

FTA RESEARCH

FEDERAL TRANSIT ADMINISTRATION

LYMMO BRT: 15 Years Later

JUNE 2013

FTA Report No. 0042
Federal Transit Administration

PREPARED BY
Brian Pessaro, AICP
Martin Catalá

National Bus Rapid Transit Institute
Center for Urban Transportation Research
University of South Florida



COVER PHOTO

Courtesy of LYNX

DISCLAIMER

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof. The United States Government does not endorse products of manufacturers. Trade or manufacturers' names appear herein solely because they are considered essential to the objective of this report.



LYMMO BRT: 15 Years Later

JUNE 2013

FTA Report No. 0042

PREPARED BY

Brian Pessaro, AICP

Martin Catalá

National Bus Rapid Transit Institute
Center for Urban Transportation Research
University of South Florida

SPONSORED BY

Federal Transit Administration
Office of Research, Demonstration and Innovation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

AVAILABLE ONLINE

<http://www.fta.dot.gov/research>

Metric Conversion Table

SYMBOL	WHEN YOU KNOW	MULTIPLY BY	TO FIND	SYMBOL
LENGTH				
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
yd	yards	0.914	meters	m
mi	miles	1.61	kilometers	km
VOLUME				
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liters	L
ft³	cubic feet	0.028	cubic meters	m ³
yd³	cubic yards	0.765	cubic meters	m ³
NOTE: volumes greater than 1000 L shall be shown in m ³				
MASS				
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams (or "metric ton")	Mg (or "t")
TEMPERATURE (exact degrees)				
°F	Fahrenheit	5 (F-32)/9 or (F-32)/1.8	Celsius	°C

REPORT DOCUMENTATION PAGE		Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.			
1. AGENCY USE ONLY	2. REPORT DATE June 2013	3. REPORT TYPE AND DATES COVERED August 1997 - December 2012	
4. TITLE AND SUBTITLE Lymmo BRT: 15 Years Later		5. FUNDING NUMBERS FL-26-7111	
6. AUTHOR(S) Brian Pessaro, AICP, and Martin Catalá			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) National Bus Rapid Transit Institute Center for Urban Transportation Research University of South Florida 4202 E. Fowler Avenue, CUT100, Tampa, FL 33620		8. PERFORMING ORGANIZATION REPORT NUMBER FTA Report No. 0042	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Department of Transportation Federal Transit Administration East Building 1200 New Jersey Avenue, SE Washington, DC 20590		10. SPONSORING/MONITORING AGENCY REPORT NUMBER FTA Report No. 0042	
11. SUPPLEMENTARY NOTES http://www.fta.dot.gov/research			
12A. DISTRIBUTION/AVAILABILITY STATEMENT Available from: National Technical Information Service (NTIS), Springfield, VA 22161 Phone 703.605.6000, Fax 703.605.6900, email [orders@ntis.gov]		12B. DISTRIBUTION CODE TRI-20	
13. ABSTRACT This report is a follow-up of the initial evaluation of LYMMO conducted in 2003. Average daily ridership on LYMMO has fallen three years in a row since 2010, and 2012 ridership was lower than the opening year ridership. The drop in ridership is partially attributable to a 15 percent loss in jobs located within ¼ mile of LYMMO between 2002 and 2010. LYMMO, nevertheless, continues to rank as one of LYNX Transit's top five routes. It has also outperformed several rail streetcar systems in the U.S. in annual passenger trips and cost per trip. LYMMO continues to be rated highly by passengers, scoring a 4.5 out of 5 in overall customer satisfaction. Fifteen percent of downtown Orlando employers said in a survey that LYMMO was a factor in their decision to remain downtown. A majority agreed that LYMMO contributed to the economic development of downtown, made downtown a more attractive place to live and work, and improved mobility in downtown.			
14. SUBJECT TERMS Bus rapid transit, downtown circulator, streetcar, LYMMO, LYNX		15. NUMBER OF PAGES 43	
16. PRICE CODE			
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT None

TABLE OF CONTENTS

1	Executive Summary
3	Section 1: Background
5	Section 2: Operational Expenses
6	Section 3: Ridership
9	Section 4: Boardings and Alightings
11	Section 5: Employment Data
15	Section 6: Rider Survey
20	Section 7: Employer Survey
24	Section 8: Future Plans
26	Appendix A: LYMMO Ridership Data, August 1997–December 2012
31	Appendix B: LYMMO Boarding and Alighting Data, 2003 and 2012
32	Appendix C: LYMMO Rider Survey, 2012
33	Appendix D: Employer Survey, 2012

LIST OF FIGURES

4	Figure 1-1:	LYMMO Route
6	Figure 3-1:	LYMMO Average Weekday Riders, 1997 to 2012
7	Figure 3-2:	Percent Change in Annual Riders LYMMO vs. LYNX
10	Figure 4-1:	LYMMO Boardings and Alightings
12	Figure 5-1:	Jobs within ¼ Mile of LYMMO, 2002
13	Figure 5-2:	Jobs within ¼ Mile of LYMMO, 2010
17	Figure 6-1:	35-Foot Gillig Hybrid Bus
19	Figure 6-2:	LYNX Central Station
20	Figure 7-1:	LYMMO Employer Survey Boundary
24	Figure 8-1:	New LYMMO Corridors

LIST OF TABLES

5	Table 2-1:	LYMMO Operational Costs
5	Table 2-2:	Operational Cost Comparison, 2011
6	Table 3-1:	LYMMO Average Weekday Riders, 1997–2012
8	Table 3-2:	LYNX Fixed-Route Performance Statistics
8	Table 3-3:	Comparison of LYMMO to Rail Streetcar Systems
11	Table 5-1:	Industries within ¼ Mile of LYMMO Route
14	Table 5-2:	Industries within Orlando Urbanized Area
15	Table 6-1:	Primary Trip Purpose
16	Table 6-2:	Frequency of Use
16	Table 6-3:	Service Ratings
17	Table 6-4:	Riders' Favorite Features of LYMMO, 2001 Survey
17	Table 6-5:	Riders' Favorite Features of LYMMO, 2012 Survey
18	Table 6-6:	LYMMO has reduced congestion in downtown Orlando
18	Table 6-7:	LYMMO has made downtown Orlando a more attractive place to live/work
18	Table 6-8:	Do you use any other LYNX services? 2001 Survey
19	Table 6-9:	Do you use any other LYNX services? 2012 Survey
21	Table 7-1:	Did your company locate in downtown before or after LYMMO began?
21	Table 7-2:	Was LYMMO a factor in your company's decision to locate and remain downtown?
22	Table 7-3:	Employer Perceptions of LYMMO's Impact
22	Table 7-4:	How many employees are at this location?
23	Table 7-5:	Which best describes your business?

ACKNOWLEDGMENTS

The authors would like to thank Laura Minns and Ola Adelekan at LYNX Transit and Claudia Korobkoff at the City of Orlando for their valuable help in the development of this report.

ABSTRACT

LYMMO bus rapid transit (BRT) service began in August 1997 in Orlando, Florida, as one of the first bus-based premium downtown circulators in the United States. This report is a follow-up of the initial evaluation conducted in 2003. Average daily ridership on LYMMO has fallen three years in a row since 2010, and 2012 ridership was lower than the opening year ridership. The drop in ridership is partially attributable to a 15 percent loss in jobs located within a ¼ mile of LYMMO between 2002 and 2010. LYMMO, nevertheless, continues to rank as one of LYNX Transit's top five routes. It has also outperformed several rail streetcar systems in the U.S. in annual passenger trips and cost per trip. LYMMO continues to be rated highly by passengers, scoring a 4.5 out of 5 in overall customer satisfaction. Fifteen percent of downtown Orlando employers said in a survey that LYMMO was a factor in their decision to remain downtown. A majority agreed that LYMMO contributed to the economic development of downtown, made downtown a more attractive place to live and work, and improved mobility in downtown.

EXECUTIVE SUMMARY

LYMMO bus rapid transit service began in August 1997 in Orlando, Florida, as one of the first bus-based premium downtown circulators in the U.S. Its construction was funded, in part, by the Federal Transit Administration's (FTA's) Bus Rapid Transit (BRT) Demonstration Program. It is operated by LYNX Transit. The National Bus Rapid Transit Institute at the University of South Florida's Center for Urban Transportation Research evaluated LYMMO in 2003. This 2013 report revisits some of the measures from the 2003 report to see how LYMMO is faring today.

At its opening in 1997, LYMMO's average weekday ridership exceeded the projections. On average, it carried 3,091 riders each weekday in 1997. The projection was 2,680 riders. However, the ridership plateaued by 1998 and remained fairly constant until 2010 when it began to drop. Average weekday ridership fell in 2010, 2011, and 2012. Average weekday ridership in 2012 was 3,017 riders, which is lower than the first year of operation. The ridership trend on LYMMO does not match the trend on the rest of LYNX's service, on which annual boardings have been increasing steadily since 1997. Nevertheless, LYMMO is still one of the LYNX's highest ridership routes, ranking 5th out of 55 fixed routes. LYMMO also outperforms several rail streetcar systems in the U.S. that are of similar length in terms of both annual passengers and cost per passenger trip (see Table 3-3).

Several things may have contributed to the drop in ridership that began in 2010. In 2010, the Amway Arena, which housed the Orlando Magic NBA basketball team, closed, thereby eliminating riders for special events. Also in 2010, the Orange County Courthouse stopped validating parking for jurors using the CentroPlex parking garage, which is also the terminus for LYMMO. Jurors at that time comprised nine percent of riders; in the most recent survey, they comprise only one percent. The economic recession has likely had a negative impact on LYMMO ridership as well. From 2002 to 2010, there was an 18 percent drop in the total number of jobs within the 1/4-mile buffer of the LYMMO route. This contrasts with a 5 percent increase in jobs in the Orlando Urbanized Area as a whole. The drop in ridership since 2010 has led to higher operational and maintenance (O&M) costs per passenger trip. Although the annual O&M cost increased only two percent between 1998 and 2012, the O&M cost per passenger trip increased 30 percent.

The location distribution of boardings and alightings has shifted since the 2003 report. In 2003, the boardings and alightings were fairly evenly distributed along the route, and they generally dropped off in number once the bus was south of E. Central Boulevard. In 2012, LYNX Central Station and the Orange County Public Library were the top two boarding and alighting locations, accounting respectively for 27 and 24 percent of all boardings and alightings.

In the latest 2012 survey of LYMMO riders, a smaller percentage use LYMMO to get to work compared to the previous (2001) survey. However, more riders now are using it for lunch, errands, and shopping. The percentage of riders that use LYMMO to get to/from jury duty fell from nine percent to one percent. In both the 2001 and 2012 surveys, 54 percent said they use LYMMO at least twice a day. The percentage of riders who use it four or more times a day has increased from 13 to 21 percent. Overall rider satisfaction remains high. On a scale of 1 to 5, the mean score for rider satisfaction was 4.5 (satisfied). More than 76 percent of riders think LYMMO has reduced congestion in downtown Orlando, and nearly 80 percent think LYMMO has made downtown Orlando a more attractive place to live and work.

In a mailed survey of employers located near LYMMO, only 34 out of 711 responded; the response rate (5%) is too small to be statistically conclusive. Therefore, the responses are provided only for illustrative purposes. Three of the 34 employers (9%) said LYMMO was a factor in their decision to locate downtown. Five of the employers (15%) said LYMMO is a factor in their decision to remain downtown. A total of 53 percent agreed or strongly agreed with the survey statement that LYMMO has contributed to the economic development of downtown, and 59 percent agreed or strongly agreed that LYMMO made downtown a more attractive place to live and work. A wider margin (73%) agreed or strongly agreed with the statement that LYMMO has improved mobility in downtown.

LYNX Transit is planning to expand LYMMO into several new corridors, with two new LYMMO lines expected to open in Spring 2014. All of the new LYMMO lines will connect with the existing LYMMO line and the SunRail commuter rail line, which is scheduled to open in early 2014. The new LYMMO lines will tap new ridership by serving new destinations such as the planned Creative Village, the Amway Center, Florida A&M College of Law, the State of Florida Office Complex, the U.S. Courthouse, Florida Hospital, and the Orlando Regional Medical Center. Given the fact that the ridership on LYMMO plateaued soon after opening, expanding LYMMO into new corridors to tap new riders appears to be timely.

Background

LYMMO bus rapid transit (BRT) service began in August 1997 as one of the first bus-based premium downtown circulators in the U.S. The transit operator is LYNX Transit. Prior to LYMMO, the Orlando Central Business District was served by two other bus circulators. The Meter Eater was introduced in 1983 and charged a fare of \$0.25. It was replaced in 1984 by the FreeBee, which was free to riders; its operations were funded through city parking revenues. In 1989, the City of Orlando purchased a vintage 1907 streetcar and renovated it in anticipation of developing a streetcar system. The Orlando Streetcar, dubbed OSCAR for short, never materialized as a system because the initial cost estimates skyrocketed from \$12 million to \$50 million.¹ Consequently, the City of Orlando and LYNX switched plans from rail to a bus-based alternative, and what resulted was LYMMO. When LYMMO opened in 1997, it was characterized by many features that distinguished it from the rest of LYNX's buses—a separate lane with extensive signage and pavement painting, specialized paving and hardscape, extensive landscaping, specialized paint scheme and shelters, a separate logo for signs and stops, free service, and very short headways.

LYMMO operates in a dedicated bus lane on a 2½-mile loop. A map of the route is shown in Figure I-1. There are 13 stations and 8 signed stops, and service is every 5 minutes throughout most of the day and every 10 minutes in the evenings. LYMMO operates 185 trips (loops) Monday–Thursday, 200 trips Friday, 85 trips Saturday, and 65 trips Sunday, with service hours of 6:00 AM to 10:00 PM Monday–Thursday, 6:00 AM to 12:00 midnight Friday, 10:00 AM to 12:00 midnight Saturday, and 10:00 AM to 10:00 PM Sunday. The LYMMO fleet consists of nine 35-foot hybrid electric Gillig buses.

¹ “Oscar, The Electric Streetcar that came from Brazil,” Orlando Sentinel, August 17, 1997, http://articles.orlandosentinel.com/1997-08-17/news/9708150220_1_streetcar-downtown-orlando-oscar.

Figure 1-1
LYMMO Route



Source: LYNX Transit

SECTION
2

Operational Expenses

Revenue for the operations and maintenance of LYMMO comes from the City of Orlando’s Parking and Enterprise Fund. The operations and maintenance (O&M) costs of LYMMO have remained steady over the years, at about \$1.2 million annually. However, since ridership began falling in 2010, O&M costs per passenger trip have been rising. Although LYMMO’s annual O&M cost has risen PM 2 percent between 1998 (the first full year of operation) and 2012, the cost per passenger trip has risen 30 percent.

Table 2-1
LYMMO Operational Costs

Year	Total O&M Cost	Passenger Trips	O&M Cost per Passenger Trip
1998	\$1,209,867	1,137,938	\$1.06
1999	\$1,237,389	1,135,736	\$1.09
2000	\$1,076,318	1,134,275	\$0.95
2001	\$1,221,121	1,068,781	\$1.14
2002	\$1,113,535	1,055,589	\$1.05
2003	\$1,089,135	1,118,268	\$0.97
2004	\$1,207,562	1,041,093	\$1.16
2005	\$1,366,136	1,184,090	\$1.15
2006	\$1,231,434	1,198,417	\$1.03
2007	\$1,267,583	1,170,189	\$1.08
2008	\$1,181,126	1,152,670	\$1.02
2009	\$1,150,674	1,256,074	\$0.92
2010	\$1,192,358	1,190,029	\$1.00
2011	\$1,283,248	950,941	\$1.35
2012	\$1,233,671	894,340	\$1.38

Nevertheless, the operational expense per passenger trip on LYMMO is low compared to the operational expense per passenger trip system-wide on LYNX. Using the most recent data from the National Transit Database (NTD)(2011), the cost per passenger trip system-wide on LYNX was \$3.12 (see Table 2-2).

Table 2-2
Operational Cost Comparison, 2011

Service	Total O&M Cost	Cost per Trip
LYMMO	\$1,283,248	\$1.35
LYNX System-wide	\$84,196,278	\$3.12

Note: System-wide data does not include demand response or vanpool.

SECTION
3

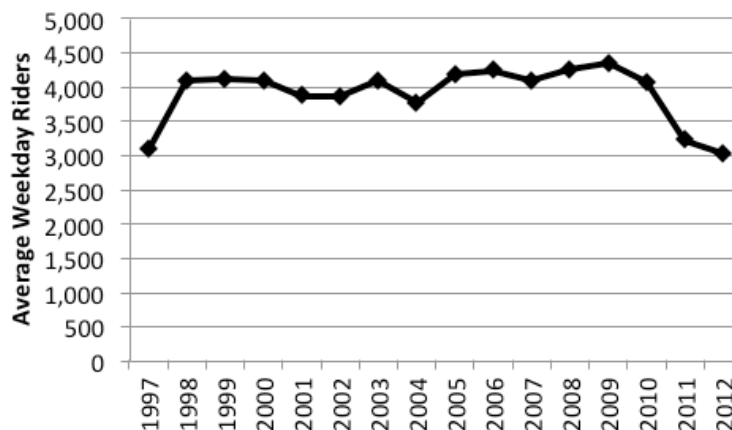
Ridership

At the time of the 2003 evaluation, average weekday ridership on LYMMO was just over 4,000 riders. It peaked in 2009 at just over 4,300 riders. Ridership began to drop in 2010. Average weekday ridership in 2012 was 3,017 riders, which is lower than what it was in 1997. Table 3-1 shows the average weekday ridership from 1997–2012. Figure 3-1 shows the same data in graph form. A more detailed table of the ridership (average weekday, Saturday, Sunday, and monthly totals) can be found in Appendix A.

Table 3-1
LYMMO Average Weekday Riders, 1997–2012

Year	Average Weekday Riders
1997	3,091
1998	4,092
1999	4,112
2000	4,101
2001	3,876
2002	3,869
2003	4,097
2004	3,763
2005	4,192
2006	4,246
2007	4,096
2008	4,261
2009	4,352
2010	4,067
2011	3,228
2012	3,017

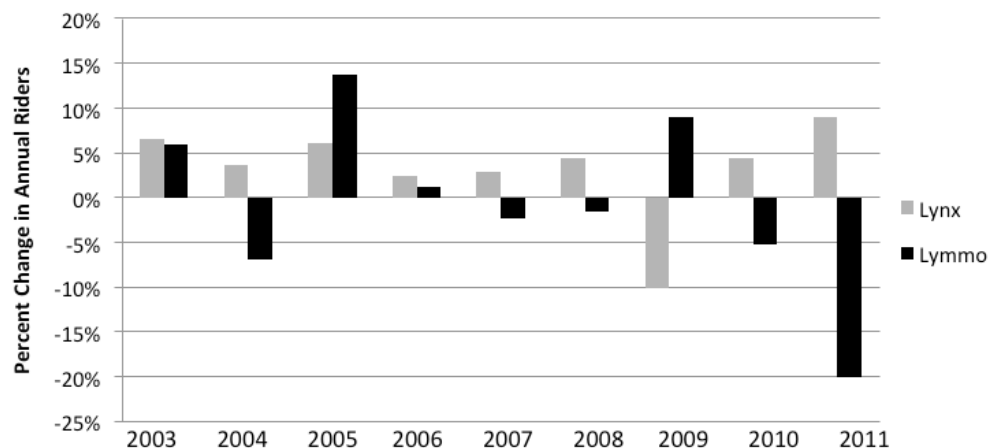
Figure 3-1
LYMMO Average Weekday Riders, 1997–2012



The drop in ridership in 2004 was likely due to service interruptions caused by the construction of LYNX Central Station. In regards to the drop in ridership that has occurred since 2010, there are two probable contributing factors. In 2010, the Orange County Courthouse stopped paying for juror parking at the CentroPlex garage; jurors now park in the garage immediately adjacent to the courthouse. This led to a drop in the number of juror trips on LYMMO. The latest passenger survey data confirms this. In the 2001 survey, nine percent of LYMMO riders said their trip purpose was jury duty; in the 2012 survey, it was 1 percent. The other change that occurred in 2010 was the closing of the Amway Arena, the home of the Orlando Magic NBA basketball team, and the subsequent opening of the Amway Center further to the south and away from LYMMO's route. This resulted in a loss of riders for special events. It should be pointed out that the new East-West LYMMO, which is expected to open in the fall of 2013, will provide service to Amway Center.

LYMMO ridership was compared to system-wide ridership on all of LYNX's directly-operated bus service to see if the trends were the same or different. Figure 3-2 compares the percent change in annual riders since the time of the last evaluation in 2003 to 2011. The figure shows that the trends are not the same. Although LYNX registered percentage gains each year except one (2009), LYMMO registered percentage gains in only four of the nine years. In the 2011, the number of annual riders on LYNX system-wide was up 9 percent and on LYMMO it was down 20 percent.

Figure 3-2
Percent Change in
Annual Riders,
LYMMO vs. LYNX



Despite the drop in ridership, LYMMO still ranks in the top five of LYNX's fixed routes. According to LYNX's 2013 Transit Development Plan (TDP), LYMMO had the 5th highest ridership of 55 fixed-route links.

Table 3-2
*LYNX Fixed-Route
Performance Statistics*

Rank	Link #	Description	Total Passengers, FY 2011
1	8	W. Oak Ridge Road/International Drive	2,353,273
2	4	S. US 441/Kissimmee	1,919,355
3	41	SR 436 Crosstown	1,829,884
4	37	Park Promenade Plaza/Florida Mall	1,076,565
5	31	LYMMO	1,016,207

Source: LYNX Transit Development Plan 2013–2022

Although classified as a BRT system, LYMMO is more comparable to a downtown streetcar circulator. Table 3-3 compares LYMMO to several rail streetcars in the U.S. that are of similar length. LYMMO carried more passengers in 2011 than three of the four streetcar systems and had a lower cost per trip than all four rail streetcar systems.

Table 3-3 *Comparison of LYMMO to Rail Streetcar Systems*

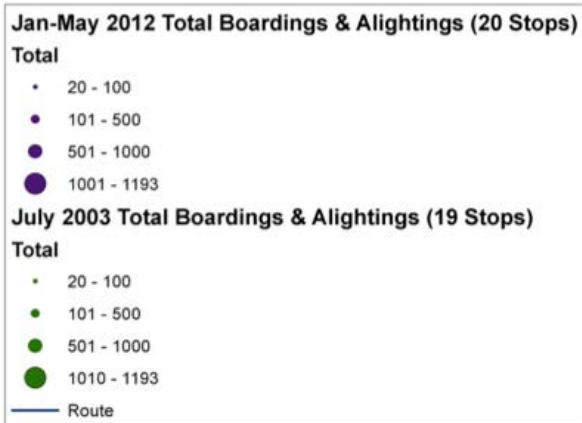
Service	Annual Passenger Trips	Annual Operating Expense	Cost per Trip	Vehicles Available for Max Service	Vehicles Operating in Max Service	Route Miles
LYMMO	950,941	\$1,283,248	\$1.35	9	7	2.5
Memphis Streetcar	1,086,125	\$4,796,905	\$4.42	16	12	4.7
Seattle Streetcar	714,461	\$2,396,642	\$3.35	3	3	2.5
Tampa Streetcar	431,425	\$2,209,652	\$5.12	10	4	2.7
Kenosha Streetcar	43,249	\$443,489	\$10.25	5	1	1.7

Source: National Transit Database 2011

Boardings and Alightings

Figure 4-1 compares the geographic distribution of LYMMO's boardings and alightings for 2003 and 2012. The green circles represent 2003 data, and the purple circles represent 2012. The same data are provided in tabular format in Appendix B. In 2003, the boardings and alightings were fairly evenly distributed along the route, and they generally dropped off in number once the bus was south of E. Central Boulevard. In 2012, LYNX Central Station and the stop at Magnolia Avenue and E. Central Boulevard were the top two boarding and alighting locations, with the former accounting for 27 percent of all boardings and alightings and the latter for 24 percent. Magnolia Avenue and E. Central Boulevard is the site of the Orange County Public Library and is also the stop with quickest access to many lunch-time establishments just two blocks west on S. Orange Avenue. The percentage of boardings and alightings at the CentroPlex Parking Garage dropped from 14 percent to 11 percent. The percentage of boardings and alightings at the Orange County Courthouse remained roughly the same at 12 percent. This may be an indicator that although fewer jurors are using LYMMO to get to the courthouse from the CentroPlex Garage, they are still using it during midday for lunch and errands.

Figure 4-1
LYMMO Boardings
and Alightings



SECTION
5

Employment Data

Employment was examined using U.S. Census Longitudinal Employer Household Dynamics (LEHD) datasets for 2002 and 2010. The year 2002 was used as the baseline because it is the oldest available dataset. For the analysis, LEHD job data were retrieved for all census blocks located within a ¼-mile buffer of the LYMMO route. This was done for both the 2002 and 2010 datasets. Table 5-1 shows the results broken down by North American Industry Classification System (NAICS) Code. In both 2002 and 2010, 70 percent of the jobs located within ¼ mile of LYMMO came from three industries: Public Administration; Professional, Scientific, and Technical Services; and Administrative/Support/Waste Management/Remediation Services.

As shown in Table 5-1, there was an 18 percent drop in the total number of jobs between 2002 and 2010. Every industry category lost jobs except three. Arts, Entertainment, and Recreation increased 581 percent. Other Services (Except Public Administration) increased 102 percent, and Retail Trade increased 82 percent. These changes are shown graphically in Figures 5-1 and 5-2. The most notable area where the decrease in jobs occurred was around Lake Eola.

Table 5-1 Industries within ¼ Mile of LYMMO Route

Industry	No. of Jobs, 2002	No. of Jobs, 2010	Percent Change
Utilities	1,358	1,314	-3%
Construction	151	119	-21%
Manufacturing	323	79	-76%
Wholesale Trade	396	273	-31%
Retail Trade	348	632	82%
Transportation and Warehousing	196	81	-59%
Information	1,509	961	-36%
Finance and Insurance	2,838	2,474	-13%
Real Estate and Rental and Leasing	1,369	729	-47%
Professional, Scientific, and Technical Services	8,265	7,474	-10%
Management of Companies and Enterprises	522	201	-61%
Administrative/Support/Waste Mgt/Remediation Svcs	7,773	3,681	-53%
Educational Services	376	278	-26%
Health Care and Social Assistance	854	734	-14%
Arts, Entertainment, and Recreation	58	395	581%
Accommodation and Food Services	2,293	1,807	-21%
Other Services (Except Public Administration)	340	687	102%
Public Administration	14,640	13,888	-5%
Total Jobs	43,609	35,807	-18%

Figure 5-1
Jobs within 1/4 Mile of
LYMMO, 2002

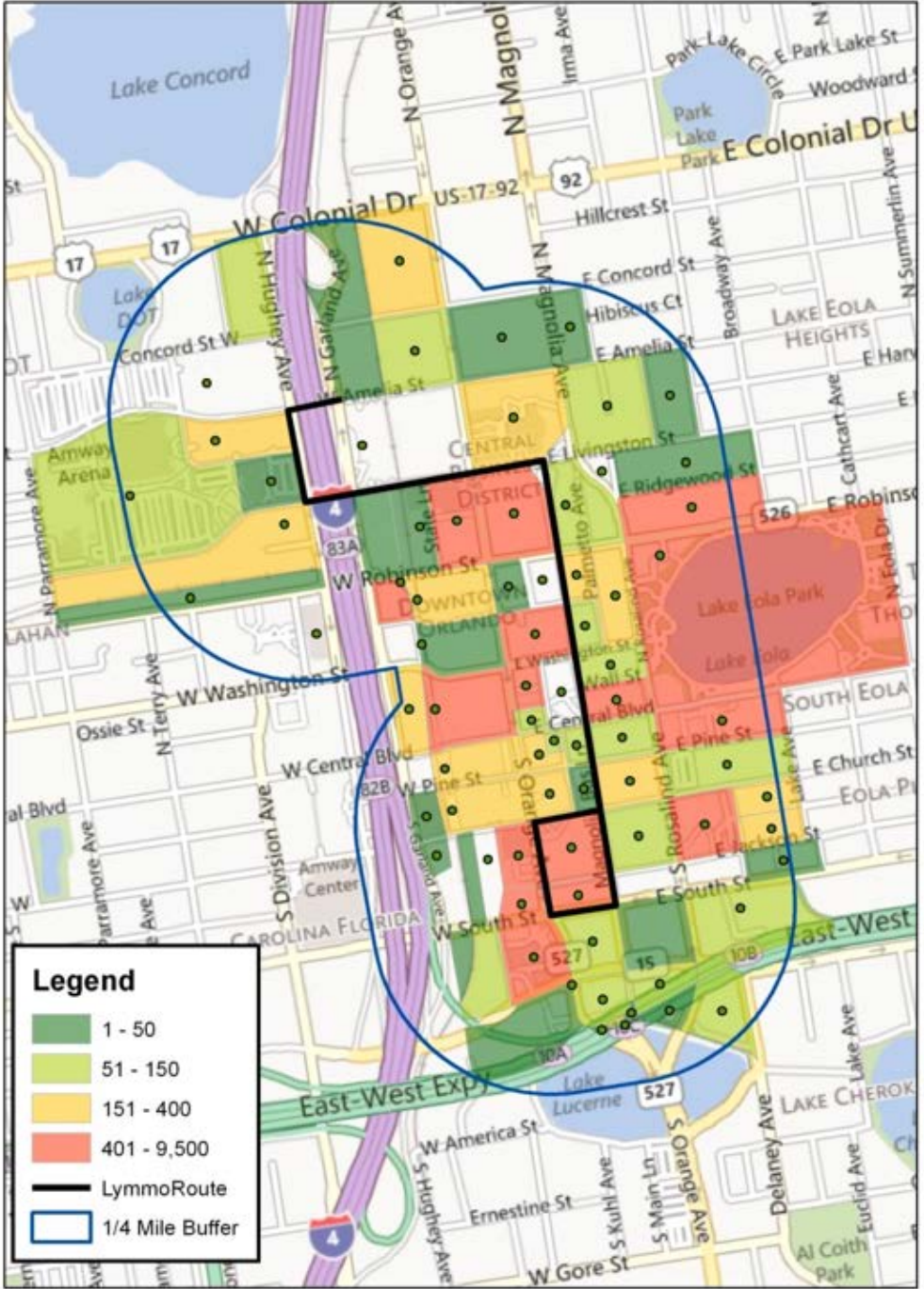
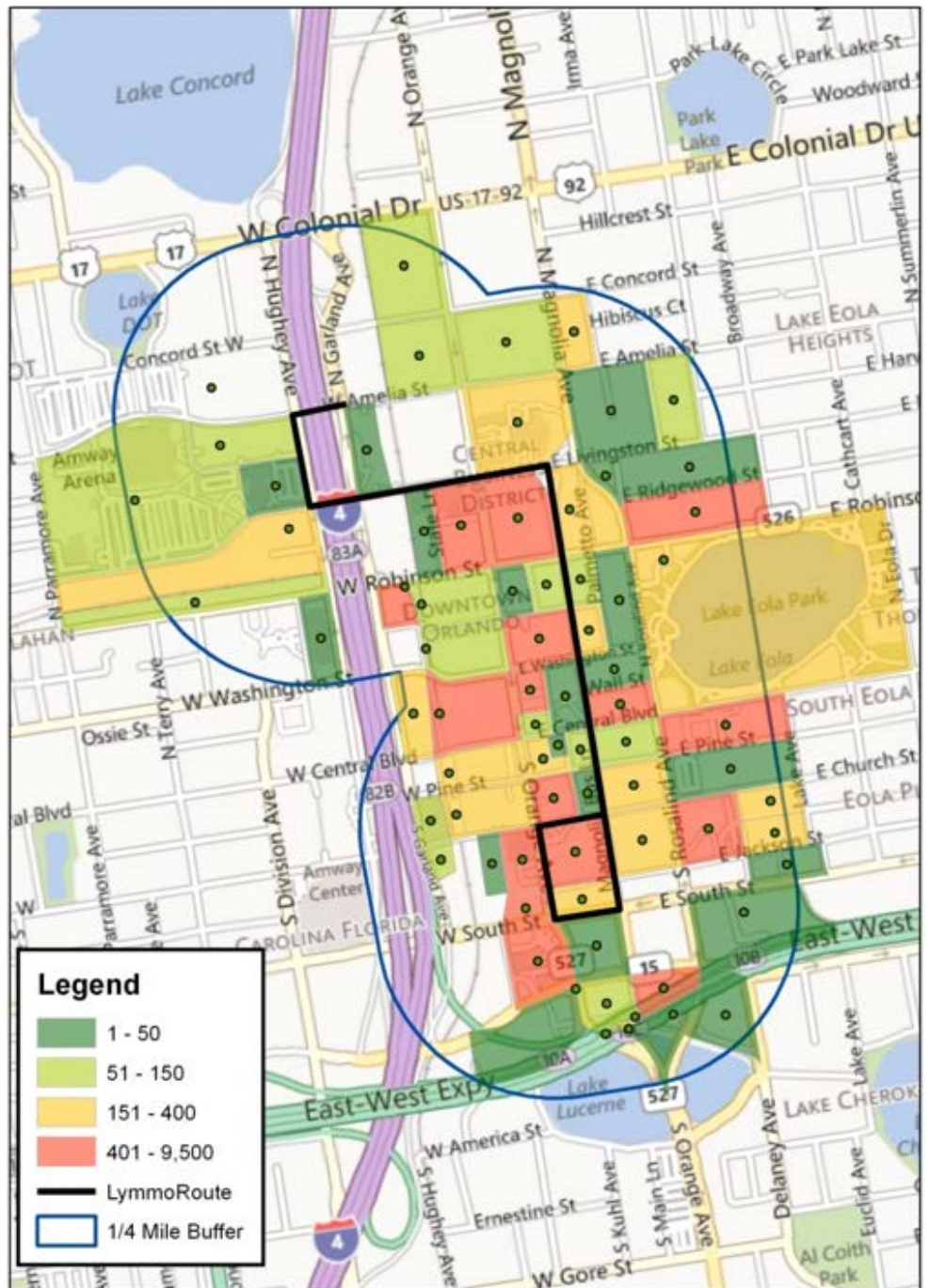


Figure 5-2
Jobs within ¼ Mile of
LYMMO, 2010



The 18 percent drop in jobs located within ¼ mile of LYMMO contrasts with a 5 percent growth in jobs experienced in the Orlando Urbanized Area as a whole (see Table 5-2). Five percent growth over an eight-year period is fairly weak and reflects the economic recession that began in 2007. It appears that the economic recession hit jobs in the downtown core of Orlando more than the urbanized area as a whole. This likely had a negative impact on LYMMO ridership.

Table 5-2 *Industries within Orlando Urbanized Area*

Industry	No. of Jobs, 2002	No. of Jobs, 2010	Percent Change
Agriculture, Forestry, Fishing and Hunting	4,111	2,885	-30%
Mining, Quarrying, and Oil and Gas Extraction	27	68	152%
Utilities	3,449	2,938	-15%
Construction	41,987	34,592	-18%
Manufacturing	43,778	32,420	-26%
Wholesale Trade	36,572	34,693	-5%
Retail Trade	81,654	85,646	5%
Transportation and Warehousing	26,748	24,666	-8%
Information	22,789	21,441	-6%
Finance and Insurance	29,647	30,112	2%
Real Estate and Rental and Leasing	18,952	22,611	19%
Professional, Scientific, and Technical Services	50,501	57,572	14%
Management of Companies and Enterprises	8,918	11,831	33%
Administrative/Support/Waste Mgt/Remediation Svcs	75,358	75,542	0%
Educational Services	51,132	52,419	3%
Health Care and Social Assistance	75,563	91,882	22%
Arts, Entertainment, and Recreation	61,703	62,713	2%
Accommodation and Food Services	81,141	101,424	25%
Other Services (Except Public Administration)	21,613	23,232	7%
Public Administration	28,622	33,803	18%
Total Jobs	764,265	802,490	5%

SECTION
6

Rider Survey

An on-board survey of LYMMO riders was conducted on Tuesday, November 27, and Wednesday, November 28, 2012. On the 27th, the survey was conducted in the afternoon from 1:30–5:30 PM; on the 28th, the survey was conducted in the morning from 7:30 AM to 1:30 PM. Five surveyors from the Center for Urban Transportation Research (CUTR) rode five of the buses and distributed the surveys to all passengers as they boarded; a total of 1,011 surveys were returned. Total LYMMO ridership on November 27 was 2,745, and total LYMMO ridership on November 28 was 2,326 for a two-day average of 2,536 riders. Using that figure yielded a response rate of 39.9 percent. The margin of error in the survey is + 2.4 at the 95% confidence level. The questionnaire used for the survey can be found in Appendix B. The questionnaire was kept to six questions because the passengers board and alight over short distances. The questionnaire used many of the same questions from the December 2001 survey that was included in the 2003 evaluation report. In the tables that follow, the 2012 survey results are expressed both in percentage and absolute numbers. For the 2001 survey results, only the percentages were available. The results are shown in the order they appeared on the questionnaire.

What is the primary purpose of this trip today?

A greater percentage of riders now use LYMMO for errands, lunch, and shopping compared to 2001 (41% in 2012 vs. 17% in 2001), and a smaller percentage use it to go to work (36% in 2012 vs. 52% in 2001). There also has been a drop in the percentage of riders using LYMMO to get to jury duty (1% 2012 vs. 9% in 2001). In 2001, the Orange County Courthouse validated the parking for jurors who used the CentroPlex parking garage at the north end of LYMMO’s route. Jurors would park their cars at the garage and ride LYMMO to the courthouse. The Orange County Courthouse stopped validating juror parking at the CentroPlex garage in 2010 when jurors were able to park at the newly-constructed Courthouse Garage.

Table 6-1
Primary Trip Purpose

Trip Purpose	2001 Survey	2012 Survey
Work	52%	36%
Lunch/shop/errands	17%	41%
Jury duty	9%	1%
Event at Arena	2%	n/a
School	n/a	4%
Library	n/a	3%
Other	21%	15%

Results may not add to 100% due to rounding.

How often do you ride LYMMO?

In both 2001 and 2012, 54 percent of the riders said they used LYMMO at least twice a day. The percentage of riders who use it four or more times a day increased, and the percentage of first time riders decreased.

Table 6-2
Frequency of Use

Response	2001 Survey	2012 Survey
4 or more times per day	13%	21%
2 or 3 times per day	41%	33%
Once a day	10%	10%
A few times per week	15%	20%
A few times per month	8%	9%
A few times per year	7%	4%
This is my first time riding	8%	2%
Total	100%	100%

Results may not add to 100% due to rounding.

Please rate your satisfaction of the following aspects of LYMMO service.

Riders in 2001 and 2012 were asked to rate several aspects of LYMMO service on a scale of 1 to 5, with 1 being very dissatisfied and 5 being very satisfied. Customer satisfaction was high in 2001 and remained high in 2012. It was not possible to conduct a statistical comparison of means between the two datasets since the 2001 raw survey data are no longer available.

Table 6-3
Service Ratings

Aspect of Service	2001 Survey Mean	2012 Survey Mean
Travel time	4.48	4.52
Reliability	4.47	4.50
Comfort	4.41	4.44
Safety	4.41	4.42
Overall satisfaction	4.45	4.49

What are your three favorite features of LYMMO?

In the 2001 survey, the top three LYMMO features according to riders were the low-floor vehicles, the vehicle interior, and the electronic information at the stations. In the 2012 survey, the top three features were that it is free to ride, it is easy to use, and the service is frequent. The results could mean two things—either the riders do not think the vehicles are as nice as they used to be or they have simply become more focused on other features. It is unlikely that it is the former. In 2010, LYNX updated the LYMMO fleet with new 35-foot Gillig hybrid electric buses. These buses include a distinctive green and gray color scheme; an example is shown in Figure 6-1. It seems more likely that bus riders in 2012 are

not as impressed with low-floor buses because they are more common now than they were in 2001; consequently, their attention has shifted to the quality of the service—namely, that LYMMO is free, easy to use, and frequent. Another reason for the change in response between 2001 and 2012 is that the stations no longer offer electronic information.

Table 6-4
*Riders' Favorite
Features of LYMMO,
2001 Survey*

Feature	Percent
Low-floor vehicles	35%
Vehicle interior	15%
Electronic info at stations	11%
Environmentally-friendly vehicles	7%
Feature of stops/stations	8%
Frequency of vehicles	6%
On-board video info displays	5%
It's easy to use	4%
It's free to ride	4%
Fast travel time	4%
Public art and system design	2%

Results may not add to 100% due to rounding.

Table 6-5
*Riders' Favorite
Features of LYMMO,
2012 Survey*

Feature	Frequency	Percent
It's free to ride	729	28%
It's easy to use	582	23%
Frequent service	558	22%
Dedicated bus lane	330	13%
Station design	119	5%
Vehicle interior	118	5%
Low floor vehicles	88	3%
Station kiosks	44	2%

Results may not add to 100% due to rounding.

Figure 6-1
*35-Foot Gillig
Hybrid Bus*



Perceptions regarding LYMMO's influence on downtown traffic congestion

Riders in the 2012 survey were asked the extent to which they agreed or disagreed with the statement that LYMMO reduces congestion in downtown Orlando. While it does not answer whether LYMMO does, in fact, do this, it does measure rider perceptions. The results show that 76 percent do think that LYMMO has reduced congestion in downtown Orlando.

Table 6-6
LYMMO has reduced congestion in downtown Orlando

Strongly Agree		Agree		No Opinion		Disagree		Strongly Disagree	
405	42%	327	34%	189	20%	23	2%	14	2%

Perceptions regarding LYMMO's influence on quality of life in downtown

A total of 79 percent of the riders think LYMMO has made downtown Orlando a more attractive place to live and work.

Table 6-7
LYMMO has made Downtown Orlando a more attractive place to live/work

Strongly Agree		Agree		No Opinion		Disagree		Strongly Disagree	
431	46%	311	33%	166	18%	23	2%	7	1%

Use of other LYNX services

In the 2001 survey, 54 percent of LYMMO riders said they did not use other LYNX services. In the 2012 survey, that percentage fell to 25 percent, meaning more riders today are using other LYNX services. The survey results are shown in Tables 6-8 and 6-9. LYNX offers more services now than it did in 2001, which may explain some of the change. For example, FastLink, NeighborLink, and KnightLYNX are all new services. FastLink is a limited stop service. NeighborLink is a flex service for riders in the less populated parts of LYNX's service area. KnightLYNX is a weekend service around the University of Central Florida campus.

Table 6-8
Do you use any other LYNX services? 2001 Survey

LYNX Service	Percent
Local bus	41%
No, I don't use other LYNX services	54%
A+ Link	2%
Special event services	2%
LYNX vanpool/schoolpool/carpool	1%
Total	100%

Table 6-9
Do you use any other
LYNX services?
2012 Survey

LYNX Service	Frequency	Percent
Local bus	595	49%
No, I don't use other LYNX services	298	25%
FastLink	89	7%
Access LYNX (formerly A+ Link)	75	6%
Xpress bus	65	5%
NeighborLink	52	4%
KnightLYNX	20	2%
LYNX vanpool	11	1%
Total	1,205	100.0%

Results may not add to 100% due to rounding.

The percentage of LYMMO riders that said they also use LYNX local bus service increased from 2001 to 2012 (from 41% to 49%). A likely contributor is the LYNX Central Station, which was constructed in 2004. Prior to that, there was no direct connection between the old downtown bus depot and LYMMO. LYNX Central Station provides a direct connection to LYMMO, services nearly 30 bus routes, and is also a future station for the SunRail commuter train. A photo of Central Station is shown in Figure 6-2.

Figure 6-2
LYNX Central Station



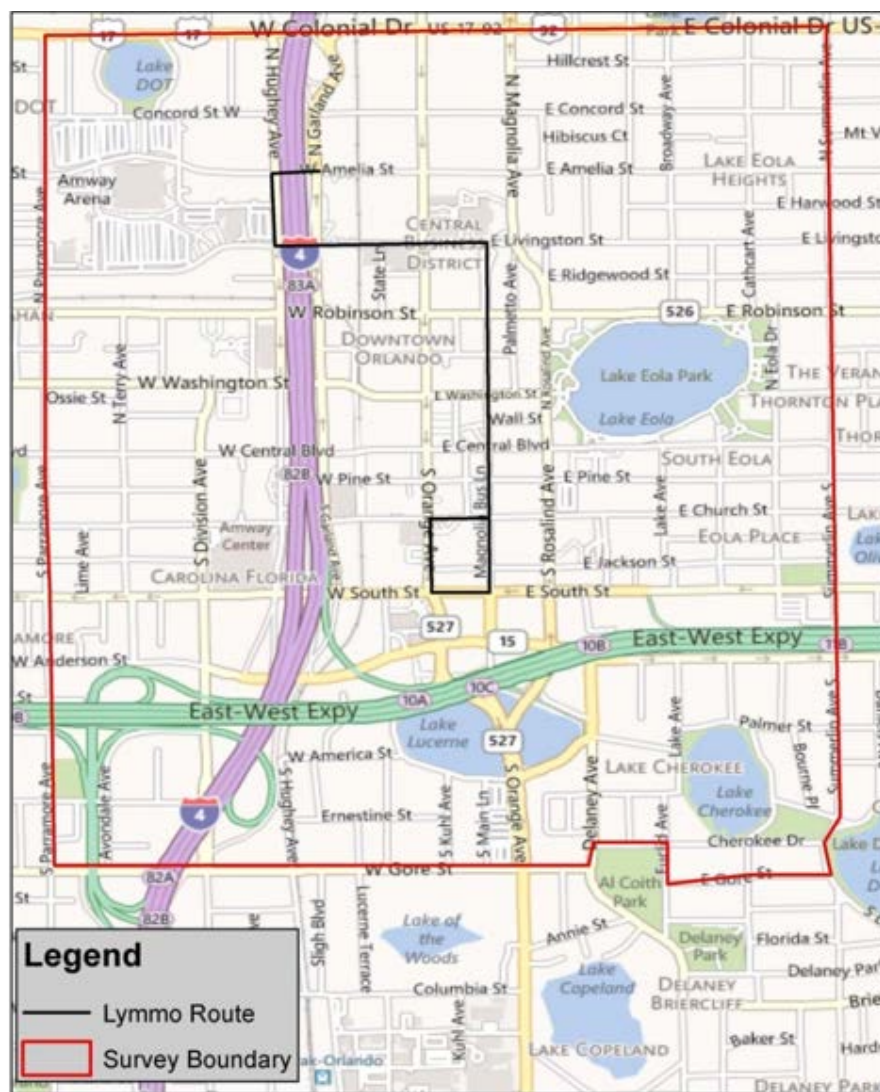
Source: Orlando Sentinel

SECTION
7

Employer Survey

A short six-question survey was mailed at the end of January 2013 to 711 employers in downtown Orlando using addresses provided by the City of Orlando. The employers were selected based on their location within a boundary of four streets: Colonial Drive on the north, Summerlin Avenue on the east, Gore Street on the south, and Parramore Avenue on the west. A map of these boundaries is shown in Figure 7-1.

Figure 7-1
LYMMO Employer
Survey Boundary



A copy of the employer survey can be found in Appendix C. It included questions about whether LYMMO was a factor in a company's decision to locate and/or stay in downtown. It also asked business owners whether they thought LYMMO contributed to the economic development of downtown, made downtown a more attractive place to live and work, and improved mobility in downtown.

Unfortunately, the response was low. Of the 711 employers surveyed, only 34 (5%) responded. Therefore, the results cannot be considered statistically conclusive. The responses are provided only for illustrative purposes.

Influence of LYMMO on employers' decision to locate and/or remain downtown

The first three survey questions asked employers whether they located in downtown before or after LYMMO began service, whether LYMMO was a factor in their decision to locate downtown, and whether LYMMO is a factor in their decision to remain in downtown. The percentage of responding employers that located downtown prior to LYMMO starting was slightly higher than the percentage of employers that located after it began (53% vs.47%; see Table 7-1). Only 3 of the 34 companies (9%) said LYMMO was a factor in their decision to locate downtown. Interestingly, one of those three located in downtown before LYMMO began service; perhaps this employer located in downtown in anticipation of LYMMO opening. Five of the 34 companies (15%) responded that LYMMO is a factor in their decision to remain downtown.

Table 7-1

Did your company locate in downtown before or after LYMMO began service?

	Frequency	Percent
Before LYMMO began	18	53%
After LYMMO began	16	47%

Table 7-2

Was LYMMO a factor in your company's decision to locate and remain downtown?

Question	Response	Frequency	Percent
Factor locating downtown?	Yes	3	9%
	No	30	91%
Factor remaining downtown?	Yes	5	15%
	No	28	85%

Employer perceptions of LYMMO

Employers were presented with three statements regarding LYMMO and were asked to register their level of agreement or disagreement with them. The statements pertained to LYMMO's contribution toward economic development, quality of life, and mobility in downtown Orlando. A majority of the employers agreed or strongly agreed that LYMMO has contributed to the economic development of downtown (53%) and made downtown a more attractive place to live and work (59%). There was even wider agreement that LYMMO has improved mobility in downtown (73%). Nevertheless, 6 of the 34 employers (18%) disagreed or strongly disagreed with these statements.

Table 7-3 *Employer Perceptions of LYMMO's Impact*

Statement	Strongly Agree		Agree		No Opinion		Disagree		Strongly Disagree	
	N	%	N	%	N	%	N	%	N	%
LYMMO has contributed to the economic development of downtown.	7	21%	11	32%	10	29%	4	12%	2	6%
LYMMO has made downtown a more attractive place to live and work.	8	24%	12	35%	8	24%	4	12%	2	6%
LYMMO has improved mobility in downtown.	13	38%	12	35%	3	9%	4	12%	2	6%

Employer demographics

The survey asked how many employees were located at the mailed location and what type of business it was. Table 7-4 shows that more than half (59%) of the employers that responded were small businesses, with only 1–9 employees at that location. About one-third (33%) were consulting or engineering firms; another 15 percent were law firms.

Table 7-4

How many employees are at this location?

Number of Employees	Frequency	Percent
1–9	20	59%
10–19	4	12%
20–99	8	24%
100–499	2	6%

Table 7-5

*Which best describes
your business?*

Business Type	Frequency	Percent
Consulting	6	18%
Engineering/Consulting	5	15%
Law Office	5	15%
Real Estate	4	12%
Arts/Entertainment	2	6%
Restaurant	2	6%
Other	2	6%
Government	1	3%
Non Profit	1	3%
Financial	1	3%
Insurance	1	3%
IT Services	1	3%
Software	1	3%
Staffing	1	3%
Total	33	100%

SECTION 8

Future Plans

LYNX plans to expand its LYMMO service and has selected three new corridors. Two of the new corridors are shown in red and yellow in Figure 8-1; the existing LYMMO route is shown in purple.

The first new corridor is the East/West LYMMO, shown in red. Its route will be 3.7 miles and will have 7 stations and 12 signed stops. Service frequency will be every 10 minutes during the peak and every 15 minutes during the off-peak. Unlike the existing LYMMO, the East/West LYMMO will provide service only in a single direction and will operate in a combination of mixed traffic and dedicated lanes with conditional transit signal priority (TSP) at 22 intersections. The estimated capital cost is \$9.9 million (2010 dollars), and the estimated operating cost is \$1 million annually.

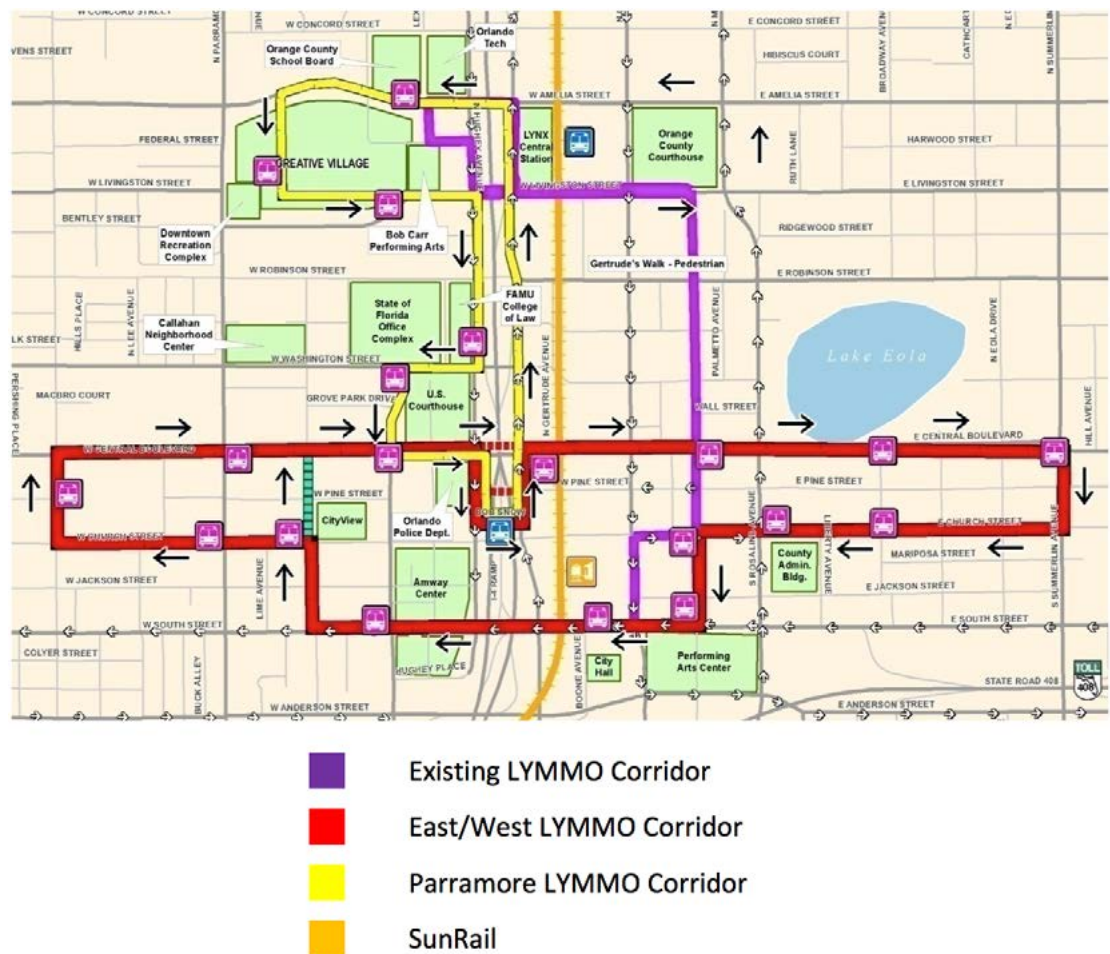


Figure 8-1 New LYMMO Corridors

The second new corridor is the Parramore/Creative Village LYMMO, shown in yellow. Basically, this is a 2.53-mile extension of the existing LYMMO line. It will operate in exclusive bus lanes and have 4 stations and 3 signed stops. One station will be located under I-4 and be a transfer point to the East-West BRT line and provide access to the Amway Center. The Parramore BRT will also provide service to the planned Creative Village located on the site of the former Amway Arena. Creative Village is a planned mixed-use development that includes 500 units of mixed-income housing, 400,000 square feet of office space, 250,000 square feet of education space, and associated community and commercial facilities. Other destinations to be served include Florida A&M College of Law, the State of Florida Office Complex, the U.S. Courthouse, and LYNX Central Station. The estimated capital cost is \$16 million (2011 dollars). The Parramore/Creative Village LYMMO will intersect with the East/West LYMMO.

Both of these projects are expected to open in spring 2014. The new LYMMO lines and the existing LYMMO will connect with the SunRail commuter rail (shown in orange) that is anticipated to open in early 2014.

The third new LYMMO corridor (not shown) is a North/South BRT route that will provide service between Florida Hospital and the Orlando Regional Medical Center. It is basically an extension of the first LYMMO, connecting both hospitals and key neighborhoods adjacent to the downtown core. However, this corridor project does not currently have funding for operations or final design. The City, LYNX, and MetroPlan Orlando (the Metropolitan Planning Organization) adopted the North and South alignments as Locally Preferred Alternatives (LPA). Preliminary design is beginning on the South LPA, and LYNX is working with the City and the Florida Department of Transportation (FDOT) to begin establishing dedicated right-of-way and station areas at key locations. The South alignment is listed as the state's first Strategic Intermodal System (SIS) connector facility.

LYMMO Ridership Data

August 1997–December 2012

Month	Avg. Weekday	Avg. Saturday	Avg. Sunday	Total Month
Aug-97	2,660	874	450	61,150
Sep-97	2,627	772	628	61,384
Oct-97	3,260	1,029	640	81,657
Nov-97	3,406	1,067	711	74,310
Dec-97	3,502	1,063	505	83,810
Jan-98	3,693	1,134	583	86,130
Feb-98	4,140	1,197	560	89,833
Mar-98	4,204	1,266	845	101,772
Apr-98	4,427	1,444	607	105,600
May-98	3,998	1,028	537	88,328
Jun-98	4,079	795	433	94,657
Jul-98	4,051	927	651	99,213
Aug-98	4,359	740	452	97,502
Sep-98	4,200	1,009	556	95,009
Oct-98	4,439	1,392	912	108,276
Nov-98	3,978	1,031	747	88,162
Dec-98	3,530	850	481	83,456
Jan-99	4,155	1,218	532	92,384
Feb-99	4,428	1,368	876	97,536
Mar-99	4,509	1,316	962	112,825
Apr-99	4,418	1,333	774	105,627
May-99	4,154	803	518	90,197
Jun-99	4,044	1,073	460	95,104
Jul-99	3,802	855	468	89,778
Aug-99	4,133	827	475	96,600
Sep-99	4,028	805	404	85,795
Oct-99	4,071	703	506	91,537
Nov-99	4,060	866	659	92,007
Dec-99	3,538	873	472	86,346
Jan-00	4,057	1,097	619	93,295
Feb-00	4,398	1,099	610	99,197
Mar-00	4,335	1,556	753	108,944
Apr-00	4,192	1,229	630	93,127
May-00	4,078	771	597	95,783
Jun-00	4,174	769	430	96,631
Jul-00	3,877	856	615	85,501

APPENDIX A: LYMMO RIDERSHIP DATA, AUGUST 1997–DECEMBER 2012

Month	Avg. Weekday	Avg. Saturday	Avg. Sunday	Total Month
Aug-00	4,182	692	771	102,034
Sep-00	4,332	944	436	93,548
Oct-00	4,147	955	720	98,640
Nov-00	4,028	1,012	683	92,042
Dec-00	3,407	911	472	75,533
Jan-01	3,735	1,281	500	89,790
Feb-01	3,976	1,145	757	87,118
Mar-01	3,810	1,251	658	92,709
Apr-01	3,984	1,360	679	92,498
May-01	3,800	1,007	530	90,267
Jun-01	3,896	656	465	86,953
Jul-01	3,771	794	601	85,977
Aug-01	3,949	767	540	96,056
Sep-01	4,138	757	490	85,340
Oct-01	4,183	750	460	101,046
Nov-01	3,843	1,044	420	86,980
Dec-01	3,427	649	378	74,047
Jan-02	3,740	924	482	88,393
Feb-02	3,890	853	539	83,365
Mar-02	3,753	747	476	84,921
Apr-02	3,997	765	496	92,968
May-02	3,912	882	499	92,081
Jun-02	3,632	744	438	78,540
Jul-02	3,447	765	595	81,857
Aug-02	4,080	516	577	94,640
Sep-02	4,137	709	439	88,213
Oct-02	4,215	766	445	101,793
Nov-02	4,013	825	584	87,311
Dec-02	3,616	707	458	81,507
Jan-03	3,757	785	411	83,857
Feb-03	4,360	1,036	651	93,946
Mar-03	4,374	1,063	544	99,896
Apr-03	3,972	828	641	93,262
May-03	4,319	1,066	651	99,285
Jun-03	4,184	867	568	94,171
Jul-03	4,231	782	642	99,408
Aug-03	4,182	822	541	94,631
Sep-03	4,136	829	511	92,732
Oct-03	4,183	819	641	102,052
Nov-03	3,999	877	455	83,104
Dec-03	3,472	848	430	81,924

APPENDIX A: LYMMO RIDERSHIP DATA, AUGUST 1997–DECEMBER 2012

Month	Avg. Weekday	Avg. Saturday	Avg. Sunday	Total Month
Jan-04	3,796	834	482	86,294
Feb-04	3,870	760	587	83,373
Mar-04	3,859	991	800	95,922
Apr-04	3,685	814	487	86,262
May-04	4,064	785	609	88,849
Jun-04	3,897	735	493	90,653
Jul-04	3,590	703	523	84,594
Aug-04	3,354	523	402	76,966
Sep-04	3,446	590	498	75,624
Oct-04	3,908	732	609	88,774
Nov-04	3,978	1,054	717	91,349
Dec-04	3,713	1,357	591	92,433
Jan-05	4,182	1,623	745	98,789
Feb-05	4,544	1,440	821	99,916
Mar-05	4,089	1,539	854	103,613
Apr-05	4,595	1,294	867	106,431
May-05	4,201	1,315	651	97,391
Jun-05	4,065	1,093	679	96,514
Jul-05	4,234	1,205	836	95,721
Aug-05	4,433	1,373	763	110,496
Sep-05	4,517	1,447	756	104,413
Oct-05	4,176	1,469	738	98,726
Nov-05	4,178	1,562	719	97,582
Dec-05	3,091	895	676	74,498
Jan-06	3,720	1,387	713	90,962
Feb-06	4,264	1,181	809	93,232
Mar-06	4,145	1,497	870	104,808
Apr-06	4,298	1,377	820	96,949
May-06	4,254	1,116	823	102,166
Jun-06	4,256	1,228	770	101,618
Jul-06	4,291	1,299	891	97,651
Aug-06	4,523	1,135	824	111,862
Sep-06	4,689	1,206	802	103,823
Oct-06	3,822	1,112	753	92,308
Nov-06	4,339	1,847	862	102,808
Dec-06	4,348	1,824	691	100,230
Jan-07	4,154	1,634	917	102,502
Feb-07	4,089	2,505	861	95,244
Mar-07	4,053	1,326	807	99,012
Apr-07	3,897	1,780	862	93,260
May-07	3,933	1,091	667	94,228

APPENDIX A: LYMMO RIDERSHIP DATA, AUGUST 1997–DECEMBER 2012

Month	Avg. Weekday	Avg. Saturday	Avg. Sunday	Total Month
Jun-07	3,800	984	704	87,540
Jul-07	3,756	1,158	818	88,422
Aug-07	4,384	1,139	1,023	109,469
Sep-07	4,554	1,341	989	99,154
Oct-07	4,579	1,391	979	114,798
Nov-07	3,958	1,686	964	94,685
Dec-07	3,994	1,349	873	91,875
Jan-08	7,164	3,055	2,166	99,272
Feb-08	4,279	1,144	958	98,266
Mar-08	4,283	1,791	1,015	103,967
Apr-08	4,251	1,267	1,000	102,589
May-08	4,125	1,495	822	98,204
Jun-08	3,905	1,148	847	90,840
Jul-08	3,933	1,059	920	98,374
Aug-08	3,469	1,097	972	83,201
Sep-08	3,863	1,264	1,033	94,166
Oct-08	4,235	1,141	817	105,234
Nov-08	3,948	1,519	850	87,718
Dec-08	3,674	1,175	1,063	90,839
Jan-09	4,112	1,199	829	96,493
Feb-09	4,734	1,222	1,157	104,201
Mar-09	4,448	1,318	1,139	108,814
Apr-09	4,869	1,219	1,205	116,807
May-09	5,051	1,631	1,324	117,118
Jun-09	4,433	1,634	1,726	110,958
Jul-09	4,285	1,260	1,019	107,677
Aug-09	4,636	1,849	1,464	113,928
Sep-09	4,083	1,112	782	97,397
Oct-09	4,382	1,137	836	105,428
Nov-09	3,742	1,258	787	87,542
Dec-09	3,445	1,674	942	89,711
Jan-10	4,111	1,965	999	98,032
Feb-10	3,546	1,442	1,376	82,188
Mar-10	3,985	2,524	1,710	108,593
Apr-10	4,515	2,416	1,374	114,484
May-10	4,486	2,109	999	106,254
Jun-10	3,971	1,853	780	97,892
Jul-10	3,969	1,997	987	101,257
Aug-10	4,036	1,394	768	98,219
Sep-10	3,925	859	1,050	91,112
Oct-10	4,404	1,439	882	104,083

APPENDIX A: LYMMO RIDERSHIP DATA, AUGUST 1997–DECEMBER 2012

Month	Avg. Weekday	Avg. Saturday	Avg. Sunday	Total Month
Nov-10	4,509	1,030	868	103,140
Dec-10	3,348	1,248	807	84,775
Jan-11	3,267	1,386	942	79,809
Feb-11	3,178	1,313	956	72,642
Mar-11	3,201	1,289	908	82,411
Apr-11	3,412	1,311	972	82,094
May-11	3,352	1,277	1,005	81,526
Jun-11	3,324	1,441	1,115	83,348
Jul-11	3,230	1,352	1,195	78,536
Aug-11	3,289	1,292	1,187	85,554
Sep-11	3,241	1,327	986	78,289
Oct-11	3,333	1,250	974	81,115
Nov-11	3,096	1,272	977	74,997
Dec-11	2,818	1,093	792	70,620
Jan-12	2,890	1,281	896	73,192
Feb-12	3,045	1,325	904	72,865
Mar-12	2,837	1,209	915	72,108
Apr-12	3,026	1,115	995	72,986
May-12	3,206	1,174	864	79,549
Jun-12	3,073	1,307	903	74,688
Jul-12	3,211	1,279	1,151	79,452
Aug-12	3,389	1,344	980	87,248
Sep-12	3,246	1,337	1,076	74,803
Oct-12	3,026	1,641	779	79,272
Nov-12	2,738	1,405	804	67,129
Dec-12	2,517	1,113	856	61,048

LYMMO Boarding and Alighting Data

2003 and 2012

Destination	Stop Number	Stop Location	2003		2012	
			Total On/Off	Percent	Total On/Off	Percent
CentroPlex Garage	6316	400 AMELIA ST	892	6%	838	11%
CentroPlex Garage	7196	400 HUGHEY AVE AND LIVING	1,193	8%	20	0%
LYNX Central Station	7197	100 LIVINGSTON ST AND N G	n/a	n/a	1,048	14%
LYNX Central Station	7198	100 LIVINGSTON ST AND N G	1,181	7%	905	12%
LYNX Central Station	7199	455 N GARLAND AVE AND AME	1,166	7%	49	1%
Bank of America	6299	LIVINGSTON ST AND ORANGE	1,184	7%	108	1%
Bank of America	6311	1 LIVINGSTON ST AND ORANG	1,131	7%	97	1%
Orange County Courthouse	5887	1 LIVINGSTON ST AND MAGNO	986	6%	439	6%
Orange County Courthouse	6298	LIVINGSTON ST AND ORANGE	1,135	7%	482	6%
St. Luke & St. James Cathedrals	6300	200 MAGNOLIA AVE AND JEFF	980	6%	302	4%
St. Luke & St. James Cathedrals	6301	200 MAGNOLIA AVE AND JEFF	872	6%	310	4%
Comerica Bank	6302	100 MAGNOLIA AVE AND WASH	915	6%	103	1%
Comerica Bank	6303	100 MAGNOLIA AVE AND WASH	874	6%	87	1%
Orange Public Library	6304	MAGNOLIA AVE AND CENTRAL	471	3%	911	12%
Orange Public Library	6305	MAGNOLIA AVE AND CENTRAL	841	5%	911	12%
Seaside Bank	6306	200 MAGNOLIA AVE AND CHUR	397	3%	142	2%
Seaside Bank	6307	CHURCH ST AND MAGNOLIA AV	462	3%	55	1%
First United Methodist	6308	300 MAGNOLIA AVE AND SOUT	405	3%	69	1%
Grand Bohemian Hotel	6309	SOUTH ST AND ORANGE AVE	368	2%	360	5%
Seaside Bank	6310	300 ORANGE AVE AND CHURCH	362	2%	454	6%
TOTAL ON/OFFS			15,815	100%	7,690	100%

LYMMO Rider Survey 2013



SURVEY

1. What is the **primary** purpose of this trip today? (check one)

- ₁ Work
- ₂ Lunch
- ₃ Other (please specify): _____
- ₄ Shop
- ₅ Errands

2. How often do you ride LYMMO? (check one)

- ₁ 4 or more times per day
- ₂ 2 or 3 times per day
- ₃ Once a day
- ₄ A few times per week
- ₅ A few times per month
- ₆ A few times per year
- ₇ This is my first time riding

3. Please rate your satisfaction of the following aspects of LYMMO service? (check one)

	Very Satisfied	Satisfied	No Opinion	Dissatisfied	Very Dissatisfied
Travel time	<input type="checkbox"/> ₅	<input type="checkbox"/> ₄	<input type="checkbox"/> ₃	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁
Reliability	<input type="checkbox"/> ₅	<input type="checkbox"/> ₄	<input type="checkbox"/> ₃	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁
Comfort	<input type="checkbox"/> ₅	<input type="checkbox"/> ₄	<input type="checkbox"/> ₃	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁
Safety	<input type="checkbox"/> ₅	<input type="checkbox"/> ₄	<input type="checkbox"/> ₃	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁
Overall Satisfaction	<input type="checkbox"/> ₅	<input type="checkbox"/> ₄	<input type="checkbox"/> ₃	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁

4. What are your three favorite features of LYMMO? (pick 3)

- ₁ Low floor vehicles
- ₂ Vehicle interior
- ₃ Dedicated bus lanes
- ₄ Station design
- ₅ Frequent service
- ₆ It's easy to use
- ₇ Station kiosks
- ₈ It's free to ride

5. Please indicate whether you agree/disagree with the following statements. (check one)

	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
LYMMO has reduced congestion in downtown Orlando.	<input type="checkbox"/> ₅	<input type="checkbox"/> ₄	<input type="checkbox"/> ₃	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁
LYMMO has made downtown Orlando a more attractive place to live/work.	<input type="checkbox"/> ₅	<input type="checkbox"/> ₄	<input type="checkbox"/> ₃	<input type="checkbox"/> ₂	<input type="checkbox"/> ₁

6. Do you use any other LYNX services? (check all that apply)

- ₁ Local Bus
- ₂ FastLink
- ₃ Xpress Bus
- ₄ NeighborLink
- ₅ Access LYNX
- ₆ LYNX Vanpool
- ₇ KnightLYNX
- ₈ No, I don't use other LYNX services

APPENDIX
D

Employer Survey 2012

Center for Urban Transportation Research
CUT100
211700
2117141511

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 2039 TAMPA FL


POSTAGE WILL BE PAID BY ADDRESSEE


UNIVERSITY OF SOUTH FLORIDA
4202 E FOWLER AVE
TAMPA FL 33620-9989

Center for Urban Transportation Research
College of Engineering
University of South Florida
4202 E. Fowler Ave., CUT100
Tampa, FL 33629-5375

Non-Profit Org
U.S. Postage
PAID
Tampa, Florida
Permit No. 257

LYMMO® Celebrating *15* years in Downtown Orlando







It's hard to believe it's been 15 years since Lymmo began running in 1997.

The Center for Urban Transportation Research at the University of South Florida is conducting a survey of downtown Orlando business owners to ask what they think of Lymmo.

We'd love to get your feedback. Simply fill out the short survey and drop it in the mail. No need to add postage.

1. The Lymmo began service in August 1997. Before After
 Did your company locate in downtown before or after that time?

2. Was the Lymmo a factor in your company's decision to locate downtown? Yes No

3. Is the Lymmo a factor in your company's decision to remain downtown? Yes No

4. How much would you agree or disagree with the following statements?

	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
The Lymmo has contributed to the economic development of downtown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Lymmo has made downtown a more attractive place to live and work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Lymmo has improved mobility in downtown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. How many employees are at this location?
 1-9 10-19 20-99 100-499 Over 500

6. Which best describes your business?

<input type="checkbox"/> Arts/Entertainment	<input type="checkbox"/> Government	<input type="checkbox"/> Non Profit
<input type="checkbox"/> Banking	<input type="checkbox"/> Hotel	<input type="checkbox"/> Real Estate
<input type="checkbox"/> Church	<input type="checkbox"/> Law Office	<input type="checkbox"/> Restaurant
<input type="checkbox"/> Consulting	<input type="checkbox"/> Medical	<input type="checkbox"/> Retail
<input type="checkbox"/> Engineering/Architectural	<input type="checkbox"/> News/Publishing	<input type="checkbox"/> Other: _____



U.S. Department of Transportation
Federal Transit Administration

East Building
1200 New Jersey Avenue, SE
Washington, DC 20590
<http://www.fta.dot.gov/research>