deteriorated over time.”

However, in 2001, 2003, 2004, 2005, 2008, 2009, 2010, and 2011, transit officials made changes in how performance indicators are measured and/or reported. The Straphangers Campaign unsuccessfully urged MTA New York City Transit to re-consider its new methodologies, because of our concerns about the fairness of these measures and the loss of comparability with past indicators. Transit officials also rejected our request to re-calculate measures back to 1996 in line with their adopted changes. As a result, in this report we were forced to redefine our baseline with current data, and considerable historical comparability was lost.

Also due to changes in the measuring and/or reporting of data by Transit officials, it was necessary to make modest adjustments to the MetroCard Rating calculation and scale—as was the case in several earlier State of the Subways reports. In selecting this scale we attempted to create a single measure which we felt accurately and fairly represents the relative performance priorities listed in our original 1996 poll of riders, community leaders and independent transit experts.

### III. Why A Report Card on the State of the Subways?

Why does the Straphangers Campaign publish a yearly report card on the subways?

**First, riders are looking for information on the quality of their trips, especially for their line.** Our profiles seek to provide this information in a simple and accessible form.

In the past, the MTA has resisted developing detailed line-by-line performance measure. That has been gradually changing, to the agency's credit:

- In 2009, the MTA began posting monthly performance data for subway car breakdown rates on its website, [www.mta.info](http://www.mta.info). It now includes subway car "mean distance between failures" in its monthly NYC Transit Committee agenda. The agency also provides a measure of regularity – "wait assessment" – by subway line and key bus routes;
- In 2010, it made some of the performance measurement databases available publicly on its "developer resources" webpage; and
- In 2011, NYC Transit developed a new line-by-line statistic that combines three service measures and weights them, not unlike our combined rating.

**Second, our report cards provide a picture of where the subways are.** Riders can consult our profiles and ratings and see how their subway line compares to others, disparities and all. They can also see the current positive trend for subway car breakdown rates and announcements, as well as the negative direction for subway car cleanliness. Future performance will be a challenge given the MTA's tight budget.

**Lastly, we aim to give communities the information they need to win better service.** We often hear from riders and neighborhood groups. They will say, "Our line has got to be worst." Or "We must have the most crowded trains." Or "Our line is much better than others." For riders and officials on lines receiving a poor level of service, our report will help them make the case for improvements, ranging from increases in service to major repairs.

That's not just a hope. In past years, we've seen riders win improvements, such as on the B, N and 5 lines. For those on better lines, the report can highlight areas for improvement. For example, riders on the 7 — now a frontrunner in the system — have pointed to past declines and won increased service.

This report is part of a series of surveys on subway and bus service. For example, we issue annual surveys on subway car cleanliness and announcements and on the conditions of subway station platforms, as well as give out the Pokey Awards for the slowest city bus routes.

Our reports can be found online at [www.straphangers.org](http://www.straphangers.org), as can our profiles (<http://straphangers.org/statesub12/lrindex.html>). We hope that these efforts — combined with the concern and activism of many thousands of city transit riders — will win better subway and bus service for New York City.

The background features a collection of overlapping circles in various colors (purple, red, orange, green, blue, grey, yellow, brown, light green, light blue, light orange, pink). Each circle contains a white number or letter. The letters include 'D', 'E', 'G', 'L', 'W', 'A', 'R', 'J', 'Q', and 'B'. The numbers include '7', '1', '6', '3', and '4'. The central text 'PROFILES OF 20 SUBWAY LINES' is overlaid on the grey circle containing the letter 'L'.

# PROFILES OF 20 SUBWAY LINES

# Straphangers Campaign

## 1 SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating \$1.50**

The 1 line ranks 4th best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

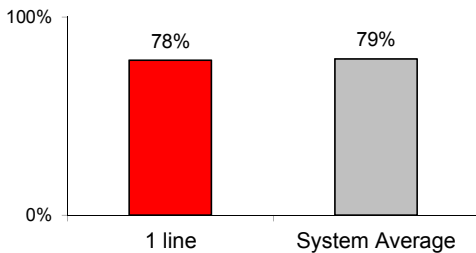
### The 1 line is scheduled to come more often than most subway lines...

scheduled minutes between weekday trains as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>1 line</b>	<b>3</b>	<b>6</b>	<b>4</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

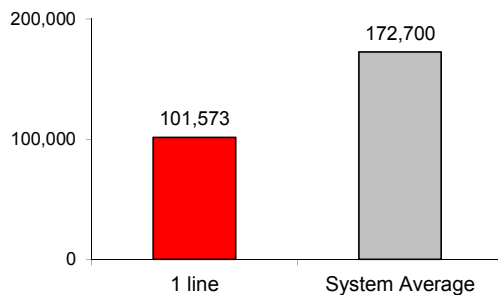
### and arrives with near-average regularity.

% of trains arriving at regular intervals --weekday "wait assessment"-- between 6 am and midnight



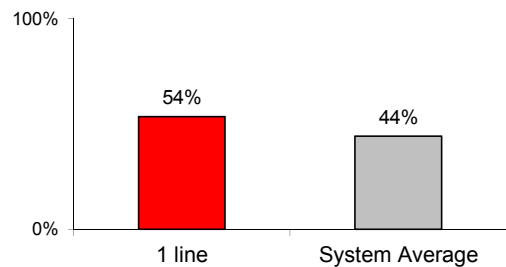
### Cars on the 1 break down more often than those on the average line.

miles traveled between delays caused by mechanical failures, 2011



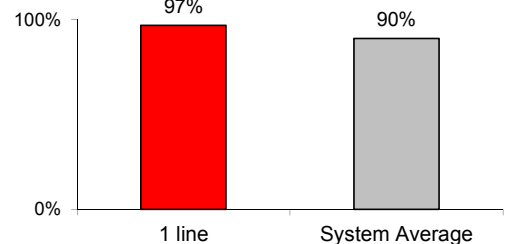
### You're more likely to get a seat on the 1.

% of passengers with seats at most crowded point during rush hour



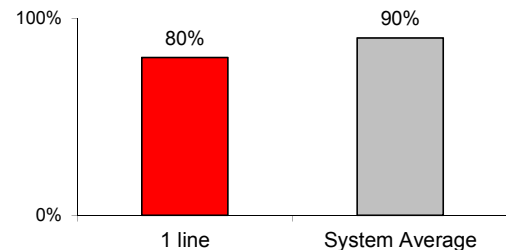
### The 1 line is the system's cleanest...

% of cars with 'light or no interior dirtiness' as defined by NYC Transit



### but performs below average on in-car announcements.

% of cars with correct announcements as defined by NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

# Straphangers Campaign

## 2 SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating \$1.15**

The 2 line ranks tied for 14th best out of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

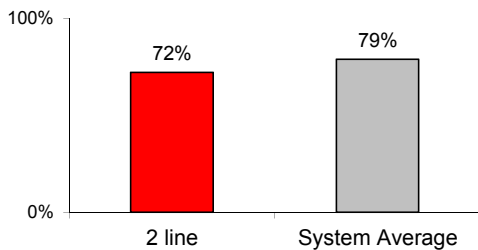
**The 2 line is scheduled to come slightly more often than most subway lines...**

scheduled minutes between weekday trains as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>2 line</b>	<b>5</b>	<b>8</b>	<b>5</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

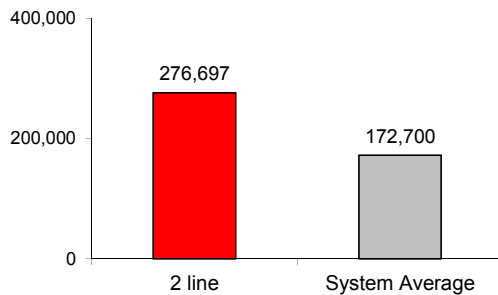
**but arrives with regularity much less than average.**

% of trains arriving at regular intervals --weekday "wait assessment"-- between 6 am and midnight



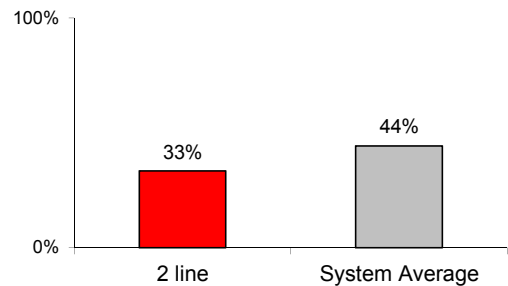
**Cars on the 2 break down less often than those on the average line.**

miles traveled between delays caused by mechanical failures, 2011



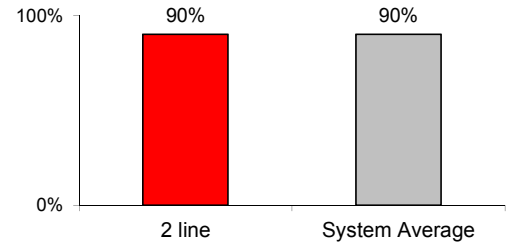
**You're less likely to get a seat on the 2.**

% of passengers with seats at most crowded point during rush hour



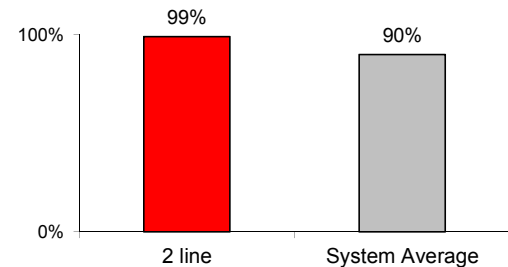
**The 2 is as clean as the average line...**

% of cars with 'light or no interior dirtiness' as defined by NYC Transit



**and performs nearly perfect on in-car announcements.**

% of cars with correct announcements as defined by NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**



# Straphangers Campaign

## 3 SUBWAY LINE PROFILE

The 3 line ranks tied for 10th best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).



**Straphangers Campaign MetroCard Rating \$1.20**

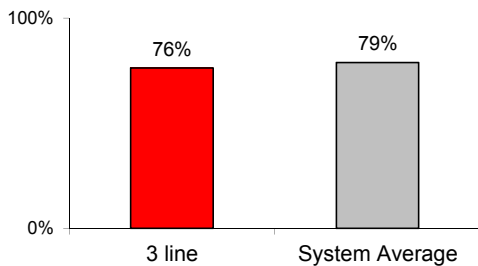
**The 3 line is scheduled to come slightly more often than most subway lines...**

scheduled minutes between weekday trains  
as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>3 line</b>	<b>5</b>	<b>8</b>	<b>5</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

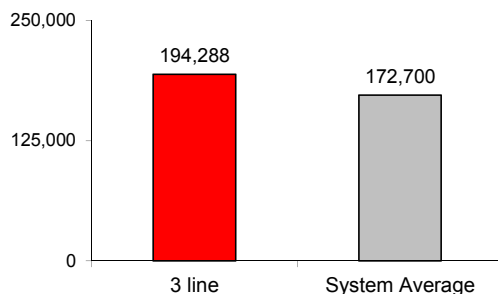
**but arrives with below-average regularity.**

% of trains arriving at regular intervals  
--weekday "wait assessment"--  
between 6 am and midnight



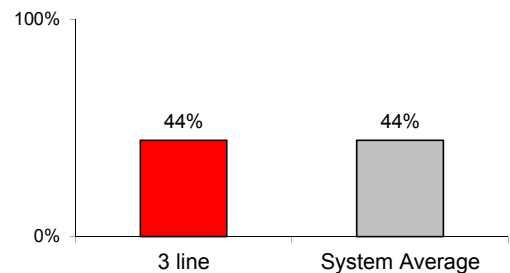
**Cars on the 3 break down less often than those on the average line.**

miles traveled between delays caused by  
mechanical failures, 2011



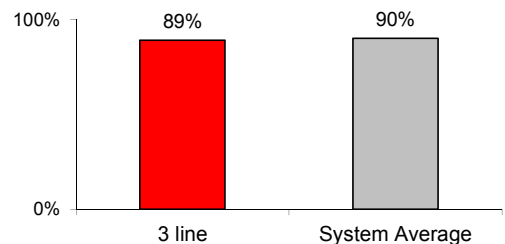
**You have an average chance of getting a seat on the 3 line.**

% of passengers with seats at most crowded point  
during rush hour



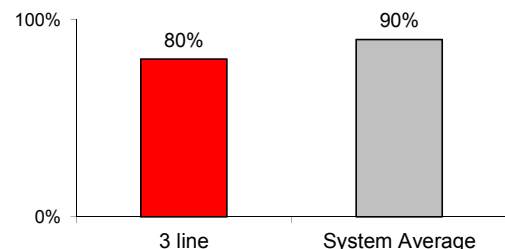
**The 3 is about as clean as the average line...**

% of cars with 'light or no interior dirtiness' as defined  
by NYC Transit



**but performs below average on in-car announcements.**

% of cars with correct announcements as defined by  
NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

# Straphangers Campaign



## SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating \$1.15**

The 4 line ranks tied for 14th best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

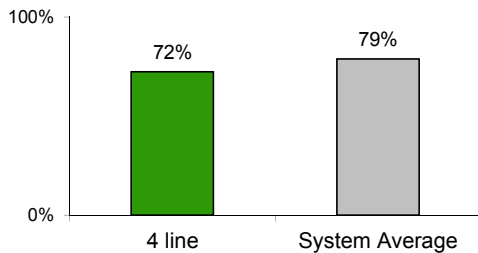
### The 4 line is scheduled to come more often than most subway lines...

scheduled minutes between weekday trains as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>4 line</b>	<b>4</b>	<b>8</b>	<b>4</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

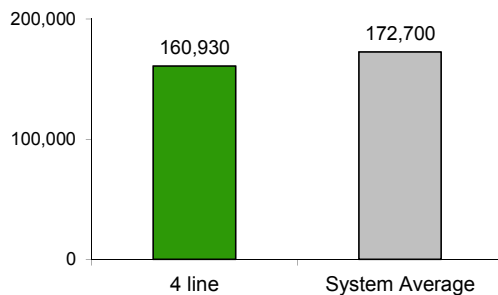
### but arrives with below-average regularity.

% of trains arriving at regular intervals --weekday "wait assessment"-- between 6 am and midnight



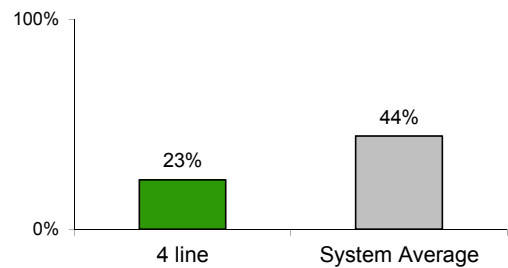
### Cars on the 4 line break down more often than those on the average line.

miles traveled between delays caused by mechanical failures, 2011



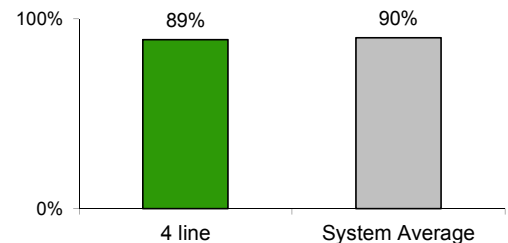
### You're much less likely to get a seat on the 4.

% of passengers with seats at most crowded point during rush hour



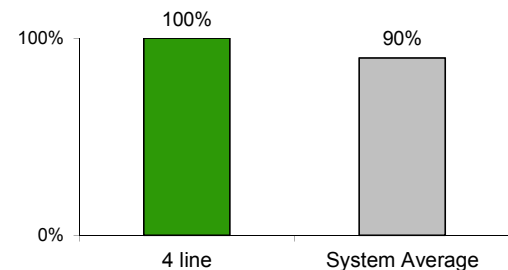
### The 4 line is about as clean as average...

% of cars with 'light or no interior dirtiness' as defined by NYC Transit



### and performs perfectly on in-car announcements.

% of cars with correct announcements as defined by NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

# Straphangers Campaign

## 5 SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating \$1.10**

The 5 line ranks second worst out of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

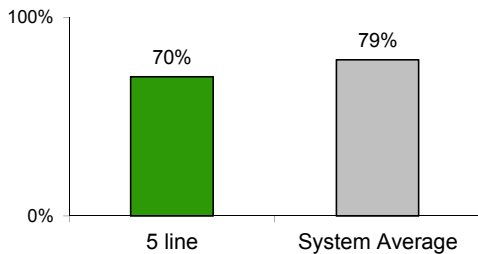
### The 5 line is scheduled to come more often than most subway lines...

scheduled minutes between weekday trains as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>5 line</b>	<b>4</b>	<b>8</b>	<b>4</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

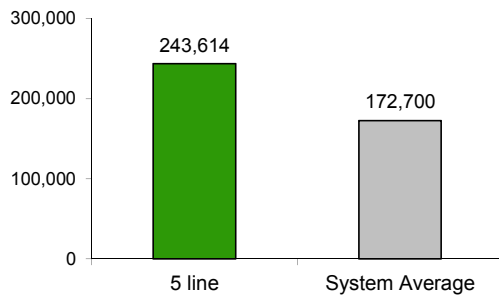
### but arrives with regularity less often than any other line in the system.

% of trains arriving at regular intervals --weekday "wait assessment"-- between 6 am and midnight



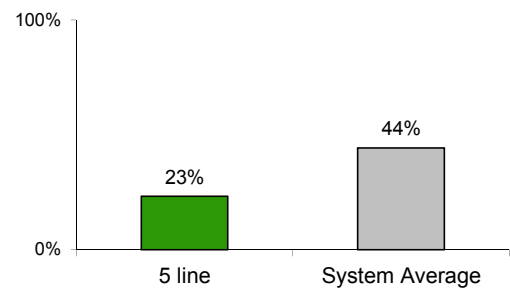
### Cars on the 5 break down less often than those on the average line.

miles traveled between delays caused by mechanical failures, 2011



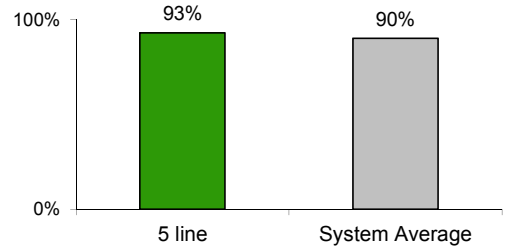
### You're least likely to get a seat on the 5.

% of passengers with seats at most crowded point during rush hour



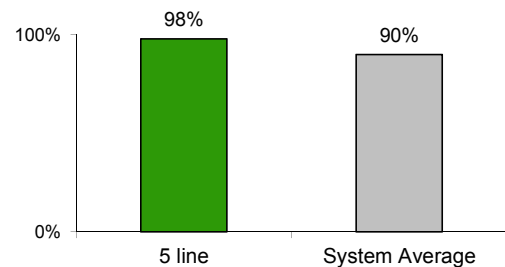
### The 5 line is cleaner than average...

% of cars with 'light or no interior dirtiness' as defined by NYC Transit



### and performs nearly perfect on in-car announcements.

% of cars with correct announcements as defined by NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

# Straphangers Campaign

## 6 SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating \$1.45**

The 6 line ranks tied for 5th best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

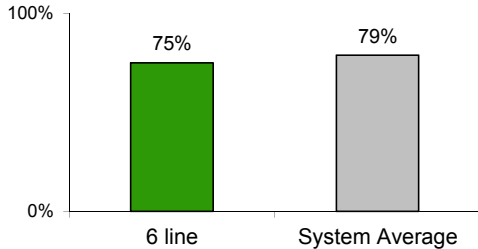
**The 6 line has more scheduled service than any other subway line.**

scheduled minutes between weekday trains  
as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>6 line</b>	<b>2:30</b>	<b>4</b>	<b>2:30</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

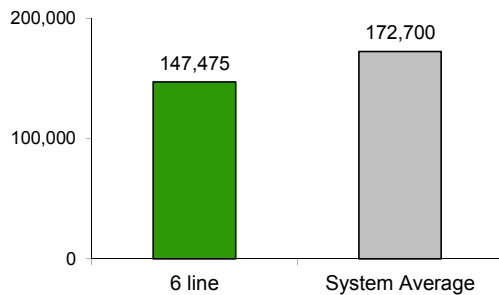
**The 6 line arrives with below-average regularity...**

% of trains arriving at regular intervals  
--weekday "wait assessment"--  
between 6 am and midnight



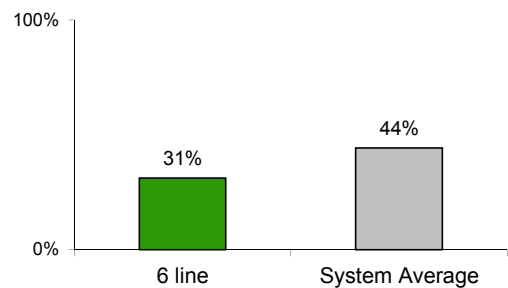
**and its cars break down more often than those on the average line.**

miles traveled between delays caused by  
mechanical failures, 2011



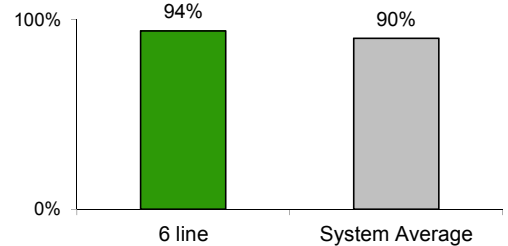
**You're much less likely to get a seat on the 6.**

% of passengers with seats at most crowded point  
during rush hour



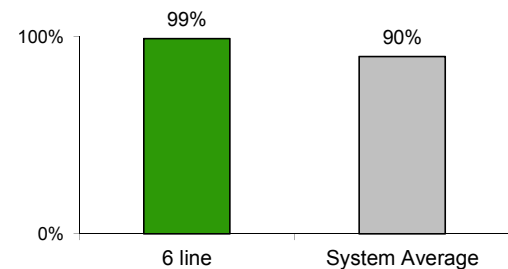
**The 6 is cleaner than the average line...**

% of cars with 'light or no interior dirtiness' as defined  
by NYC Transit



**and performs nearly perfect on in-car announcements.**

% of cars with correct announcements as defined by  
NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

# Straphangers Campaign

## 7 SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating \$1.55**

The 7 line ranks tied for 2nd best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

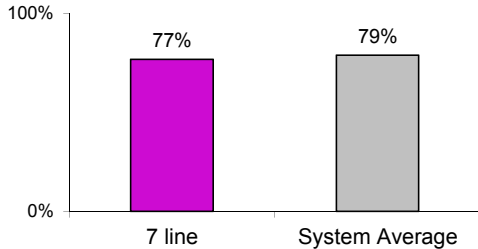
**The 7 line is scheduled to come much more often than the average line.**

scheduled minutes between weekday trains  
as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>7 line</b>	<b>2:30</b>	<b>6</b>	<b>2:30</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

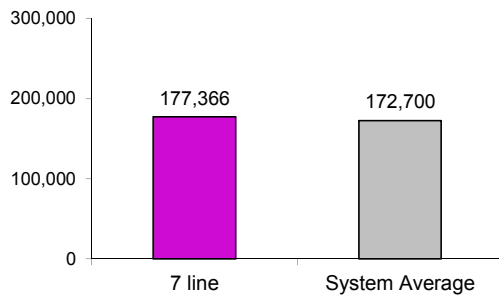
**The 7 line arrives with below-average regularity...**

% of trains arriving at regular intervals  
--weekday "wait assessment"--  
between 6 am and midnight



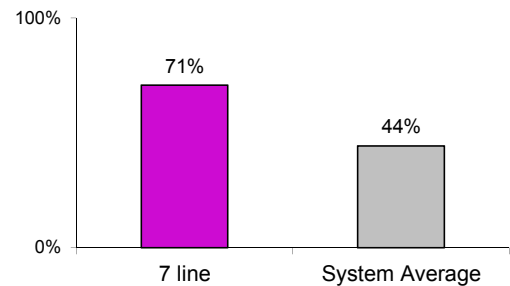
**but its cars break down less often than those on the average line.**

miles traveled between delays caused by  
mechanical failures, 2011



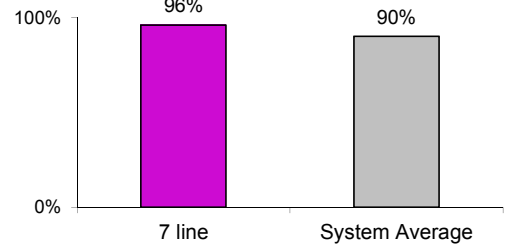
**You're much more likely to get a seat on the 7.**

% of passengers with seats at most crowded point  
during rush hour



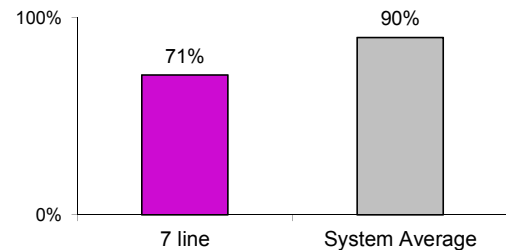
**The 7 is much cleaner than the average line...**

% of cars with 'light or no interior dirtiness' as defined  
by NYC Transit



**but performs worst on in-car announcements.**

% of cars with correct announcements as defined by  
NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

# Straphangers Campaign

## A SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating \$1.15**

The A line ranks tied for 14th best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

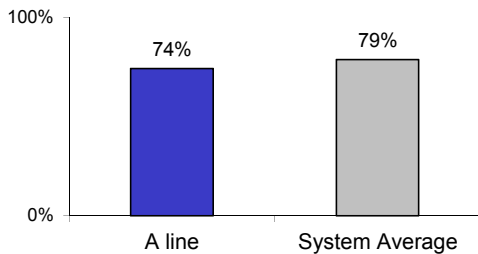
### The A has more rush-hour but less midday service than the average subway line.

scheduled minutes between weekday trains as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>A line</b>	<b>4:45</b>	<b>10</b>	<b>4:45</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

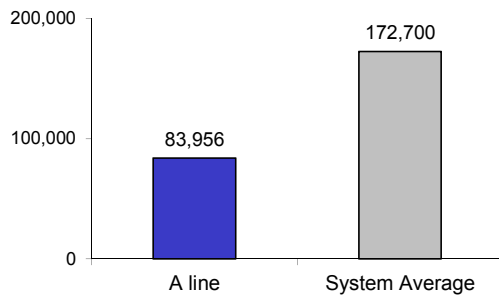
### The A arrives with regularity less often than the system average...

% of trains arriving at regular intervals --weekday "wait assessment"-- between 6 am and midnight



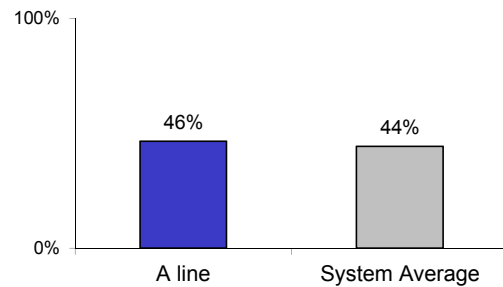
### and its cars break down much more often than those on the average line.

miles traveled between delays caused by mechanical failures, 2011



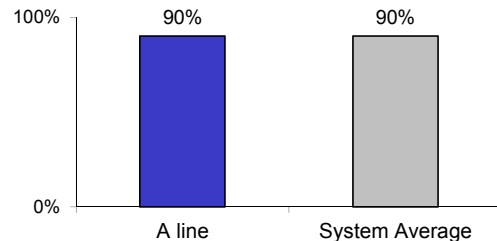
### You're more likely to get a seat on the A.

% of passengers with seats at most crowded point during rush hour



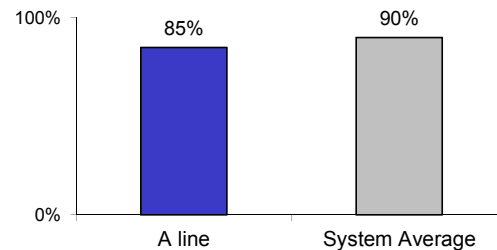
### The A is as clean as the average line...

% of cars with 'light or no interior dirtiness' as defined by NYC Transit



### but performs below average on in-car announcements.

% of cars with correct announcements as defined by NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

# Straphangers Campaign

## B SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating \$1.15**

The B line ranks tied for 14th best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

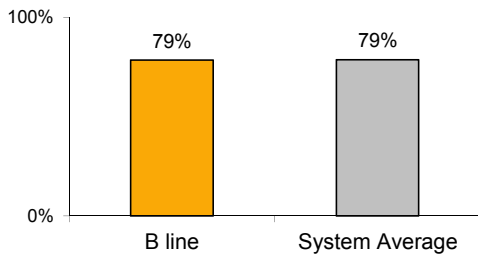
### The B line has a below-average amount of daytime service, and doesn't run at night.

scheduled minutes between weekday trains  
as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>B line</b>	<b>7:15</b>	<b>10</b>	<b>8</b>	<b>-</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

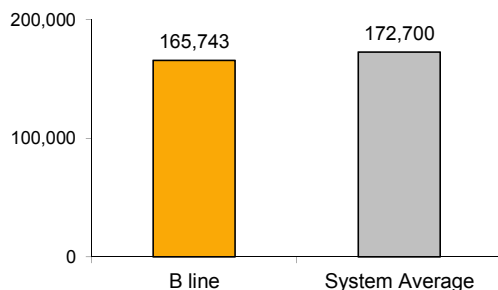
### The B arrives with average regularity...

% of trains arriving at regular intervals  
--weekday "wait assessment"--  
between 6 am and midnight



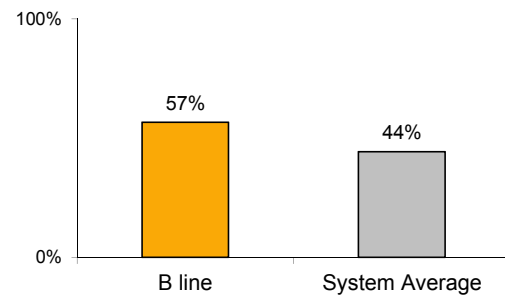
### and its cars break down about as often as those on the average line.

miles traveled between delays caused by  
mechanical failures, 2011



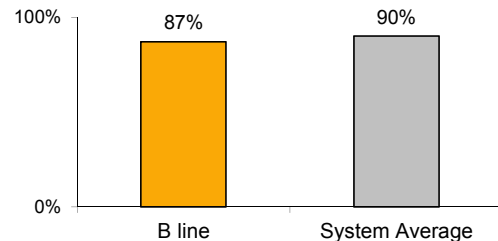
### You're more likely to get a seat on the B.

% of passengers with seats at most crowded point  
during rush hour



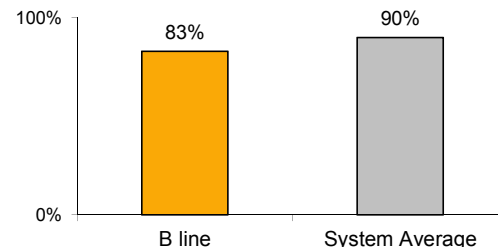
### The B is less clean than the average line...

% of cars with 'light or no interior dirtiness' as defined  
by NYC Transit



### and also performs below average on in-car announcements.

% of cars with correct announcements as defined by  
NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**



# Straphangers Campaign

## SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating 85¢**

The C line ranks worst of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

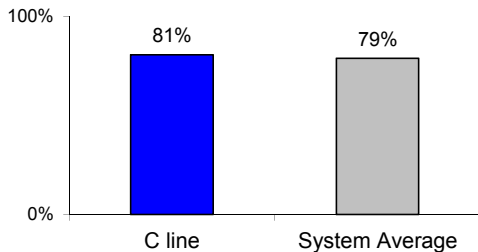
### The C line has the least amount of daytime service, and doesn't run at night.

scheduled minutes between weekday trains  
as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>C line</b>	<b>9:15</b>	<b>10</b>	<b>10</b>	<b>-</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

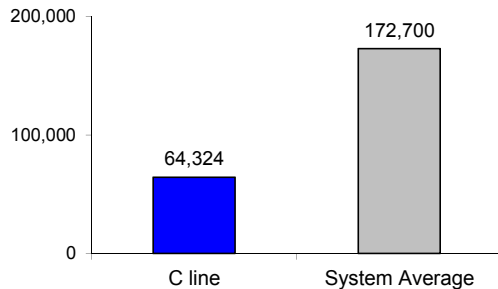
### The C arrives with regularity more often than average...

% of trains arriving at regular intervals  
--weekday "wait assessment"--  
between 6 am and midnight



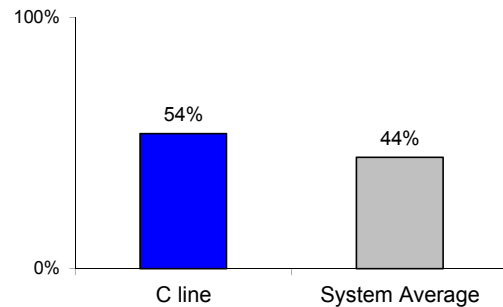
### but its cars break down more often than those on any other line.

miles traveled between delays caused by  
mechanical failures, 2011



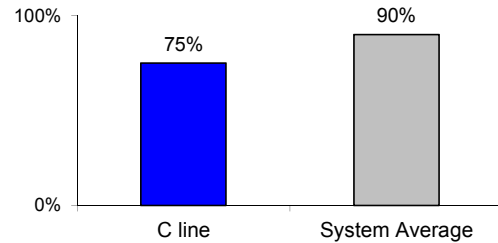
### You're more likely to get a seat on the C.

% of passengers with seats at most crowded point  
during rush hour



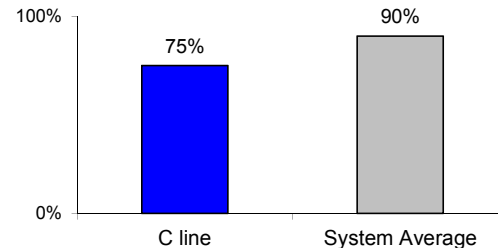
### The C line is the system's least clean...

% of cars with 'light or no interior dirtiness' as defined  
by NYC Transit



### and performs next to worst on in-car announcements.

% of cars with correct announcements as defined by  
NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**



# Straphangers Campaign

## D SUBWAY LINE PROFILE



Straphangers Campaign  
MetroCard Rating **\$1.20**

The D line ranks tied for 10th best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

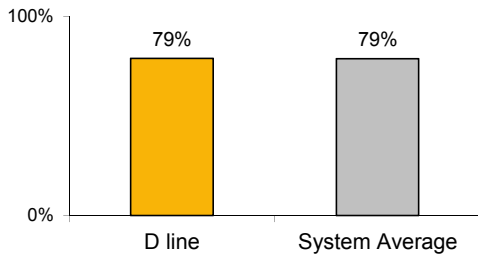
### The D is scheduled to come less often than the average subway line.

scheduled minutes between weekday trains  
as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>D line</b>	<b>6</b>	<b>10</b>	<b>6</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

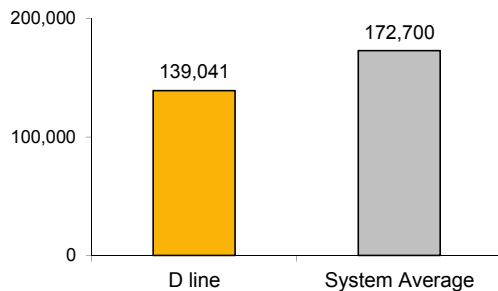
### The D line arrives with average regularity...

% of trains arriving at regular intervals  
--weekday "wait assessment"--  
between 6 am and midnight



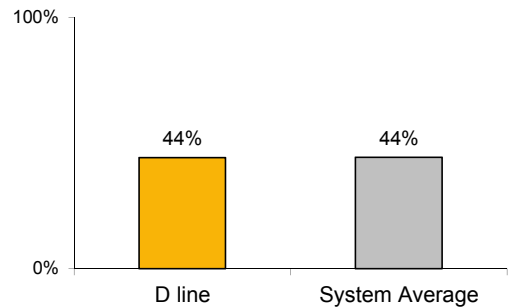
### but its cars break down more often than those on the average line.

miles traveled between delays caused by  
mechanical failures, 2011



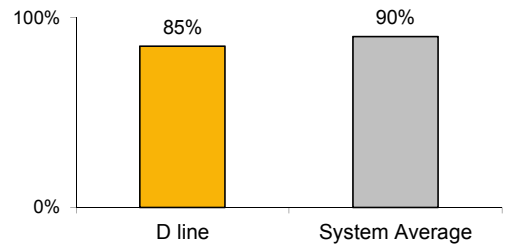
### You've an average chance to get a seat on the D.

% of passengers with seats at most crowded point  
during rush hour



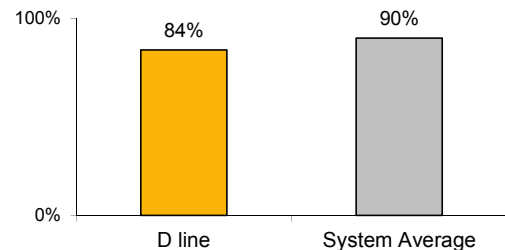
### The D is less clean than the average line...

% of cars with 'light or no interior dirtiness' as defined  
by NYC Transit



### and also performs below average on in-car announcements.

% of cars with correct announcements as defined by  
NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

# Straphangers Campaign

## E SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating \$1.40**

The E line ranks tied for 7th best of 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

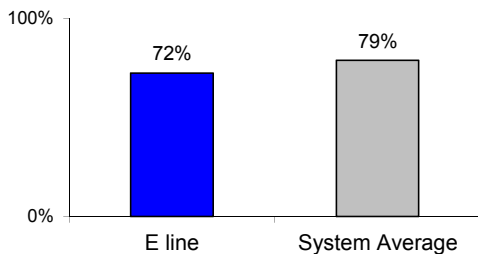
### The E line has an above-average amount of scheduled service...

scheduled minutes between weekday trains  
as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>E line</b>	<b>4</b>	<b>7:30</b>	<b>4</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

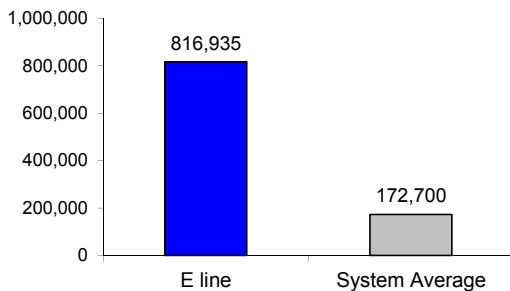
### but arrives with regularity less often than the average line.

% of trains arriving at regular intervals  
--weekday "wait assessment"--  
between 6 am and midnight



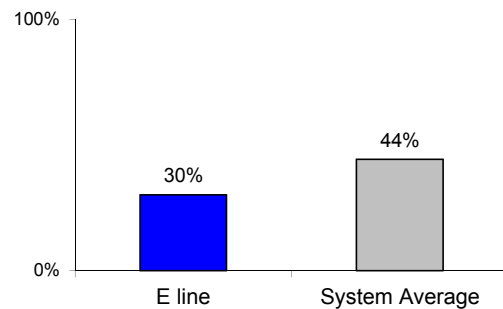
### Cars on the E break down less often than those on any other subway line.

miles traveled between delays caused by  
mechanical failures, 2011



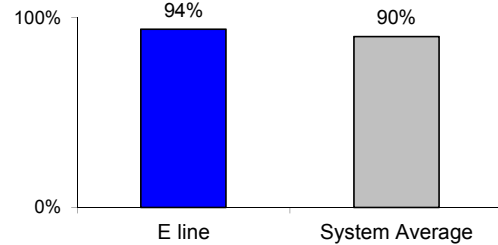
### You're much less likely to get a seat on the E.

% of passengers with seats at most crowded point  
during rush hour



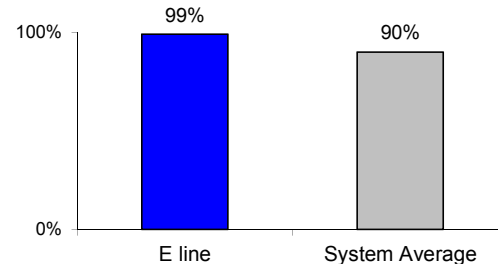
### The E is cleaner than the average line...

% of cars with 'light or no interior dirtiness' as defined  
by NYC Transit



### and performs nearly perfect on in-car announcements.

% of cars with correct announcements as defined by  
NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

# Straphangers Campaign

## F SUBWAY LINE PROFILE



Straphangers Campaign  
MetroCard Rating **\$1.40**

The F line ranks tied for 7th best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

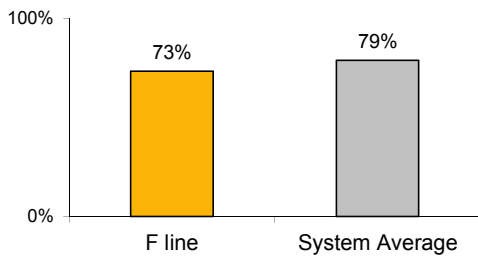
### The F is scheduled to come more often than most subway lines.

scheduled minutes between weekday trains  
as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>F line</b>	<b>4</b>	<b>7:30</b>	<b>4</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

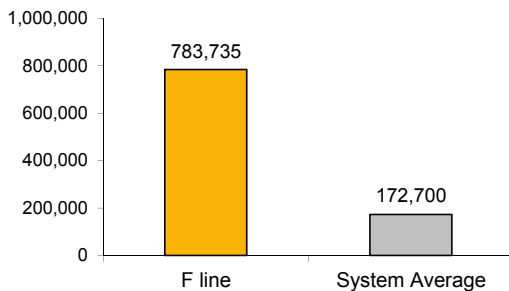
### The F arrives with regularity less often than the average line...

% of trains arriving at regular intervals  
--weekday "wait assessment"--  
between 6 am and midnight



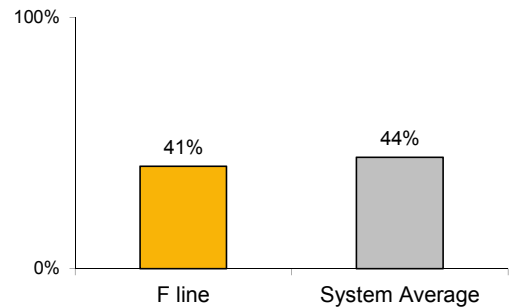
### but its cars break down much less often than those on the average line.

miles traveled between delays caused by  
mechanical failures, 2011



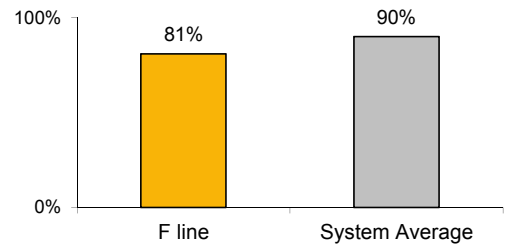
### You're less likely to get a seat on the F.

% of passengers with seats at most crowded point  
during rush hour



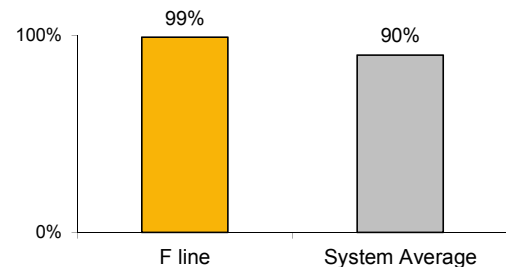
### The F is much less clean than the average line...

% of cars with 'light or no interior dirtiness' as defined  
by NYC Transit



### but performs nearly perfect on in-car announcements.

% of cars with correct announcements as defined by  
NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

# Straphangers Campaign

## G SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating** **No Rating**

The G line profile is based on the MTA New York City Transit information below. (There is no MetroCard Rating for the G. Its data on crowding can not be compared to other lines.) Full methodology is available at [www.straphangers.org](http://www.straphangers.org).

### The G line is scheduled to come much less often than most subway lines...

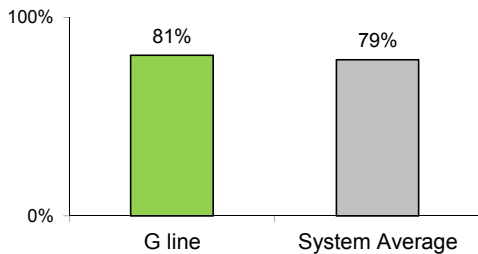
scheduled minutes between weekday trains  
as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>G line</b>	<b>6:30</b>	<b>10</b>	<b>10</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

*Reliable crowding data for the G line is not available.*

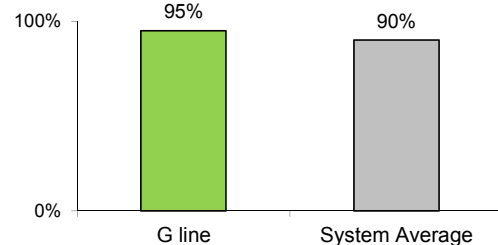
### but arrives with above-average regularity.

% of trains arriving at regular intervals  
--weekday "wait assessment"--  
between 6 am and midnight



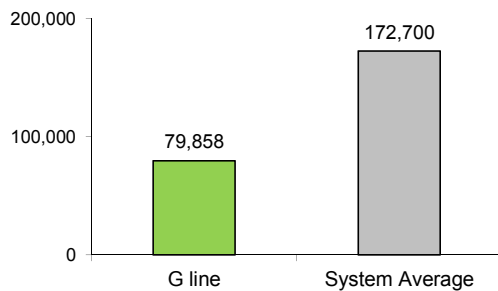
### The G line is much cleaner than average...

% of cars with 'light or no interior dirtiness' as defined by NYC Transit



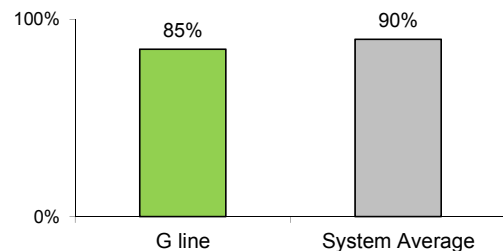
### Cars on the G break down much more often than those on the average line.

miles traveled between delays caused by mechanical failures, 2011



### but performs below average on in-car announcements.

% of cars with correct announcements as defined by NYC Transit



Questions about your line? Suggestions? Complaints? -- Call 511

# Straphangers Campaign

## J/Z SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating \$1.55**

The J/Z lines rank tied for 2nd best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

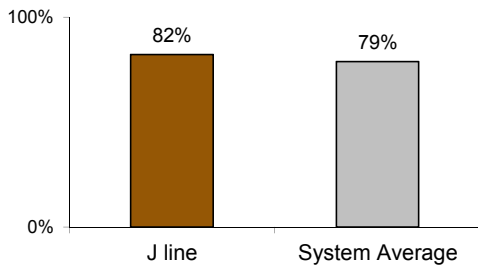
### The J & Z lines have more rush-hour but less midday service than the average line.

scheduled minutes between weekday trains  
as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>J line</b>	<b>5</b>	<b>10</b>	<b>5</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

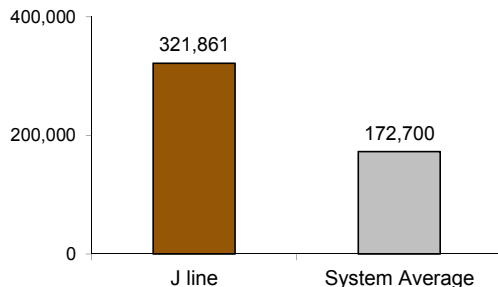
### The J & Z arrive with the system's highest regularity...

% of trains arriving at regular intervals  
--weekday "wait assessment"--  
between 6 am and midnight



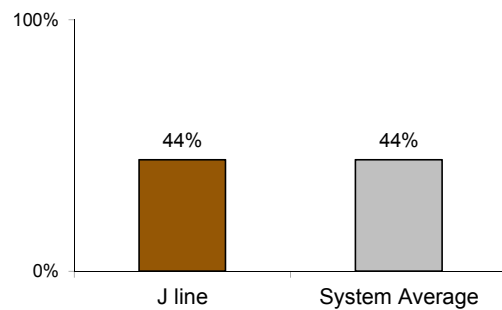
### and their cars break down less often than those on the average line.

miles traveled between delays caused by  
mechanical failures, 2011



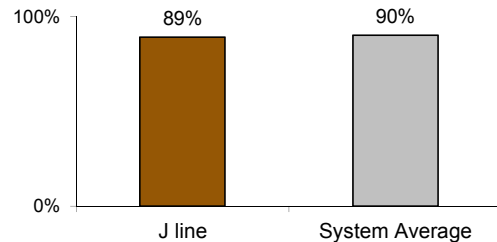
### You've an average chance of a seat on the J & Z.

% of passengers with seats at most crowded point  
during rush hour



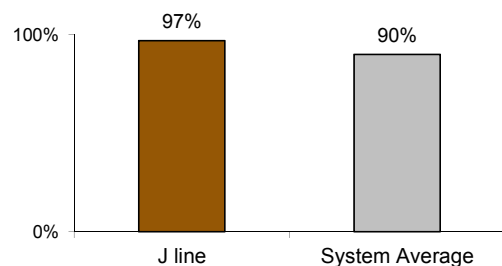
### The J & Z are about as clean as average...

% of cars with 'light or no interior dirtiness' as defined  
by NYC Transit



### and perform above average on in-car announcements.

% of cars with correct announcements as defined by  
NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

# Straphangers Campaign

## L SUBWAY LINE PROFILE

The L line ranks tied for 5th best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).



**Straphangers Campaign MetroCard Rating \$1.45**

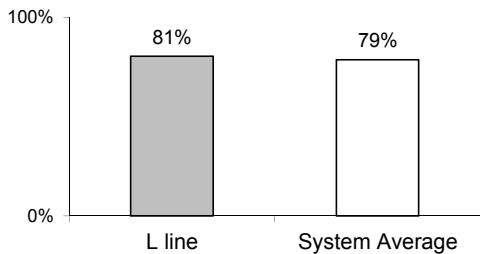
### The L line is scheduled to come more often than most subway lines...

scheduled minutes between weekday trains  
as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>L line</b>	<b>3:30</b>	<b>7:30</b>	<b>4</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

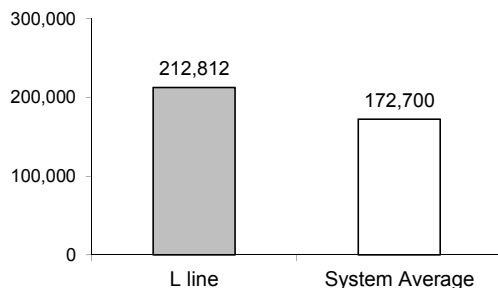
### and arrives with above-average regularity.

% of trains arriving at regular intervals  
--weekday "wait assessment"--  
between 6 am and midnight



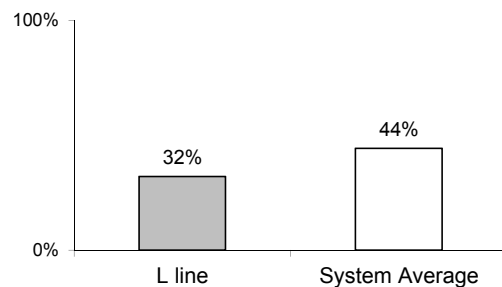
### Cars on the L break down less often than those on the average line.

miles traveled between delays caused by  
mechanical failures, 2011



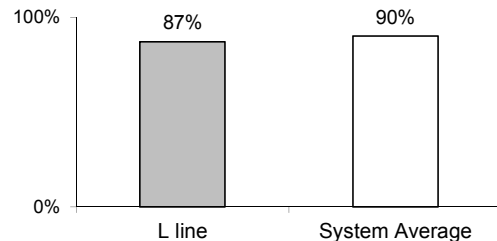
### You're less likely to get a seat on the L.

% of passengers with seats at most crowded point  
during rush hour



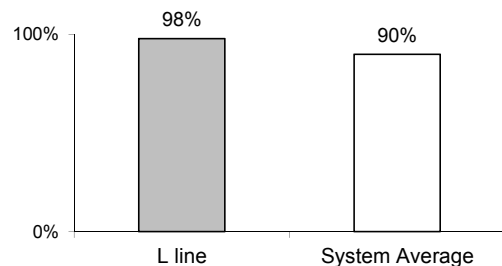
### The L line is less clean than average...

% of cars with 'light or no interior dirtiness' as defined  
by NYC Transit



### but performs above average on in-car announcements.

% of cars with correct announcements as defined by  
NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

# Straphangers Campaign

## M SUBWAY LINE PROFILE



Straphangers Campaign MetroCard Rating **\$1.25**

The M line ranks 9th best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

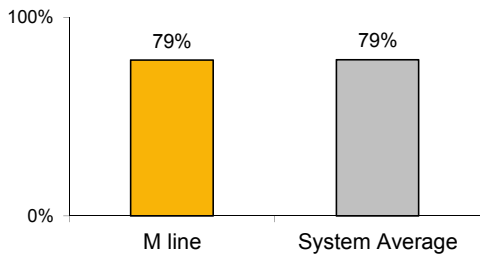
**The M line is scheduled to come much less often than the average line.**

scheduled minutes between weekday trains as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>M line</b>	<b>8</b>	<b>10</b>	<b>8:45</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

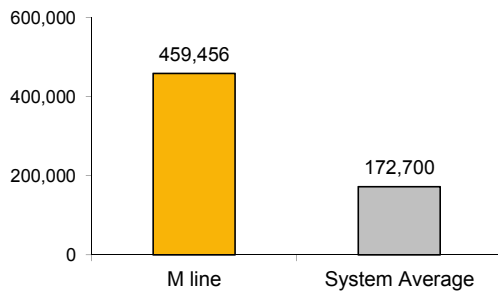
**The M arrives with average regularity...**

% of trains arriving at regular intervals --weekday "wait assessment"-- between 6 am and midnight



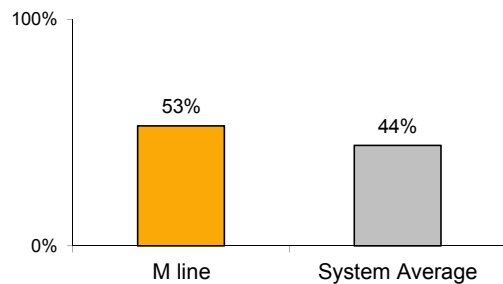
**and its cars break down less often than those on the average line.**

miles traveled between delays caused by mechanical failures, 2011



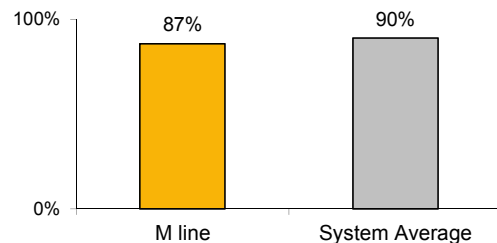
**You're more likely to get a seat on the M.**

% of passengers with seats at most crowded point during rush hour



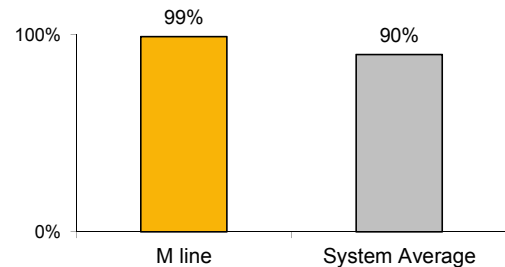
**The M is less clean than the average line...**

% of cars with 'light or no interior dirtiness' as defined by NYC Transit



**but performs nearly perfect on in-car announcements.**

% of cars with correct announcements as defined by NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**



# Straphangers Campaign

## N SUBWAY LINE PROFILE



Straphangers Campaign  
MetroCard Rating **\$1.20**

The N line ranks tied for 10th best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

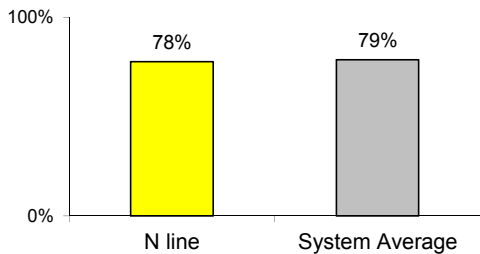
### The N line is scheduled to come less often than most subway lines...

scheduled minutes between weekday trains  
as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>N line</b>	<b>7</b>	<b>10</b>	<b>7</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

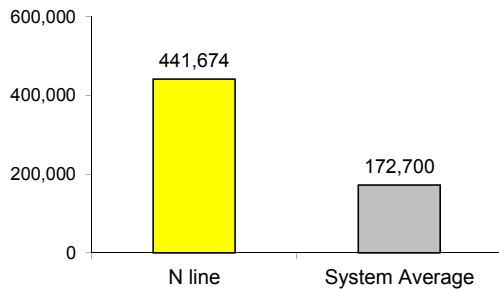
### but arrives with near-average regularity.

% of trains arriving at regular intervals  
--weekday "wait assessment"--  
between 6 am and midnight



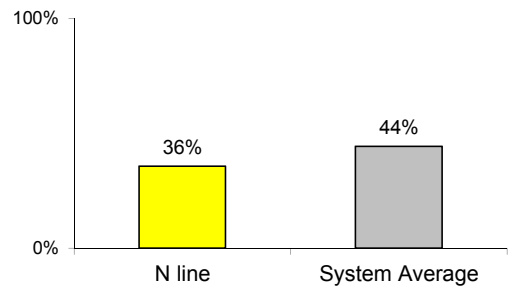
### Cars on the N break down much less often than those on the average line.

miles traveled between delays caused by  
mechanical failures, 2011



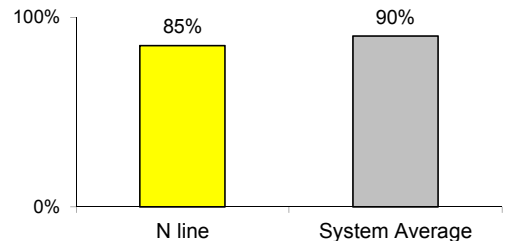
### You're less likely to get a seat on the N.

% of passengers with seats at most crowded point  
during rush hour



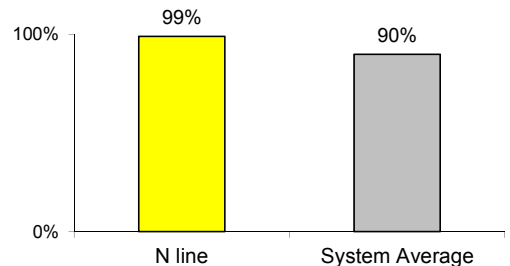
### The N line is less clean than average...

% of cars with 'light or no interior dirtiness' as defined  
by NYC Transit



### but performs nearly perfect on in-car announcements.

% of cars with correct announcements as defined by  
NYC Transit



Questions about your line? Suggestions? Complaints? -- Call 511



# Straphangers Campaign

## Q SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating \$1.60**

The Q line ranks best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

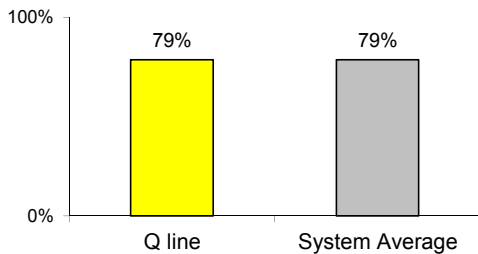
**The Q line is scheduled to come less often than most subway lines...**

scheduled minutes between weekday trains as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>Q line</b>	<b>6</b>	<b>10</b>	<b>6</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

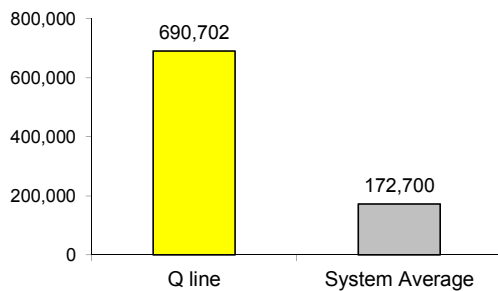
**but arrives with average regularity.**

% of trains arriving at regular intervals --weekday "wait assessment"-- between 6 am and midnight



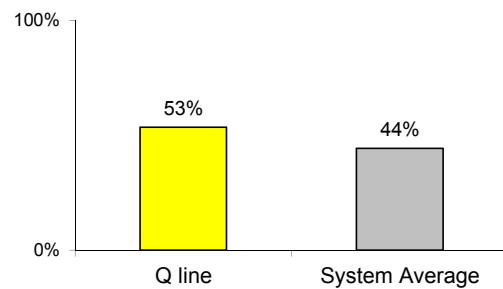
**Cars on the Q break down much less often than those on the average line.**

miles traveled between delays caused by mechanical failures, 2011



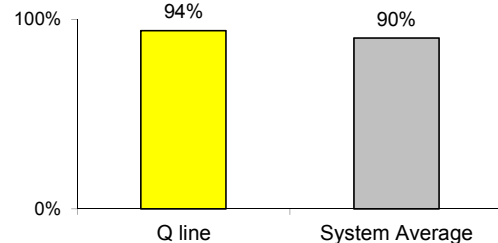
**You're more likely to get a seat on the Q.**

% of passengers with seats at most crowded point during rush hour



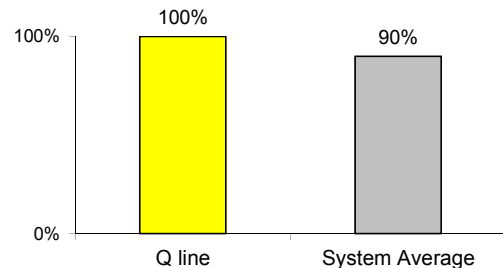
**The Q line is cleaner than average...**

% of cars with 'light or no interior dirtiness' as defined by NYC Transit



**and performs perfectly on in-car announcements.**

% of cars with correct announcements as defined by NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

# Straphangers Campaign

## R SUBWAY LINE PROFILE



**Straphangers Campaign MetroCard Rating \$1.20**

The R line ranks tied for 10th best of the 19 subway lines rated by the Straphangers Campaign. Our ranking is based on the MTA New York City Transit data below, using a method described at [www.straphangers.org](http://www.straphangers.org).

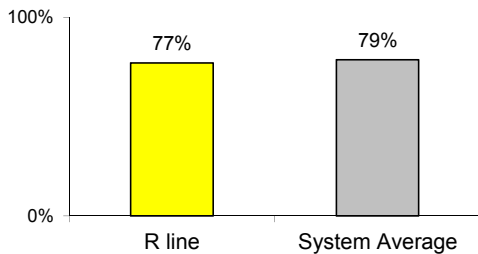
### The R line is scheduled to come less often than most subway lines...

scheduled minutes between weekday trains as of December 2011

	AM Rush	Noon	PM Rush	Overnight
<b>R line</b>	<b>6</b>	<b>10</b>	<b>6:30</b>	<b>20</b>
<b>System Average</b>	<b>5:10</b>	<b>8:32</b>	<b>5:33</b>	<b>20</b>

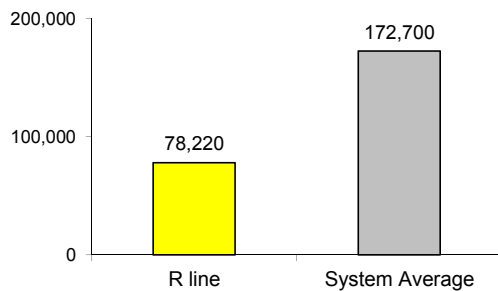
### and arrives with below-average regularity.

% of trains arriving at regular intervals --weekday "wait assessment"-- between 6 am and midnight



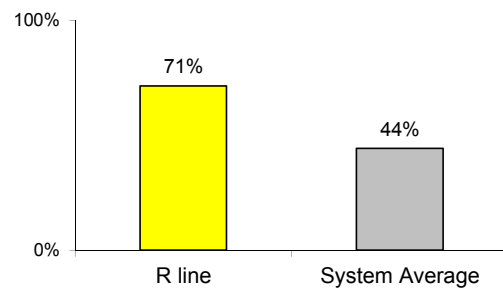
### Cars on the R break down much more often than those on the average line.

miles traveled between delays caused by mechanical failures, 2011



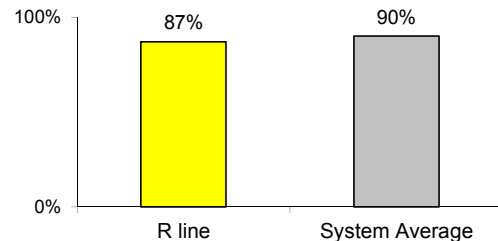
### You're most likely to get a seat on the R.

% of passengers with seats at most crowded point during rush hour



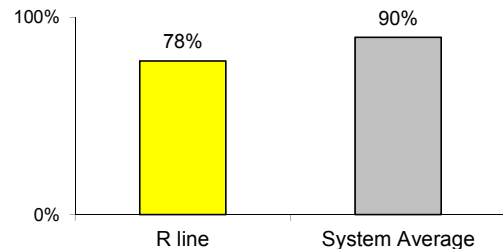
### The R line is less clean than average...

% of cars with 'light or no interior dirtiness' as defined by NYC Transit



### and performs below average on in-car announcements.

% of cars with correct announcements as defined by NYC Transit



**Questions about your line? Suggestions? Complaints? -- Call 511**

## **Appendix I: Detailed Methodology**

### **How We Developed Our Profiles and MetroCard Ratings**

This appendix describes in detail the methodology used by the NYPIRG Straphangers Campaign to develop our profiles of New York City subway lines and our MetroCard Ratings.

Essentially, we reviewed six measures of transit performance compiled by MTA New York City Transit, presented them in concise, one-page, rider-friendly profiles, and then gave a MetroCard Rating based on their overall performance. We chose these six measures — which are fully described below — for several reasons. This included their importance to riders, as reflected in New York City Transit's polling of riders and in our own survey of 38 transit experts. Additional factors included the availability, reliability and comparability of the data.

The MetroCard Rating was developed in two steps, explained more fully below. First, we decided how much weight to give each of the six measures of transit services in our profiles. Then we placed each line on a scale that permits fair and consistent comparisons. Under that formula, a line whose 2011<sup>7</sup> scores fell on average at the 50<sup>th</sup> percentile of lines for all six performance measures would earn a MetroCard Rating of \$1.25. Those scoring at the 90<sup>th</sup> percentile would receive a rating of \$2.25, the current base fare.

#### **1. Presenting New York City Transit Data to Riders**

We decided to report data in the form of concise one-page profiles for each subway line. That met our goal of presenting the information in a way that would be easily understandable to the riding public.

Below is a description of each of six measures of transit performance that we used. We have listed the published sources of the data; if no published source is listed, we received the data from MTA New York City Transit in electronic form. In 1997, New York City Transit officials reviewed a draft version of the profiles and concluded:

Although it could obviously be debated as to which indicators are most important to the transit customer, we feel that the measures that you selected for the profiles are a good barometer in generally representing a route's performance characteristics...Further, the format of your profiles...is clear and should cause no difficulty in the way the public interprets the information.<sup>8</sup>

An advance summary of the findings for the 2012 State of the Subways report was provided to MTA New York City Transit.

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<sup>7</sup> Data on scheduled service, service regularity, breakdown rate, interior cleanliness and in-car announcements was taken from MTA New York City Transit 2011 sources. On crowding, we cite 2010 MTA NYCT cordon count and 2011 passenger loading guidelines — the most recent data available at the time of this report's preparation. For the sake of brevity, we refer to data from sources cited in this report as '2011 data.'

<sup>8</sup> The draft included the same six measures of service as the final version. Transit officials did note that for some lines, "it may be more useful to present the profiles by corridor rather than individual route...especially for such high-volume corridors as the Lexington Avenue express." (Source: Letter, to Gene Russianoff, staff attorney, Straphangers Campaign from Lois Tendler, Acting Chief of Operations Planning, MTA New York City Transit, April 17, 1997.) Since all the data we use is broken down by line, we felt the profiles should reflect this.

## A. Scheduled headways

We measured amount of service based on the scheduled "headways" between trains for weekday morning rush, afternoon rush and midday hours. Headways are the number of minutes scheduled between train arrivals. For example, the 4 line is scheduled to arrive every four minutes during the weekday morning rush. Because virtually all subway lines operate at the same interval — 20 minutes — during late night hours, we did not include overnight headways in our analysis. This approach allowed us to include the B and C—two train lines that do not regularly operate during overnight hours.

For our profiles, we decided to have the morning and afternoon rush hour intervals each contribute 40% to the overall headways measurement; midday headways account for the remaining 20%. We felt that this fairly reflected the relative use of service. For any line which has different scheduled intervals for northbound and southbound trains, the average headway was considered. Due to changes in the way MTA New York City Transit reports its headway data, the amount of scheduled service figures cited in this report may not be comparable to those published in our fourteen previous reports. System average data was calculated by averaging data by time period from the 20 lines measured in this report.

(Source: Subway Service Frequency (Headway in Minutes) by Route and Time of Day—effective: December 4, 2011—A and B Divisions. Received from the Office of the President, MTA New York City Transit, May 17, 2012.)

## B. Regularity of Service

Regularity of service measures the adherence of *actual* intervals to *scheduled* intervals between trains. A line with a *low* regularity, for example, would show either gaps in train service during some portion of the day, and/or train bunching at others.

In 2001, MTA New York City Transit created a new measure of this indicator, called *wait assessment*:

*The percentage of service intervals is no more than the scheduled interval plus 2 minutes during the hours of 6 a.m. to 9 a.m. and 4 p.m. to 7 p.m., or plus 4 minutes during the hours of 9 a.m. to 4 p.m. and 7 p.m. to 9 p.m.*

In 2008, transit officials modified this definition:

*[Wait assessment] is the percent of instances that the time between trains does not exceed schedule by more than 2 minutes (peak) or 4 minutes (off-peak). The reporting time is 6:00 a.m. to midnight.*

This reporting time (6 a.m. to midnight) represents a departure from the reporting time used by transit officials between 2001 and 2007. Further, 2009 data was published as 12-month, rather than 6-month, rolling averages.

In 2010, transit officials changed the definition again:

*Wait assessment (WA), which is measured weekdays between 6:00 a.m. - midnight is defined as the percent of actual intervals between trains that are no more than the scheduled interval plus 25%.*

In this report, we cite by-line wait assessment data received in a letter from the Office of the President, MTA New York City Transit. We note that data we received on six lines—the 1 through the 6—differs slightly from that published in the February, 2012 MTA New York City Transit Committee Agenda, available at [http://mta.info/mta/news/books/pdf/120227\\_1000\\_Transit.pdf](http://mta.info/mta/news/books/pdf/120227_1000_Transit.pdf)

(Source: Subway Weekday Wait Assessment, January-December, 2011. Received from the Office of the President, MTA New York City Transit, May 17, 2012.)

### *C. Mean distance between failures (MDBF)*

MTA New York City Transit states that MDBF measures subway car reliability and "is calculated as revenue car miles divided by the number of delay incidents attributed to car-related causes." In this report we cited data for the 12-month moving average for the period ending December 2011. The system average quoted is the "fleet average" published by MTA New York City Transit. We note that data we received on the majority of lines differs slightly from that published in the February, 2012 MTA New York City Transit Committee Agenda, available at [http://mta.info/mta/news/books/pdf/120227\\_1000\\_Transit.pdf](http://mta.info/mta/news/books/pdf/120227_1000_Transit.pdf)

(Source: MDBF [Mean Distance between Failures] Analysis and Mileage, by-line Twelve-month Moving Average, December 31, 2011, Rail Control Center, Department of Subways, printed April 23, 2012. Received from the Office of the President, MTA New York City Transit, May 17, 2012.)

### *D. Chance of getting a seat*

We developed a formula to calculate the chance of being able to get a seat at the most crowded point on each line. First, we identified each line's "instance of greatest crowding" using New York City Transit's 2010 *Weekday Cordon Count*. We did this by isolating for each line the most crowded 1-hour interval at the most crowded point entering or exiting Manhattan's Central Business District (CBD). Then we divided the number of seats on all cars on each line by the number of passengers during that 1-hour interval. For example, the 1 line was at its most crowded point entering the CBD, downtown at West 66<sup>th</sup> Street, between 8:00 a.m. and 9:00 a.m. on the day the count was taken; the average number of passengers counted was 82.106 per car. Cars on the 1 line are of the class R62-A, a 51-foot A-subdivision car with 44 seats. Thus the ratio of the number of seats to the total number of passengers per car would be 44/82.106 or 54%. This figure, 54%, represents the chance that a rider will be able to get a seat on a train at the 1 line's most crowded point entering/exiting the CBD, during the most crowded 1-hour weekday interval. In cases where more than one car class was used on a line, we evaluated crowding based on the seating guidelines for the predominant type of car used on the line. As the G line does not enter the CBD, passenger loading data is not included in MTA New York City Transit's cordon count. For this reason, we report no crowding data for the G line in this report, and subsequently, calculate no MetroCard Rating for the G. System average data was calculated by averaging the 'chance of getting a seat' scores of 19 lines cited in the cordon count.

(Source: New York City Transit Subdivision 'A' and 'B' Car Assignments, December 4, 2011, and *Year 2010 Weekday Cordon Count*. Received from the Office of the President, MTA New York City Transit, May 17, 2012.)

### *E. Passenger Environment Surveys: Cleanliness and Announcements*

New York City Transit conducts a periodic "Passenger Environment Survey" (PES) to measure the quality of the transit environment experienced by riders. It does this for subway cars, stations and buses and releases the results semi-annually. The PES is performed by "surveyors who are specifically trained for this function and who have no direct association with the departments affected by the survey evaluations. The surveying of...subway cars is conducted throughout each quarterly recording period to the extent necessary to depict a 'representative' sample of NYC Transit's vehicles."<sup>9</sup> Our profiles represent the first time that PES findings have been presented to the public on a line-by-line basis. We included PES ratings on cleanliness and announcements because New York City Transit's own surveys of rider opinion show both are of major concern to riders.

#### *(1) Interior cleanliness*

The PES includes a rating on the cleanliness of the interior of subway cars while in passenger service. It defines a car with a light degree of dirtiness as one with "occasional 'ground in' spots, but generally clean." Interior cleanliness in our profile was measured as the sum of the total percentage of cars with "no dirtiness of car floors and seats," and those with "a light degree of dirtiness of car floors and seats" during the last six months of 2011.

(Source: Passenger Environment Survey, Subway Car Results by Route, Second Half 2011. Received from the Office of the President, MTA New York City Transit, May 17, 2012.)

#### *(2) Adequacy of routine in-car announcements*

In-car announcements are also monitored in the Passenger Environment Survey. Our profiles note the average percentage of cars with adequate "routine in-car announcements" for the last six months of 2011. PES rates announcements as adequate if they are "understandable" and "correct." Such announcements would include at least four of the five following items:

- next station announced;
- transfer options, if applicable;
- route designation announced (either letter or number corresponding to a train line);
- next station announced; and
- "stand clear of the closing doors" announced.

This represents a change in PES methodology made in the third quarter of 2000.

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<sup>9</sup> Source: MTA New York City Transit *Passenger Environment Survey*, Third Quarter, 1996, p. 1.

(Source: Passenger Environment Survey, Subway Car Results by Route, Second Half 2011. Received from the Office of the President, MTA New York City Transit, May 17, 2012.)

## 2. Developing a Straphangers Campaign MetroCard Rating

We decided to include one overall rating for each of 19 subway lines. The rating is intended as a shorthand tool to summarize all of the information reported in the profiles and to allow for comparisons among lines.

As described below, under the formula used, a line whose 2011 scores fell on average at the 50<sup>th</sup> percentile of all lines for all six performance measures would receive a MetroCard Rating of \$1.25. A line which matched the 90<sup>th</sup> percentile of this range would receive a line rating of \$2.25. However, some lines which ranked high on some measures of performance may have received only an average MetroCard rating due to poor relative performance in other areas. (See Figure 1.)

Some riders may find this scale too generous, believing that performance levels should be far better than they are now. Other riders, who value transit service over other ways to travel in New York City, may believe the subways and buses to be a bargain.<sup>10</sup>

The MetroCard rating does not seek to make a subjective value judgment of the worth of subway service. It is not based on economic factors, such as the cost of providing service or comparisons to the costs of other modes of transportation. Instead, it is only a yardstick that permits a simple and direct ranking of subway lines.

### *A. Ranking Subway Performance Indicators*

We used two sources of information to formulate a scale of the relative importance of various subway line performance indicators. First, the Straphangers Campaign conducted a poll of 38 transit experts, activists and members of the riding public. We asked them to rank eight indicators of subway performance that opinion polls indicated were of major concern to riders. Second, we examined MTA New York City Transit's own rider opinion surveys. One performance indicator, crime, ranked high in both the Straphangers Campaign's poll and in the MTA rider surveys, but could not be included in the profile project because applicable data was not available on a line-by-line basis. A second measurement, "enroute schedule adherence," (commonly referred to as "on-time performance") was dropped from consideration because New York City Transit made changes to its definition and to the time periods surveyed.

Three lines — the Grand Central, the Franklin Avenue and the Rockaway Shuttle — were dropped from consideration because not all six measures of service were available for these

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<sup>10</sup> For example, in critiquing an earlier draft of our profile, transit officials said: "After all, what alternative mode of transportation along Lexington Avenue can even remotely compare at a cost of \$1.50 to the speed, frequency, and we dare say, reliability of the subway service." (Source: Letter, April 17, 1997, to Gene Russianoff, staff attorney, Straphangers Campaign from Lois Tendler, Acting Chief of Operations Planning, MTA New York City Transit.)

lines. Due to the lack of reliable crowding data for the G, no MetroCard Rating was calculated for that line.

The remaining 19 subway lines were evaluated on the basis of six indicators, all regularly measured by New York City Transit on a line-by-line basis. Each measure was assigned a percentage weight based on the priorities expressed by those polled as follows; the measures are grouped by the type of indicator:

Amount of service	(total: 30%)
<i>Scheduled headways</i>	30%
Dependability of service	(total: 35%)
<i>Regularity of service</i>	22.5%
<i>Mean distance between failures</i>	12.5%
Comfort/usability	(total: 35%)
<i>Chance of getting a seat</i>	15%
<i>Interior cleanliness</i>	10%
<i>Adequacy of in-car announcements</i>	10%
	(total = 100%)

Data and/or specific calculations on three of these indicators — chance of getting a seat, interior cleanliness and in-car announcements — have never before been released to the public on a line-by-line basis.

### *B. Calculating the MetroCard Rating*

In our first five surveys, 1996 performance data served as a baseline. As we said in our 1997 report, Line Ratings "will allow us to use the same formula for ranking service on subway lines in the future. As such, it will be a fair and objective barometer for gauging whether service has improved, stayed the same, or deteriorated over time."

However, in 2001, 2003, 2004, 2005, 2008, 2009, 2010 and 2011, transit officials made changes in how performance indicators are measured and/or reported. The Straphangers Campaign unsuccessfully urged MTA New York City Transit to re-consider its new methodologies, because of our concerns about the fairness of these measures and the loss of comparability with past indicators. Transit officials also rejected our request to re-calculate measures back to 1996 in line with their adopted changes. As a result, in this report we were forced to redefine our baseline with current data, and considerable historical comparability was lost.

Due to these changes by New York City Transit in the measurement and reporting of data, we have established a new baseline this year — largely 2011 data published in this report — against which we hope to be able to compare future performance.

### *C. 2011 MetroCard Ratings*

19 lines were rated on a linear scale for each of the six measurements used. A line in 2011 equaling the system best would receive a score of 100 for that indicator, while a 2011 line



matching the system worst would receive a score of 0. Thus all lines in this report received a score for each measurement between 0 and 100. The lines' scores were then multiplied by the respective weights assigned each indicator. The six adjusted scores were then added up (see Figures 1 and 2), which use the 4 line as an example.

The summed totals were then placed on a logarithmic scale. This scale emphasizes the relative differences between scores nearest the top and bottom of the scale, and ensures that a small difference in performance between any two lines translates to a small difference between scores. Our method reflects the odds, rather than the percentage chance, of any train on a given line meeting a basic level of satisfaction.<sup>11,12</sup>

Finally, we converted the scale to a dollar-based line rating, to offer riders a simple basis for comparisons among lines.<sup>13</sup> We calibrated this scale so that a line whose 2011 scores fell on average at the 50th percentile of all lines for all six performance measures would receive a rating of \$1.25. A line which matched the 95th percentile of this range would be rated \$2.25. Each figure was then rounded to the nearest 5¢. In selecting this scale we attempted to create a single measure which we felt accurately and fairly represents the relative performance priorities listed in our original 1996 poll of riders, community leaders and independent transit experts. The actual scale used to convert summed raw scores to line ratings is shown on the following page, with the 4 line as an example. (See Figures 2 and 3.)

Because of changes in data reporting at New York City Transit, 2011 Straphangers MetroCard Ratings cannot be compared to ratings given in previous State of the Subways reports.

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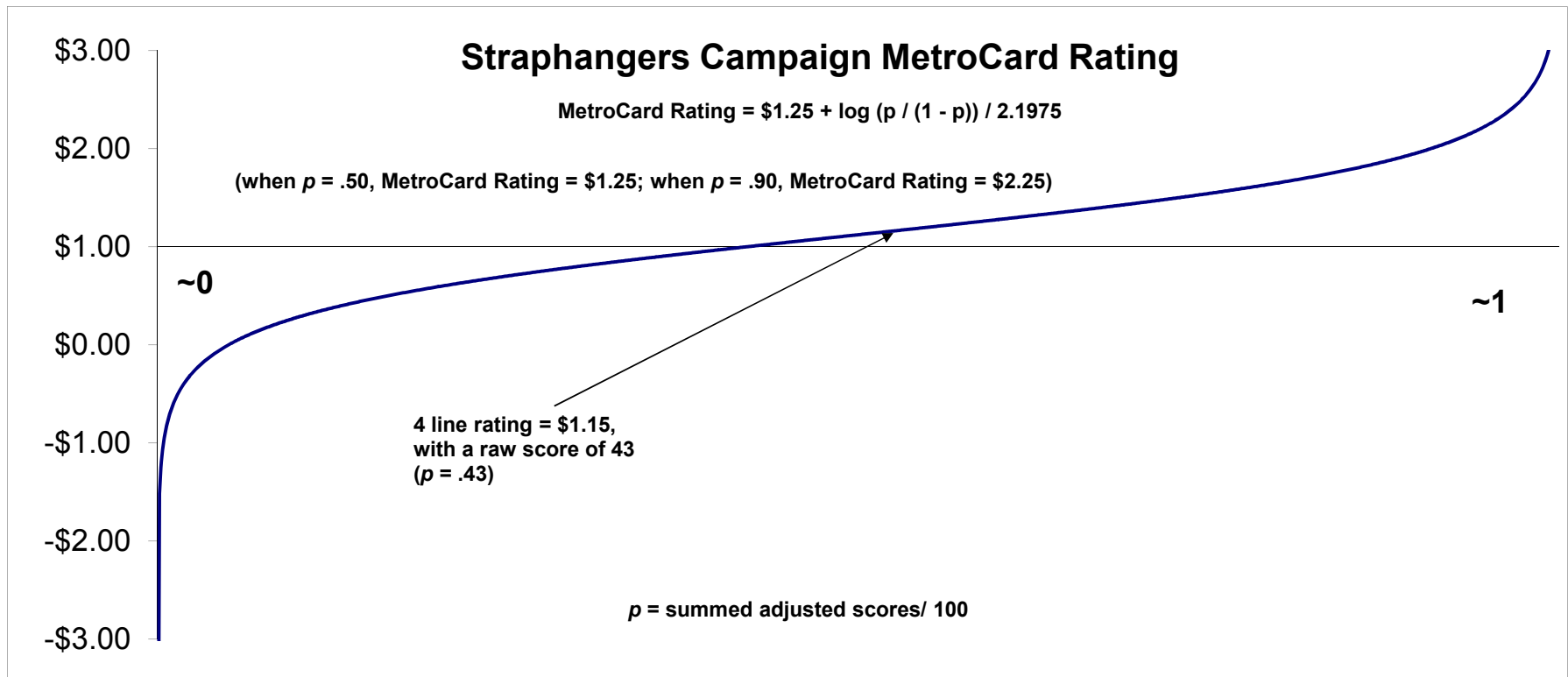
<sup>11</sup> J. H. Aldrich and F. D. Nelson, *Linear Probability, Logit and Probit Models*. Sage Publications, Beverly Hills, 1984.

<sup>12</sup> G. Henderson, H. Adkins and P. Kwong, "Subway Reliability and the Odds of Getting There on Time," *Transportation Research Record 1297: Public Transit Research: Management and Planning*, 1991, p. 10-13.

<sup>13</sup> This rating method is similar to the "hedonic" method of ranking items based on user satisfaction, as originally developed by Sherwin Rosen. (Source: S. Rosen, 'Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition,' *Journal of Political Economy* 82, p. 34-55.)

Figures 2 and 3: Sample Straphangers Campaign MetroCard Rating

Indicator	Highest rating in system—2011	Lowest rating in system—2011	4 line value	4 line score	Percentage weight	4 line adjusted score
Scheduled Service	6 line	C line	AM rush — 4 min; noon — 8 min; PM rush — 4 min	71	30%	21
Service Regularity	82% regular	70% regular	72% regular	18	22.5%	4
Breakdown Rate	every 816,935 miles	every 64,324 miles	every 160,930 miles	13	12.5%	2
Crowding	71% seated	23% seated	23% seated	1	15%	0
Cleanliness	97% clean	75% clean	89% clean	64	10%	6
Announcements	100% adequate	71% adequate	100% adequate	100	10%	10
<b>Summed adjusted score</b>	<b>4 line -- 43 pts (after rounding of all weighted indicator scores) -- 14th best in system</b>					



## Appendix II: Credits

Since 1979, the NYPIRG Straphangers Campaign has been a leading voice for New York City's millions of daily subway and bus riders. The Straphangers Campaign is a project of the New York Public Interest Research Group, Fund (NYPIRG).

The 2012 State of the Subways Report Card was made possible by the effort of many people.

The profiles and MetroCard Ratings were designed by Matt Glomski and Gene Russianoff of the Straphangers Campaign in collaboration with Li Howard, who designed the original profile mastheads. Nikhil Goyal provided technical assistance and website support. Matt Glomski analyzed data for the report. Gene Russianoff wrote the report.

Campaign Coordinator Cate Contino supervised editing, production and fact-checking and provided research support and handled a thousand other details. Campaign Field Organizer Jason Chin-Fatt provided production assistance.

Steven Romalewski, former director of NYPIRG's Community Mapping Assistance Project (CMAP), helped develop the profile criteria and refine our approach. Marty DeBenedictis of NYPIRG consulted on the management of data.

Special thanks to NYPIRG Executive Director Rebecca Weber, Deputy Director Marvin Shelton and Assistant to the Executive Director Meaghan Cleveland, for their assistance during many phases of the report.

The methodology for the profiles and the MetroCard Ratings were originally developed in close consultation with the University Transportation Research Center at City College. We are indebted to the analytic skills of Yuko Nakanishi and Robert Paaswell, the director emeritus of UTRC. At the start of our project, we received expert and generous guidance from the late Gary Henderson, who headed past efforts at the MTA Inspector General to improve MTA performance measures.

We thank the following officials at MTA New York City Transit for their assistance over time: Martin Krieger at the Operations Planning Division; and Lois Tandler, Deborah Hall-Moore and Carolyn Jackson-Colley at Government and Community Relations.

We want to acknowledge the transit riders who gave us feedback on the original design and contents of the line profiles. Special thanks to our colleagues in the transit riders' advocacy community: Beverly Dolinsky, formerly of the Permanent Citizens Advisory Committee to the MTA and Andrew Albert of the New York City Transit Riders Council; Ira Greenberg of the PCAC and MTA Board of Directors; and Joseph G. Rappaport, former Straphangers Campaign coordinator.

Photo credit: Wilbur O. Araujo