

Attention: Members of the Northeastern Illinois Task Force, Systems Performance Working Group

Subject: What measurements Pace uses to assess the level of performance

- 1) How well does (RTA/CTA/Metra/Pace) perform to meet the needs of its customers?
 - a. Service frequency and reliability (including a definition of what each service board defines as “on-time”)
 - ◆ Please refer to Slides 2-4
 - b. Rider experience, from researching route(s) to actual travel
 - ◆ Please refer to Slide 5
 - c. Customer communications (via all channels—online, phone, and in person both at stations/stops and on board vehicles)
 - ◆ Please refer to Slide 6
 - d. Mobility management for physically challenged individuals
 - ◆ Please refer to Slide 7
 - e. Security (including hard data as well as measurements of customer perceptions of security)
 - ◆ Please refer to Slide 8
 - f. Integration of services between modes and service providers
 - ◆ Please refer to Slide 9

- 2) How well does the current system perform to meet the needs of the community?
 - a. Level of transit access and service equity in the 6-county area
 - ◆ Please refer to Slide 10
 - b. Transit access to jobs in the region
 - ◆ Please refer to Slide 11
 - c. Service availability across differing populations
 - ◆ Please refer to Slides 12-14
 - d. Prioritization of system and service expansions
 - ◆ Please refer to Slide 15 and Slide 16
 - e. Maximizing economic development linked to transit
 - ◆ We do not track information for this category
 - f. Route planning (including measurements of available capacity utilization and reverse commute routes, and suburb-to-suburb transportation)
 - ◆ Please refer to Slides 18-24
 - g. Sustainability practices
 - ◆ Please refer to Slide 25

3) How efficiently and effectively the system operates

- a. Costs per trip and per mile
 - ◆ Please refer to Slide 26
- b. Revenue per trip and per passenger
 - ◆ Please refer to Slide 27
- c. Public funding per passenger and per capita
 - ◆ Please refer to Slide 28

Indicate overall how your agency incorporates findings from the measurements into planning and operations, and how often this incorporation occurs.

- ◆ Please refer to Slide 29

Northeastern Illinois Public Transit Task Force

{ Pace Suburban Bus



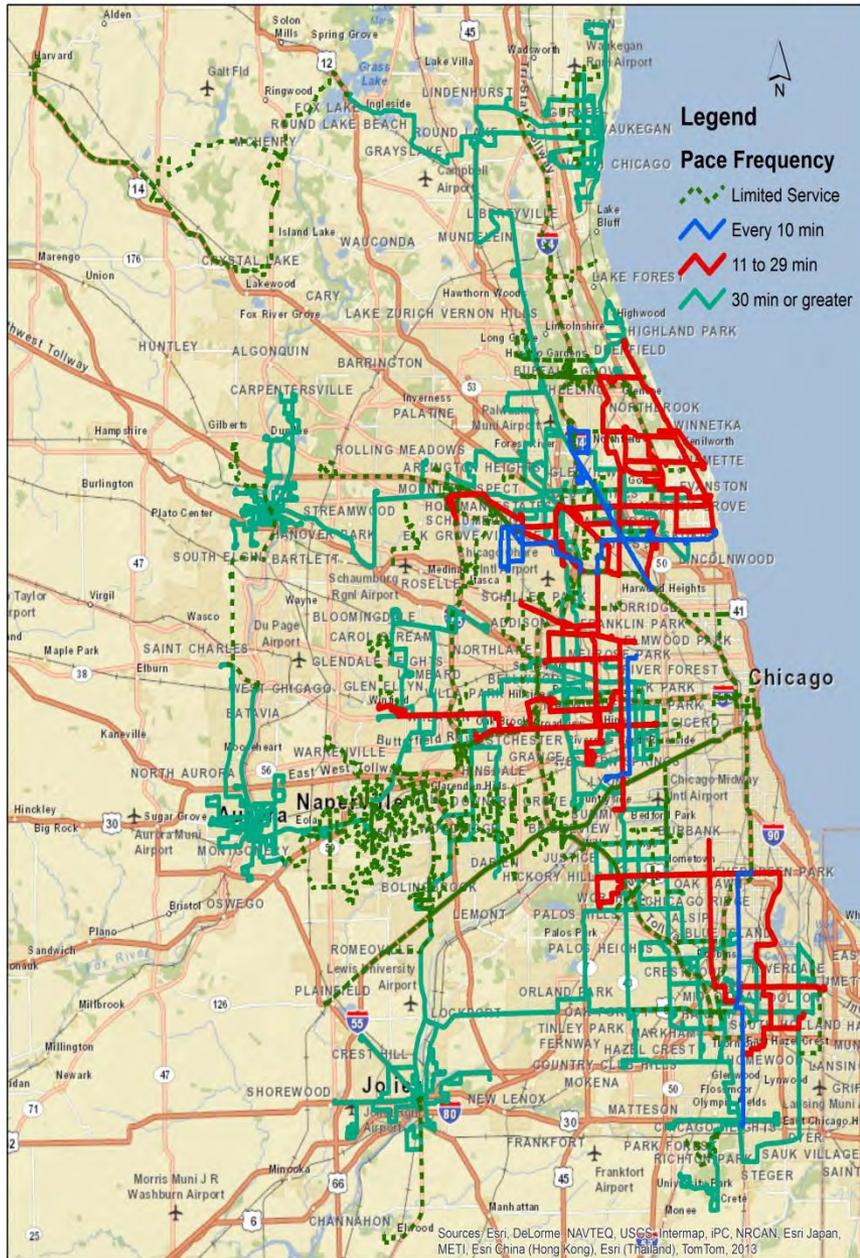
Frequency



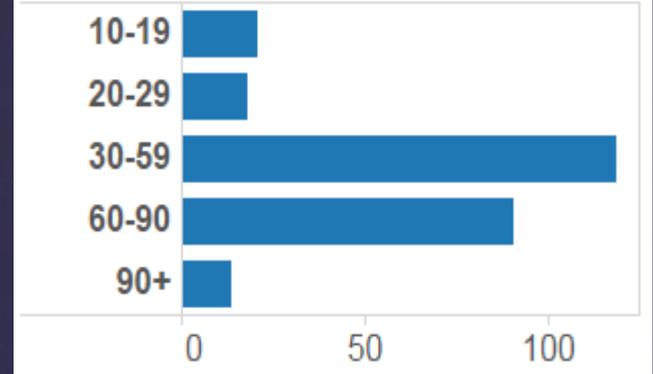
Pace Frequency

20

Miles



Headway (frequency)

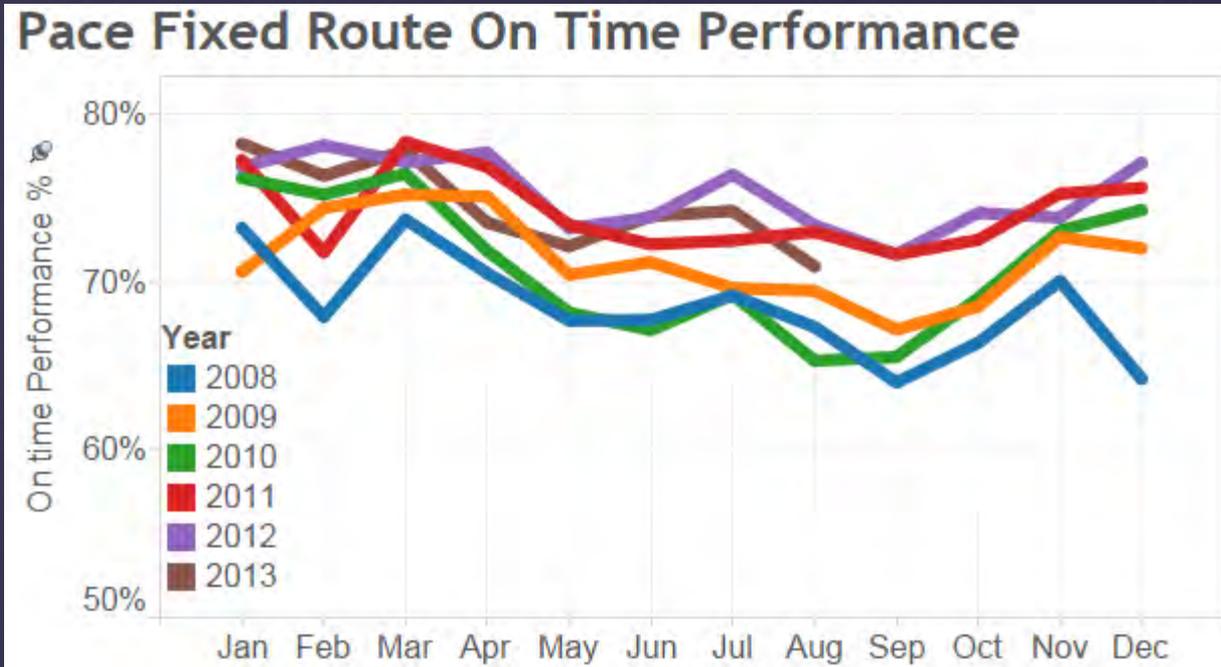


Frequency of Pace Service varies between 10 minutes and just over 90 minutes.



Tuesday, October 01, 2013

Reliability



Tuesday, October 01, 2013

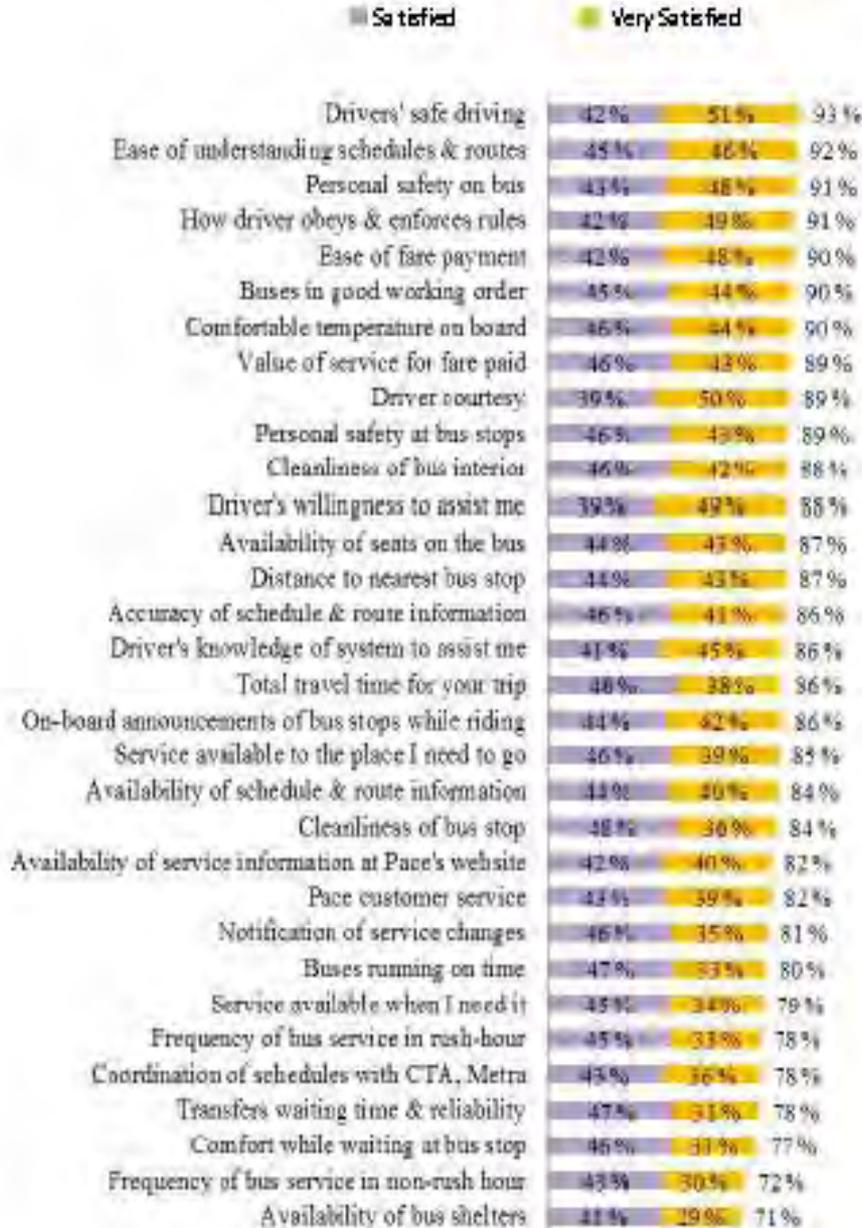
On Time

At Pace a bus is considered on time if it reaches a time point not earlier than 1 minute ahead of its scheduled time and not more than 5 minutes later than scheduled.

0-5

Rider Experience

Customer Satisfaction with Service Attributes

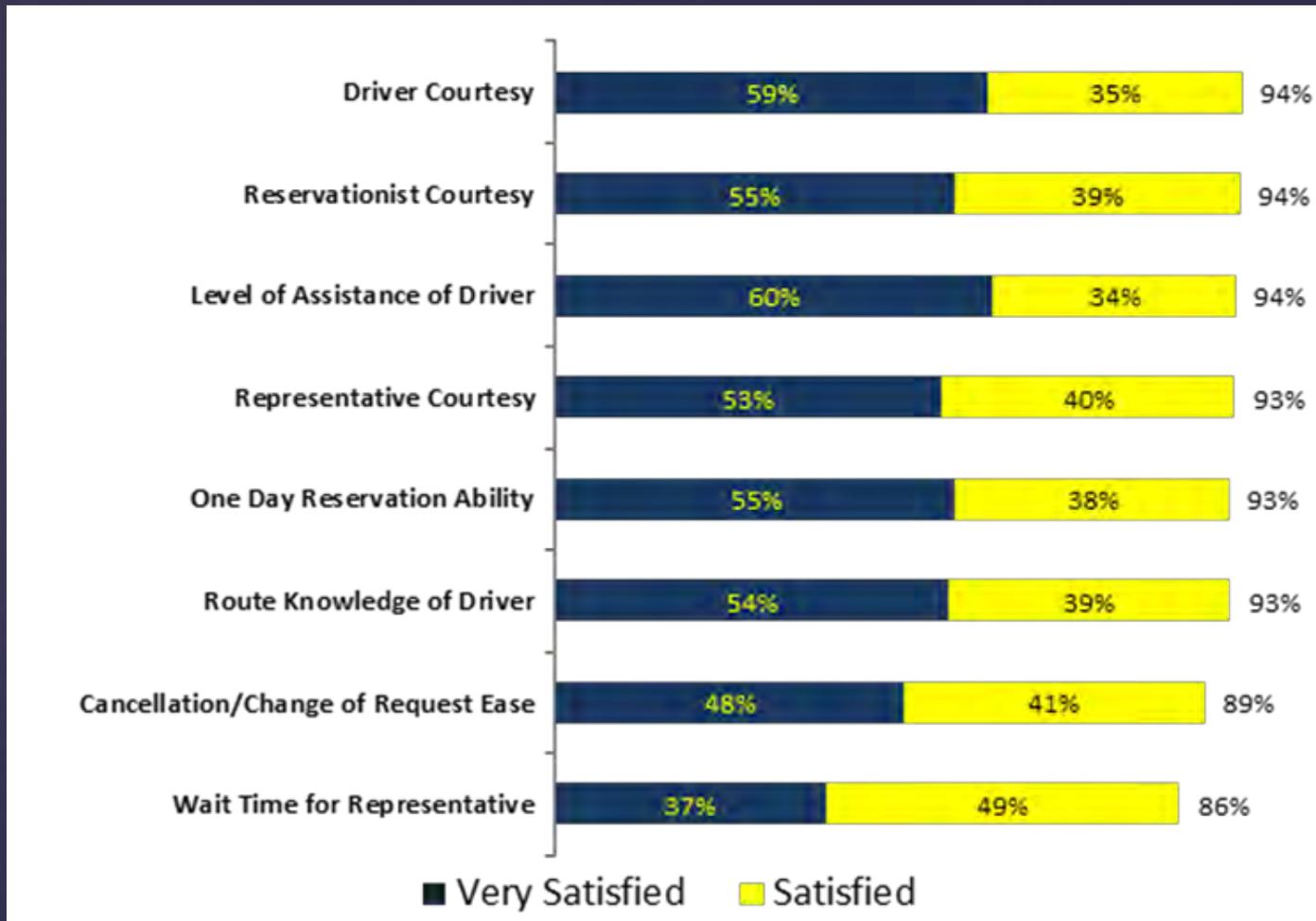


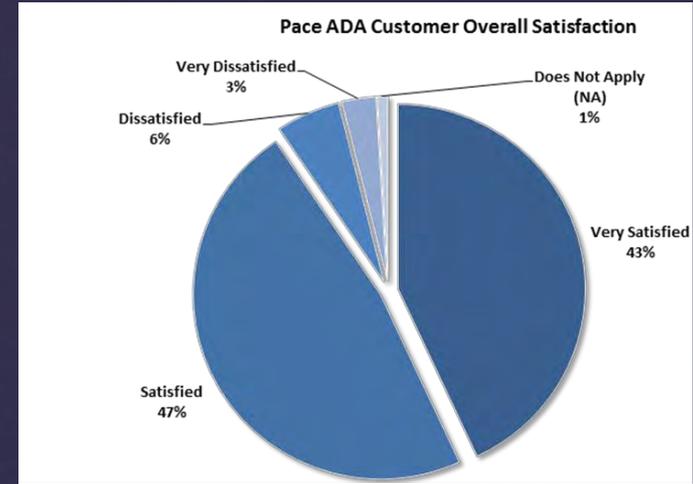
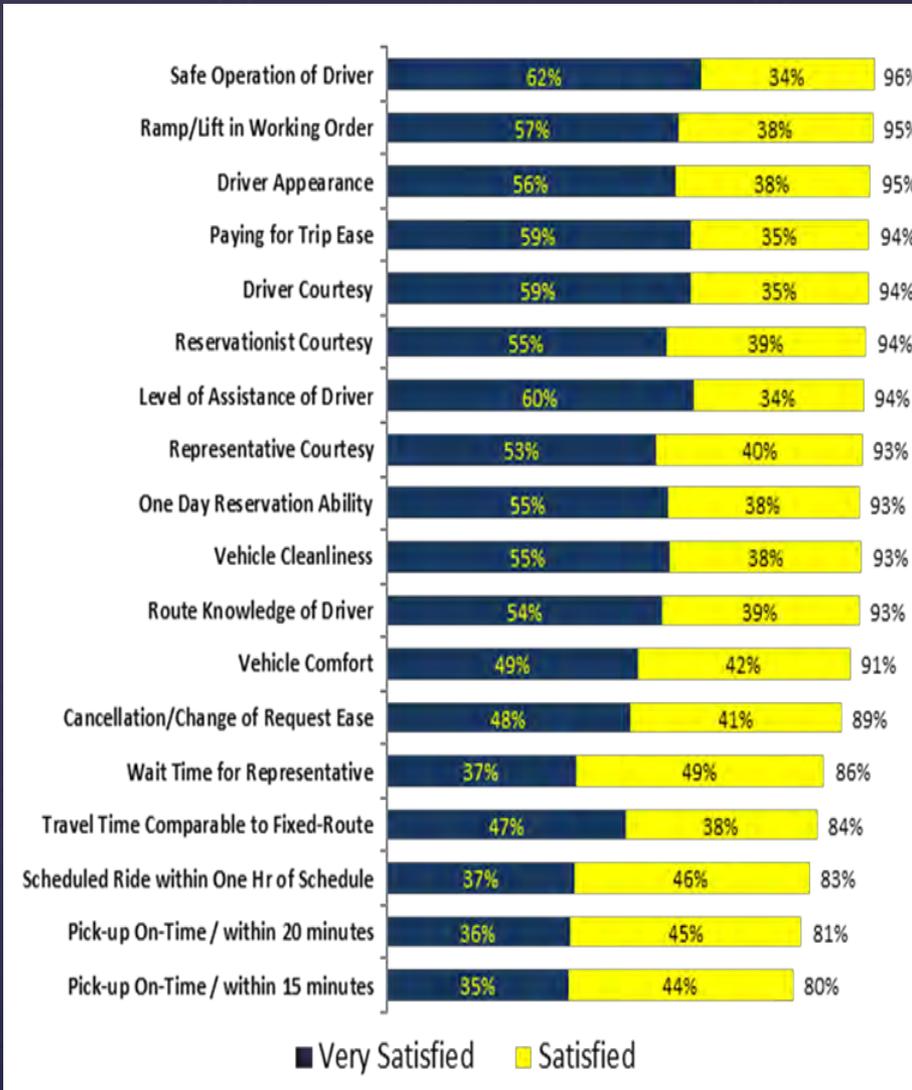
Overall our Customers Survey results indicate a 90% Satisfaction rating.



Tuesday, October 01, 2013

Customer Communications



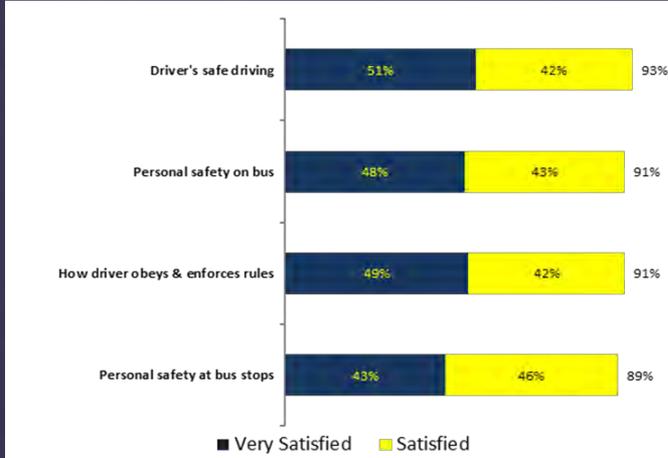


Pace ADA Paratransit riders were more than 90% satisfied with 12 of 18 rated elements



Security

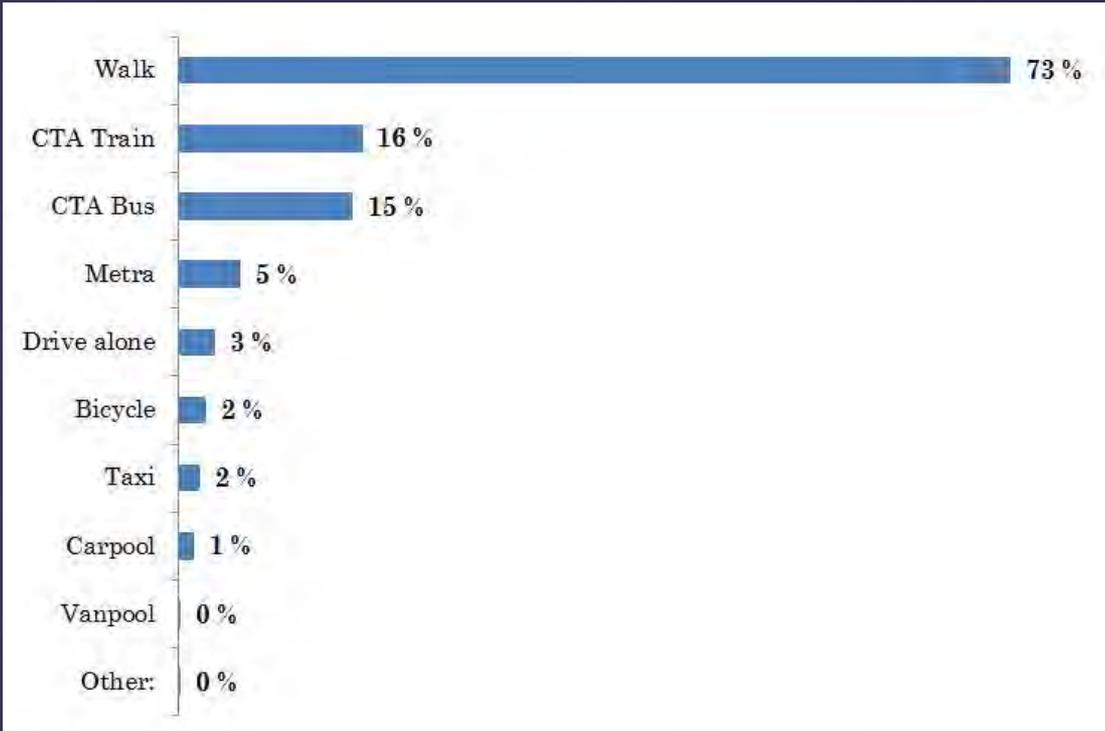
Fixed Route Ridership Security



ADA Ridership Security



Service Integration



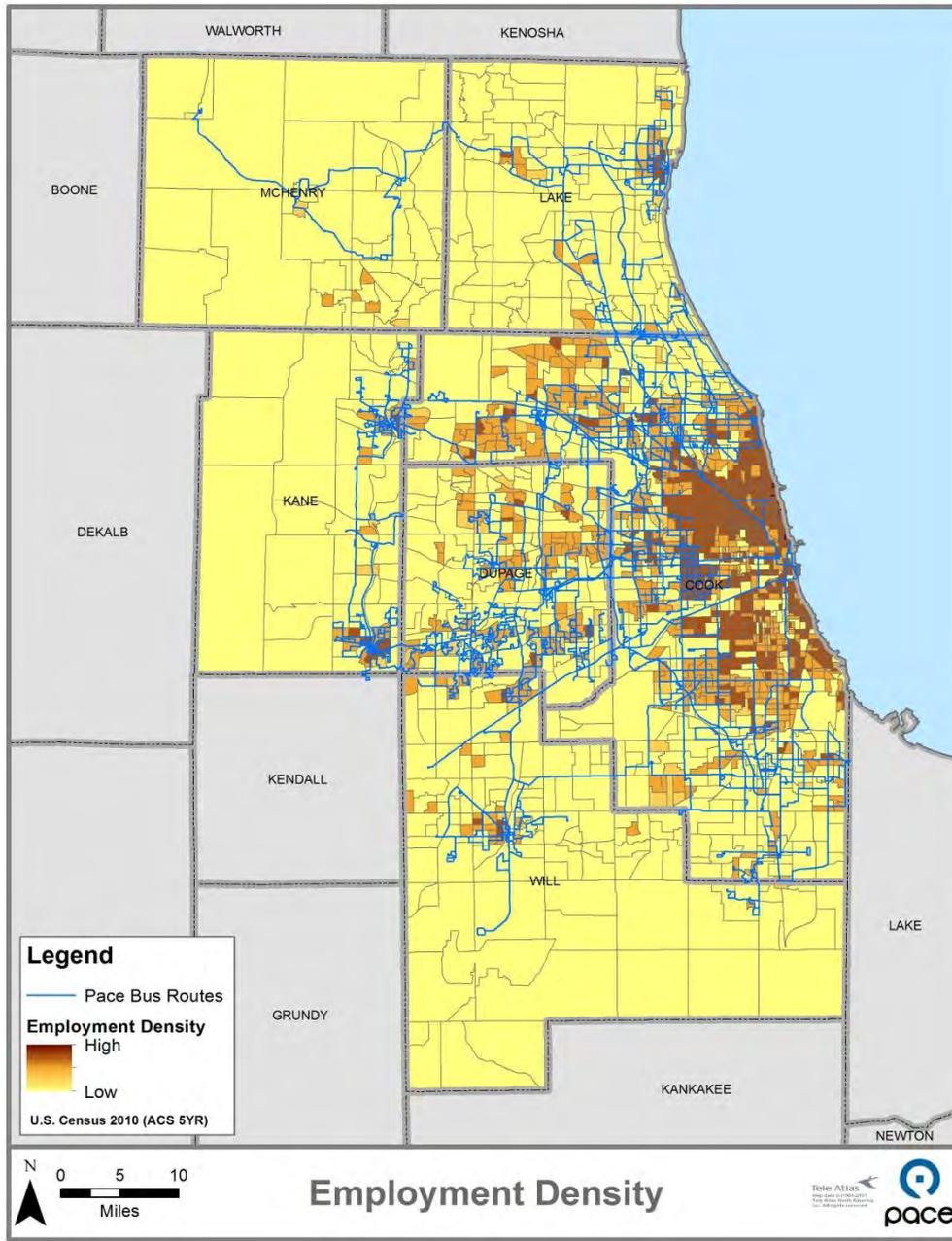
* Figures may not add up to 100% due to multiple responses per record

“After you get off the last Pace bus [survey-trip], how will you get to your destination?”

The majority of riders (73%) planned to walk to their final destination after exiting their final Pace bus ride on their survey-trip. CTA train (16%), CTA bus (15%), and Metra (5%) were also cited by respondents as their planned mode of transportation to their final destination after exiting Pace.



Transit Access to Jobs



Total Primary Jobs

	2011	
	Count	Share
Total Primary Jobs	3,567,834	100.0%

Jobs Counts by Places (Cities, CDPs, etc.) Where Workers Live - Primary Jobs

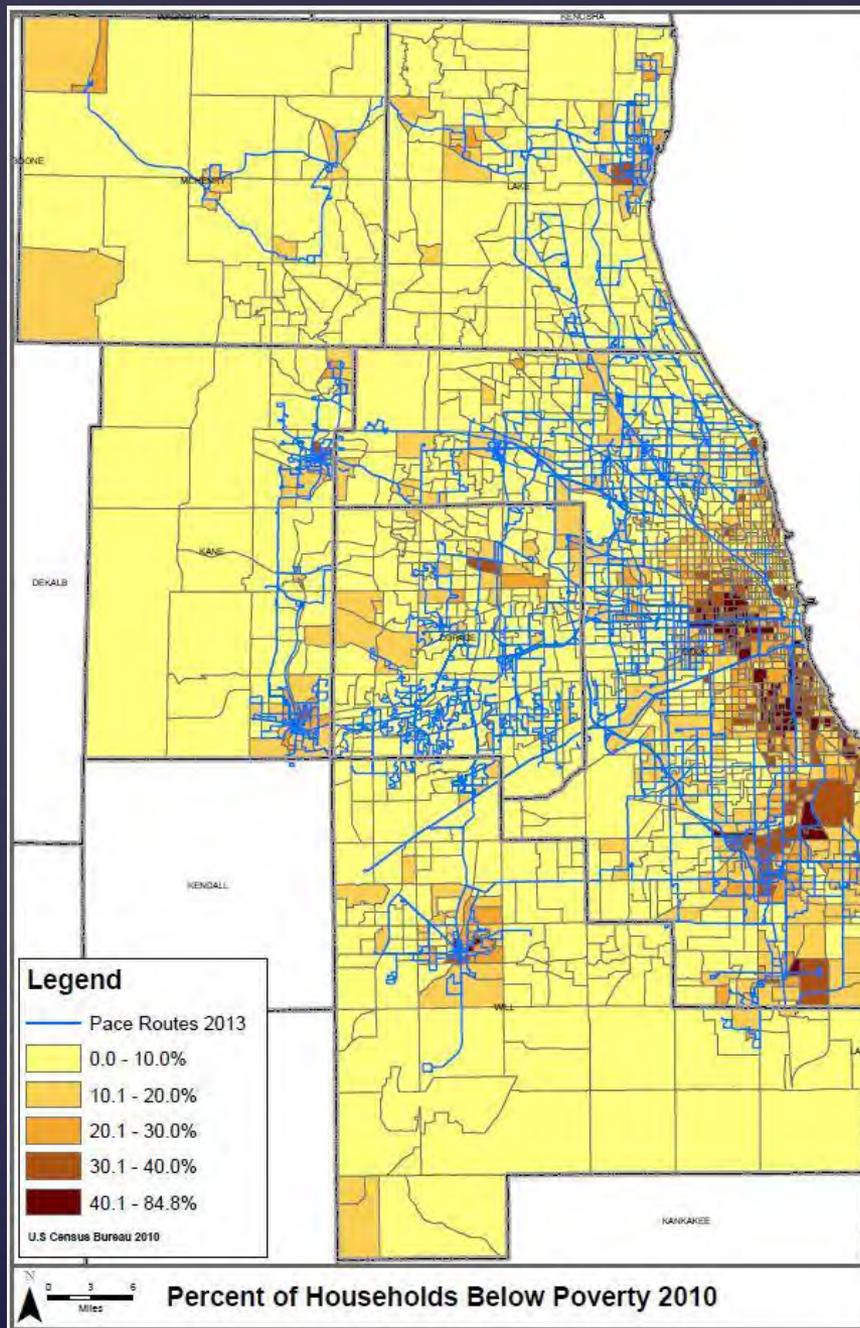
	2011	
	Count	Share
Chicago city, IL	951,960	26.7%
Aurora city, IL	63,463	1.8%
Naperville city, IL	60,074	1.7%
Joliet city, IL	53,223	1.5%
Elgin city, IL	40,569	1.1%
Schaumburg village, IL	35,531	1.0%
Arlington Heights village, IL	33,185	0.9%
Bolingbrook village, IL	29,628	0.8%
Evanston city, IL	29,487	0.8%
Palatine village, IL	29,454	0.8%
All Other Locations	2,241,260	62.8%

Pace services provide access to 1.1 million jobs within our suburban service area – this is 68.6% of all jobs in our service area. (2006 business data)



Tuesday, October 01, 2013

Service Availability

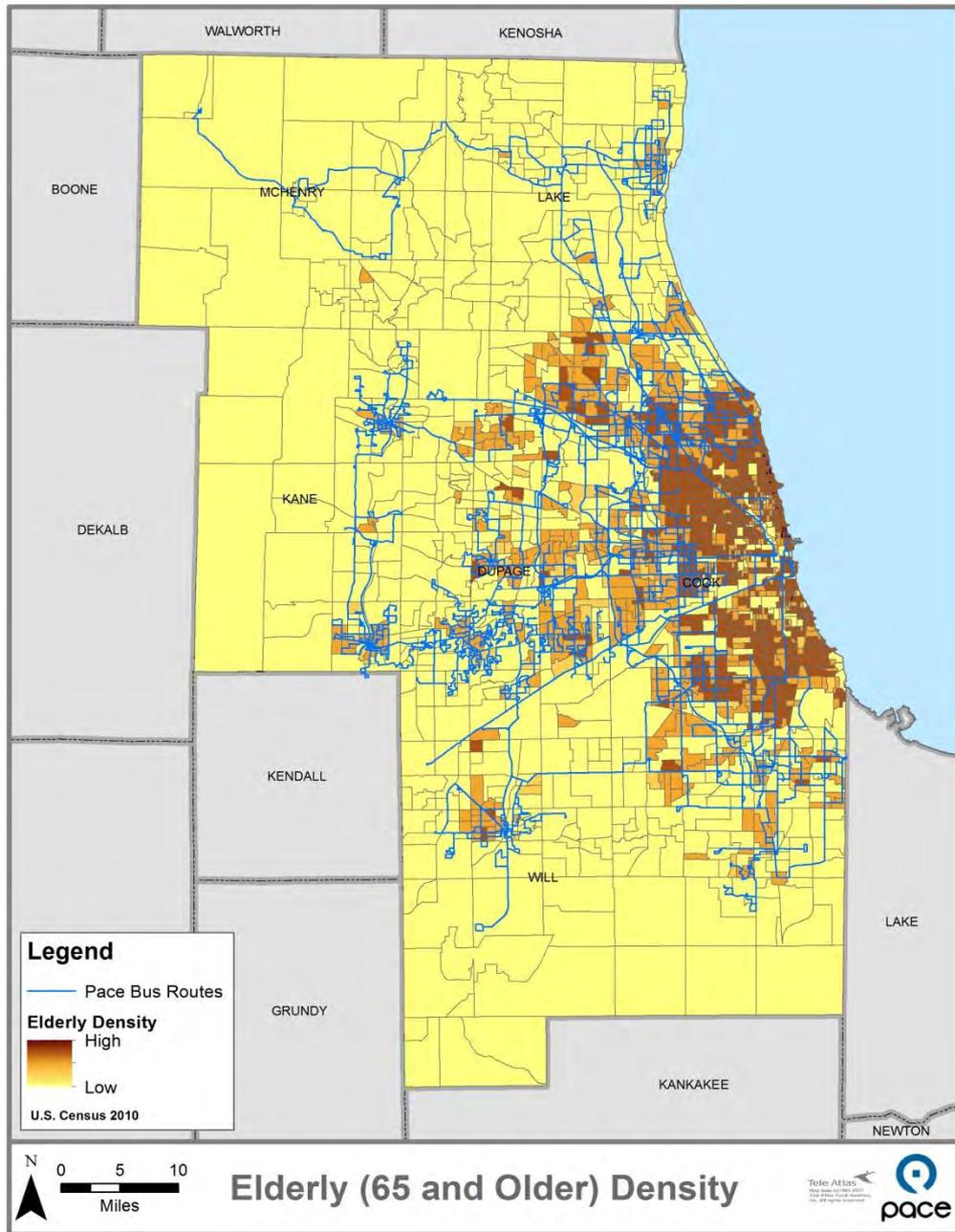


Pace is a critical service for low-income suburbanites – approximately 26% of our passengers have household incomes below the federal poverty threshold of \$15,510 for a two person household. More than 61% of our passengers have household incomes below 200% of the poverty threshold. (CSI Survey 2013)



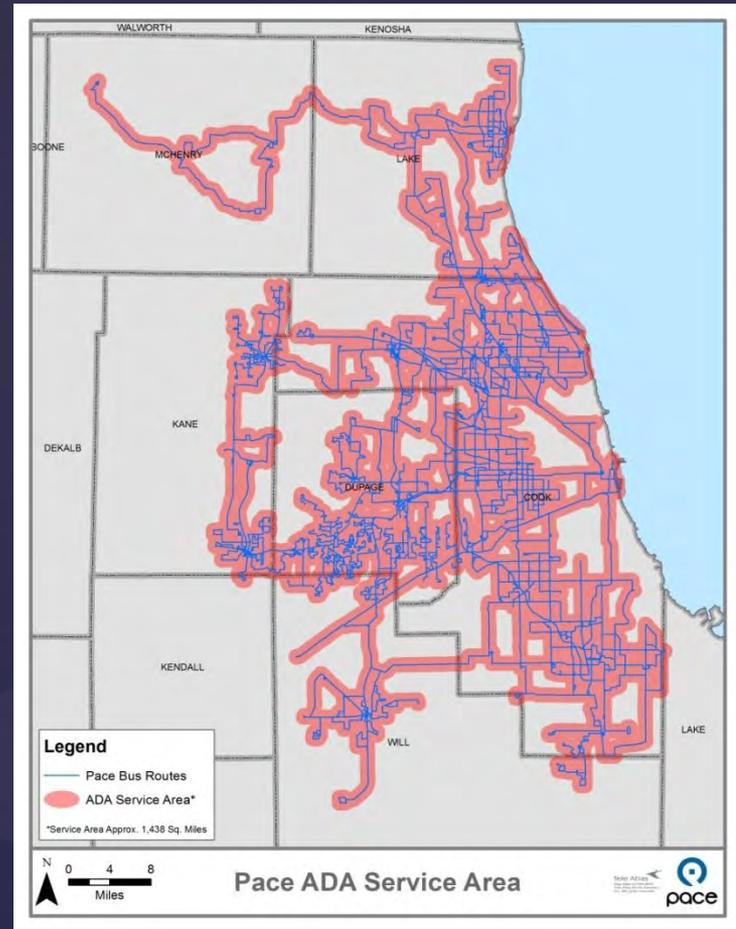
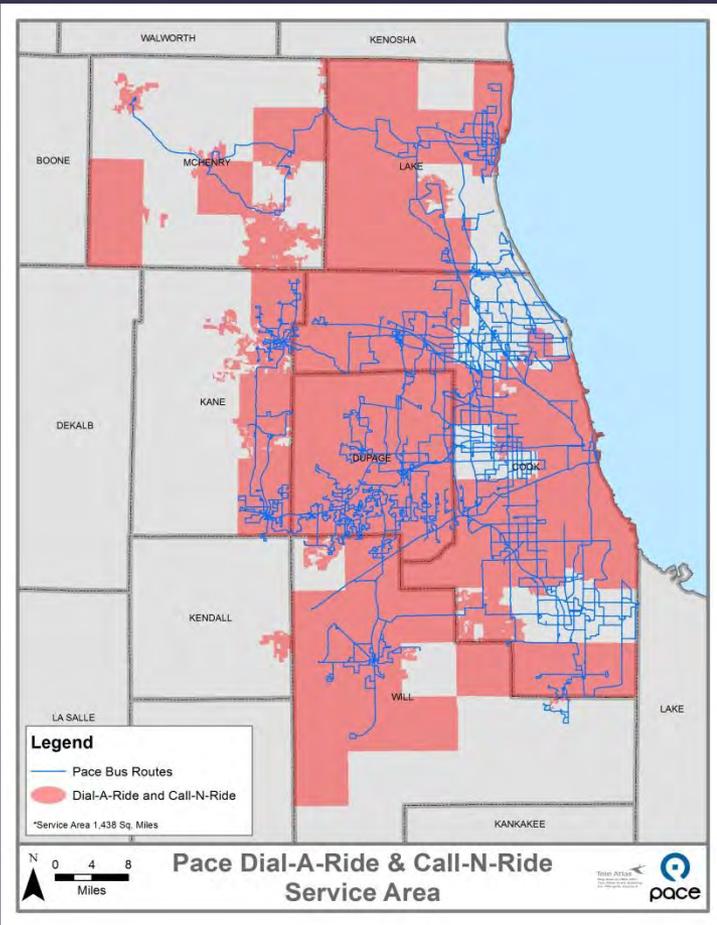
Tuesday, October 01, 2013

Service Availability



Tuesday, October 01, 2013

Service Availability



Service Expansion

Proactive

Over the past 10 years, Pace has developed a systematic approach for evaluating and restructuring service to keep up with changing travel patterns in the region. The work reflects Pace's Vision 2020 Strategic Plan, which was developed in July 2002. Projects include:

- Elgin Restructuring - implemented August 2003
- North Shore Initiative - implemented March 2005
- Fox Valley DuPage Initiative - implemented October 2005
- South Cook County Will County Restructuring - implemented November 2008, March, 2009 and June 2009
- West Cook Restructuring - implemented June 2011 and December 2011
- McHenry Country Restructuring - implemented December 2012
- I-90 Market Expansion Project (collaboration with Illinois Tollway) - first phase implemented August 2013
- Lake County Restructuring - first phase to be implemented November 2013
- Northwest Cook - implementation TBD

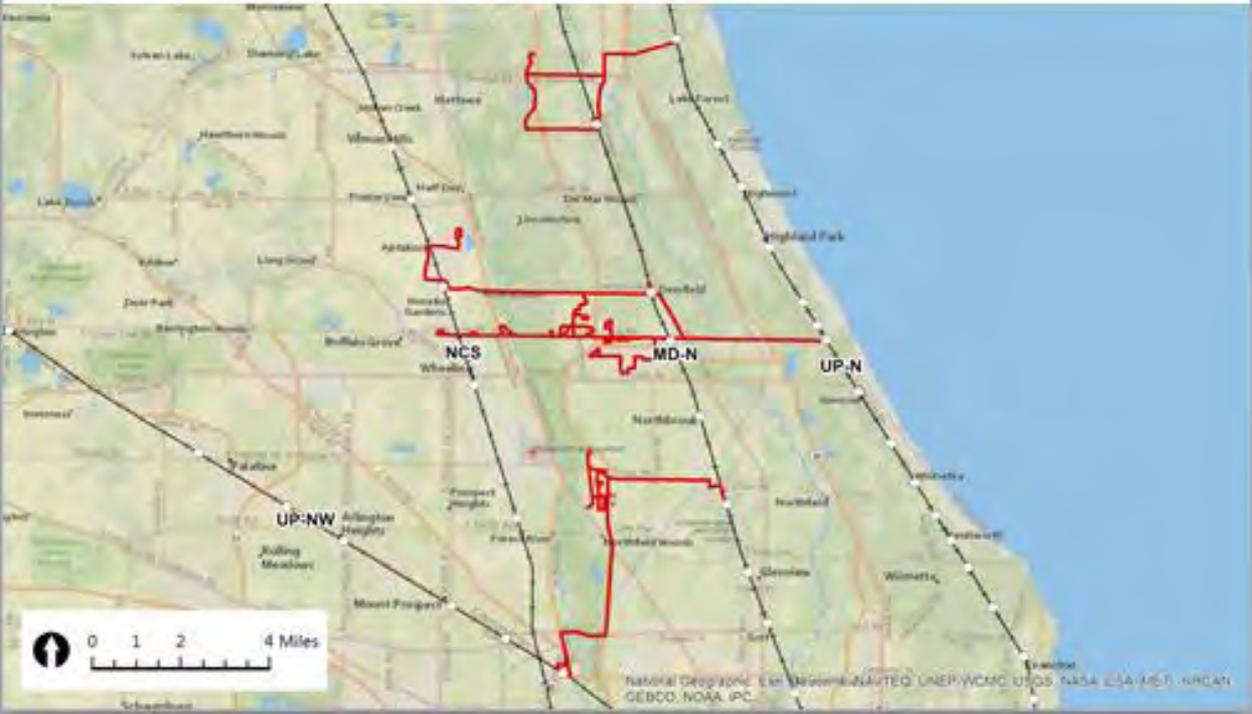


Responsive

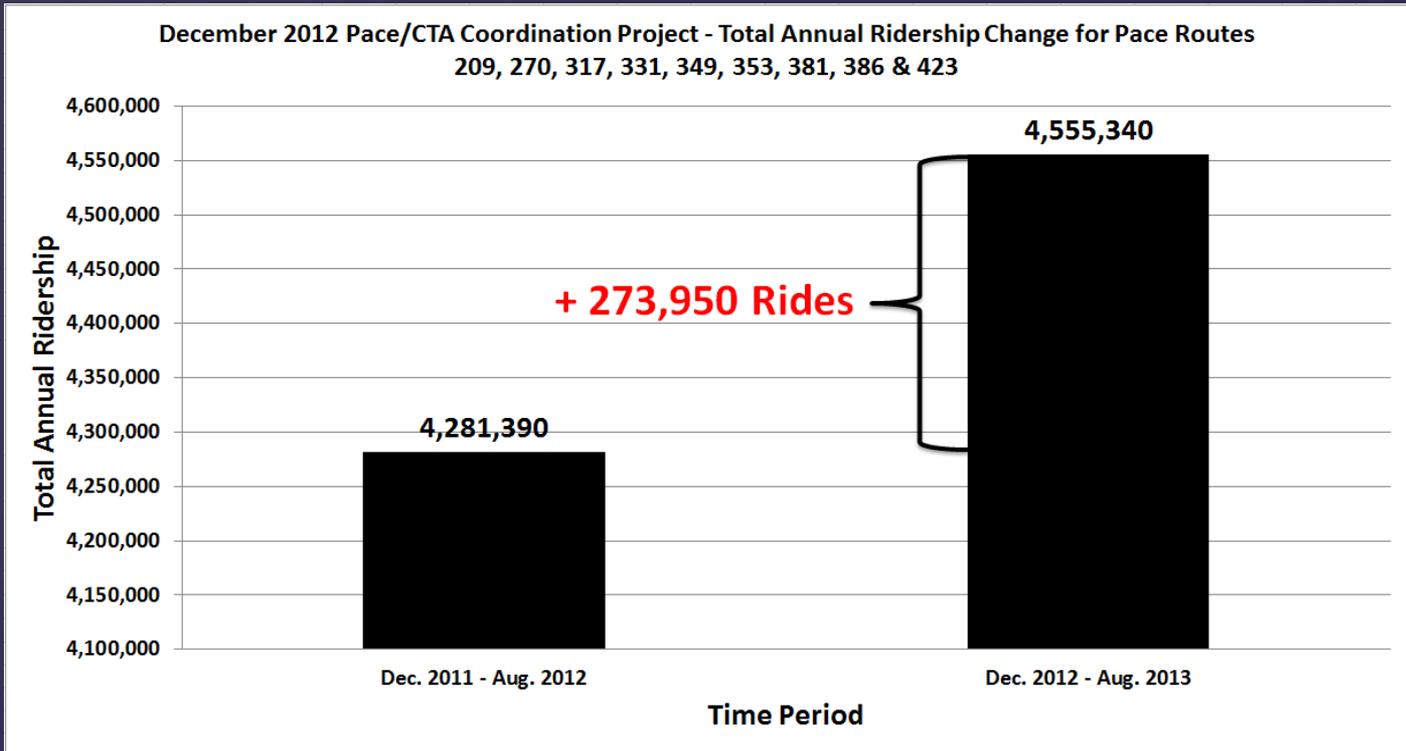
In light of the dynamic nature of regional development, Pace continually reviews and responds to opportunities and comments raised by our stakeholders, from individual passengers and operators to businesses, communities, partner agencies and other groups. This interaction results in a wide range of service adjustments, such as:

- Trip time adjustments to improve a connection with other bus routes or train lines, or to match workplace or school start and end times
- Routing changes to extend service to new or relocating businesses or institutions
- New trips added to address overcrowding issues or improve service frequency or span
- Schedule adjustments to achieve better on-time performance

Link from Metra to Workplaces



Route Planning



Route Planning

Forest Park

North Terminal: 19 5/8 x 49 1/2 x 1/4

 **318**
West North Avenue
320
Madison Street

 **301**
Roosevelt Road
308
Medical Center

 **303**
Forest Park - Rosemont
310
Madison Street - Hillside
17/317
Westchester

South Terminal

 **305**
Cicero - River Forest
747
DuPage Connection
757
Northwest Connection

 Board here
305 747 757
Board in North Terminal
17 301 308 317
303 310 318 320

 To trains  To trains

24 3/4 x 14 3/4 x 1/4

Out to street, buses and parking

	17 Westchester 301 Roosevelt Road 303 Forest Park - Rosemont 308 Medical Center	310 Madison Street - Hillside 317 Westchester 318 West North Avenue 320 Madison Street	305 Cicero - River Forest 747 DuPage Connection 757 Northwest Connection	
---	--	---	---	--

 North parking lot |  South parking lot  Kiss & Ride 



bus stop

90 Harlem



North to Harlem/Higgins Blue Line Station
Weekdays, early morning thru late evening
Weekends, early morning thru mid-evening
Every 12 to 15 minutes at most times

307 Harlem



North to Grand/Thatcher, via Harlem
and Grand
Daily, early morning thru mid-evening

318 North



West to Wolf/North, via Harlem
and North Avenue
Monday thru Saturday, early morning
thru late evening
Sunday/holidays, early morning and all evening

TP 4773

www.transitchicago.com

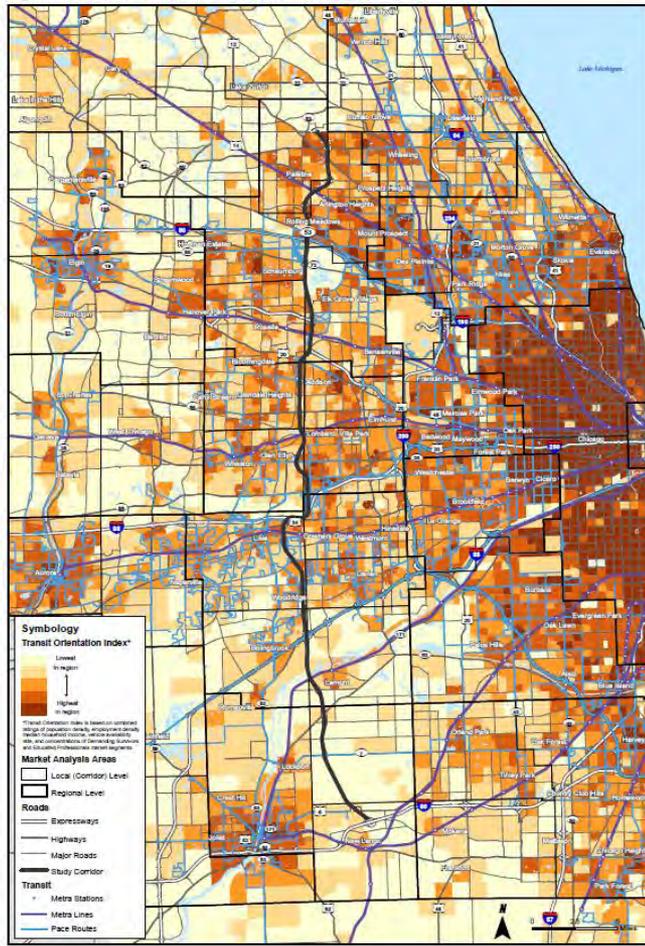
836-7000



Tuesday, October 01, 2013

Route Planning

Figure 41 Transit Orientation Index with Pace Network



NelsonNygaard

Figure 2: Wheeling Metra – Schaumburg NWTC Alignment



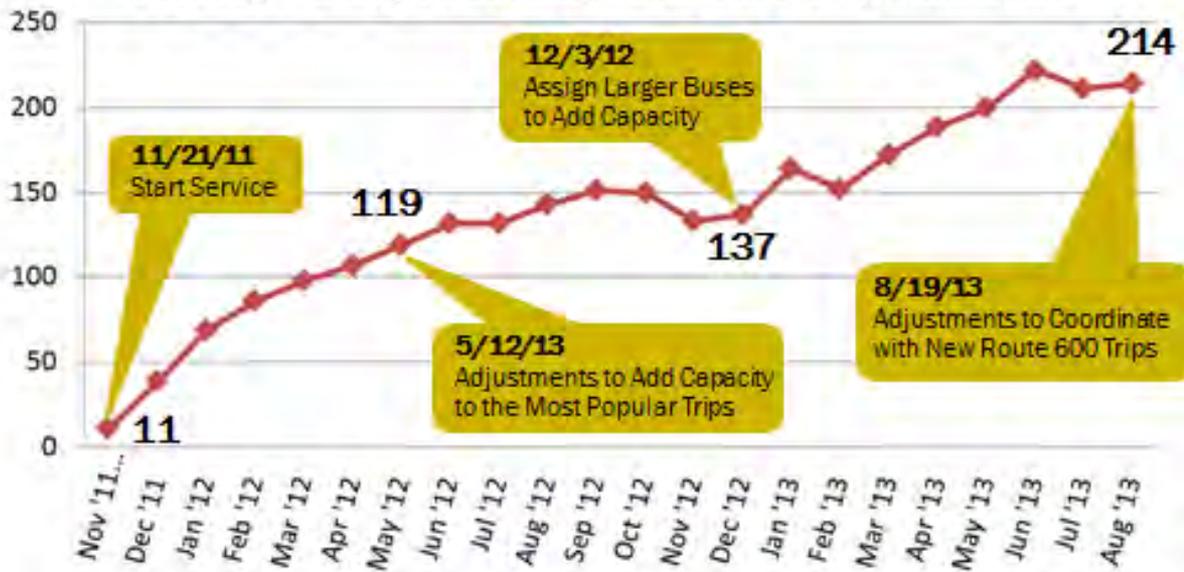
Route Planning

Route 604 Service Plan



Route 895 Ridership Growth

Route 895 95th St-Rosemont-Schaumburg
Average Daily Ridership and Service Milestones



Pace Suburban Bus

Ridecheck Plus

Ridership by Route and Trip

Route 352

352 - Halsted - South

Serial Number	Time	Trip Block	Trip #	Board	Alight	Max Load	Rev Miles	Rev Hours	Board Per Mi	Board Per Hr	Pass Miles	Avg Trip Len (Mi)	Ramp Event	Gross Trips
4,692,665	3:05p	1046518	86	70	52	53	16.9	1.2	4.15	59.8	646.9	9.2		1
4,692,738	3:15p	1046550	88	70	48	56	8.7	0.6	8.09	120.7	389.4	5.6		1
4,692,666	3:35p	1046515	92	64	60	36	16.9	1.2	3.77	54.3	406.1	6.4		2
4,692,740	3:45p	1046572	94	45	42	20	9.7	0.6	5.17	77.2	206.4	4.6		1

Pace Suburban Bus

Ridecheck Plus

Ridership by Route and Stop

Route 352

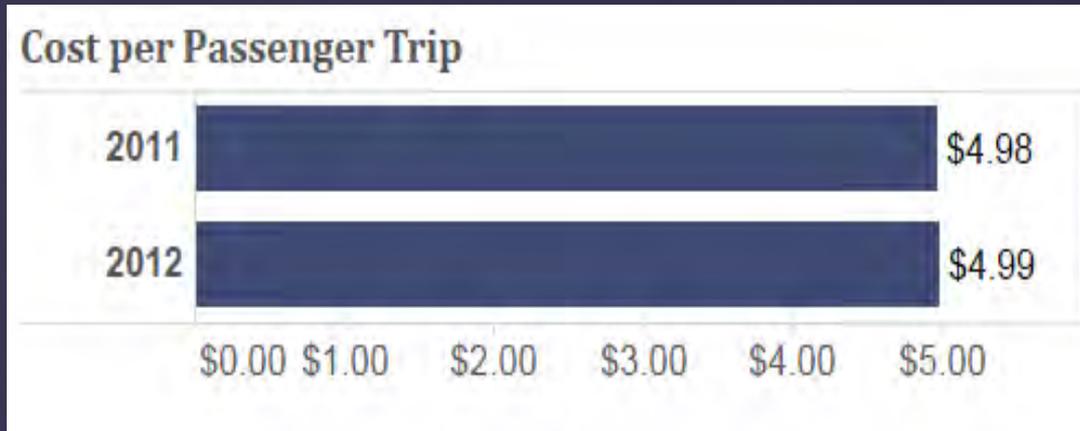
352 - Halsted - South

Sort	Stop	Dir	Stop ID	Trips	All Day				AM Peak				Midday				PM Peak				Ramp Event	Bicycle Event	Gross Trips					
					Board	Alight	Load		Trips	Board	Alight	Load		Trips	Board	Alight	Load		Trips	Board				Alight	Load			
							Avg	Max	Total			Avg	Max				Avg	Max							Avg	Max		
10	95th St CTA Station	S	35240005	69	1,379		22	48	1,517	10	172		19	29	20	382		21	28	15	229		17	32			130	
20	95th/Eggleston	S	35240020	69	13	11	22	49	1,519	10			1	19	29	20	7	4	21	28	15	1	3	17	30			130
30	95th/Halsted	S	35240040	69	201	21	25	53	1,699	10	23	1	22	31	20	64	10	24	33	15	58	3	21	33			130	
40	Halsted/99th	S	35240060	69	21	33	24	51	1,687	10	3	3	22	31	20	12	11	24	36	15	4	4	21	33			130	
50	Halsted/103rd	S	35240080	69	82	39	25	52	1,730	10	9	3	22	32	20	32	10	25	37	15	21	12	21	40			130	
60	Halsted/107th	S	35240100	69	42	54	25	52	1,718	10	7	2	23	33	20	15	15	25	37	15	9	12	21	39			130	
70	Halsted/111th	S	35240120	69	119	64	26	51	1,773	10	20	11	24	31	20	40	12	27	40	15	39	15	23	44			130	
80	Halsted/115th	S	35240140	69	96	78	26	51	1,791	10	19	8	25	32	20	28	29	27	39	15	32	13	24	45			130	
90	Halsted/119th	S	35240162	69	134	49	27	52	1,876	10	27	7	27	37	20	52	19	28	41	15	29	11	25	52			130	
100	Halsted/West Pullman Metra Station	S	35240170	69	7	15	27	52	1,868	10			27	37	20	4	5	28	41	15	2	2	25	52			130	



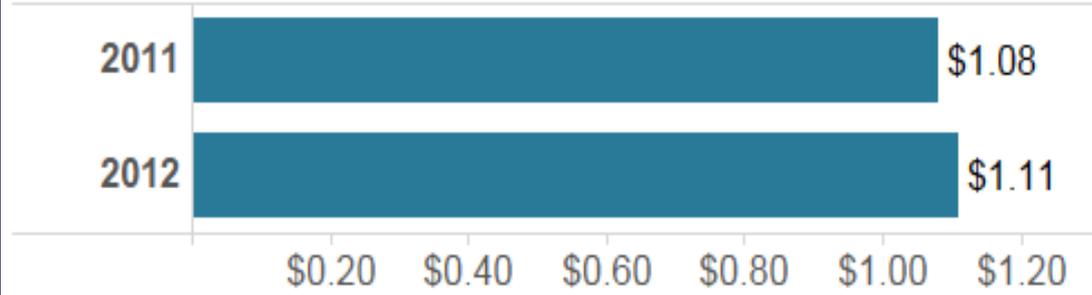
Pace begins its transition away from diesel to a more sustainable fuel source, natural gas. The Markham facility will be converted to natural gas during 2014 and the new northwest facility will be constructed as a natural gas facility. The next order of buses will be powered by natural gas. This greener fuel source is also a more economical option for Pace to choose moving forward.

Cost per Trip & Veh Mile



Revenue per Trip & Veh Mile

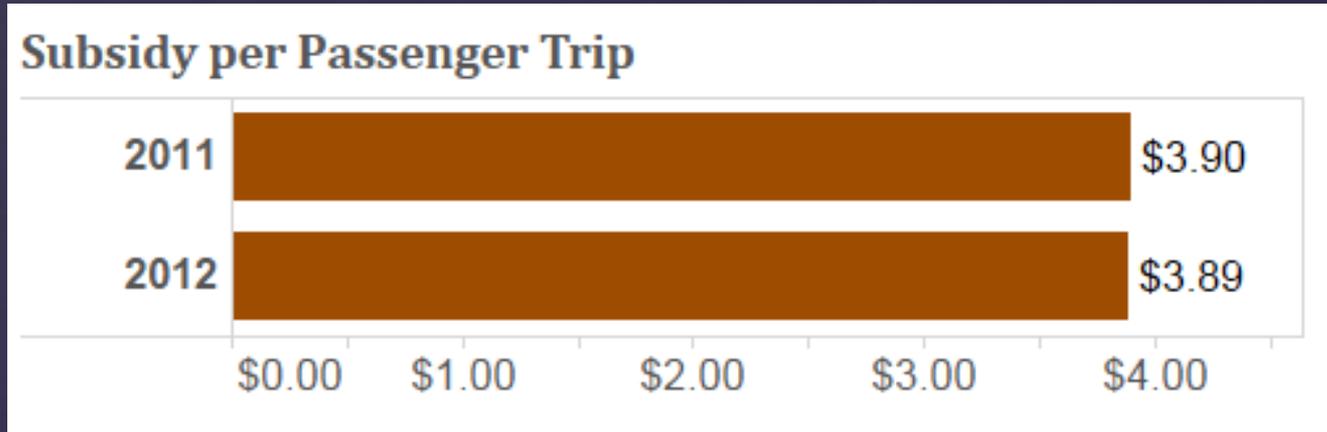
Fare Revenue per Passenger Trip



Fare Revenue per Vehicle Mile



Subsidy per Trip/Passenger



During 2012 Pace received \$142 million from the RTA or roughly \$25 per capita.



Pace Planning/Operations Performance Measures Matrix

Pace evaluates performance measures and adjusts service based on:

- External requests (communities, businesses and customers)
- Service performance indicators
- Systematic service reviews

Planning

- Service is added, reduced or discontinued.
- Service is restructured or adjusted.
- No service changes are made.

Depending on need and urgency, service adjustments are typically made 3 - 4 times per year.

Operations

Measures are taken to ensure the continued safe, reliable and efficient operation of service.

Pace staff participates in continuous training throughout the year.

Good Afternoon. I am Michael Bolton, Pace Deputy Executive Director for Strategic Services. I thank the working group for the invitation to testify today about how we assess our system performance.

Pace is responsible for transit planning in a 3500 square mile area of Northeastern Illinois which includes the following Counties: Cook, DuPage, Kane, Lake, McHenry and Will. We have the largest service area of any transit system in the country that does not serve a central business district. As such, there are disparate demographics within and between the counties presenting challenges for both residential and employment land uses in their respective counties.

We have seen ridership gains every year since 2009, in fact our ridership for August of this year was the highest August ridership in the history of the organization. We are able to accomplish this because we operate a family of services. Besides our fixed route buses – we have one of the largest vanpool programs in the nation - with 800 vans on the road every day – we have over 90 agreements with local municipalities for various types of service, such as the Niles Free Bus, Rosemont Shuttles, McRide in McHenry County, Ride in Kane and Ride DuPage. We launched our highly successful Bus-On-Shoulders demonstration project on I-55 in November of 2011. Routes 755 & 855 which serve that corridor have seen ridership gains of 400% and 70% respectively, and schedule adherence has improved from 68% to over 90%.

Pace operates service based upon the demand in different parts of the region. The frequency of our bus operations in densely populated areas is different than the service we provide in less populated areas.

For example, Route 270 operates weekday service from 5a.m. to 11p.m. and runs every 10 minutes during peak hours serving passengers along the Milwaukee Avenue corridor from Jefferson Park to Glenview. This type of frequent fixed-route service is not right-sized for areas like McHenry County where demand response services, such as dial-a-ride, more cost effectively meet lower trip demand. Approximately 72% of our suburban service area has access to some form of Pace service.

New technologies help us to improve our on-time performance. We are now able to track the routes where we lose time and then make adjustments. We measure our on-time performance at more than 1500 time points throughout the region every day using a GPS-based system. At Pace, a bus is considered on time if it reaches a time point not earlier than 1 minute ahead of its scheduled time and not more than 5 minutes later than scheduled, which is an industry standard. Based on these parameters, we are in the 70-80% range for on-time performance throughout the Pace system. Our planning and scheduling departments frequently review on-time performance data, and over the past two years have optimized 22 schedules accordingly.

Overall, our riders are satisfied with the service that we provide. They also know that we respond to things that they tell us are important to them in our surveys. We evaluate the survey data and implement the responses in planning both service routes and capital expenditures. In 2011, Pace conducted a Customer Satisfaction Survey of its fixed-route service to measure riders' use, perceptions and satisfaction levels. A

total of 9,220 questionnaires were successfully completed. Major findings include:

- An overall satisfaction among riders of 90%.
- 89% are likely or very likely to recommend Pace to others.
- 89% are likely or very likely to continue riding Pace one year from the date they completed the survey.

A survey of Pace ADA Paratransit riders yielded similar results with 90% of customers stating that they were satisfied to very satisfied with Pace paratransit services.

Additionally, our riders believe that Pace is a very secure system, with 91% of respondents stating that they feel satisfied to very satisfied with regards to their personal safety while riding Pace. 96% of ADA passengers stated that they were satisfied to very satisfied with the safety of Pace drivers.

Since approximately 40% of Pace riders transfer to the CTA and Metra, it is imperative to mention the importance of service integration with our sister agencies. For example, we have quarterly meetings with the CTA to discuss planning and service related matters. In December 2012, Pace, in conjunction with the CTA, restructured routes in a number of shared corridors in order to accommodate the needs of both CTA and Pace passengers while saving taxpayer dollars by reducing service duplication. As a result of the December service changes, Pace has seen an increase of 273,950 rides on the routes that operate in these corridors.

Another example of our collaborative efforts is illustrated by the coordination of service we arranged in preparation for the CTA's Red Line reconstruction project. Pace implemented two temporary weekday express bus routes for customers commuting between the south suburbs and the City of Chicago. As part of this project, Pace also adjusted service on Route 353, so that customers from Homewood, Riverdale, and Blue Island could make a new connection with the CTA's Jeffery Jump for services to downtown Chicago.

Other coordinated services include a number of commuter routes that shuttle passengers to and from Metra stations throughout the region serving both traditional and reverse commuters.

In addition to coordinating service related issues, we also work with our sister agencies to improve customer travel information. For example, there are shared Pace/CTA bus stop signs in corridors where both agencies provide service. Also, Pace route information is displayed on signs at CTA terminals.

One of the biggest areas of concern when considering building a world class transit system is the type of access riders have to transit. We spend a lot of time looking at this issue, including access to the 1.1 million jobs or about 70% of all the region's jobs located in suburban Chicago. Additionally, Pace is a critical service for low-income suburbanites. Approximately 26% of our passengers have household incomes below the federal poverty threshold of \$15,510 for a two person household, and more than 61% of our passengers have household incomes under twice below the poverty threshold.

When looking at how well the current system performs to meet the needs of the community we have to examine and take into account how we deal with the prioritization of system and service expansions in each service area.

Pace takes a proactive and responsive approach when prioritizing system and service expansions.

Proactive

Over the past 10 years, Pace has developed a systematic approach for evaluating and restructuring service to keep up with changing travel patterns in the region. As part of this effort, our staff actively works with our stakeholder communities to serve the changing landscape while preserving strong transit markets throughout the region. This work reflects Pace's Vision 2020 Strategic Plan. This strategic plan aims to provide a high level of service on major regional thoroughfares while operating local service to provide for the daily travel needs of our constituents. Major projects furthering the goals set forth in the long-range strategic plan include:

- Elgin Restructuring - implemented August 2003
- North Shore Initiative - implemented March 2005
- Fox Valley DuPage Initiative - implemented October 2005
- South Cook County Will County Restructuring - implemented November 2008, March, 2009 and June 2009

- West Cook Restructuring - implemented June 2011 and December 2011
- McHenry County Restructuring - implemented December 2012
- I-90 Market Expansion Project (collaboration with Illinois Tollway) - first phase implemented August 2013
- Lake County Restructuring - first phase to be implemented November 2013
- Northwest Cook - implementation TBD

Responsive

In light of the dynamic nature of regional development, Pace continually reviews and responds to opportunities and comments raised by our stakeholders: from individual passengers and operators to businesses, communities, partner agencies and other stakeholders. This interaction results in a wide range of service adjustments, such as:

- Trip time adjustments to improve a connection with other bus routes or train lines, or to match workplace or school start and end times
- Routing changes to extend service to new or relocating businesses or institutions
- New trips added to address overcrowding issues or improve service frequency or span and
- Schedule adjustments to achieve better on-time performance

Route planning at Pace includes a variety of measurements given our limited resources and sprawling service area. Staff continually evaluates available capacity utilization, patterns of traditional, reverse and suburb to suburb commuters, and land use changes to determine if we are meeting the needs of the communities we serve. Pace has a number of tools, such as Ridecheck, which allows Pace to make informed decisions on when and where to adjust service. Depending on the need and urgency, Pace typically makes service changes 3 to 4 times per year.

An example of this is our shuttle bug program. This service is tailored provide the “last mile” connection for reverse commuters traveling via Metra into the suburbs for work. Only 4.1% of jobs in suburban Chicago are within $\frac{1}{4}$ mile walking distance of a Metra station. On average, suburban jobs are 1.9 miles from the nearest Metra station. Therefore, a “last mile” connection is necessary to enhance the accessibility of Metra stations so commuters can access more destinations. Pace has 12 routes serving 7 Metra stations that specifically address this “last mile” problem in the north and northwest suburbs. These routes make up our Shuttle Bug program. Pace staff continually coordinates with the local transit management association as well as our sister agencies to change and implement new service. The primary connection in the past 16 years has been with Metra service, but this summer we implemented a new route connecting Allstate employees to the CTA yellow line as well.

An example of suburb to suburb service is Route 895 which connects south suburban residents with job centers in northwest Cook County. The route began in November, 2011 funded by a Federal Job Access Reverse Commute Grant. Ridership has improved to over 200 passengers per day.

As we move into the future staff has been evaluating current and future trip patterns to develop new service. In 2011, Pace completed the I-355 market study that examined trip patterns within a 5 mile radius of the I-355/290/IL53 corridor. The study specifically examined data from CMAP's travel tracker survey to determine trip lengths and destination areas. Other elements were examined such as car ownership, density, and pedestrian access to determine if transit would be successful. The proposed Route 604, which will provide service between Wheeling and Schaumburg starting in 2016, was a direct result of this work.

Sustainability

Pace begins its transition away from diesel to a more sustainable fuel source, natural gas, or CNG. The Markham facility, which covers the south suburbs, will be converted to natural gas during 2014 and the new northwest facility will be constructed as a natural gas facility. The next order of buses will be powered by natural gas. This greener fuel source is also a more economical option for Pace. A conservative estimate is that this first batch of CNG buses – about 1/7th of our fleet – will save us \$1 to \$1.5 million annually in fuel costs. If we are able to convert the entire fleet to CNG in the future we could be looking at savings of \$6 to

\$10 million dollars annually. The cost of CNG is less volatile than diesel and it will also reduce our dependence on foreign oil

How Efficiently and Effectively the System Operates

Pace uses several measures for tracking the efficiency of its system vs. similar operations in the United States.

According to the most recent (2010) peer comparisons published in Pace's budget, Pace has an operating cost of \$5.13 per passenger trip, which puts it slightly below the average (\$5.26) of its peers, but actually shows a very favorable ratio of operating cost per revenue mile (\$7.49 vs. a peer average of \$11.36, 20% less) as well as cost per passenger mile (\$0.79 vs. a peer average of \$1.14, 30% less). These commonly-used industry measures suggest that Pace is generally more efficient than similar organizations in transporting its passengers.

These numbers have improved over the past few years (no peer comparison available, though) to a cost of \$4.90 per passenger boarding (2011) and \$4.96 (2012).

With many different fare options and opportunities, Pace's 2012 average fare revenue per passenger boarding is \$1.11 up slightly from the \$1.07 of 2011. The average revenue per vehicle mile operated remained unchanged at \$1.18.

Given the changes in revenue per passenger, and the stability of cost per passenger, the net cost (or subsidy) per passenger actually went down slightly from 2011 to 2012, from \$3.90 to \$3.89 per passenger.

Pace received a total of \$142 million dollars for non-ADA service through the RTA in 2012, an average of roughly \$25 per capita. The peer agencies that RTA used for comparison all have per capita subsidies between two and seven times that of Pace.

As we have shown today, Pace serves a broad and diverse service area. Our family of services offers residents in northeastern Illinois a variety of service options that meet their travel needs while maximizing the limited resources that we have in order to ensure the continued safe, efficient and reliable operation of service.

I would like to thank the working group members for the opportunity to testify on behalf of Pace today and I would be happy to answer any questions.