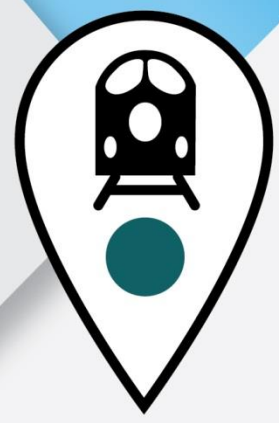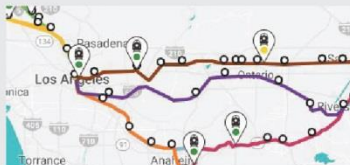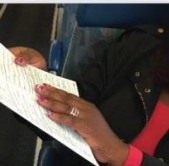METROLINK®

CONSULTANT SERVICES FOR
METROLINK 2018 ORIGIN-DESTINATION STUDY

Final Report

Submitted by:

redhillgroup
THE POWER OF INSIGHT

April 17, 2019

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KEY FINDINGS

Ridership Profiles

- Over the last decade, the ethnic composition of Metrolink ridership has seen a steady increase in the proportion of Non-Caucasian riders. Although the current proportion of Hispanic riders (29%) is essentially unchanged from 2015 (30%), a more prominent increase is observed for Asian/Pacific Islander riders from 18 percent in 2015 to 22 percent in 2018.
- The median household income shows a substantial increase from $76,976 in 2015 to $92,833 in 2018 indicating improving economic conditions. Higher median household income is apparent across all Metrolink lines with the highest increase observed on the Antelope Valley Line (+$24,797). The Ventura and Orange County Lines now both have six-figure median household incomes at $106,233 and $117,280 respectively.
- Also reflecting the improving economy, the proportion of riders who are full-time employees is now 82 percent compared to 2015 at 74 percent.
- The proportion of Metrolink riders who are considered "choice riders" based on the automobile ownership has also increased from 82 to 85 percent. The largest increases occurred on the San Bernardino Line (73 to 84 percent) and Ventura County Line (80 to 87 percent).
- Nearly half (45%) of Metrolink riders speak a language other than English at home with Spanish (24% of all riders) being the predominant language. The proportion of Spanish as a primary language is highest on the San Bernardino Line (31%), and Inland Empire Line (27%). Asian languages, including Mandarin and Cantonese Chinese (14% combined) as well as Tagalog (6%) are more prevalent on the Riverside Line.
- Among the 45 percent of Metrolink riders who speak a language other than English at home, only three percent (1% of all riders), say they speak English less than well. Two-thirds of these riders (67%) are Spanish speakers.

Trip Characteristics

- Compared to 2015, the proportion of riders who use Metrolink at least five days a week has increased slightly from 63 to 65 percent. The greatest increase in the proportion of frequent riders occurs on the Antelope Valley and San Bernardino Lines with eight and seven percentage point increases respectively.
- About one-quarter (26%) of Metrolink riders say that they ride more often now than last year, while only six percent say they are riding less. The increased frequency of use is primarily due to new jobs (28%), increasing travel needs (18%), and new homes (17%).
- At 82 percent, work and business appointment trips continue to comprise the majority of all Metrolink trips. This remains essentially unchanged from 2015 (81%). The proportion of work-related trips in 2018 for the Antelope Valley (70%) and San Bernardino (79%) Lines have recovered from their significant decline in 2015 when they were five and nine percent lower, respectively.

- The distribution of home-counties is similar to 2015. However, Los Angeles County as a predominant work destination has seen an increase from 75 percent to 82 percent. This is offset by a lower proportion of work destinations for Orange County at 16 percent compared to 22 percent in 2015.
- The use of monthly passes continues the downward trend with the proportion declining from 63 percent in 2008, to 60 percent in 2010, 54 percent in 2015 and now 52 percent in 2018. This is offset by the increase in one-way/round-trip tickets and 7-day passes.
- The vast majority of Metrolink riders (92%) are aware of the Metrolink mobile ticketing app, and nearly half of all riders (49%) say they use it.
- As the proportion of automobile ownership increases, Metrolink riders who rely on driving alone to reach their first boarding station from home has increased by four points from 63 percent in 2015 to 67 percent. Metro bus/rail as a transfer mode from alighting station to work has also seen an increase of ten points from 26 percent to 36 percent in 2018.
- If the current Metrolink train did not exist, Metrolink riders are more likely to drive a car they own or lease (45%), take an earlier train (14%), or take a later train (12%). Riders on the 91/PVL Line are now more likely to switch to driving alone (45% in 2015, 53% in 2018), likely reflecting the addition of riders from the new Perris Valley stations.
- Over half (55%) of Metrolink riders use Transportation Network Companies (TNCs). They use them to reach locations Metrolink doesn't serve (55%), to reach Metrolink stations (38%) and to a lesser extent to replace Metrolink service (7%). Eighty percent say that overall, TNCs have no impact on their use of Metrolink. Fifteen percent say it has increased their use of Metrolink compared to only six percent who say it has caused a decrease in use.
- Metrolink's average track distance traveled on weekdays is now 37.4 miles which is essentially unchanged from the 37.1 miles observed in 2015.

Customer Satisfaction and Motivation

- The mean value for Metrolink's overall satisfaction is 4.05 based on a scale from one to five. The top three performance attributes were also the top three in 2015, although the mean value of each attribute has shown a slight increase. These attributes are: Helpfulness and Courtesy of Metrolink Conductors, Value of Making Good Use of My Time on the Train, and Safe Operation of Trains.
- Three of the performance attributes with the lowest level of satisfaction rating are: Announcements of Delay Information at the Station, Information on Train Delays Overall, and Cleanliness of Restrooms on Train.
- Since 2015, Ease of Buying Tickets/Ticket Vending Machine Reliability has experienced the largest increase in average satisfaction rating from 3.24 to 4.08 (+0.84 points). Conversely, performance attributes with the largest decreases are: Cleanliness of Train Interior (-0.13), Usefulness of Printed Materials Onboard the Train (-0.14), and Cleanliness of Restroom on Train (-0.15).
- Based on the quadrant analysis, performance attributes that are considered as Metrolink's Strength include: Operational Safety, Riding Experience Overall, Onboard Security, Station Experience, and Working Equipment.

- Metrolink's critical performance attributes that merit close attention are heavily related to the train's timeliness, including: On-Time Train Arrival, Announcement of Train Delays at the Station and Onboard, and Train Delay Information Overall. Other factors that are both important and below average satisfaction include: Response to Concerns, Convenient Schedule, Clean Interior, and the Metrolink Website.
- Reduced Fares is the most frequently requested change to Metrolink service for the next year at 21 percent. This is followed by Reliable Travel Times, More Evening Trains, and Going More Places, each at 11 percent.
- Wi-Fi (63%), Electrical Outlets (60%), and Emergency Call Button (58%) are the top three amenities based on the proportion of riders who say each item is very important.

Employment Characteristics

- The top three industry categories remain unchanged since 2015. These include Finance/Real Estate/Insurance/Legal Services (19%), Government (16%), and Health Care/Social Services (14%).
- The proportion of riders who receive a fare subsidy from their employers has decreased from 48 percent in 2008, to 40 in percent in 2015, and to 39 percent in 2018. However, the average incentive level has continued to increase from $109.78 in 2015 to $125.51.
- Transportation/Utilities continues to be the most likely industry to receive a subsidy at 61 percent, followed by Government (59%), and Finance/Real Estate (49%).
- On average, the highest incentive amount is received by Construction/Manufacturing ($214.52), although the proportion of riders within this industry who receive the incentive is only 20 percent.

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CHAPTER 1 – INTRODUCTION

1.1   Background

Metrolink is Southern California's regional commuter rail service governed by the Southern California Regional Rail Authority (SCRRA), a joint powers authority funded by five transportation commissions: Los Angeles County Metropolitan Transportation Authority, Orange County Transportation Authority, Riverside County Transportation Commission, San Bernardino Associated Governments, and Ventura County Transportation Commission. Metrolink currently operates over seven routes throughout six counties with approximately a 538 route-mile network. Metrolink passengers travel approximately 441 million miles each year, making Metrolink the second busiest public transportation provider in Southern California.

In the past two decades Metrolink has expanded from three lines operating in two counties with 3,000 daily boardings to seven lines operating in six counties with over 47,000 average weekday boardings. While transit ridership both locally and nationally has experienced prolonged ridership loss, Metrolink ridership has remained robust and continues to grow. It reflects Metrolink's investment in service expansion and greater affordability of fares during recent years, which has helped make Metrolink service the preferred mode of transport for many Southern Californians.

As part of the ongoing efforts to increase public transit use to reduce congestion and improve air quality in Southern California, Metrolink has added new services in regions that were previously not served by the rail lines and in areas where more transit stops were deemed necessary due to changing travel patterns. In June 2016 Metrolink started a new service, the Perris Valley Line (PVL), as an extension to the 91/LA Line, adding approximately 24 route miles between Riverside Downtown and South Perris. In December 2017 a new intermodal transit station was constructed in San Bernardino Downtown as an extension to the San Bernardino Line. And recently, Metrolink showcased its new Burbank Airport North station for the Antelope Valley Line which is now one of the two Metrolink stations next to the airport.

1.2   Objectives

The Southern California Regional Rail Authority commissioned the 2018 Onboard Study to profile and update current customer profiles, travel characteristics, and perceptions of service quality. This study is intended to provide critical information to guide Metrolink's planning, marketing, and financial decision making. Primary objectives include the evaluation of access and egress modes, fare media usage, estimate of non-ticket holders, origin-destination patterns, demographic information for Title VI, and customer satisfaction ratings.

1.3   Report Organization

This report presents survey results addressing passenger opinions on Metrolink's service quality, and O-B-A-D information including access and egress modes, to support Metrolink planning and financial decision making. To provide the proper context, the survey results are depicted in a uniform format used in the previous studies to maintain consistency when comparing results over time.

There are five chapters overall, with each chapter focusing on ridership from a different perspective. Results are presented from the viewpoints of current conditions, market and product segmentation, and changes over time. The contents for each chapter are summarized below.

Chapter 1:   **Introduction**
Chapter 1 sets the stage for the 2018 Onboard Study. It includes a brief historical background and facts of Metrolink's operations including its new implemented services, along with a discussion of project objectives and methodologies.

Chapter 2:   **Ridership Profiles**
Chapter 2 provides current Metrolink rider demographic profiles at the system and line levels. The primary focus is on 2018 survey results, but changes and trends are identified comparing 2018 findings with previous studies when they are significant.

Chapter 3:   **Trip Characteristics**
Chapter 3 provides an in-depth look at trip characteristics including frequency of use, tenure, and trip purposes. These are presented at the line and system-wide level. New survey questions about the ticketing app and the use of TNCs are also discussed in this section.

Chapter 4:   **Customer Satisfaction and Motivation**
This chapter explores passenger perceptions of service quality and customer satisfaction on various attributes of their Metrolink experience. In addition, motivational factors such as why patrons use Metrolink as well as trends and variations in patron satisfaction levels are identified.

Chapter 5:   **Employment Characteristics**
Chapter 5 focuses on the characteristics of employed riders with respect to the occupation and industry categories. Employer fare subsidy levels by industry category are measured and compared to better understand Metrolink's working commuter market.

Percentages in individual charts and tables throughout the report may not sum exactly up to 100 percent due to rounding or where a question is a multiple response question. All charts and tables are presented with combined weekday and weekend data except where yearly comparisons need to be made against previous studies where only weekday data was available.

CHAPTER 2 – RIDERSHIP PROFILES

In addition to obtaining the demographic information for Title VI Analysis, the ridership profiles provide a clearer picture of the customer base and how it varies by line. This supports marketing and communications decision-making to help maximize Metrolink's service value for both current and potential customers. In this chapter the survey results present the current demographic composition by age, ethnicity, and household income. The results are then compared with previous studies to identify any significant shifts in the demographic distribution over time.

2.1   Age Composition

Figure 1: Age Composition of Riders by Year (Weekday)
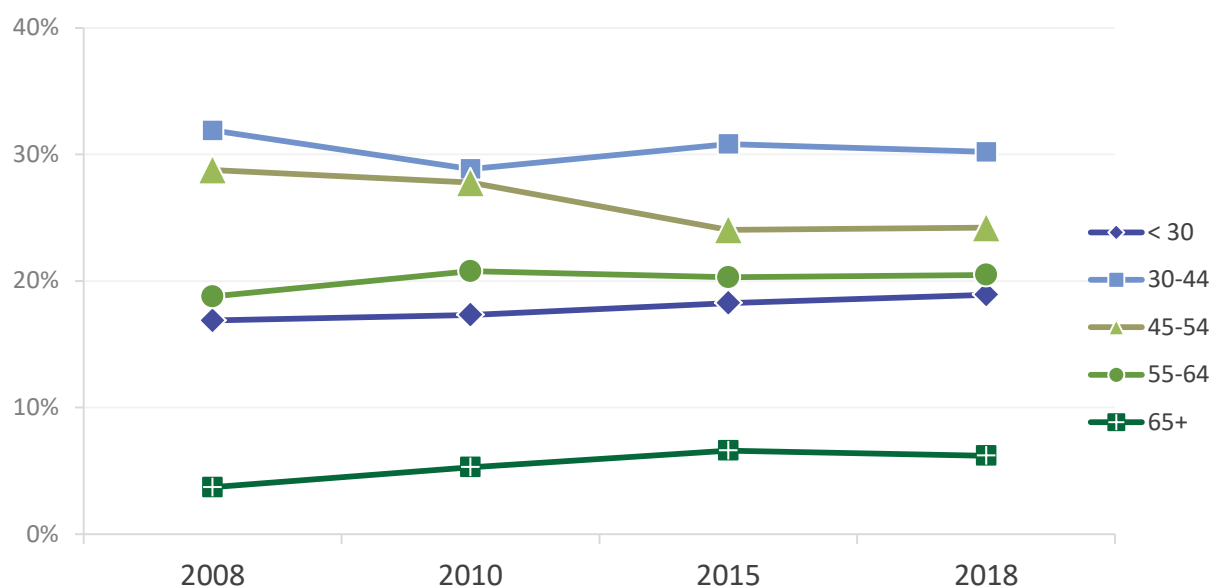
Continuing the trend observed in the 2015 study, the majority of Metrolink weekday riders belong in the economically active age groups of 30 to 44 (30%), 45 to 54 (24%), and 55 to 64 (20%). The average age remains unchanged at 44 years old.

Table 1: Gender by Age Category by Year (Weekday)

AGE	2008		2010		2015		2018	
	Male	Female	Male	Female	Male	Female	Male	Female
< 30	15%	18%	15%	20%	17%	20%	18%	20%
30-44	35%	29%	31%	26%	32%	29%	33%	28%
45-54	28%	29%	27%	28%	25%	23%	23%	25%
55-64	17%	20%	21%	21%	19%	22%	20%	21%
65+	4%	3%	6%	4%	7%	6%	6%	7%

Similarly, the distribution of gender by age between the 2015 and 2018 studies shows no significant changes as the differences vary by only one to two percentage points.

2.2 Ethnicity

The distribution by ethnicity reflects the communities that Metrolink serves which is apparent both at the system and line level. At the system level, 67 percent of riders are non-Caucasian, continuing an upward trend observed in 2015 (65%). This is driven primarily by an increase in Asian/Pacific Islander riders, which now account for 22 percent of riders compared to 18 percent in 2015. The increase of Asian/Pacific Islander riders may in part be due to changes in the underlying population demographics. Census data for 2010 and the most recent available estimates for 2017 show that across Metrolink's six-county service area, the proportion of Asian/Pacific Islanders has increased slightly while the proportion of African Americans and Caucasians has declined slightly.

The proportion of Hispanic riders is essentially unchanged at one percentage point less than 2015, and the proportion of African American riders is trending slightly down from 15 percent in 2010 to 12 percent in 2015 and now 10 percent in 2018.

Figure 2: Ethnicity Distribution (Weekday)

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
Other	5%	4%	6%	5%	5%	5%	7%	5%
African American	10%	2%	19%	14%	9%	4%	14%	7%
Asian/Pacific Is.	22%	26%	12%	13%	35%	35%	22%	15%
Hispanic	29%	19%	28%	41%	29%	19%	25%	33%
Caucasian	33%	48%	35%	27%	22%	36%	32%	39%
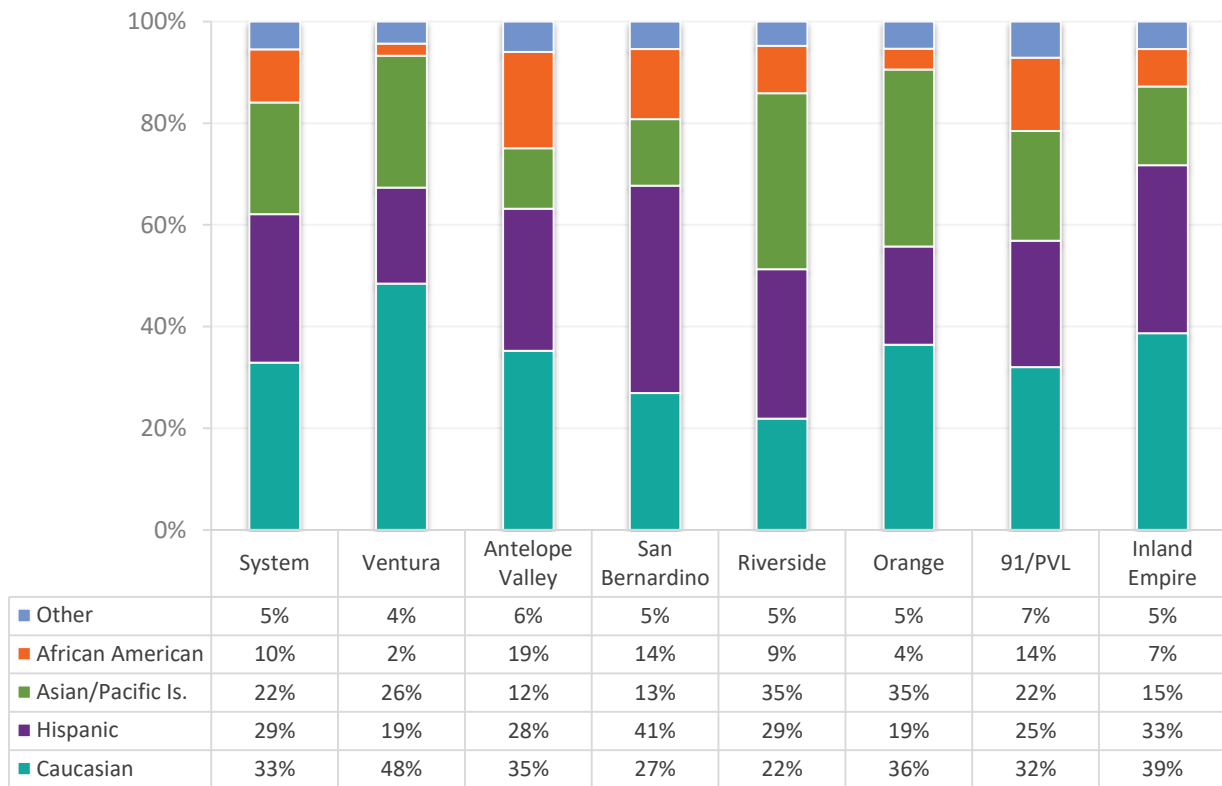
Ethnicity by line varies, generally reflecting the ethnic composition of the communities served by each line. For instance, nearly half (48%) of riders are Caucasian on the Ventura Line compared to only 22 percent for

the Riverside Line. On the Orange County Line, the two largest ethnicities are Caucasian riders (36%), and Asian/Pacific Islander riders (35%). The proportion of Hispanic riders is highest on the San Bernardino Line (41%), followed by the Inland Empire Line (33%). The Riverside and Orange County Lines have the largest proportion of Asian/Pacific Islander riders, with each at 35 percent.

Figure 3: System-Wide Ethnicity Distribution Over Time (Weekday)

	Caucasian	Hispanic	Asian/Pacific Islander	African American	Other
2008	41%	26%	17%	12%	4%
2010	41%	24%	17%	15%	4%
2015	35%	30%	18%	12%	5%
2018	33%	29%	22%	10%	5%
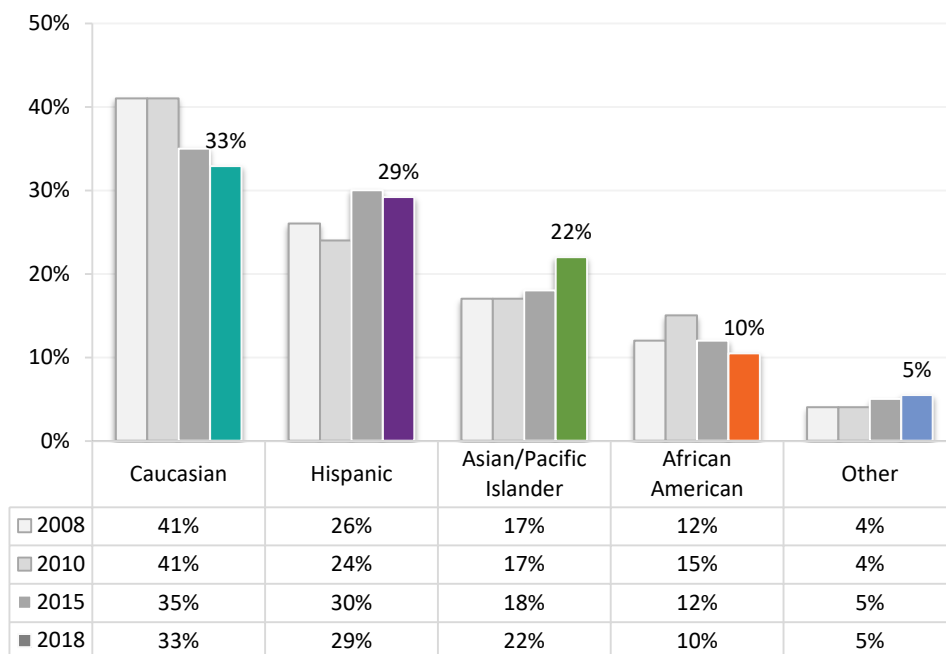
In order to show changes in ethnicity over time, the 2018 distribution is compared with results from previous studies in Figure 4. Since some of the previous studies were conducted only on weekdays, the 2018 data is also presented only for weekday riders.

Figure 4: Ethnicity by Average Ridership by Year (Weekday)
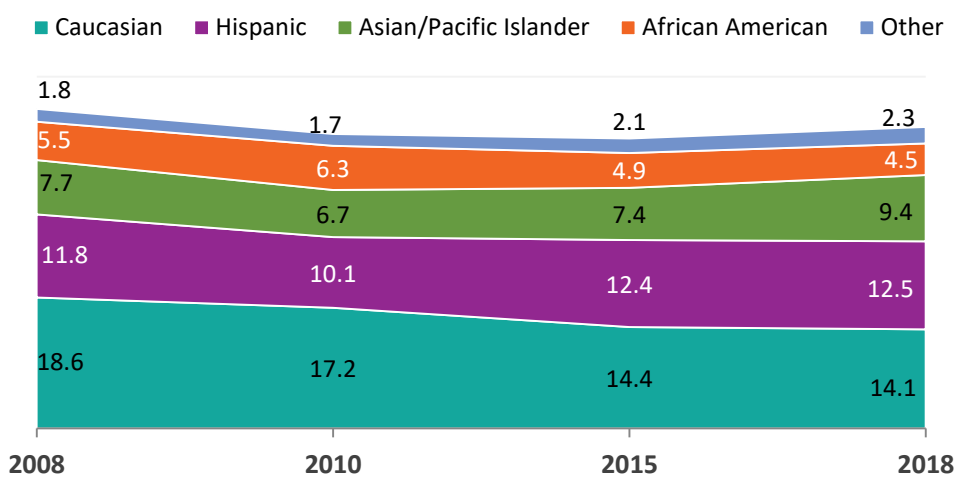
Over the last decade, Metrolink has seen a steady increase in the proportion of Non-Caucasian riders. The proportion of Asian riders experienced the greatest growth both as a percentage of total riders and in absolute numbers. Census data also shows an increase in the proportion of Asian/Pacific Islander population from 2010 to 2017 for Metrolink's combined six-county service area. The absolute number of Hispanic riders has increased slightly, but African American and Caucasian riders have decreased both in absolute numbers and as a percentage of all riders.

Table 2: System Ridership Composition: Absolute and Percentage by Year (Weekday)

ETHNICITY	2008		2010		2015		2018	
	Riders	%	Riders	%	Riders	%	Riders	%
Caucasian	18,632	41%	17,170	41%	14,432	35%	14,103	33%
Hispanic	11,815	26%	10,050	24%	12,370	30%	12,514	29%
Asian/ Pacific Islander	7,725	17%	6,700	16%	7,422	18%	9,426	22%
African American	5,453	12%	6,282	15%	4,948	12%	4,487	10%
Other	1,818	4%	1,675	4%	2,062	5%	2,346	5%
Total	45,443	100%	41,877	100%	41,233	100%	42,876	100%

Total 2018 Riders was scaled up to match average weekday ridership of 42,876

2.3   Income

Following the improving economic conditions, there is a statistically significant increase in the system-wide proportion of households with an annual household income of $50,000 or more from 70 percent in 2015 to 80 percent in 2018. This increase is also apparent across all Metrolink lines. The Antelope Valley Line reported the highest increase at 15 percentage points, although the proportion is still lower compared to 2008 (68%).   The San Bernardino and Inland Empire Lines show similar increases at 13 and 12 percentage points respectively.

The extension to the South Perris region may have had a slight negative impact on the proportion of riders above $50,000 for this line which partially offsets the average 10 percent increase across all lines, limiting the increase to 5 percentage points from 76 to 81 percent.

Figure 5: 2018 Annual Household Income of Over $50,000 (Weekday)
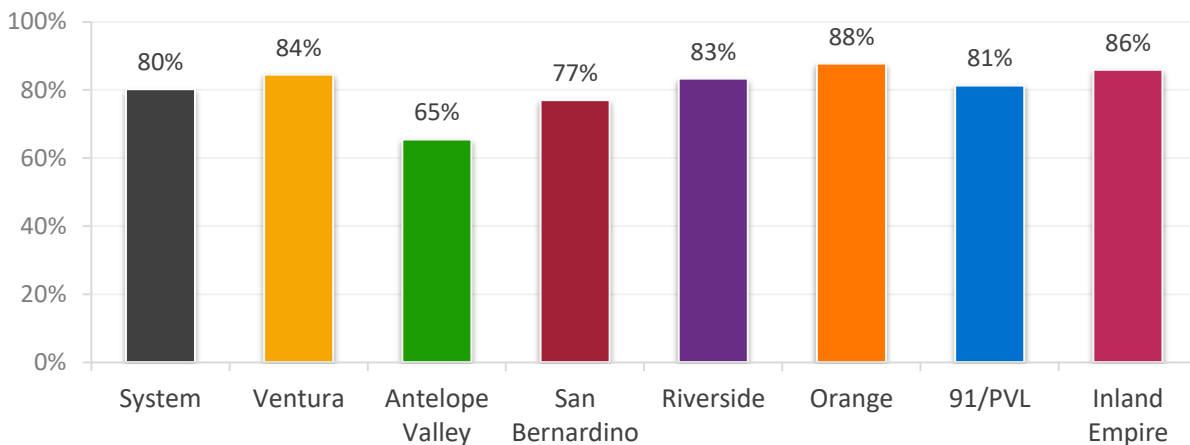
Using median household income provides a more general assessment of regional household incomes. The system-wide income continues to trend upward with an increase from $76,976 in 2015 to $92,833 in 2018. The Orange and Ventura County Lines exhibit the highest median household incomes and both now have six-digit median values of $117,280 and $106,233 respectively.

Table 3: Median Household Income by Year (Weekday)

Line	2008	2010	2015	2018
Ventura	$93,324	$83,792	$91,660	$106,233
Antelope Valley	$60,840	$60,766	$49,294	$74,091
San Bernardino	$58,289	$65,681	$66,614	$77,879
Riverside	$88,231	$86,028	$81,505	$96,310
Orange	$89,956	$85,218	$95,015	$117,280
91/PVL	$79,846	$84,562	$87,084	$90,860
IE	$83,073	$75,289	$73,626	$89,641
System	$78,490	$75,389	$76,976	$92,833

Although the Antelope Valley and San Bernardino Lines have experienced significant growth in median incomes, they are still the lowest median income lines in the system. The Antelope Valley Line experienced the largest increase in median income at +$24,797, as the proportion of riders in the higher income brackets increased. This is partly due to the increase of the proportion of full-time employment on the Antelope Valley Line since 2015 from 55 percent to 71 percent. Ventura, Riverside, and Orange County Lines have seen an increase between $14,000 and $22,000 since 2015. The Metrolink line with the lowest increase in median income is the 91/PVL Line which is $3,776. This is likely the result of the expansion of the 91/PVL Line into the Perris Valley region.

2.4   Automobile Availability

There are two ways of interpreting automobile availability: transit dependency and choice riders. Since the target sample is comprised of rail commuters, the latter is likely to be more prevalent, although transit dependency will remain fundamental in assessing transit-related travel behavior in Metrolink's region.

Figure 6: Automobile Availability (Weekday)
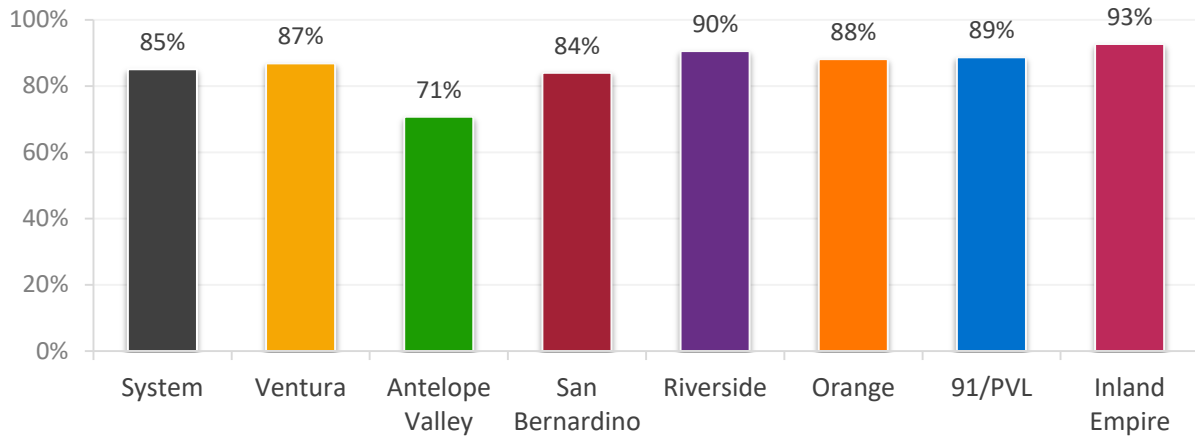
Overall, the proportion of riders who indicate that they have an automobile available to make their trip instead of taking Metrolink has increased slightly from 82 percent in 2015 to 85 percent. The highest increase in automobile availability is observed on the San Bernardino Line (from 73 to 84 percent) and on the Ventura Line (from 80 to 87 percent). The Antelope Valley Line also experienced a significant increase in automobile availability from 66 percent in 2015 to 71 percent in 2018. The increase in the proportion of automobile availability for these lines can be explained to a large extent by higher employment percentages and the related increase in income[1]. The San Bernardino, Ventura and Antelope Valley Lines, which had the greatest increase in auto availability, also all experienced double-digit increases in full-time employment, which is greater than the other lines.

Conversely, the proportion of automobile availability in the Orange County, 91/PVL, and Inland Empire Lines is essentially unchanged with changes of only one percentage point. Among those who don't have an automobile available, one-fifth (20%) state that they are unable to drive or don't know how to drive. The fact that four out of five riders prefer to take Metrolink despite owning a car translates into a significant reduction of 39,950 long trips each day on Southern California roadways.

2.5   Employment Status

The system-wide full-time employment level has recovered significantly in 2018 to 82 percent compared to 74 percent in 2015. Full-time employment has increased for the Ventura, Antelope Valley, San Bernardino, Orange County, and the 91/PVL Lines. Full-time employment has remained within a two percentage point variation for the Riverside and Inland Empire Lines, and did not decline by more than

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[1] Rice, S. R. (2002). Car ownership, employment, and earnings . *Journal of Urban Economics*, 127-128.

two percent for any line. The Antelope Valley, San Bernardino and Ventura County Lines experienced the greatest decline in full-time employment in 2015, and these were the three lines that experienced the greatest increases in 2018.

Figure 7: Employment Status (Weekday)

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
Not Employed/ Retired	3%	2%	8%	4%	1%	2%	1%	1%
Part-Time	3%	4%	6%	3%	3%	2%	3%	4%
Self-Employed	3%	2%	4%	3%	2%	4%	4%	2%
Student Only	9%	4%	12%	11%	8%	8%	7%	4%
Full-Time	82%	87%	71%	78%	86%	84%	86%	89%
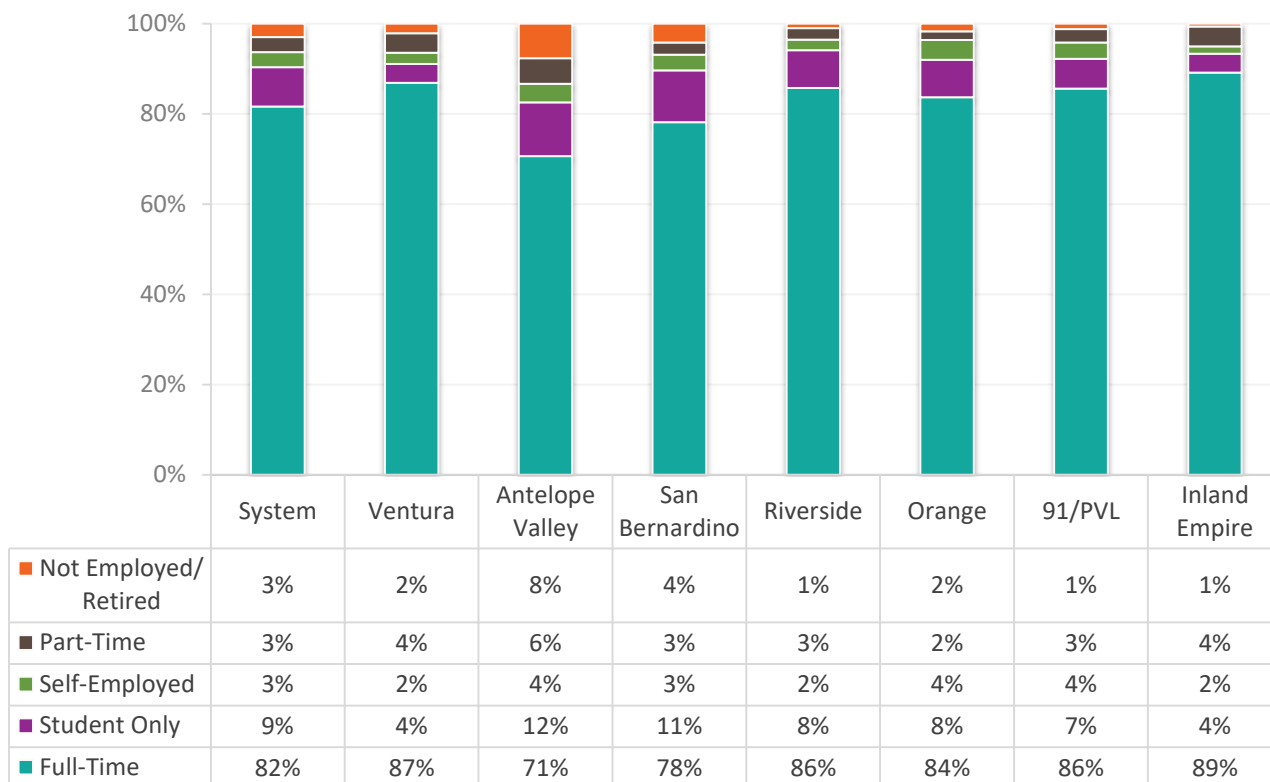
Consistent with increases in income levels and proportion of automobile ownership, the Ventura Line also has one of the highest proportions of employed/self-employed riders, which has increased from 88 percent in 2015 to 93 percent.

Table 4: System-wide Change of Employment Status by Year (Weekday)

Employment Status	2008	2010	2015	2018	% Change from 2015
Employed Full-Time	84%	78%	74%	82%	**8%**
Employed Part-Time	4%	6%	4%	3%	**-1%**
Self-Employed	4%	4%	6%	3%	**-3%**
Student	5%	6%	11%	9%	**-2%**
Not Employed/Retired	4%	6%	5%	3%	**-2%**

Nine percent of all Metrolink riders are students. Among this group, college/university students comprise the majority of student riders (78%), followed by high school (8%), and trade/technical school students (7%). On average, Metrolink student riders are 27 years old and ride Metrolink three days a week. They are more likely to use the round-trip/one-way ticket (74%) compared to the monthly passes (15%) and 7-day passes (9%). The distribution of student riders by ethnicity is 37 percent Hispanic, 23 percent Asian/Pacific Islander, 22 percent Caucasian, and 10 percent African American. This distribution is similar to overall ridership for Asian/Pacific Islanders and African Americans, but is more heavily weighted towards Hispanic student riders (37% vs 29%) and away from Caucasian student riders (22% vs 33%).

2.6   Language Spoken at Home

The distribution of primary language spoken at home is useful in developing the Limited English Proficiency (LEP) Plan for Metrolink as the recipient of federal financial assistance. While LEP is outside the scope of work of this study, at the minimum this report intends to explore the distribution of non-English languages spoken across all Metrolink lines.

Figure 8: Languages Spoken at Home

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
■ Other	11%	17%	7%	6%	9%	21%	13%	9%
■ Cantonese	2%	2%	1%	1%	5%	3%	1%	1%
■ Mandarin	3%	2%	0%	2%	9%	4%	2%	1%
■ Tagalog	3%	4%	4%	3%	6%	1%	5%	3%
■ Spanish	24%	15%	27%	31%	23%	16%	20%	27%
■ English	55%	60%	60%	55%	47%	53%	57%	59%
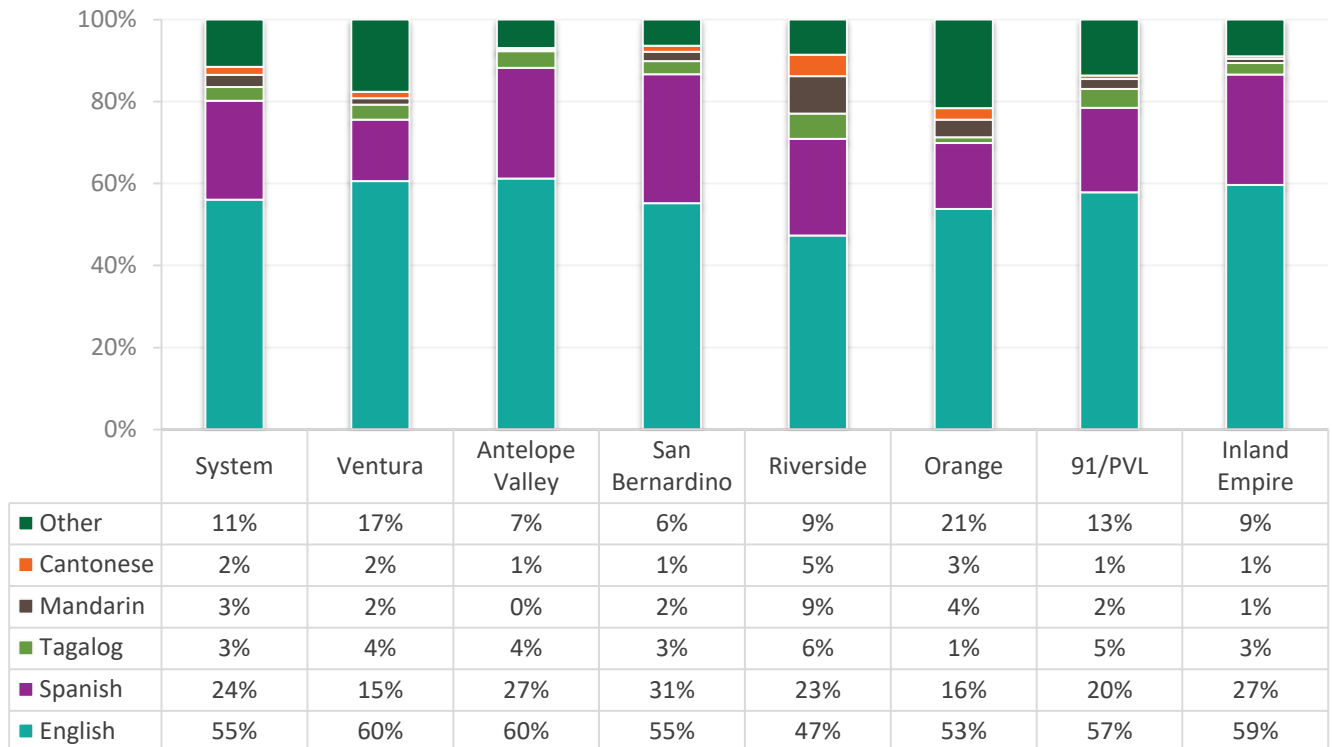
Among all Metrolink riders, 55 percent primarily speak English at home and 45 percent speak a different language with Spanish being predominant at 24 percent of all riders. The 2017 census estimates for the six-county service area show a slightly higher proportion of those who speak a different language other than English at 50 percent. Los Angeles County ranks the highest at 57 percent, followed by Orange County at 46 percent.

The distribution of other languages spoken at home is highly diverse. Tagalog, Mandarin and Cantonese Chinese follow at a much lower level at three, three and two percent, respectively. All other languages were identified by less than two percent of riders.

English is also the primary language spoken at home by riders across all Metrolink lines. The proportion of Spanish as a primary language is the second highest across all Metrolink lines and is most prevalent on the San Bernardino (31%) and Inland Empire (27%) Lines. The Riverside Line has the highest proportion of Asian/Pacific Islander languages, including Mandarin and Cantonese (14%) and Tagalog (6%), reflecting the population characteristics of the San Gabriel Valley. The proportion of Korean as a primary language is more apparent on the 91/PVL Line and the Orange County Line (each at 5%), and the Riverside Line (3%). Hindi is observed in both the Ventura County (4%) and Inland Empire Lines (2%). Vietnamese as a primary language is highest on the Orange County Line at three percent, compared to less than one percent for the other lines.

Figure 9: English Proficiency

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
■ Not Well	3%	4%	6%	4%	3%	2%	3%	3%
■ Well	15%	11%	16%	13%	13%	20%	14%	11%
■ Very Well	82%	86%	77%	83%	84%	78%	83%	86%
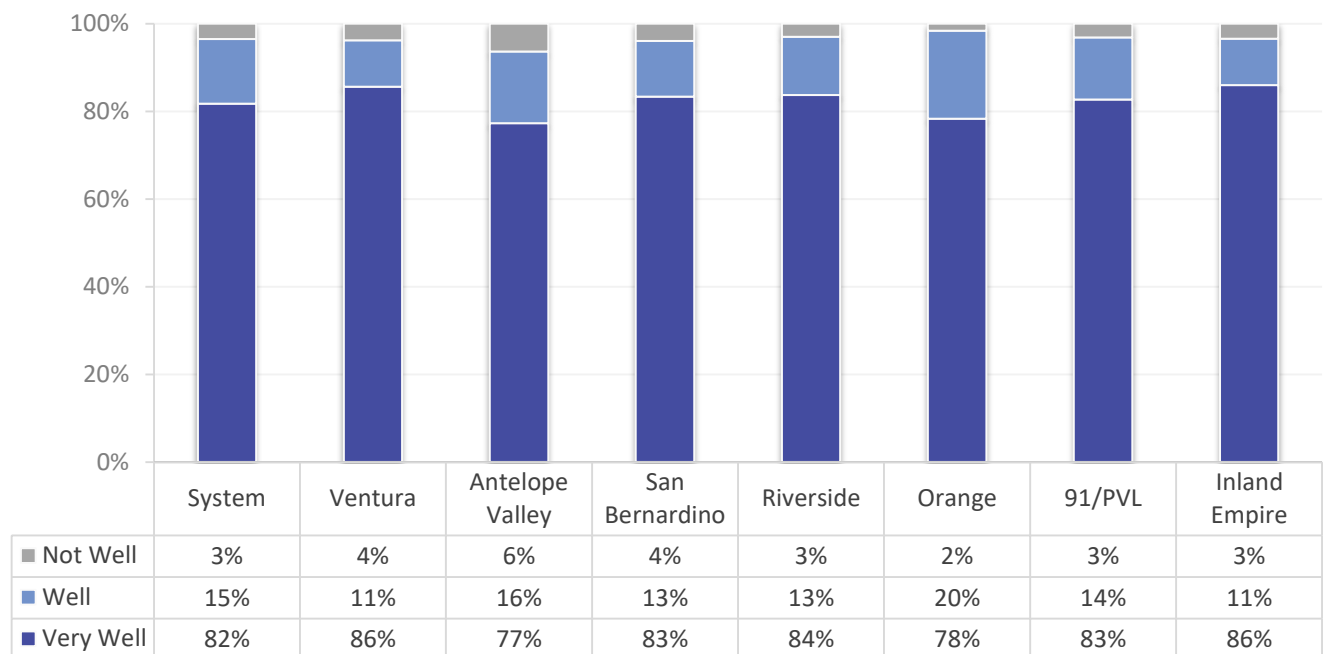
Among the 45 percent of Metrolink users who speak a language other than English at home, only three percent indicate that they speak English less than well. Within this group that would be considered LEP (speak English "less than well"), 67 percent are Spanish speakers. This is true across most lines, however on the Orange County and Inland Empire Lines the distribution is more diverse with 20 and 56 percent being Spanish speakers.

CHAPTER 3 – TRIP CHARACTERISTICS

This chapter evaluates Metrolink patron's travel behavior at the line and system level. As appropriate, the 2018 Onboard Survey results are compared to previous years' studies in order to identify trends and changes over time. Because the results from previous studies are limited to weekday data, weekdays are presented in the majority of the following graphs and tables. Notable differences in weekend ridership will be addressed in writing.

3.1   Frequency of Use

3.1.1   Current Frequency of Use

Figure 10: Ridership Frequency by Line (Weekday)

	6-7 Days/ Week	5 Days/ Week	4 Days/ Week	3 Days/ Week	1-2 Days/ Week	1-3 Days/ Month	< Once/ Month
System	4%	61%	11%	6%	6%	6%	6%
Ventura	2%	67%	13%	4%	4%	6%	3%
Antelope Valley	5%	51%	10%	5%	10%	11%	8%
San Bernardino	5%	57%	10%	6%	6%	6%	10%
Riverside	3%	69%	12%	6%	6%	3%	2%
Orange	3%	58%	10%	7%	7%	6%	9%
91/PVL	4%	64%	11%	6%	6%	6%	3%
Inland Empire	3%	70%	10%	6%	4%	3%	3%
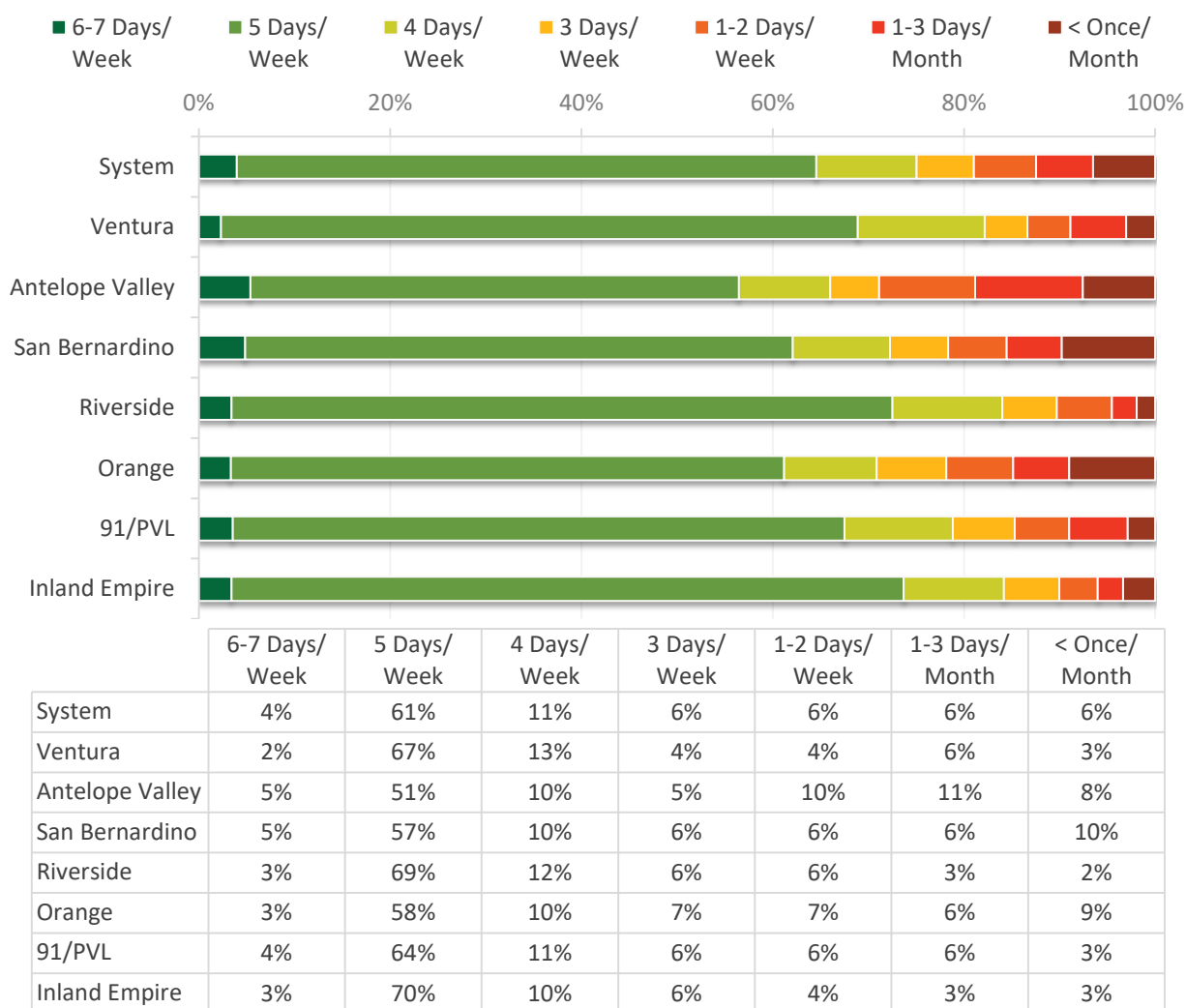
Most Metrolink trips are taken by regular riders. About two-thirds (65%) of Metrolink customers continue to have a high frequency of ridership of five or more days a week, a two point increase since 2015 (63%). The highest proportion of high-frequency ridership can be found on the Riverside (72%) and Inland Empire (73%) Lines. Lower riding frequency of four days a week or less are more common for riders on the Antelope Valley Line (44%), Orange County Line (39%), and the San Bernardino Line (38%).

Among the regular riders who use Metrolink five or more days a week, there are some notable changes since 2015. The Antelope Valley Line has experienced an increase of eight points and the San Bernardino Line has seen a seven point jump. Conversely, the Riverside Line has seen a decrease of ten points. The increasing proportion of regular riders on both the Antelope Valley and San Bernardino Lines is consistent with the increase in the proportion of employed riders for these lines.

Table 5: Ridership Frequency by Line and Year (Weekday)

FREQUENCY	System		Ventura		Antelope Valley		San Bernardino		Riverside		Orange		91/PVL		Inland Empire	
	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15
5 + Days Week	65%	63%	69%	68%	56%	48%	62%	55%	73%	83%	61%	59%	68%	68%	74%	81%
4 Days/ Week	11%	11%	13%	11%	10%	12%	10%	12%	12%	9%	10%	13%	11%	12%	10%	10%
3 Days/ Week	6%	7%	4%	8%	5%	7%	6%	6%	6%	3%	7%	10%	6%	7%	6%	4%
1-2 Days/ Week	6%	7%	4%	8%	10%	10%	6%	9%	6%	2%	7%	8%	6%	4%	4%	3%
1-3 Days/ Month	6%	6%	6%	3%	11%	13%	6%	9%	3%	1%	6%	3%	6%	5%	3%	2%
< Once/ Month	6%	6%	3%	2%	8%	10%	10%	9%	2%	2%	9%	6%	3%	4%	3%	1%

Weekday ridership is in stark contrast to weekend ridership, where the vast majority (75%) of weekend riders uses Metrolink one to three days a month or less which is a 10 percentage point increase from 2015.

Figure 11: Mean Ridership Frequency by Line (Days per Week) (Weekday)
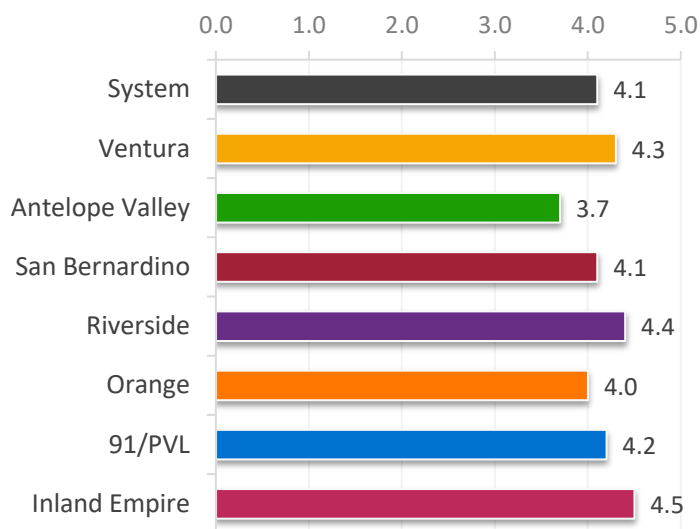
The average days per week for weekday riders who use Metrolink is 4.1, which is almost identical to 2015 (4.0). The Antelope Valley Line with 3.7 days per week continues to be the lowest average days per week, although this is up from 3.4 in the previous study. The San Bernardino Line, whose mean value was 3.6 in 2015, has experienced a substantial increase to 4.1 this year and is now in line with the system-wide average. In contrast, the average days per week traveled by Riverside Line riders, while still above the system-wide average, has declined from 4.7 to 4.4 this year.

The remaining Lines; Ventura, Orange, 91/PVL and Inland Empire all remain within a tenth of a day when comparing 2018 to 2015.

Table 6: Mean Ridership Frequency by Line and Year (Days per Week) (Weekday)

LINE	Average Days/Week	
	'18	'15
System	4.1	4.0
Ventura	4.3	4.2
Antelope Valley	3.7	3.4
San Bernardino	4.1	3.6
Riverside	4.4	4.7
Orange	4.0	4.0
91/PVL	4.2	4.2
Inland Empire	4.5	4.6

Table 7: Mean Ridership Frequency by Year (Days per Week) (Weekday)

YEAR	% Ridings 5+ Days/Week	Days / Week Riding Mean
2008	66%	4.2
2010	62%	4.0
2015	63%	4.0
2018	65%	4.1

Table 8: Mean Ridership Frequency by Fare Type (Days per Week) (Weekday)

Fare Type	Average Days/Week
System	4.1
Monthly Pass	4.9
7-Day Pass	5.0
One-way/Round Trip	2.5

3.1.2   Frequency of Use since Last Year

Note: this subsection covers results for both weekday and weekend riders.

The 2018 study included a new question comparing riders' frequency of use this year compared to last year. On each line, a clear majority of riders say that they ride at the same frequency as a year ago. Riders on the Antelope Valley Line exhibit the highest proportion of riders who say they ride Metrolink more frequently now at 31 percent. At the opposite end of the spectrum, the proportion of riders that say they are riding less often is very consistent with all but one line having either six or seven percent saying they are riding less. The sole exception is the Riverside Line where only four percent are riding less often than a year ago.

Figure 12: Frequency of Use since Last Year
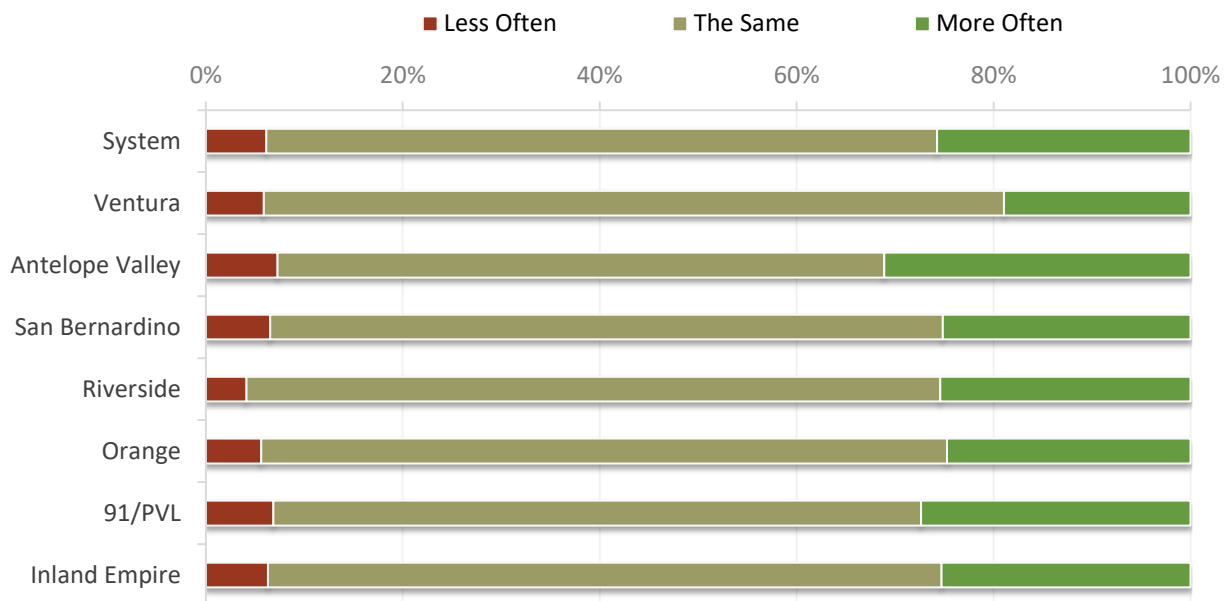
	Less Often	The Same	More Often
System	6%	68%	26%
Ventura	6%	75%	19%
Antelope Valley	7%	62%	31%
San Bernardino	7%	68%	25%
Riverside	4%	70%	25%
Orange	6%	70%	25%
91/PVL	7%	66%	27%
Inland Empire	6%	68%	25%

Riders who state that they are either riding more or less were also asked for a reason why their frequency changed. Those who ride Metrolink more than last year most commonly cite that they have changed their job (28%), are generally traveling more (18%), have changed home location (17%), and "other" reasons (18%), most commonly listing "traffic" as their "other" reason.

Those who travel less frequently indicate that they generally travel less (25%), have issues with Metrolink schedules (18%), and "other" (23%), where "having a car" and a "work schedule change" were frequently mentioned.

Figure 13: Reasons for the Change in Frequency of Use since Last Year
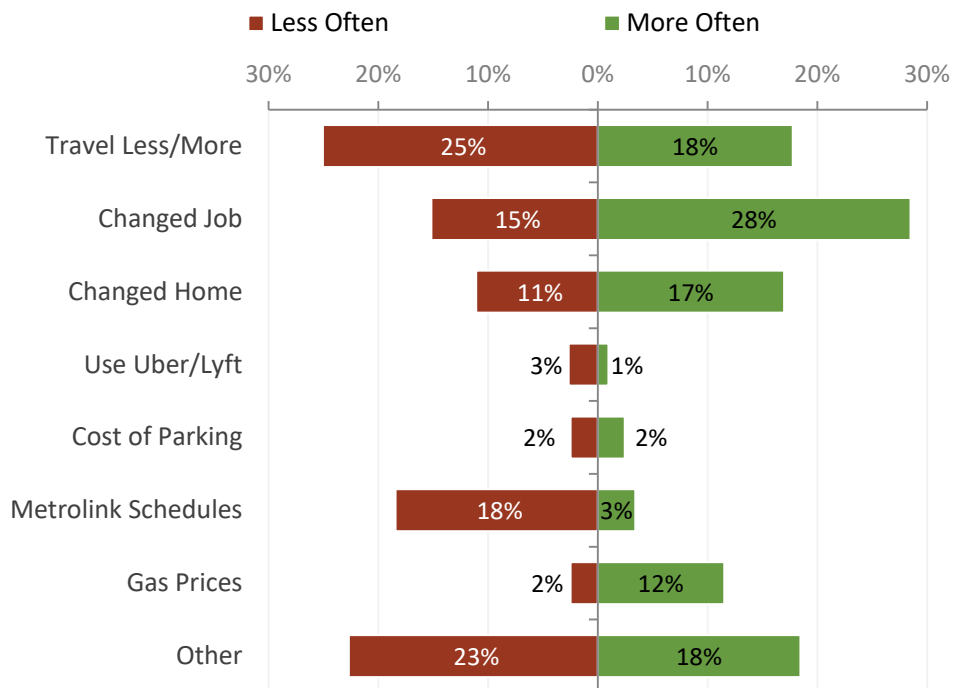
3.2   Ridership Tenure

Most Metrolink riders have been riding for an extended period with more than one-half (55%) riding for over two years which is identical to 2015. At the same time, Metrolink continues to attract new riders with 30 percent of trips taken by riders in their first year. This is also essentially unchanged from 2015 (29%).

Figure 14: Ridership Tenure by Line (Weekday)

	First Time	<6 Months	6-12 Months	1-2 Years	2-4 Years	4-6 Years	6+ Years
System	2%	17%	11%	14%	16%	8%	31%
Ventura	2%	20%	10%	11%	18%	9%	30%
Antelope Valley	2%	18%	10%	11%	17%	9%	33%
San Bernardino	2%	16%	10%	14%	13%	9%	37%
Riverside	1%	18%	11%	13%	15%	7%	35%
Orange	3%	17%	11%	15%	20%	8%	26%
91/PVL	2%	19%	13%	14%	15%	10%	28%
Inland Empire	3%	16%	13%	16%	18%	9%	25%
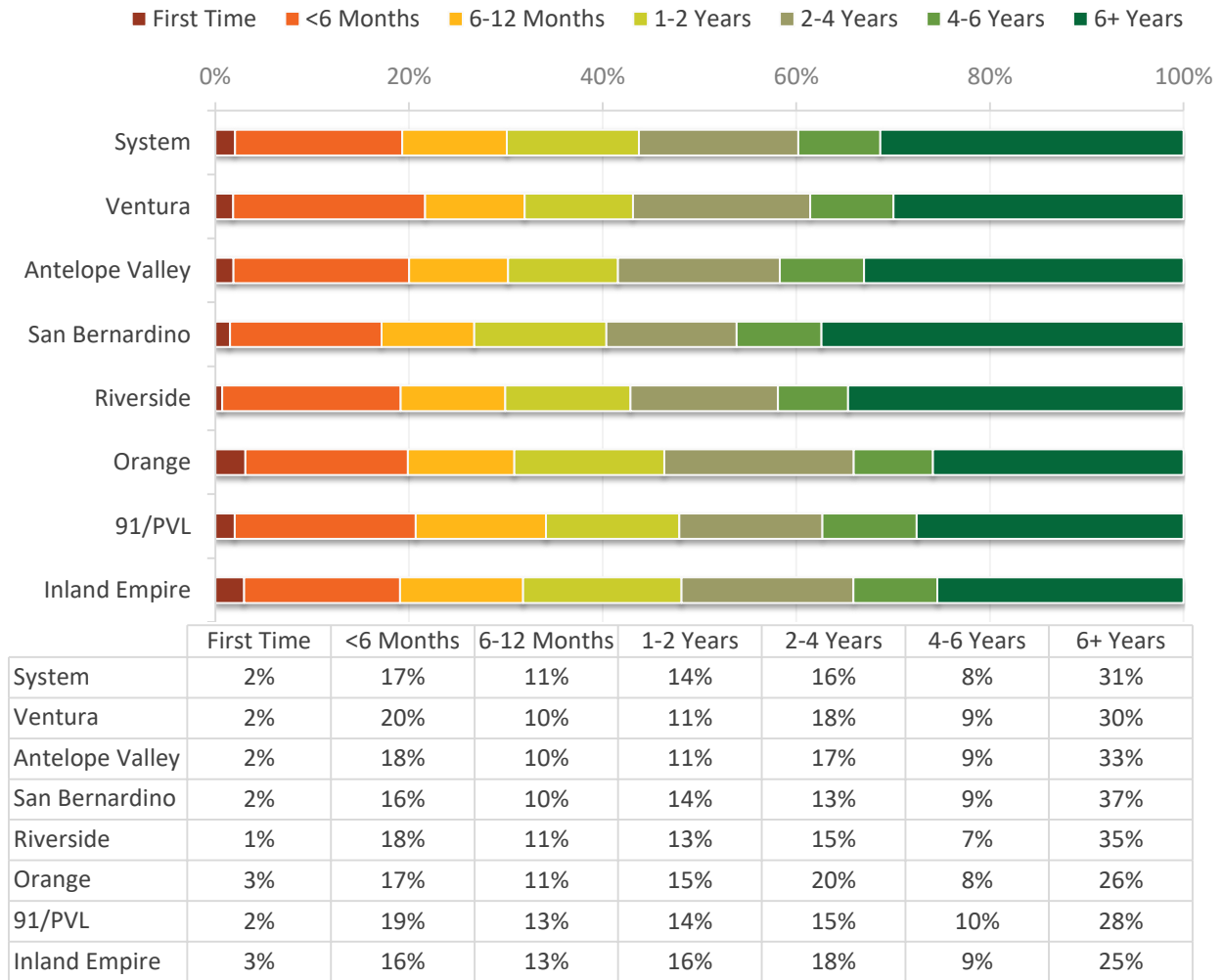
When comparing the length of use by line, new weekday riders who have been Metrolink customers for less than one year are more common on the 91/PVL Line (34%). This is as expected as the 91/PVL expanded 24 miles into the Perris Valley region which included four new stations to serve the respective areas.

Riders during the weekend are more likely than weekday riders to have been customers for less than one year (43% vs 30%), whereas weekday riders are more likely to be long term riders of six years or more (31% vs 27%).

Table 9: Ridership Tenure by Year (Weekday)

TENURE	2008	2010	2015	2018
First Time	2%	3%	1%	2%
<6 Months	15%	12%	18%	17%
6-12 Months	12%	8%	10%	11%
1-2 Years	14%	13%	15%	14%
2-4 Years	18%	11%	17%	16%
4-6 Years	11%	14%	10%	8%
6+ Years	27%	40%	28%	31%

Ridership tenure categories are virtually unchanged from 2015[2]. However, there is a three point increase from 28 percent to 31 percent for riders of six years or more.

The high proportion of individuals who have used Metrolink for a long time period indicates satisfaction with Metrolink service. On the other hand, a higher proportion of newer riders could result from growing ridership, as observed on the 91/PVL Line. Since the percentage distribution always adds up to 100 percent, a higher percentage in one group must come from a lower percentage of the other group. Both groups could increase in absolute numbers without substantially changing the percentage distribution.

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[2] The category "Not a Regular Rider" was added in 2015 and not included in part of the tenure results shown above. However, Results are similar to 2008.

3.3 Trip Purpose

Work and business appointment trips among the weekday riders are essentially unchanged from 2015 at 82 percent in 2018. The Riverside (91%) and Inland Empire (90%) Lines continue to have the highest proportion of work-related trips; however both have experienced declines of four and six points respectively since 2015. The San Bernardino (79%) and Antelope Valley (70%) Lines have each experienced an increase in work-related trips since 2015, jumping nine and five points respectively. The increase of work-related trips for both the Antelope Valley and San Bernardino Lines is in line with the increase in median income for these two lines.

As expected, the vast majority (89%) of weekend ridership trips are non-work related. This is a seven point increase from 82 percent in 2015.

Figure 15: Trip Purpose by Line (Weekday)

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
■ Non-Work	18%	13%	30%	21%	10%	17%	12%	10%
■ Business Appt.	1%	1%	2%	2%	1%	2%	1%	0%
■ Work	81%	86%	68%	77%	90%	82%	87%	90%
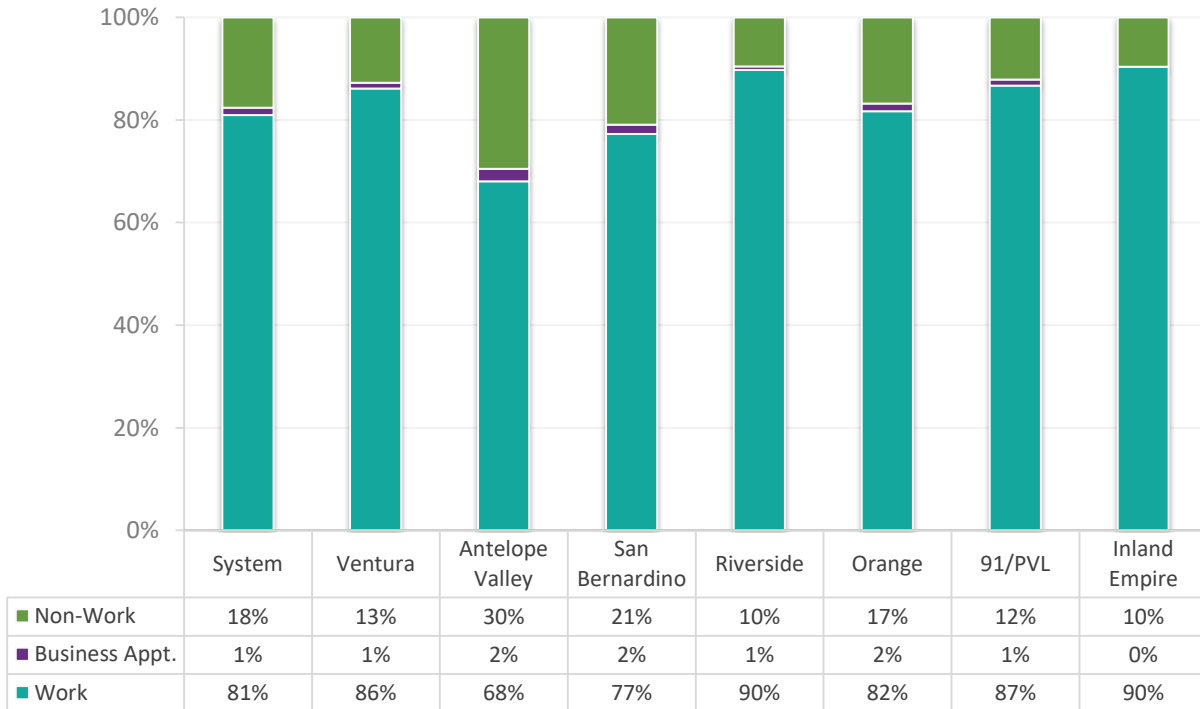
Table 10: Trip Purpose by Line and Year (Weekday)

TRIP PURPOSE	System		Ventura		Antelope Valley		San Bernardino		Riverside		Orange		91/PVL		Inland Empire	
	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15
Work	81%	79%	86%	85%	68%	59%	77%	66%	90%	94%	82%	85%	87%	86%	90%	96%
Business Appt.	1%	2%	1%	2%	2%	6%	2%	4%	1%	1%	2%	2%	1%	1%	0%	0%
Non-Work	18%	19%	13%	14%	30%	35%	21%	30%	10%	6%	17%	14%	12%	14%	10%	4%

3.4   Work Destination by County

Table 11: Work Trip Destination by County and Year (Weekday)

WORK COUNTY	System		Ventura		Antelope Valley		San Bernardino		Riverside		Orange		91/PVL		Inland Empire	
	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15
Los Angeles	82%	75%	93%	92%	98%	99%	97%	94%	97%	100%	85%	69%	85%	81%	1%	0%
Orange	16%	22%	4%	0%	1%	1%	0%	0%	0%	0%	15%	30%	10%	17%	95%	99%
San Bernardino	1%	1%	0%	0%	0%	1%	3%	6%	2%	0%	0%	0%	0%	0%	0%	0%
Riverside	1%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	5%	2%	3%	0%
Ventura	0%	1%	2%	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
San Diego	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	1%

With Los Angeles being the second largest city in the United States, it is not surprising that Los Angeles County attracts the largest proportion of weekday work trips for Metrolink riders at 82 percent system-wide. This is a seven percentage point increase from 2015 (75%), and on par with 2008 (81%).   Similar to the 2015 result, nearly all riders going to work on the Antelope Valley Line (98%), San Bernardino Line (97%), and Riverside Line (97%) are going to work in Los Angeles County. The Inland Empire Line, which does not have a station within Los Angeles County, continues to have the lowest proportion (1%) of riders heading to Los Angeles County for work, instead having the highest proportion of riders heading towards Orange County (95%). The Orange County Line has the second highest proportion of riders going to work in Orange County at 15 percent.

All other counties that Metrolink riders work within account for only a fraction of system-wide ridership, and have not experienced any notable changes.

3.5   Home Origins by County

Table 12: Home Origins by County and Year (Weekday)

HOME COUNTY	System		Ventura		Antelope Valley		San Bernardino		Riverside		Orange		91/PVL		Inland Empire	
	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15
Los Angeles	40%	38%	60%	47%	96%	98%	38%	40%	40%	35%	22%	19%	14%	19%	1%	0%
Orange	19%	17%	5%	4%	1%	1%	0%	0%	1%	1%	72%	72%	27%	29%	10%	5%
San Bernardino	19%	21%	0%	0%	0%	1%	59%	56%	24%	30%	0%	0%	3%	3%	11%	18%
Riverside	18%	18%	0%	1%	1%	0%	3%	3%	35%	34%	1%	1%	56%	49%	77%	77%
Ventura	3%	5%	35%	47%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
San Diego	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	4%	8%	0%	0%	2%	0%

Overall, the largest proportion of system-wide riders live within Los Angeles County (40%).Orange County (19%), San Bernardino County (19%), and Riverside County (18%) each hold a similar proportion of system-wide riders, though there is significant variation in this distribution by line with results weighted towards the origin county of each line.

Table 13: Home and Work County Matrix (Weekday)

| | | WORK COUNTY | | | | | | |
		Los Angeles	Orange	San Bernardino	Riverside	Ventura	San Diego	Total
HOME COUNTY	Los Angeles	34%	3%	1%	0%	0%	0%	38%
	Orange	18%	1%	0%	1%	0%	0%	20%
	San Bernardino	17%	1%	0%	0%	0%	0%	19%
	Riverside	9%	10%	0%	0%	0%	0%	19%
	Ventura	3%	0%	0%	0%	0%	0%	3%
	San Diego	0%	1%	0%	0%	0%	0%	1%
	Total	82%	16%	1%	1%	0%	0%	100%

3.6   Fare Media

3.6.1   Trip Fare

The 10-trip ticket was eliminated in 2012, which likely converted a majority of the former 10-trip ticket users to customers using a one-way/round trip ticket or a 7-day pass, thus creating a noticeable difference in fare media usage between 2010 and 2015.

Another significant change over the last two years is the reduction in the cost of several fares. Currently four 7-day passes cost the same as a monthly pass, so unless someone travels 22 days a month, buying a combination of weekly and round-trip tickets may be more cost-effective than purchasing a monthly pass. This is likely to continue to shift riders from monthly passes to a combination of 7-day passes and round-trip tickets.

Figure 16: Fare Media Use by Year (Weekday)

	2008	2010	2015	2018
Monthly Pass	63%	60%	54%	52%
One-Way/Round Trip	16%	18%	32%	33%
7-Day Pass			12%	13%
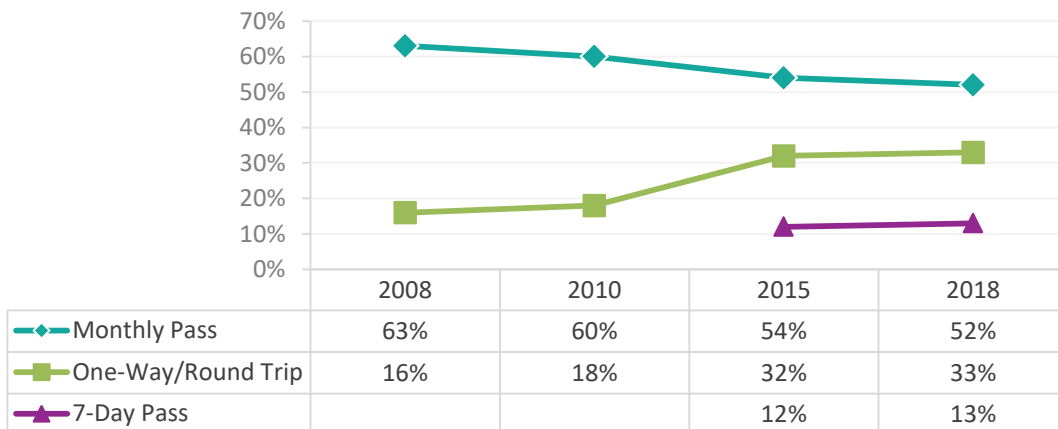
In 2018 monthly passes continue to be the most common fare type for weekday riders, accounting for just over half (52%) of all riders, which is similar to 2015 (54%). One-way and round-trip fares account for one-third (33%) of ridership and, although its use has been increasing since 2008, it is essentially unchanged from 2015 (32%).

Weekend riders most commonly use weekend passes (42%) and one-way/round-trip tickets (51%). Compared to 2015, weekend passes (41%) are essentially unchanged, and one-way/round-trip ticket usage is slightly higher up two percentage points from 49 percent in 2015.

Choice of fare type varies significantly across the different Metrolink lines. Although the 7-day pass exhibits the least variation by line with a system-wide average of 13 percent, it is used by a significantly higher proportion of riders on the Inland Empire Line at 25 percent. Monthly passes are the most commonly used fare type for six of the seven lines, with the sole exception of the Antelope Valley line, where one-way/round-trip tickets are more prevalent. Their use is highest on the Ventura (65%) and Riverside Lines (62%), and lowest on the Antelope Valley Line (40%). Although the Ventura and Riverside Lines had the highest proportion of monthly pass users, their use is going in opposite directions from 2015 with the Ventura Line increasing six percentage points while the Riverside Line declined by 11 percentage points. The Riverside Line's decrease in monthly pass usage was offset by a 12 percentage point increase in one-way/round-trip tickets. The 91/PVL Line also experienced a shift with the introduction of the four new stations, away from monthly passes declining from 57 to 51 percent, and towards one-way/round-trip tickets, up from 26 to 34 percent.

Figure 17: Fare Media Use by Line (Weekday)

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
■ Monthly Pass	52%	65%	40%	49%	62%	56%	51%	48%
■ 7-Day Pass	13%	10%	10%	13%	13%	10%	14%	25%
■ One-way/Round Trip	33%	24%	45%	37%	25%	32%	34%	26%
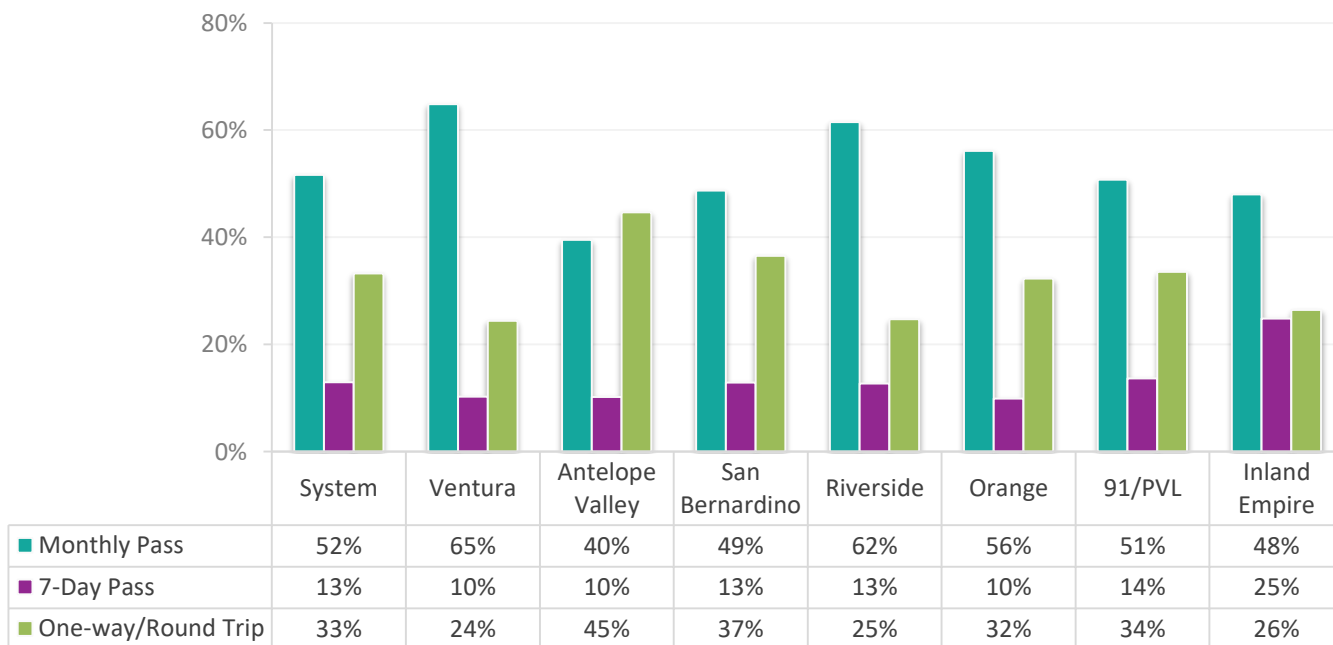
The highest proportions of one-way/round trip fares by line are on the Antelope Valley (45%) and San Bernardino Lines (37%).

Table 14: Fare Media Use by Line and Year (Weekday)

FARE	System		Ventura		Antelope Valley		San Bernardino		Riverside		Orange		91/PVL		Inland Empire	
	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15
Monthly Pass	52%	54%	65%	59%	40%	35%	49%	46%	62%	73%	56%	56%	51%	57%	48%	61%
7-Day Pass	13%	12%	10%	8%	10%	9%	13%	10%	13%	12%	10%	10%	14%	15%	25%	21%
One-way/ Round Trip	33%	32%	24%	32%	45%	43%	37%	41%	25%	13%	32%	33%	34%	26%	26%	17%

The distribution of weekday rider's fare media choice by demographic segments has not varied significantly since 2015. Riders who are in the age group of less than 30 years old, as well as those who are 65 and older, and riders with a household income of less than $50,000 continue to have the highest use of one-way/round trip tickets. Riders who live in households of higher incomes, as well as those over the age of 30 and under 60 more commonly use the monthly passes.

Table 15: Fare Media Use by Select Demographics by Year (Weekday)

DEMOGRAPHICS	Monthly Pass		7-Day Pass		One-way/ Round Trip		Other	
	'18	'15	'18	'15	'18	'15	'18	'15
Male	51%	53%	15%	13%	33%	31%	2%	3%
Female	53%	56%	11%	11%	33%	31%	2%	3%
< 30	28%	30%	13%	13%	58%	55%	0%	1%
30-40	55%	58%	14%	14%	28%	25%	2%	3%
45-54	59%	63%	13%	12%	26%	22%	2%	3%
55-64	62%	61%	13%	9%	22%	25%	2%	4%
65+	44%	44%	2%	6%	52%	46%	2%	4%
Caucasian	55%	59%	10%	11%	34%	29%	1%	1%
Hispanic	45%	48%	17%	15%	36%	34%	1%	2%
Asian/Pacific Is.	65%	70%	11%	10%	24%	19%	1%	1%
African American	37%	36%	14%	11%	43%	41%	7%	12%
Other	46%	42%	13%	10%	38%	43%	3%	5%
< $50,000	23%	28%	12%	15%	61%	50%	5%	8%
≥ $50,000	59%	66%	13%	11%	27%	23%	1%	1%
First Time	17%	1%	21%	0%	58%	97%	3%	2%
< 6 Months	45%	43%	17%	20%	36%	35%	2%	2%
6-12 Months	50%	57%	14%	15%	36%	26%	0%	2%
1-2 Years	51%	50%	14%	14%	34%	33%	2%	3%
2-4 Years	49%	56%	13%	13%	36%	28%	2%	3%
4-6 Years	53%	59%	14%	10%	31%	27%	2%	4%
6+ Years	65%	69%	9%	7%	23%	20%	3%	3%

3.6.2 Ticketing App Awareness

Since the discussion in this section utilized the result of a new question not presented in the previous studies, all charts are produced using both the weekday and weekend data.

The 2018 onboard study included a new question regarding awareness of the Metrolink ticketing app released in 2016 after the previous onboard survey[3]. System-wide, the vast majority of riders (92%), are aware of the app. The proportion of riders that use the app in their commute is significantly lower at 49 percent. Use of the app is highest on the Inland Empire Line (65%), followed by the 91/PVL (56%). The proportion of customers who are both aware of the app and currently use it is the highest proportion of riders across all lines when compared to riders who are aware but don't use it, and riders that are not aware of the app. As expected from the higher frequency of use, weekday riders are more aware of the Metrolink ticketing app than weekend riders (93% vs. 74%). Half (50%) of weekday riders use the app while only 38 percent of weekend riders use it.

Figure 18: Awareness of Ticketing App

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
■ Yes - Used App but Stopped	6%	8%	5%	7%	7%	7%	6%	5%
■ Yes - Aware & Not Interested	23%	28%	24%	27%	28%	19%	19%	16%
■ Yes - Aware & Intend to Try	13%	12%	13%	13%	12%	16%	12%	9%
■ Yes - Use It	49%	47%	46%	43%	49%	50%	56%	65%
■ No - Did Not Know	8%	5%	11%	11%	5%	8%	6%	5%

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[3] https://www.railwayage.com/cs/metrolink-launches-mobile-ticketing-app/
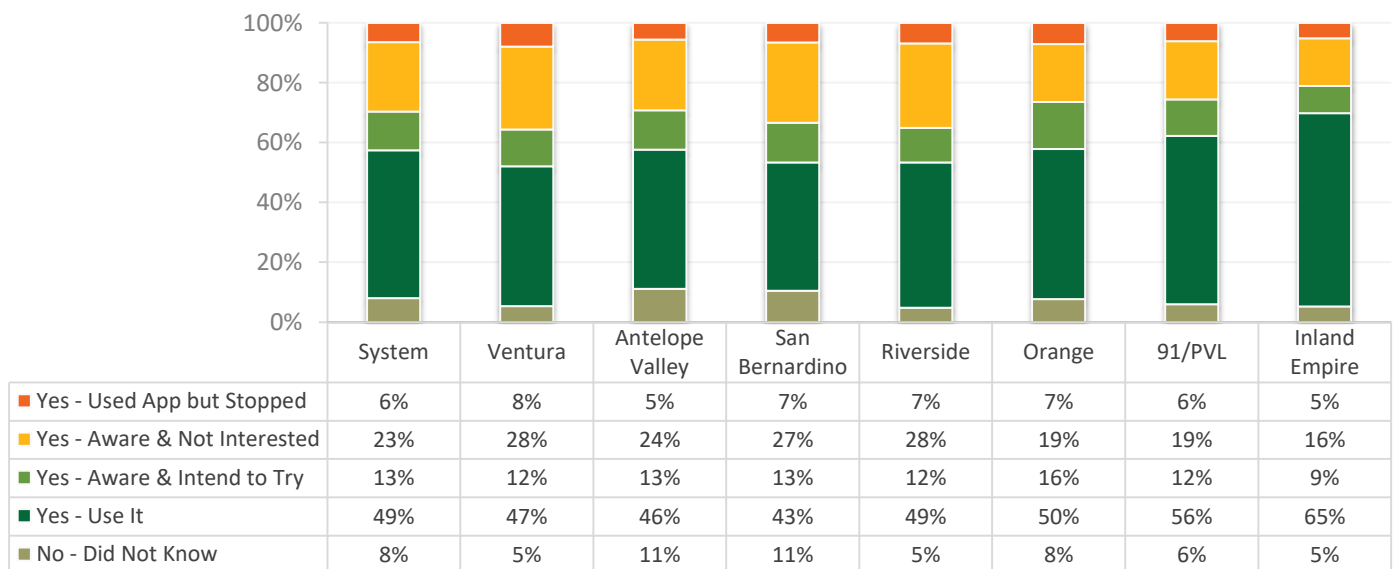
3.7 Station Access and Egress Modes

Figure 19: Access Mode from Home by Year (Weekday)

	2008	2010	2015	2018
■ Other	1%	0%	1%	0%
■ Rode a bike	2%	2%	2%	1%
■ Carpooled	4%	5%	2%	2%
■ Lyft/Uber	0%	0%	0%	2%
■ Bus Transfer	4%	4%	4%	2%
■ Metro Transfer	3%	4%	5%	4%
■ Walked	4%	4%	5%	4%
■ Dropped Off	13%	17%	19%	17%
■ Drove Alone	70%	64%	63%	67%
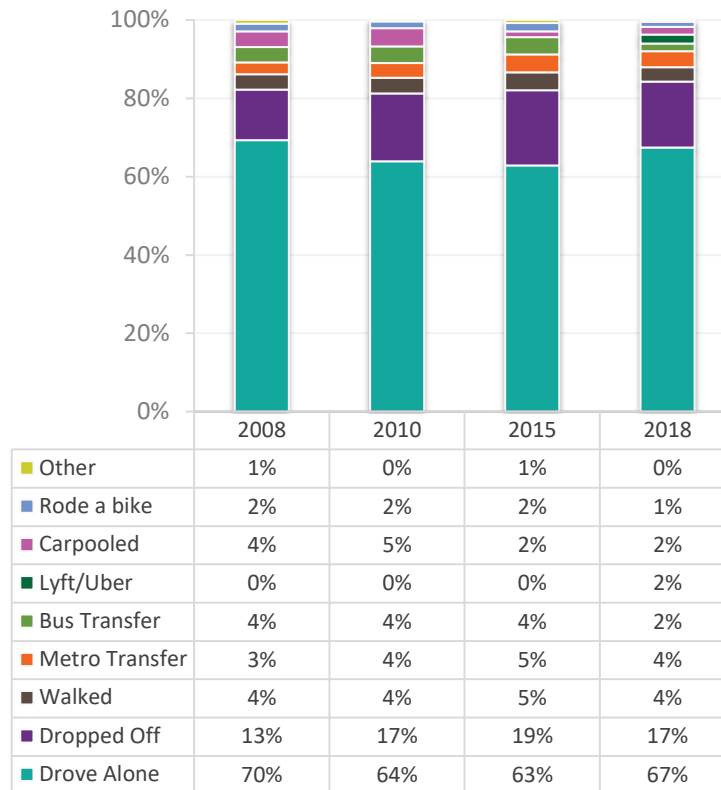
Weekday riders predominantly rely on driving alone (67%) to reach their first boarding point from their home, which is a four point increase since 2015. The increase of customers who drive alone has been offset by minor decreases in other access-mode categories, the largest decrease is for riders who are dropped off which has decreased to 17 percent from 19 percent in 2015. The use of public transit as an access mode has also declined slightly from nine percent in 2015 to six percent in 2018. On average, the distance from home to access the station is 6.1 miles which is similar to the 2015 distance of 5.9 miles.

Weekend riders have a much different access mode distribution, as they are almost equally as likely be dropped off (26%) as to drive alone (30%) to reach their first Metrolink boarding point from home.

The majority of weekday work trips head towards L.A. Union Station, which reflects the high rate of train transfer/Metro Rail service for weekday riders' egress mode (36%), an increase of ten points from 2015. This may be partially reflective of the seven point uptick in work destinations within L.A. County since the previous study. The train egress-mode increase is also predominantly offset by a seven point decrease of customers who transfer to a bus (7%) as well as a four point decrease to those who are picked up (7%).

Figure 20: Egress Mode to Work by Year (Weekday)

	2008	2010	2015	2018
■ Other	7%	1%	1%	1%
■ Lyft/Uber	0%	0%	0%	3%
■ Carpool	3%	3%	3%	2%
■ Ride a Bike	2%	2%	3%	3%
■ Dash Bus	3%	4%	3%	2%
■ Bus Transfer	9%	13%	14%	7%
■ Picked Up	5%	8%	11%	7%
■ Employee Shuttle	8%	6%	6%	6%
■ Drive Alone	13%	12%	14%	14%
■ Walk	20%	18%	20%	19%
■ Metro Transfer	30%	35%	26%	36%
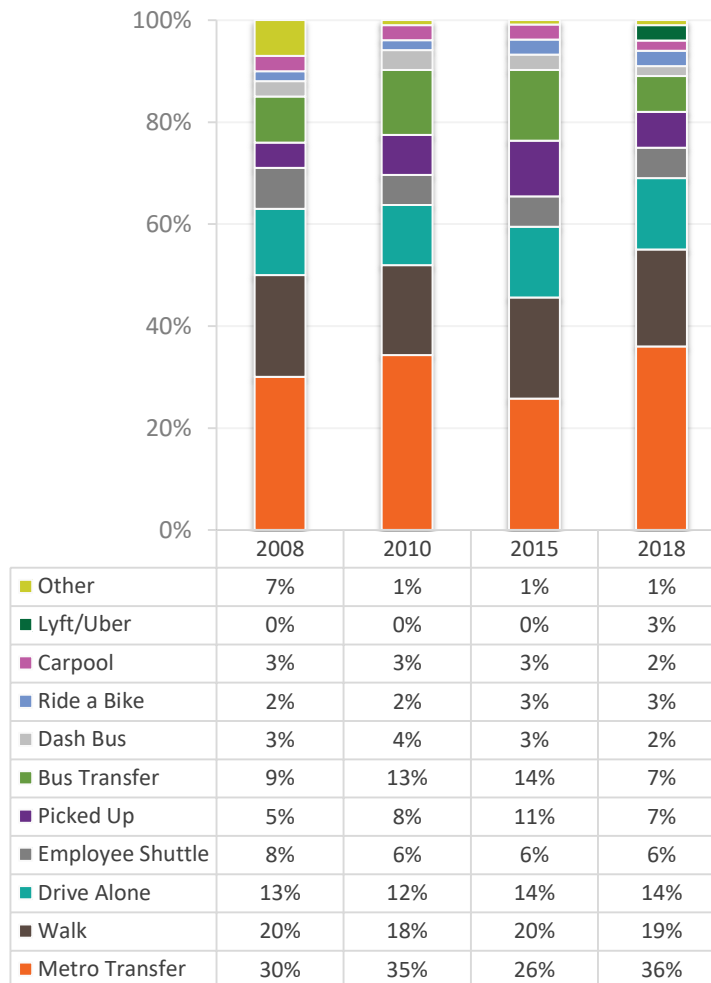
Figure 21: Automobile as Access and Egress (Weekday)

2018

		EGRESS MODE			
		Drive Alone in Car	Picked Up	Carpool	Total
ACCESS MODE	Drove Alone in Car	10%	2%	0%	12%
	Dropped Off	2%	5%	0%	7%
	Carpooled	1%	0%	0%	1%
	Total	13%	7%	0%	20%

2015

		EGRESS MODE			
		Drive Alone in Car	Picked Up	Carpool	Total
ACCESS MODE	Drove Alone in Car	11%	2%	0%	13%
	Dropped Off	5%	8%	0%	13%
	Carpooled	1%	0%	0%	2%
	Total	17%	10%	1%	28%

Weekday riders who use an automobile for both the access and egress of their Metrolink trip account for 20 percent of riders which has seen a decrease from the 28 percent observed in 2015. However, among these access/egress modes, the proportion of riders who drive alone to access their first station remained essentially the same at 13 percent in 2015 and 12 percent in 2018.

3.8   Daily Transfer Flow through Los Angeles Union Station

Los Angeles Union Station serves as the main transit hub that connects Metrolink to other transit modes and services including Amtrak trains, Metro bus, Metro Rail, LADOT, Foothill Transit, Fly-Away service (to Los Angeles International Airport), as well as other private transportation providers.

More than two-thirds (69%) of all Metrolink riders travel through Los Angeles Union Station on a typical weekday.

Nine percent of all Metrolink riders transfer from/to another Metrolink train, and this has not changed significantly since 2015.   Of those who have a non-Metrolink transfer, 62 percent say that they use public transit which is higher than the 59 percent observed in 2015. The remainder of riders either uses a personal automobile, carpool, or get dropped off/picked up (20%). Only 19 percent walk or ride a bike as a transfer mode.

The Los Angeles County Metropolitan Transportation Authority (Metro) which includes heavy/light rails and buses is the predominant non-Metrolink transfer mode through Union Station with a proportion of 49 percent. This figure is now higher compared to the 45 percent observed in the previous study. However, within Metro transfers, the use of Metro rails has seen an increase from 84 percent in 2015 to 87 percent this year.   The use of Metro buses currently account for 13 percent of all Metro transfers.

Figure 22: Daily Transfer Flow at L.A. Union Station (Weekday)

System		
System Count	48,359
% of System	100%

LAUS Transfers		
System Count	33,238
% of System	69%

Intra-Metrolink		
System Count	2,861
% of System	6%
% of Transfers	9%

Non-Metrolink		
System Count	30,377
% of System	63%
% of Transfers	91%

Other Motorized		
System Count	5,968
% of System	12%
% of Transfers	18%
% of Non-SCRRA	20%

Transit		
System Count	18,719
% of System	39%
% of Transfers	56%
% of Non-SCRRA	62%

Other Non-Motorized		
System Count	5,690
% of System	12%
% of Transfers	17%
% of Non-SCRRA	19%

Other Transit		
System Count	3,772
% of System	8%
% of Transfers	11%
% of Non-SCRRA	12%
% of Transit	20%

Metro		
System Count	14,947
% of System	31%
% of Transfers	45%
% of Non-SCRRA	49%
% of Transit	80%

Metro Bus		
System Count	1,902
% of System	4%
% of Transfers	6%
% of Non-SCRRA	6%
% of Transit	10%
% of Metro	13%

Metro Rail		
System Count	13,045
% of System	27%
% of Transfers	39%
% of Non-SCRRA	43%
% of Transit	70%
% of Metro	87%

3.9   Travel Mode Prior to Metrolink

Twenty percent of system-wide weekday riders indicate that they have always used Metrolink to reach their destination, and 80 percent reported becoming Metrolink customers after using some other sort of transportation.

Among system-wide weekday riders who used another means of transportation before using Metrolink, over half (59%) drove alone, and 10 percent carpooled or vanpooled. Driving alone as a travel mode prior to using Metrolink accounts for 50 percent or more for each Metrolink line, ranging from a high of 76 percent for the Inland Empire Line to a low of 51 percent for the Antelope Valley Line. Those who switched from driving alone to riding Metrolink have the following characteristics:

- Average age: 45 years old (similar to all riders)
- Ethnicity composition: Caucasian (34%), Hispanic (29%), and Asian/Pacific Islander (22%) (similar to all riders)
- 86 percent have a household income of more than $50,000 (vs. 80 percent of all riders)
- 93 percent employed (vs. 88 percent of all riders)
- 95 percent currently have automobile available (vs. 85 percent of all riders)
- Average frequency of use: 4 days a week (similar to all riders)
- Average tenure: 5 years (vs. 5.5 years of all riders)

Figure 23: Travel Mode Prior to Metrolink by Line (Weekday)

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
■ Other	4%	2%	5%	4%	3%	5%	4%	1%
■ Amtrak	1%	4%	1%	0%	0%	2%	0%	1%
■ Bus/Subway	6%	9%	9%	8%	9%	4%	4%	1%
■ Carpool/Vanpool	10%	6%	13%	14%	10%	7%	9%	10%
■ Always Taken Metrolink	20%	20%	21%	21%	18%	21%	21%	11%
■ Drove Alone	59%	58%	51%	52%	60%	61%	61%	76%
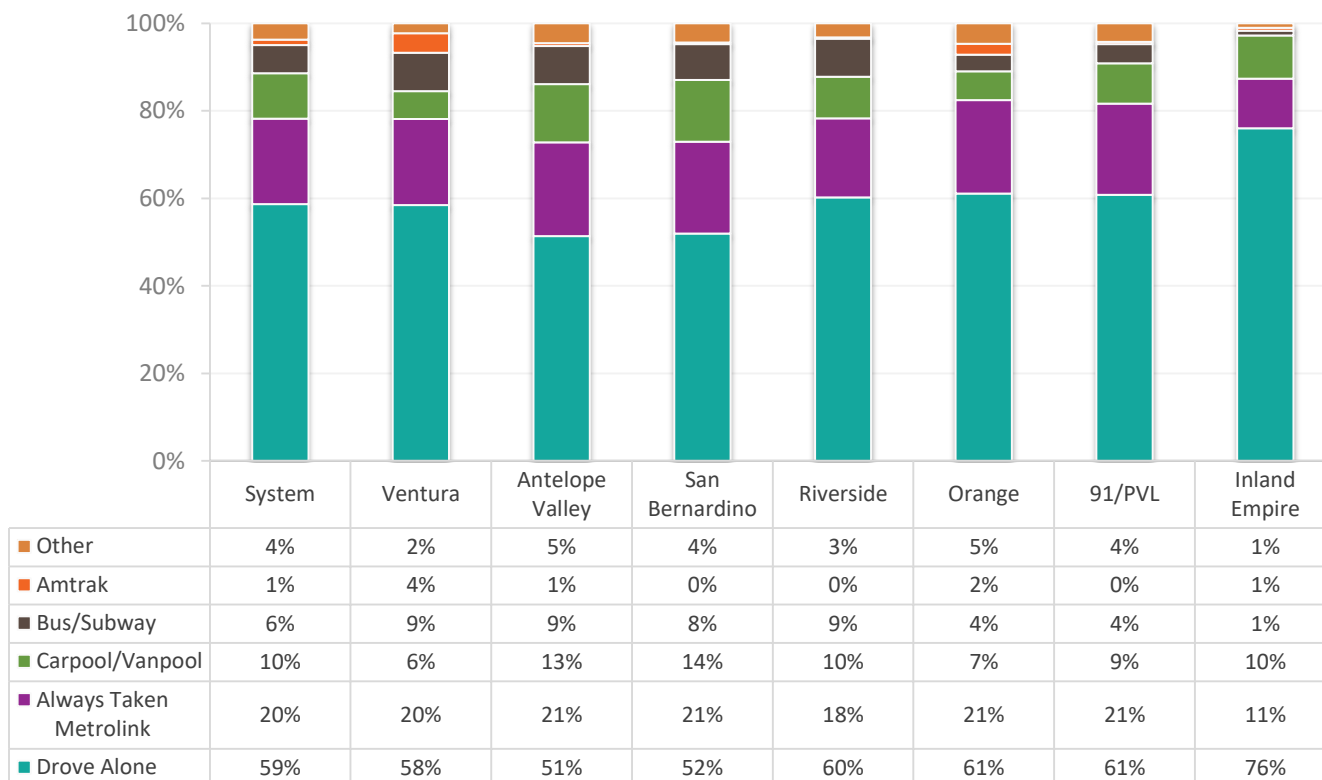
Since 2015, the Riverside and Inland Empire Lines have each experienced a nine point increase for those who previously drove to reach their destination.

Table 16: Travel Mode Prior to Metrolink by Line and Year (Weekday)

TRAVEL PRIOR TO METROLINK	System		Ventura		Antelope Valley		San Bernardino		Riverside		Orange		91/PVL		Inland Empire	
	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15
Drove Alone	59%	53%	58%	54%	51%	46%	52%	50%	60%	51%	61%	54%	61%	55%	76%	67%
Always Metrolink	20%	21%	20%	26%	21%	19%	21%	19%	18%	25%	21%	24%	21%	22%	11%	15%
Carpool/ Vanpool	10%	11%	6%	9%	13%	17%	14%	13%	10%	9%	7%	9%	9%	12%	10%	12%
Bus/Subway	6%	8%	9%	7%	9%	11%	8%	12%	9%	10%	4%	5%	4%	5%	1%	2%
Amtrak	1%	1%	4%	1%	1%	0%	0%	0%	0%	0%	2%	4%	0%	0%	1%	0%
Other	4%	5%	2%	4%	5%	6%	4%	5%	3%	5%	5%	4%	4%	6%	1%	4%

3.10   Alternatives to Metrolink

3.10.1   If the Train Didn't Exist

If the specific train that customers were surveyed on did not exist, the most common alternative to Metrolink among all weekday riders is to drive a car they own or lease (45%), followed by taking an earlier train (14%) or a later train (12%). Riders on the Inland Empire Line (57%) and 91/PVL Line (53%) have the highest proportion of riders who would drive, whereas riders on the San Bernardino (39%) and Antelope Valley Lines (40%) have the lowest proportion.

As six of the seven lines' service areas have gone unchanged, transit substitution preference rates remain similar to the 2015 rates.   The 91/PVL Line, which added four stations since the previous study, is the exception to the rule where the proportion that would drive alone increased from 45 percent in 2015 to 53 percent in 2018 because there are fewer alternatives available surrounding the new stations. The Orange County Line continues to have the highest rate (14%) of riders who would take the Amtrak, as it partially is in alignment with the Pacific Surfliner.

Driving a car is also the most common Metrolink alternative for weekend riders, at 39 percent. This is a ten point increase from 2015 of 29 percent due to the decline of riders who would take a bus (12%) which only accounts for seven percent in 2018. Riders who would carpool (15%) and those who would not make the trip (14%) also compose a larger proportion of system-wide riders on the weekend.

Figure 24: Transit Alternatives by Line (Weekday)

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
Other	1%	0%	2%	1%	1%	1%	1%	1%
Don't Know	3%	3%	5%	2%	2%	2%	2%	3%
MetroRail	3%	7%	4%	4%	2%	1%	1%	0%
Amtrak	4%	8%	2%	0%	0%	14%	3%	1%
Not Make Trip	5%	4%	7%	5%	4%	5%	5%	3%
Carpool	5%	4%	7%	6%	3%	4%	5%	6%
Bus	8%	5%	11%	14%	13%	2%	3%	1%
Later Train	12%	12%	10%	13%	11%	11%	11%	14%
Earlier Train	14%	10%	13%	16%	17%	13%	15%	14%
Drive Car I Own/Lease	45%	48%	40%	39%	48%	47%	53%	57%
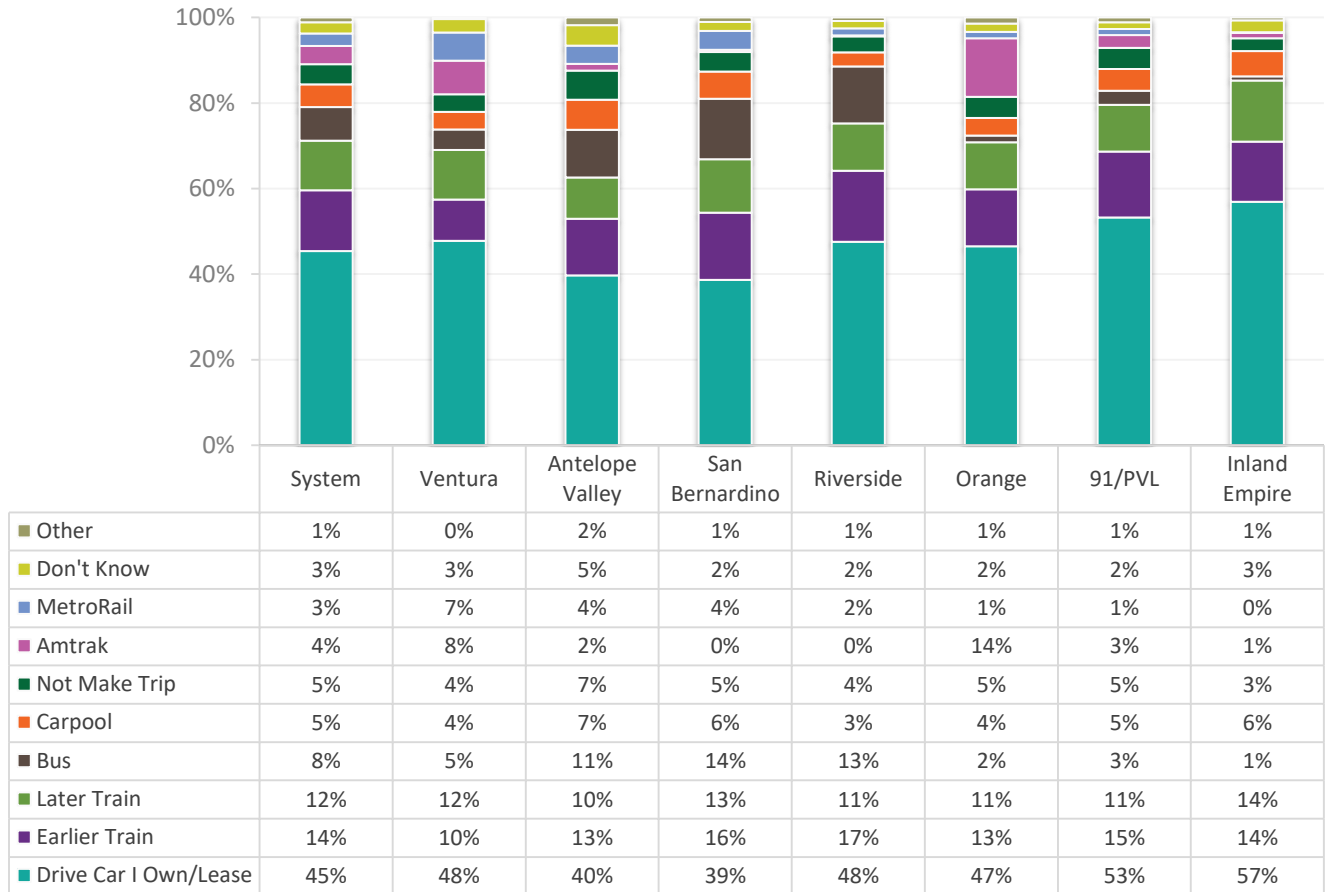
Table 17: Transit Alternatives by Line and Year (Weekday)

SUBSTITUTIONS	System		Ventura		Antelope Valley		San Bernardino		Riverside		Orange		91/PVL		Inland Empire	
	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15	'18	'15
Drive Car I Own/Lease	45%	45%	48%	44%	40%	39%	39%	40%	48%	44%	47%	46%	53%	45%	57%	60%
Earlier Train	14%	12%	10%	13%	13%	10%	16%	12%	17%	17%	13%	10%	15%	13%	14%	10%
Later Train	12%	14%	12%	14%	10%	12%	13%	15%	11%	14%	11%	16%	11%	18%	14%	13%
Bus	8%	9%	5%	5%	11%	12%	14%	15%	13%	13%	2%	3%	3%	2%	1%	2%
Carpool	5%	6%	4%	5%	7%	11%	6%	6%	3%	5%	4%	3%	5%	7%	6%	6%
Not Make Trip	5%	5%	4%	4%	7%	8%	5%	5%	4%	3%	5%	4%	5%	7%	3%	3%
Amtrak	4%	4%	8%	6%	2%	1%	0%	1%	0%	0%	14%	14%	3%	3%	1%	1%
MetroRail	3%	1%	7%	5%	4%	2%	4%	1%	2%	0%	1%	2%	1%	1%	0%	0%
Don't Know	3%	3%	3%	3%	5%	6%	2%	4%	2%	3%	2%	2%	2%	4%	3%	3%
Other	1%	1%	0%	4%	2%	0%	1%	1%	1%	1%	1%	1%	1%	0%	1%	1%

3.10.2 Transportation Network Companies (TNCs)

Note: This section covers both weekday and weekend riders.

As the use of transit network companies (TNCs), which are also known as ride-hailing and include Uber and Lyft, has become increasingly popular, Metrolink included a set of new questions to the 2018 Origin-Destination study regarding riders' use of them and their relationship to Metrolink use.

Figure 25: Use of TNCs/Ride Hailing by Line

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
Do Not Use TNC	45%	40%	43%	45%	53%	37%	44%	56%
Use TNC	55%	60%	57%	55%	47%	63%	56%	44%
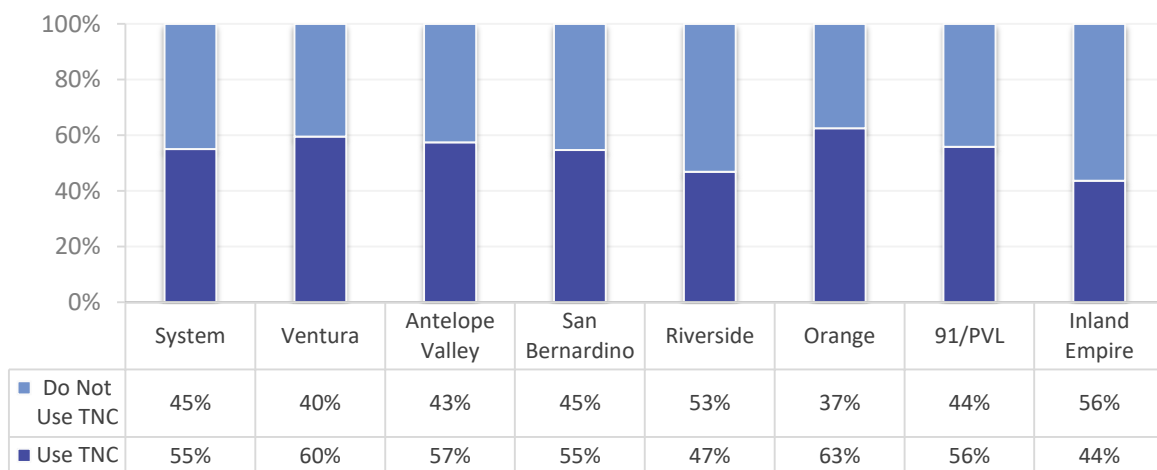
Over half (55%) of system-wide riders use the TNCs. The Orange County Line has the highest proportion of TNC use (63%), whereas riders on the Inland Empire Line have the lowest proportion (44%).

Metrolink riders who stated that they use TNCs were also asked about how their use of Metrolink may have changed in relation to that TNC use, whether it is a complimentary or a substitutional use. The majority (80%) of TNC users state that their use of Metrolink has not been impacted. Six percent say their Metrolink use has decreased, while 15 percent say that their use has increased.

Figure 26: TNC Effect on Metrolink Use by Line

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
Decreased	6%	8%	9%	6%	4%	4%	5%	4%
Stayed the Same	80%	79%	75%	78%	87%	79%	80%	84%
Increased	15%	13%	16%	16%	9%	17%	14%	11%
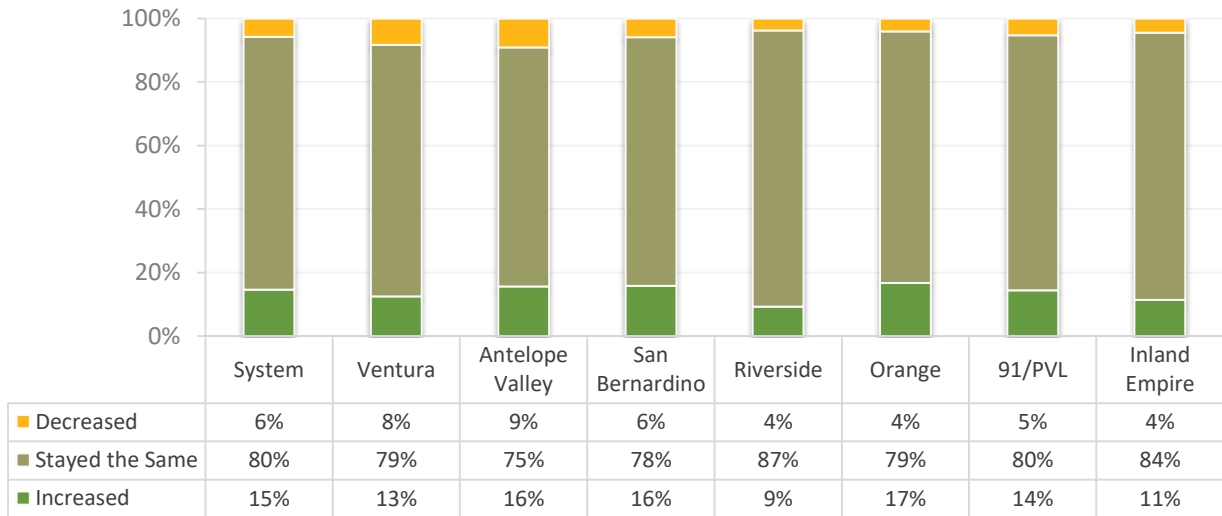
Among riders who say that they use TNCs, over half (55%) use them to reach locations where Metrolink does not serve, and 38 percent use TNCs to reach Metrolink stations. Only seven percent use TNCs as a substitute for Metrolink service which is consistent with the proportion of riders who say that their use of Metrolink decreases due to TNCs (6%).

Figure 27: TNC Use in Relation to Metrolink by Line

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
To Replace Service	7%	12%	9%	5%	6%	7%	11%	5%
Where Metrolink Doesn't Serve	55%	57%	46%	55%	61%	57%	56%	52%
To Reach Station	38%	31%	45%	40%	34%	36%	33%	43%
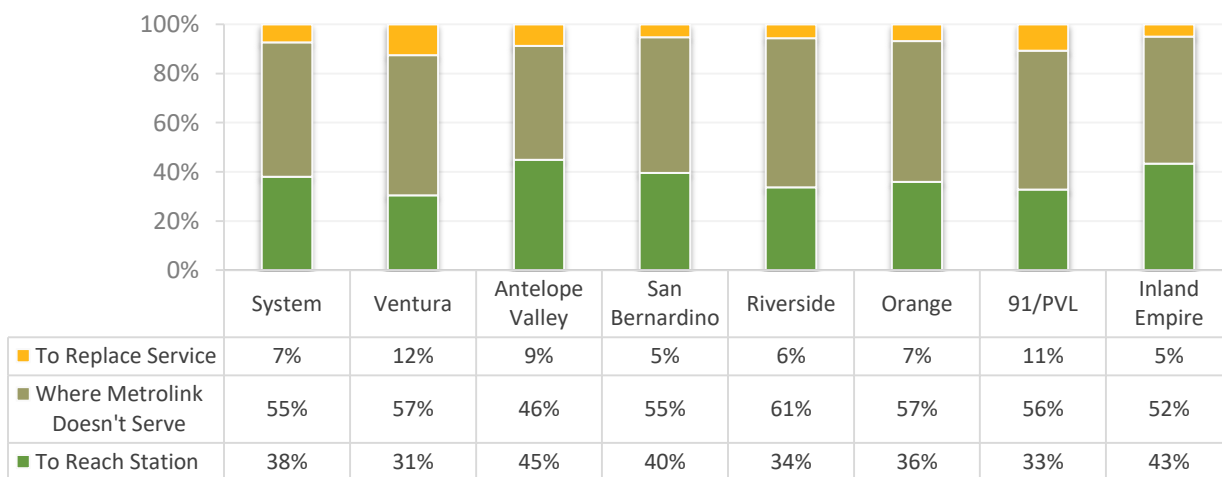
3.11 Trip Length

Table 18: Average Metrolink Trip Length (Weekday)

LINE	2008	2010	2015	2018
Ventura	34.2	35.8	35.0	34.3
Antelope Valley	41.5	42.9	45.5	42.2
San Bernardino	36.1	37.7	34.6	37.6
Riverside	37.6	39.3	37.9	38.8
Orange	38.6	37.7	38.2	36.0
Inland Empire	31.8	36.6	33.4	32.9
91/PVL	36.5	33.8	35.1	38.6
System	36.9	38.0	37.1	37.4

Metrolink trip distance is calculated as the track miles between a riders' boarding station to alighting station. The average distance traveled system-wide is 37.4 miles which is unchanged from 37.1 miles in 2015. Compared to 2015, the Inland Empire continues to have the lowest average distance traveled, whereas the Antelope Valley Line continues to have the highest average. Riders on the 91/PVL Line have experienced the largest increase of 3.5 miles traveled to 38.6 miles, while riders on the Antelope Valley Line have experienced a decrease of 3.3 miles traveled.

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CHAPTER 4 – CUSTOMER SATISFACTION AND MOTIVATION

One of the reasons transit agencies collect customer satisfaction information is to help set priorities for service improvements across a variety of service attributes. Customer satisfaction survey results can help Metrolink choose from among a long list of performance attributes (i.e. train cleanliness or on-time performance) to more optimally focus the agency's efforts and resources. Common techniques such as the quadrant analysis are applied to gauge the relative importance and satisfaction level for each performance attribute. The result is compared with the motivational factors of using Metrolink to draw conclusions regarding potential opportunities and constraints in Metrolink services.

4.1   Satisfaction Ratings

The overall satisfaction level for each performance attribute is measured by the mean which is calculated using a scale from 1 (Very Poor) to 5 (Excellent). In the table below, Metrolink's overall satisfaction is on the top row and the individual performance attributes are arranged by the mean value from high to low.

Metrolink's overall satisfaction rating of 4.05 is essentially unchanged from 2015's 3.99. The top three individual performance attributes with the highest mean values include: Helpfulness and Courtesy of Metrolink Conductors (4.37), Value of Making Good Use of my Time on the Train (4.36), and Safe Operation of Trains (4.30). The top three performance attributes were also the top three attributes in 2015, and the mean score for each has stayed the same or increased slightly.

The greatest increase for an individual attribute rating is for Ease of Buying Tickets/Ticket Vending Machine Reliability with a 0.84 point increase, which reflects reliability improvements of Ticket Vending Machines and the introduction of Metrolink's Mobile Ticket in 2016. Enforcement Against Fare Evasion (+0.22) had the second largest improvement.

Conversely, the performance attributes with the lowest level of satisfaction rating (below 3.5) are: Metrolink Responsiveness to Customer Concerns (3.43), Cleanliness of Restrooms on Train (3.40), Information on Train Delays Overall (3.33), and Announcements of Delay Information at the Station (3.31). The highest decrease in mean satisfaction rating is observed in Cleanliness of Restrooms on Train (-0.15), Usefulness of Printed Materials Onboard the Train (-0.14), and Cleanliness of Train Interior (-0.13). Although Information on Train Delays Overall, and Announcements of Delay Information at the Station were the two lowest rated performance attributes, their average performance ratings are moving in the right direction with increases of 0.13 and 0.17 respectively.

Table 19: Satisfaction Ratings by Performance Category

Rating Description	Very Poor	Poor	Fair	Good	Excellent	Mean
Overall Satisfaction	1%	2%	15%	57%	26%	4.05
Helpfulness and Courtesy of Metrolink Conductors	0%	1%	9%	41%	49%	4.37
Value of Making Good Use of my Time on the Train	0%	1%	9%	41%	48%	4.36
Safe Operation of Trains	0%	1%	7%	53%	39%	4.30
Riding Experience Overall	0%	1%	11%	60%	28%	4.14
Travel Time on Train Compared to Driving	1%	4%	18%	41%	37%	4.08
Ease of Buying Tickets / Ticket Vending Machine Reliability	1%	5%	16%	39%	38%	4.08
Feeling Secure From Crime While Riding Train	1%	2%	16%	51%	30%	4.07
Value of Metrolink "Quiet Cars"	3%	3%	16%	41%	37%	4.07
Availability of Parking at Station	2%	4%	14%	46%	34%	4.06
Station Experience Overall	0%	2%	16%	58%	23%	4.02
Clarity of Onboard Announcements	1%	4%	19%	47%	28%	3.96
Enforcement Against Fare Evasion	2%	5%	17%	47%	28%	3.95
Clarity of Station Signage	1%	4%	18%	53%	23%	3.94
Enforcement of Rules of Conduct Among Riders	1%	5%	19%	47%	27%	3.93
Value of Metrolink Fare Compared to Driving	1%	5%	24%	40%	29%	3.90
Equipment on Train in Good Working Order	1%	4%	21%	53%	21%	3.90
Availability of Transit Connections at Stations	1%	4%	23%	50%	22%	3.87
Feeling Secure From Crime While at Station	1%	6%	21%	48%	24%	3.86
Availability of Seating on Train	1%	5%	24%	48%	21%	3.84
Behavior of Other Riders	1%	4%	26%	52%	17%	3.78
Cleanliness of Train Interior	2%	7%	24%	46%	21%	3.76
Ease of Obtaining Information at Metrolinktrains.com	2%	6%	26%	44%	22%	3.76
Train Arriving at my Destination on Time	2%	8%	24%	44%	22%	3.75
Security in Station Parking Lot	3%	9%	23%	45%	21%	3.73
Usefulness of Printed Materials Onboard the Train	2%	6%	27%	47%	18%	3.72
Convenience of Metrolink Train Schedules	1%	6%	29%	49%	14%	3.70
Announcements of Delay Information Onboard the Train	4%	10%	26%	42%	18%	3.59
Availability of Train Delay Information on Twitter/ app.*	4%	12%	28%	39%	17%	3.54
Metrolink Responsiveness to Customer Concerns	6%	12%	30%	38%	14%	3.43
Cleanliness of Restrooms on Train	4%	12%	34%	38%	12%	3.40
Information on Train Delays Overall	5%	15%	33%	34%	12%	3.33
Announcements of Delay Information at the Station	5%	17%	31%	34%	12%	3.31

This report employs a quadrant analysis to identify the highest priorities for service improvement among all Metrolink performance attributes. The area where each performance factor is located is based on two factors; satisfaction rating (x-axis) and the importance of the rating (y-axis). The satisfaction rating is measured using the mean value. The importance level is calculated as the correlation between overall satisfaction and each individual performance attribute. Thus, higher importance for an attribute translates into higher impact on the overall satisfaction[4].

Figure 28: Satisfaction Rating Quadrant Analysis
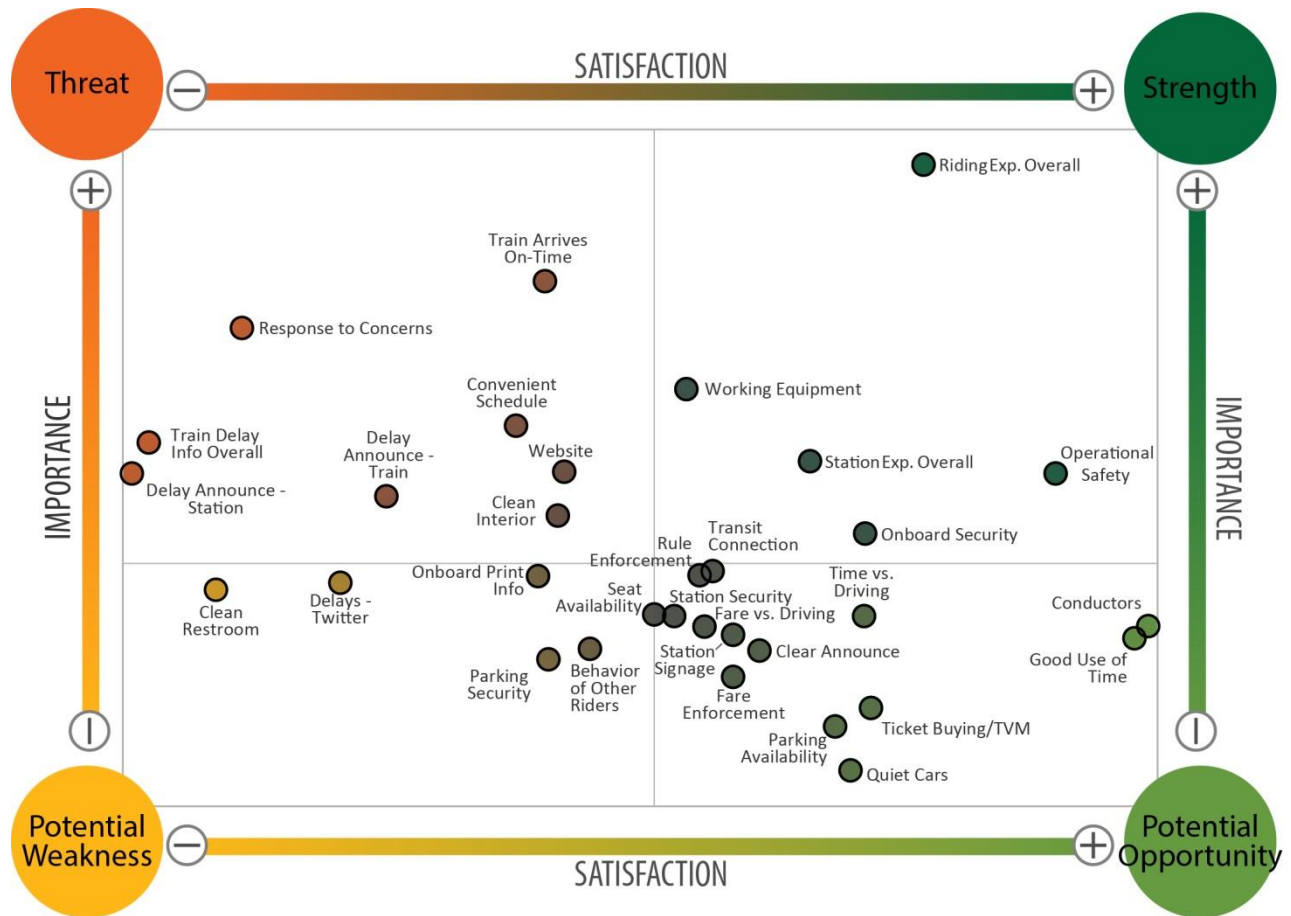
Based on the average values for both the satisfaction and importance, the chart is divided into quadrants. The "Strength" quadrant consists of the performance attributes with both high satisfaction ratings and high importance in impacting overall satisfaction. The performance attributes that reside within this quadrant are similar compared to the 2015 results which include Riding Experience Overall, Operational Safety, Station Experience, Working Equipment and Onboard Security.

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[4] Technically, correlation by itself does not signify causation. However, it is likely that individual performance factors that move more closely with overall satisfaction are having a greater impact on overall satisfaction.

On the lower right of the chart, the "Potential Opportunity" quadrant measures a high level of satisfaction but with relatively low importance. The number of performance attributes within this quadrant has increased since 2015 predominantly due to the general increases in the mean value of many performance attributes. Conductors' Helpfulness, and Station Signage continue to receive high satisfaction ratings but now are less important to the passengers compared to the previous study as observed by the shift from the "Strength" quadrant.

The next quadrant is the "Potential Weakness" quadrant which reflects a combination of lower satisfaction levels and lower importance relative to overall satisfaction. Performance attributes within this quadrant include: Cleanliness of Restrooms, Delay Information on Twitter/Mobile App, Onboard Printed Information, Parking Security, and Behavior of Other Riders. Of note, Ticket Buying/TVMs, which previously had the lowest satisfaction rating in the Potential Weakness quadrant, has moved into the Potential Opportunity quadrant indicating increased satisfaction with current systems. In addition, the Value of Fare Vs. Driving and Fare Enforcement have also moved from a Potential Weakness to a Potential Opportunity. In the other direction, Seat Availability has dropped from the Strength quadrant into the border between Potential Opportunity and Potential Weakness.

The "Threat" quadrant is the most critical quadrant providing a list of performance factors that merit immediate attention for service improvement because the performance attributes within this quadrant have both low satisfaction and high importance ratings, and hence have the greatest impact on overall satisfaction. Half of the factors in this quadrant relate to on-time arrival and communications about delays. This includes: Delay Announcements at Stations, Train Delay Info Overall, Delay Announcements on the Train, and Train Arrival On-Time. These four performance attributes are carryovers in this quadrant from 2015 and are in the same order as they were in 2015 based on satisfaction rating.

The other factors in this quadrant include two repeats from 2015; Response to Concerns and Convenient Schedule. Two new factors are Clean Interior and Website. Clean Interior has moved from a Strength in 2015 to a Threat in 2018 indicating a new, important detrimental influence on overall satisfaction. The Website moved from low importance and high satisfaction to below average satisfaction and high importance. Additional research on the use and satisfaction with the website may provide insights to address this new concern.

It is imperative to understand that the quadrant analysis at best serves as a measurement of service priority from the statistical point of view. It does not include the practical information about the cost associated with implementing the service improvement, nor the potential for significant changes in the performance. These external factors clearly must be taken into consideration in the effort of prioritizing Metrolink resource allocation to improve customer satisfaction and retention. Although it is very likely that the cost of implementation will be high, improving the reliability of train arrival times is by far the most highly correlated attribute to the overall satisfaction, and as such offers a significant opportunity for improved rider satisfaction.

Figure 29: Top Two Box of Performance Ratings - 1

	Overall	Safe Operation of Trains	Helpfulness/ Courtesy of Conductors	Value of Making Use of Time	Riding Experience Overall	Station Experience Overall	Feeling Secure on Train	Availability of Parking	Value of Quiet Cars	TVM Reliability & Ease	Train Travel Time vs. Driving
■ System	83%	92%	90%	89%	87%	82%	81%	80%	79%	77%	77%
■ Ventura	88%	94%	93%	90%	93%	82%	89%	88%	84%	86%	77%
■ Antelope Valley	82%	90%	86%	87%	85%	82%	75%	80%	74%	76%	71%
■ San Bernardino	84%	91%	87%	88%	87%	80%	78%	78%	77%	71%	75%
■ Riverside	75%	90%	93%	89%	84%	82%	84%	85%	80%	79%	81%
■ Orange	83%	94%	93%	91%	88%	82%	84%	78%	80%	77%	79%
■ 91/PVL	82%	90%	90%	92%	89%	83%	80%	77%	78%	81%	80%
■ Inland Empire	83%	93%	88%	90%	89%	83%	86%	79%	81%	84%	81%

Figure 30: Top Two Box of Performance Ratings - 2

	Clarity of Station Signage	Enforcement of Fare Evasion	Onboard Anncmnt. Clarity	Enforcement of Conduct Rules	Equipment on Train Working	Availability of Transit Connections	Feeling Secure at Station	Availability of Seating on Train	Value of Fair vs. Driving	Behavior of Others	Cleanliness of Train Interior
■ System	77%	76%	75%	74%	74%	72%	71%	70%	69%	69%	67%
■ Ventura	74%	81%	76%	85%	82%	73%	71%	82%	69%	81%	74%
■ Antelope Valley	79%	75%	75%	64%	75%	74%	69%	66%	74%	50%	59%
■ San Bernardino	77%	72%	71%	68%	69%	71%	65%	69%	66%	63%	61%
■ Riverside	81%	79%	80%	79%	70%	72%	78%	78%	67%	74%	69%
■ Orange	77%	78%	78%	78%	79%	75%	72%	69%	71%	78%	74%
■ 91/PVL	75%	74%	74%	78%	72%	69%	74%	68%	65%	72%	68%
■ Inland Empire	71%	77%	74%	80%	76%	65%	78%	64%	72%	73%	67%

Figure 31: Top Two Box of Performance Ratings - 3

	Parking Lot Security	Train Arriving on Time	Obtaining Website Info Ease	Usefulness of Printed Materials	Convenience of Schedule	Onboard Delay Anncmnts.	Twitter Delay Anncmnts.	Response to Concerns	Cleanliness of Train Restrooms	Station Delay Anncmnts.	Overall Information on Delays
■ System	66%	66%	66%	65%	64%	60%	56%	52%	50%	46%	46%
■ Ventura	64%	76%	62%	61%	61%	54%	56%	51%	54%	41%	43%
■ Antelope Valley	66%	73%	70%	71%	65%	62%	63%	55%	44%	53%	52%
■ San Bernardino	57%	67%	67%	66%	72%	58%	56%	53%	44%	46%	45%
■ Riverside	75%	56%	66%	64%	57%	67%	56%	53%	52%	48%	48%
■ Orange	64%	63%	60%	60%	58%	60%	52%	50%	58%	45%	44%
■ 91/PVL	71%	61%	65%	62%	58%	60%	58%	50%	49%	45%	49%
■ Inland Empire	76%	63%	68%	67%	68%	54%	56%	52%	49%	43%	45%

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4.2   Personal Safety Rating

With Metrolink's service expansion, passenger numbers continue to grow and the demand for train services that match modern travel characteristics means that services are now more available early in the morning and late at night. Ensuring that passengers are safe and secure throughout their commute is fundamental for Metrolink's continued success. To assess passengers' perception of safety, the 2018 Onboard Survey has added questions to capture opinions regarding the occurrence of various types of sexual harassment during their commute.

Figure 32: Personal Safety Experiences – Overall Type Comparison
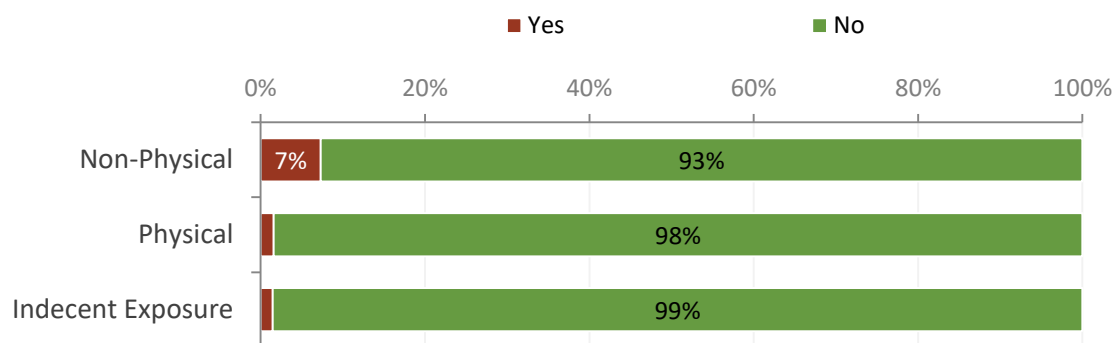
System-wide, the occurrence of any type of sexual harassment is minimal. The least critical offense or the non-physical harassment such as inappropriate gestures and comments accounts for only seven percent overall. Female passengers are more likely to experience non-physical harassment at ten percent compared to male counterparts at five percent. Physical offense and indecent exposure both account for less than two percent, respectively.

Figure 33: Non-Physical Personal Safety Experiences by Line

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
No	93%	95%	88%	91%	95%	95%	94%	94%
Yes	7%	5%	12%	9%	5%	5%	6%	6%
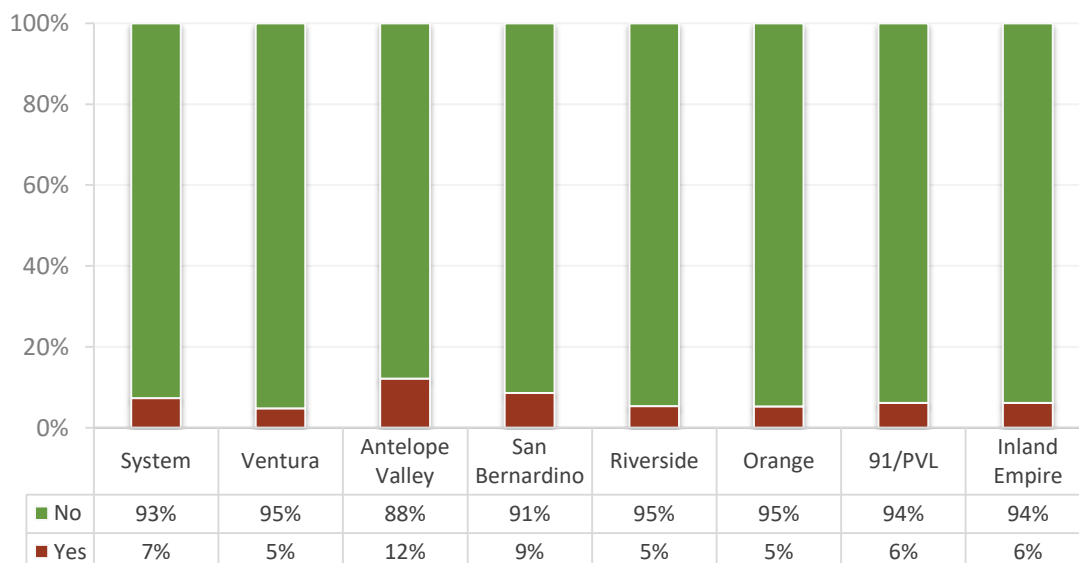
In the worst scenario, the type of sexual harassment experienced by passengers occurred as a non-physical offense. Compared to other lines, the Antelope Valley Line has the highest incidence of non-physical harassment (12%), followed by San Bernardino (9%), and the 91/PVL and Inland Empire Lines (both at 6%). The remaining lines are all similar at five percent.

Figure 34: Physical Personal Safety Experiences by Line

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
■ No	98%	99%	98%	97%	99%	98%	99%	100%
■ Yes	2%	1%	2%	3%	1%	2%	1%	0%
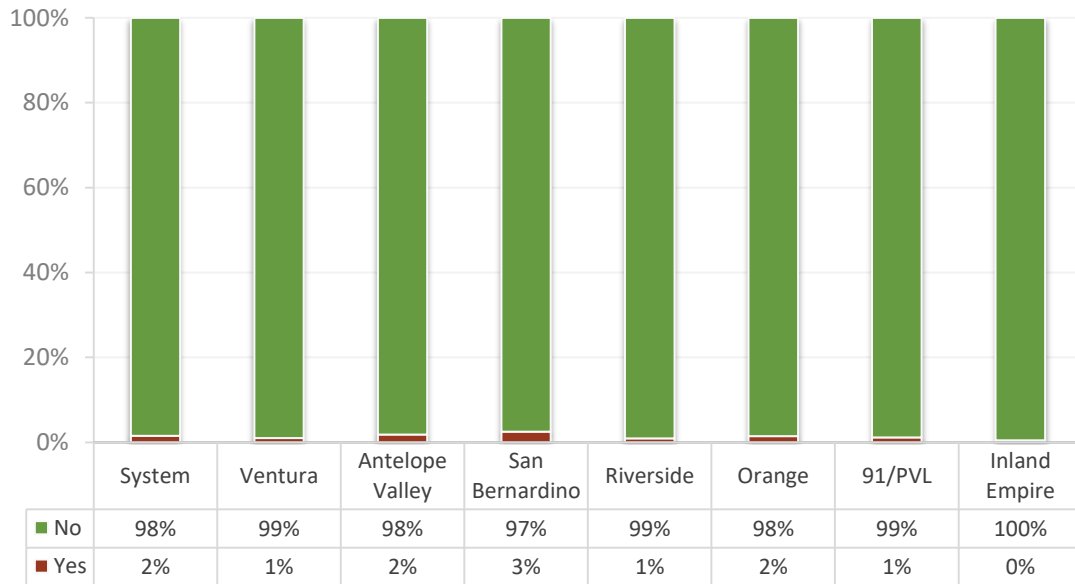
Physical offense such as unwanted touching, groping, fondling, etc. is almost non-existent for all Metrolink lines.

Figure 35: Indecent Exposure Experiences by Line

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
■ No	99%	99%	97%	98%	98%	99%	98%	100%
■ Yes	1%	1%	3%	2%	2%	1%	2%	0%
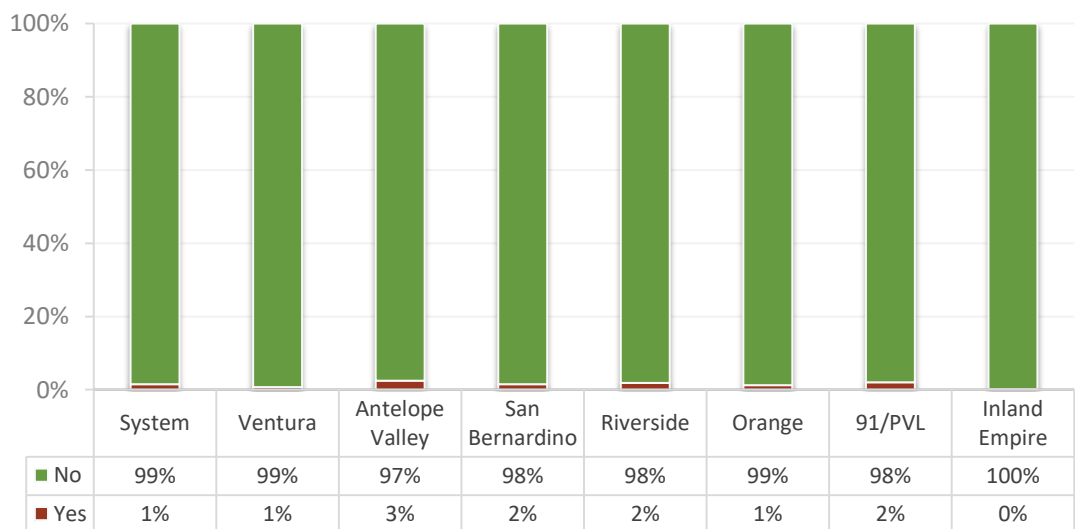
Similarly, the occurrence of indecent exposure is minimal for all Metrolink lines.

4.3   Rider Motivations

In addition to asking passengers to provide a satisfaction rating for each performance attribute, the questionnaires also explore the motivation factors behind passengers' preference to use Metrolink compared to other travel modes. These factors are important in assessing whether using Metrolink is a choice or a non-choice option and can assist Metrolink to focus marketing campaigns.

Figure 36: Top Five Motivational Factors for Metrolink Use by Line

	Less Stress	More Relaxing	Save Money	Better Use of Time	Environ. Reasons
System	68%	58%	38%	38%	29%
Ventura	70%	64%	43%	46%	35%
Antelope Valley	55%	49%	41%	28%	24%
San Bernardino	67%	55%	33%	31%	26%
Riverside	76%	61%	36%	46%	29%
Orange	73%	65%	38%	47%	32%
91/PVL	71%	57%	39%	42%	31%
Inland Empire	72%	60%	42%	36%	28%
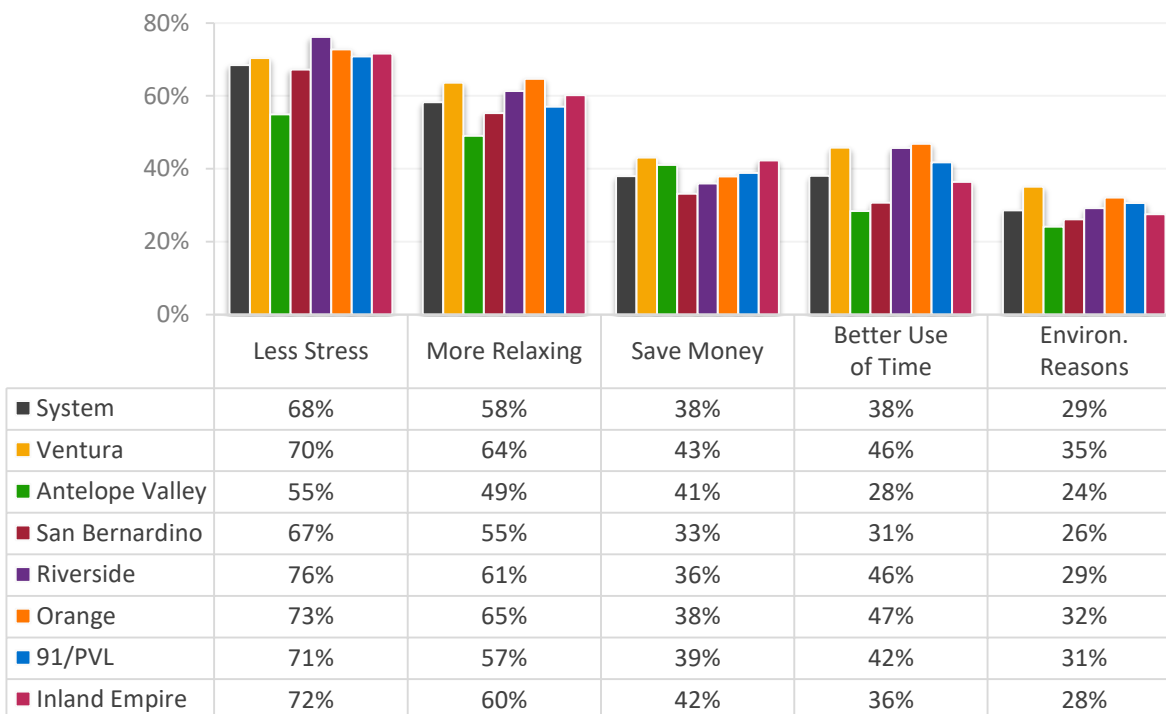
As expected, the top two motivational factors for using Metrolink are Less Stressful than Driving (68%) and More Relaxing (58%) which are essentially two sides of the same coin. These two factors remain unchanged from 2015 results which were 67 and 57 percent respectively. Saving Money (38%) and Better Use of Time (38%) are also unchanged from 2015. Using Metrolink for Environmental Reasons was cited by 29 percent and this motivation is more prevalent on Metrolink Lines with higher income, such as the Ventura Line (35%), Orange County Line (32%), and 91/PVL (31%).

The order and frequency of responses are generally consistent across all Metrolink lines with the exception for the Antelope Valley Line. The passengers in this line are less likely to cite Less Stressful than Driving, More Relaxing, or Better Use of Time. They are about twice as likely as other lines to indicate that they Have No Car Available or Are Unable to Drive.

Figure 37: Motivational Factors for First time Use of Metrolink by Line

	Traffic	New Job	Recommended	Employer Subsidy	I Love Trains	New Home	Free Ticket Offer
System	63%	27%	17%	15%	11%	11%	3%
Ventura	61%	32%	16%	19%	15%	6%	1%
Antelope Valley	50%	25%	15%	14%	12%	15%	3%
San Bernardino	60%	25%	17%	14%	11%	13%	1%
Riverside	71%	26%	20%	17%	7%	12%	3%
Orange	65%	33%	18%	15%	12%	8%	2%
91/PVL	67%	26%	20%	10%	8%	15%	4%
Inland Empire	74%	20%	17%	14%	8%	9%	5%
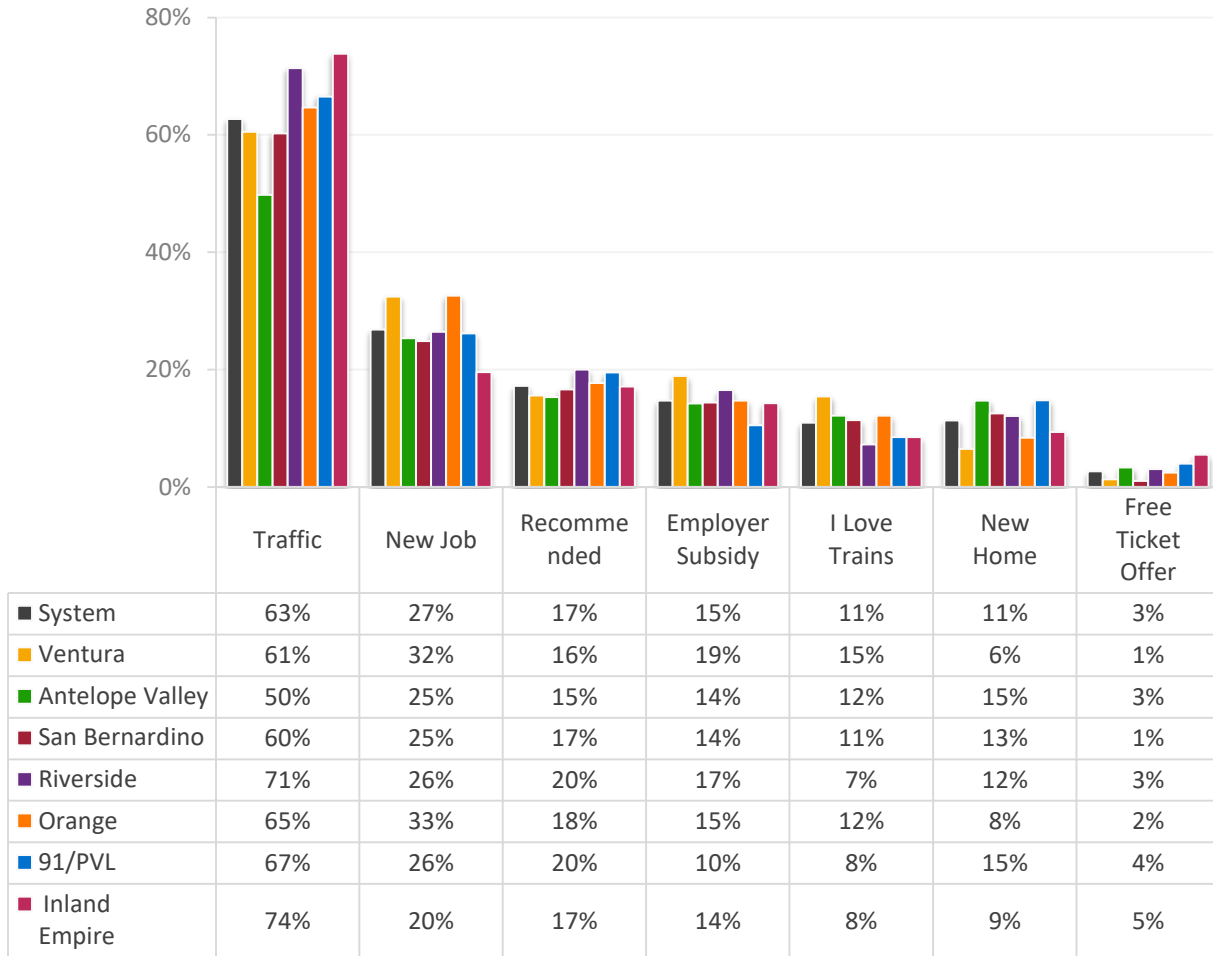
Passengers were also presented with options that influenced their decision to use Metrolink for the first time. In line with previous motivational factors, the majority of riders selected Traffic as the main reason at 63 percent. This factor was cited by more than two to one compared to other motivators to initiate trial of Metrolink. Traffic as the main reason is also dominant across all Metrolink Lines and is most apparent on Riverside Line (71%) and Inland Empire Line (74%).

Slightly over a quarter of passengers (27%) indicate that they used Metrolink for the first time because of a New Job. This category follows the same order as the second most cited reason across all Metrolink Lines. This factor is more prevalent on the Ventura and Orange County Lines where a New Job is cited by over 30 percent.

Using Metrolink for the first time due to a Recommendation or an Employer Subsidy are the third and fourth most motivational factors for trial at 17 and 15 percent respectively. The proportion for Recommendation as a reason is similar across all lines but is highest on the Riverside and the 91/PVL Lines, at 20 percent each. The proportion citing an Employer Subsidy is highest on the Ventura Line at 19 percent.

4.4   Desired Changes

In 2015, the survey question regarding desired changes was designed in an open-ended format. Based on the 2015 summary of results, feasible responses were pre-coded and presented as options in the current survey questionnaire. These options revolve around various service improvements such as extending the operation hours, expanding the service area, and better travel time.

Figure 38: Metrolink Desired Changes by Line

	System	Ventura	Antelope Valley	San Bernardino	Riverside	Orange	91/PVL	Inland Empire
■ Other	3%	5%	5%	3%	1%	4%	3%	3%
■ Better Connections	2%	5%	2%	2%	2%	1%	3%	2%
■ More Comfortable	5%	4%	6%	5%	2%	5%	4%	3%
■ More Weekend Trains	5%	4%	5%	5%	5%	4%	5%	4%
■ More Late Night Trains	6%	3%	9%	6%	4%	6%	9%	5%
■ More Morning Trains	6%	6%	6%	4%	8%	7%	7%	6%
■ Faster Travel Times	9%	6%	11%	13%	5%	8%	5%	5%
■ More Midday Trains	10%	15%	8%	3%	15%	11%	14%	16%
■ Go to More Places	11%	8%	13%	13%	7%	9%	10%	12%
■ More Evening Trains	11%	17%	9%	4%	15%	16%	13%	11%
■ Reliable Arrival Times	11%	9%	9%	9%	13%	15%	12%	13%
■ Reduced Fares	21%	18%	17%	31%	22%	15%	14%	20%

Among all options, Reduced Fares (21%) is the most requested change on a system level. San Bernardino Line has the highest proportion of those who asked for Reduced Fares at 31 percent. The proportion citing Reduced Fares is lowest on the 91/PVL Line at 14 percent, likely reflecting the recent promotional discounts that were implemented after the line extension.

Reliable Arrival Times is more prevalent on the Orange County Line (15%), Riverside Line (13%), and Inland Empire Line (13%). More Evening Trains is most frequently requested on the Ventura (17%), Orange (16%), and Riverside (15%) Lines. Trains that Go to More Places are desired by mostly the Antelope Valley and San Bernardino Lines (both at 13%). And as expected, More Midday Trains are more apparent among Metrolink lines with no or limited midday service, such as Ventura (15%), Riverside (15%), the 91/PVL (14%), and the highest for the Inland Empire (16%).

4.5   Importance of Amenities

Amenities play an integral role in building ridership since individuals react positively to amenities designed to improve their riding experience. With limited resources most agencies aim to balance the impact and cost-effectiveness of the investment by identifying amenities that will have the greatest potential to increase ridership. For this reason, passengers of the onboard study were asked to rate the importance of each amenity. The result provides a guide for Metrolink to consider where to invest while taking into account the financial constraints.

Figure 39: Amenities Importance
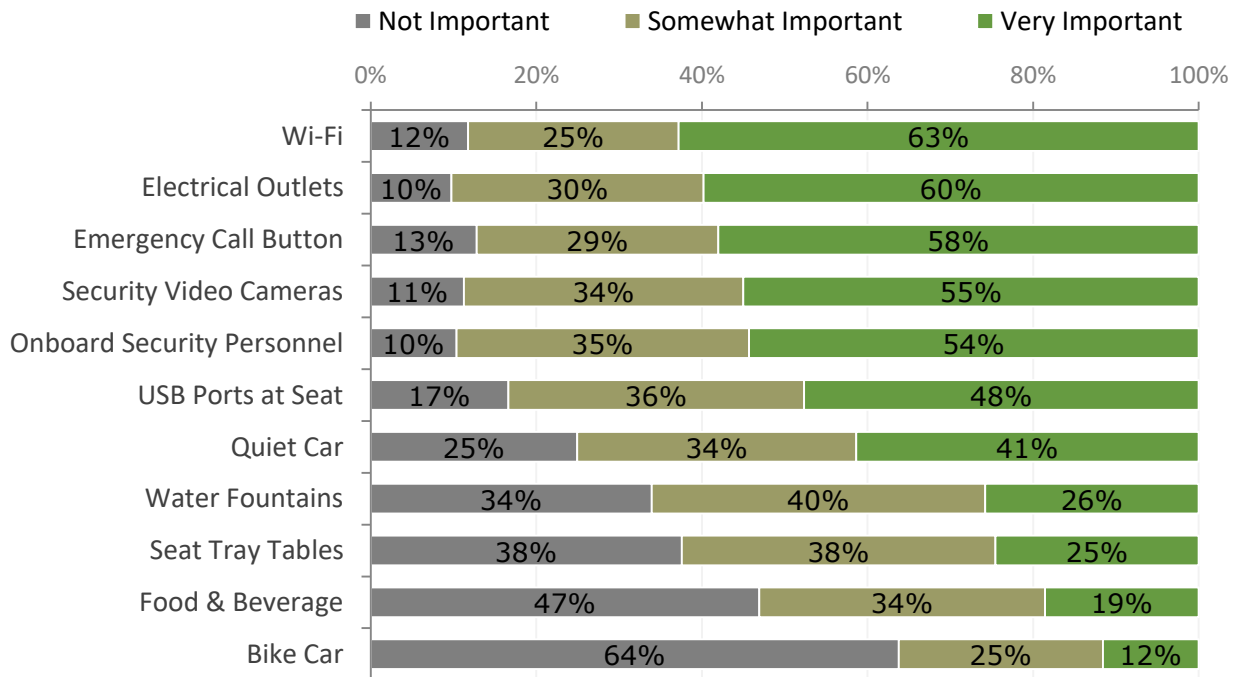
Wi-Fi emerges on the top of list as 63 percent of riders indicate that internet connectivity is becoming very important to them. Electrical Outlets are also considered at the top of the list as 60 percent say that this is very important. The proportion of those who cite Wi-Fi and Electrical Outlets to be very important is similar across all Metrolink lines.

In terms of security such as an Emergency Call Button, Security Cameras, and Onboard Security Personnel, over half of riders rate these as very important. When combining the proportion of those who say they are somewhat important or very important, the proportions of security items are on par with the top two amenities ranging from 87 to 89 percent.

The Antelope Valley and San Bernardino Lines are more likely to rate amenities regarding onboard security as very important. The proportion of riders saying Security Video Cameras are very important is highest on the Antelope Valley (61%) and San Bernardino (58%) Lines. In line with this, the presence of Onboard Security Personnel is more important on the Antelope Valley (66%) and San Bernardino (59%) Lines. An Emergency Call Button was rated as very important most frequently on the Riverside Line (64%), followed by both the Antelope Valley (63%) and San Bernardino (61%) Lines.

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CHAPTER 5 – EMPLOYMENT CHARACTERISTICS

Metrolink operates in the heart of one of the country's most dynamic regions in terms of population and employment growth. By exploring employment characteristics of its patrons, Metrolink can get an idea of how relevant the use of rail is to the daily work commute by industry category. Understanding the characteristics of this market is important in order to develop effective and focused marketing plans, including employment-sponsored transportation programs.

5.1 Industry Category

Work as a home-based trip purpose accounts for 74 percent of all trips. These trips are comprised of 92 percent full-time workers, two percent part-time employed, and two percent self-employed. Among employed riders, the top three industry categories are Finance/Real Estate/Insurance/Legal Services (19%), Government (16%), and Health Care/Social Services (14%). Both the order and proportion of the top three industry categories are essentially unchanged from 2015 results.

Figure 40: Industry Category

Industry Category	Percent of Riders
Finance/Real Estate/Insurance/Legal Services	19%
Government	16%
Health Care/Social Services	14%
Educational Services	9%
Architecture/Engineering/Consulting/Business Services	8%
Entertainment/Media/Design/Internet	8%
Transportation/Utilities	7%
Construction/Manufacturing	6%
Wholesale/Retail Sales	6%
Food Services/Hotels	3%
Other	4%

5.2 Fare Subsidy by Industry Category

The widespread practice of employer-subsidized transit passes is a significant but often overlooked determinant of Metrolink use for employees' trip to work. Several incentives for employers to provide transit passes can include the available tax benefits of alternative commuting, parking demand management, or simply a stress relief from the congested traffic.

Figure 41: Subsidy by Industry Category (Percent of Employed Riders)

Industry Category	Percent Subsidized	Mean Subsidy
Finance/Real Estate/Insurance/Legal Services	49%	$149.49
Government	59%	$113.33
Health Care/Social Services	31%	$116.59
Educational Services	19%	$83.32
Architecture/Engineering/Consulting/Business Services	36%	$110.77
Entertainment/Media/Design/Internet	35%	$103.59
Transportation/Utilities	61%	$114.57
Construction/Manufacturing	20%	$214.52
Wholesale/Retail Sales	21%	$164.33
Food Services/Hotels	11%	$194.58
Other	23%	$153.79
System	39%	$125.51

The proportion of employed riders who receive an employment subsidy for their Metrolink pass is essentially unchanged from 2015 at 39 percent. However, the mean value of the fare subsidy has increased from $109.78 in 2015 to $125.51 this year. Similar to the 2015 result, Transportation/Utilities continue to be the most likely industry to receive a subsidy at 61 percent, followed by Government (59%), and Finance/Real Estate (49%).

Food Services/Hotels, despite its high increase in average subsidy, continue as the industry category that is least likely to receive an employment subsidy at only 11 percent. Following this category are Educational Services (19%), Construction/Manufacturing (20%), and Wholesale/Retail Sales (21%). However, when a transit fare benefit is provided, the average value can be as high as $214.52 for Construction/Manufacturing and $164.33 for Wholesale/Retail Sales. The industry category with the lowest average value of fare subsidy is Educational Services with $83.32, although it has increased from $62.76 in 2015.

APPENDICES

Appendix A: Survey Counts by Line, Train and Daypart

	TOTAL COLLECTED					TOTAL COMPLETE				
100 SERIES - VENTURA COUNTY										
TRAIN	**AM PEAK**	**MIDDAY**	**PM PEAK / NIGHT**	**WEEKEND**	**TOTAL COL.**	**AM PEAK**	**MIDDAY**	**PM PEAK/ NIGHT**	**WEEKEND**	**TOTAL. COMP.**
100	50				**50**	36				**36**
101	108				**108**	63				**63**
102	153				**153**	114				**114**
104	109				**109**	74				**74**
108	35				**35**	19				**19**
110	69				**69**	48				**48**
115			65		**65**			50		**50**
117			152		**152**			104		**104**
118			57		**57**			40		**40**
119			152		**152**			99		**99**
121			58		**58**			5		**5**
123			23		**23**			13		**13**
150			73		**73**			49		**49**
155			40		**40**			26		**26**
TOTAL	**524**		**620**		**1144**	**354**		**386**		**740**

200 SERIES - ANTELOPE VALLEY										
	TOTAL COLLECTED					TOTAL COMPLETE				
TRAIN	AM PEAK	MIDDAY	PM PEAK / NIGHT	WEEKEND	TOTAL COL.	AM PEAK	MIDDAY	PM PEAK/ NIGHT	WEEKEND	TOTAL. COMP.
201	26				26	11				11
202	71				71	45				45
203	64				64	38				38
204	211				211	128				128
205	79				79	43				43
206	160				160	106				106
207		18			18		6			6
209		124			124		52			52
210		98			98		63			63
211		29			29		15			15
212		80			80		37			37
213		54			54		19			19
214		26			26		13			13
215			162		162			88		88
216		153			153		43			43
217			87		87			52		52
218		29			29		19			19
219			149		149			89		89
220		155			155		61			61
222			37		37			20		20
224			51		51			29		29
226			115		115			50		50
261				74	74				31	31
263				102	102				47	47
264				172	172				92	92
266				61	61				27	27
267				144	144				67	67
268				81	81				37	37
270				78	78				38	38
282	110				110	52				52
285			141		141			57		57
TOTAL	721	766	742	712	2941	423	328	385	339	1475

	TOTAL COLLECTED					TOTAL COMPLETE				
TRAIN	**AM PEAK**	**MIDDAY**	**PM PEAK / NIGHT**	**WEEKEND**	**TOTAL COL.**	**AM PEAK**	**MIDDAY**	**PM PEAK/ NIGHT**	**WEEKEND**	**TOTAL. COMP.**
304		42			**42**		16			**16**
305	127				**127**	86				**86**
306		113			**113**		49			**49**
307	104				**104**	70				**70**
308		125			**125**		77			**77**
309	246				**246**	163				**163**
310		70			**70**		35			**35**
311	138				**138**	100				**100**
312		113			**113**		43			**43**
313	39				**39**	18				**18**
318			104		**104**			68		**68**
320			154		**154**			87		**87**
322			135		**135**			64		**64**
323		82			**82**		32			**32**
324			166		**166**			35		**35**
325		8			**8**		2			**2**
327		115			**115**		57			**57**
328			98		**98**			67		**67**
329			22		**22**			14		**14**
331			47		**47**			35		**35**
335			13		**13**			7		**7**
337			27		**27**			12		**12**
351				77	**77**				35	**35**
353				82	**82**				34	**34**
356				37	**37**				20	**20**
357				99	**99**				44	**44**
358				68	**68**				27	**27**
362				90	**90**				29	**29**
363				105	**105**				54	**54**
364				53	**53**				23	**23**
366				69	**69**				15	**15**
367				40	**40**				10	**10**
368				95	**95**				35	**35**
369				79	**79**				43	**43**
TOTAL	**654**	**668**	**766**	**894**	**2982**	**437**	**311**	**389**	**369**	**1506**

300 SERIES - SAN BERNARDINO

400 SERIES - RIVERSIDE

	TOTAL COLLECTED					TOTAL COMPLETE				
TRAIN	AM PEAK	MIDDAY	PM PEAK / NIGHT	WEEKEND	TOTAL COL.	AM PEAK	MIDDAY	PM PEAK/ NIGHT	WEEKEND	TOTAL. COMP.
401	155				**155**	24				**24**
403	192				**192**	125				**125**
404			228		**228**			50		**50**
405	96				**96**	65				**65**
406			208		**208**			113		**113**
407	98				**98**	64				**64**
408			85		**85**			55		**55**
409	92				**92**	63				**63**
410			76		**76**			42		**42**
411			36		**36**			21		**21**
412			103		**103**			57		**57**
TOTAL	**633**		**736**		**1369**	**341**		**338**		**679**

600 SERIES - ORANGE COUNTY

	TOTAL COLLECTED					TOTAL COMPLETE				
TRAIN	AM PEAK	MIDDAY	PM PEAK / NIGHT	WEEKEND	TOTAL COL.	AM PEAK	MIDDAY	PM PEAK/ NIGHT	WEEKEND	TOTAL. COMP.
600	129				**129**	52				**52**
601	116				**116**	67				**67**
603	80				**80**	54				**54**
604			142		**142**			97		**97**
605	172				**172**	122				**122**
606			221		**221**			127		**127**
608			145		**145**			86		**86**
660				188	**188**				99	**99**
663				90	**90**				39	**39**
664				165	**165**				90	**90**
665				174	**174**				36	**36**
667				190	**190**				110	**110**
685	161				**161**	108				**108**
686			99		**99**			71		**71**
687	156				**156**	94				**94**
689			169		**169**			113		**113**
TOTAL	**814**		**776**	**807**	**2397**	**497**		**494**	**374**	**1365**

700 SERIES - 91 / PERRIS VALLEY LINE (PVL)

TRAIN	TOTAL COLLECTED				TOTAL COL.	TOTAL COMPLETE				TOTAL. COMP.
	AM PEAK	MIDDAY	PM PEAK / NIGHT	WEEKEND		AM PEAK	MIDDAY	PM PEAK/ NIGHT	WEEKEND	
700	34				34	21				21
701	127				127	57				57
702			134		134			63		63
703	198				198	134				134
705	168				168	83				83
706			371		371			243		243
708			70		70			58		58
731	14				14	8				8
732	1				1	1				1
751				98	98				59	59
752				180	180				86	86
753				238	238				81	81
754				73	73				31	31
TOTAL	542		575	589	1706	304		364	257	925

800 SERIES - INLAND EMPIRE - ORANGE COUNTY

TRAIN	TOTAL COLLECTED				TOTAL COL.	TOTAL COMPLETE				TOTAL. COMP.
	AM PEAK	MIDDAY	PM PEAK / NIGHT	WEEKEND		AM PEAK	MIDDAY	PM PEAK/ NIGHT	WEEKEND	
800	51				51	32				32
803	98				98	68				68
805	94				94	24				24
806			141		141			80		80
807	268				268	194				194
808			134		134			85		85
809	85				85	23				23
810			140		140			88		88
811	101				101	69				69
812			139		139			73		73
817			27		27			15		15
857				55	55				32	32
858				170	170				88	88
859				316	316				158	158
860				76	76				32	32
TOTAL	697		581	617	1895	410		341	310	1061

Appendix B: Survey Instrument

2018 RIDER SURVEY

Please tell us about your current ONE-WAY TRIP YOU ARE MAKING ON THIS TRAIN NOW.
For **each** question MARK *ONE BOX ONLY* UNLESS otherwise indicated.

Be Entered Into a DRAWING for AMAZON GIFT CARDS $200 when you complete this survey!

● Correct ☑ Incorrect
◐ Incorrect ☒ Incorrect

METROLINK.

1. *When* did you *START* riding Metrolink? ① m m / y y: ② Today is my First Time ③ I am not a Regular Rider
   (use your best guess for Month and Year) ☐☐ / ☐☐

START OF *THIS* ONE-WAY TRIP

2. **What is the name of the *FIRST* METROLINK STATION you boarded for *this* one-way trip?**

   Station name: _____

3. **Where did you just COME FROM *before* boarding your first Metrolink train?**

   ① From Work ⑤ From Visiting Friends / Family
   ② From Home ⑥ From Leisure Activity or Event
   ③ From School ⑦ Other: _____
   ④ From Business Appointment _____

4. **Where is that STARTING LOCATION?** (NOT your first train station)

   Address: _____
   Example: 201 S. Figueroa St.

   OR Cross streets: _____ & _____
   Example: Pico Blvd. Figueroa St.

   OR Major Landmark: _____
   Example: LA Convention Center

   AND City: _____
   Example: Los Angeles

5. **How many *minutes* did it take you to travel to the METROLINK STATION?** _____ minutes

6. **How DID YOU TRAVEL TO that Metrolink STATION from your starting place?** (select the one for the **longest part** of the trip)

   ① Was dropped off
   ② Carpooled with someone else
   ③ Drove my car

   If you parked at this station, where did you park?
   ① Directly in the Metrolink parking lot/garage
   ② Parked on the street or offsite
   ③ Other: _____

   ④ Transferred from another train
   ① Metro Green Line ③ Metro Gold Line
   ② Metro subway (Red/Purple) ④ Amtrak

   ⑤ Transferred from a bus
   ① Metro route #: _____ ⑥ Other bus company; Name: _____
   ② OCTA route #: _____ ⑦ City shuttle; Name: _____
   ③ Dash
   ④ LADOT Bunker Hill Shuttle ⑧ Private shuttle bus; Name: _____
   ⑤ LAX FlyAway

   ⑥ Lyft/Uber
   ⑦ Bicycle
   ⑧ Walked all the way
   ⑨ Other: _____

END OF *THIS* ONE-WAY TRIP

7. **What is the name of the *LAST* METROLINK STATION at the end of *this* one-way trip?**

   Station name: _____

8. **Where will you GO TO *after* your last Metrolink train?**

   ① To Work ⑤ To Visit Friends / Family
   ② To Home ⑥ To Leisure Activity or Event
   ③ To School ⑦ Other: _____
   ④ To Business Appointment _____

9. **WHERE is that ENDING LOCATION?** (NOT your last train station)

   Address: _____
   Example: 888 Columbia Ave.

   OR Cross streets: _____ & _____
   Example: 6th St. Claremont Blvd.

   OR Major Landmark: _____
   Example: Claremont McKenna College

   AND City: _____
   Example: Claremont

10. **How many *minutes* will it take you to get *from* your LAST METROLINK STATION to the END OF YOUR TRIP?** _____ minutes

11. **How WILL YOU TRAVEL FROM that Metrolink STATION to the end of your trip?** (select the one for the **longest part** of the trip)

    ① Will be picked up
    ② Carpool with someone else
    ③ Drive my car

    If you parked at this station, where did you park?
    ① Directly in the Metrolink parking lot/garage
    ② Parked on the street or offsite
    ③ Other: _____

    ④ Transfer to another train
    ① Metro Green Line ③ Metro Gold Line
    ② Metro subway (Red/Purple) ④ Amtrak

    ⑤ Transfer to a bus
    ① Metro route #: _____ ⑥ Other bus company; Name: _____
    ② OCTA route #: _____ ⑦ City shuttle; Name: _____
    ③ Dash
    ④ LADOT Bunker Hill Shuttle ⑧ Private shuttle bus; Name: _____
    ⑤ LAX FlyAway

    ⑥ Lyft/Uber
    ⑦ Bicycle
    ⑧ Walk all the way
    ⑨ Other: _____

Please Turn Over →

12. DID YOU OR WILL you make this trip in the *OPPOSITE DIRECTION* TODAY?

① Yes, I am *taking Metrolink both-directions* today.

② Yes, this is a *round-trip but I am taking Metrolink in one direction only*.

③ No, *today* I am *traveling in one direction only*.

13. What type of *TICKET* are you using *TODAY*? (mark only ONE)

① Monthly Pass ④ Round-Trip Ticket ⑦ None

② 7-Day Pass ⑤ One-Way Ticket

③ Weekend Pass ⑥ Other: _____

14. What type of *FARE* are you using *TODAY*? (mark only ONE)

① Regular Adult ④ Student ⑦ PCA

② Senior ⑤ Military ⑧ Other:

③ Disabled ⑥ Access _____

15. What is the *PRICE* of your *pass or ticket*? $ ____ ____ . ____ ____

16. *How* do you usually *obtain* your Metrolink ticket? (mark ONE)

① Ticket vending machine ③ Metrolink mobile ticketing app

② My employer ④ Other: _____

17. Does your *employer pay* for part or all of your pass or ticket?

① No

② Yes – My employer pays $ ____ ____ . ____ ____ per month

③ Does not apply (Not employed or Self-employed)

18. *How often* do you ride Metrolink?

① 6 - 7 days a **Week** ⑤ 1 - 2 days a **Week**

② 5 days a **Week** ⑥ 1 - 3 days a **Month**

③ 4 days a **Week** ⑦ Less than **once a Month;** how many times a year? ____

④ 3 days a **Week**

19. SINCE LAST YEAR, are you riding Metrolink …

① The same

② **More** often ➡

③ **Less** often ➡

19-a. WHY has your use of Metrolink CHANGED?

① Travel more/less ④ Use of Uber/Lyft ⑦ Gas prices

② Changed job ⑤ Cost of parking ⑧ Other:

③ Changed home ⑥ Metrolink schedules _____

20. Did you have an *automobile available* to make *TODAY'S trip* instead of taking Metrolink? (mark only ONE)

① I have a car but prefer to take Metrolink ④ I have no car available to me

② My car is broken / being serviced ⑤ I am unable to drive or don't know how to drive

③ I don't have a car, I prefer to use Metrolink

21. How did you make this trip *BEFORE riding Metrolink*? (mark only ONE)

① Drove alone ④ Amtrak

② Carpooled / Vanpooled ⑤ Always taken Metrolink

③ Bus or Subway ⑥ Other: _____

22. If the *Metrolink train* you are *currently riding DIDN'T exist*, how would you make this trip? (mark only ONE)

① Drive a car I currently own or lease ⑥ Take Amtrak

② Take an earlier scheduled Metrolink train ⑦ Ride with someone else / carpool

③ Take a later scheduled Metrolink train ⑧ I would not make the trip

④ Metro Rail (Blue / Green / Red / Purple / Gold Line) ⑨ Other (specify): _____

⑤ Take bus ⑩ Don't know

23. *Why* did you take Metrolink *INSTEAD of DRIVING TODAY*? (mark ALL that apply)

① Save money ⑥ Employer pays for ticket

② More relaxing ⑦ Less stress than driving

③ No car available ⑧ Better for environment

④ Unable to drive ⑨ Better use of time

⑤ Train is safer ⑩ Other: _____

24. Which of the following *influenced your decision* to try Metrolink for the FIRST TIME? (mark ALL that apply)

① Traffic ⑤ Employer subsidy ⑨ I love trains

② New job ⑥ Free ticket offer ⑩ Special event train

③ Website ⑦ Recommendation ⑪ Group trip

④ Advertising ⑧ New home ⑫ Other: ____

25. If Metrolink could make JUST ONE CHANGE next year, what should it be? (mark only ONE)

① Trains that go to more places ⑦ More evening trains

② More comfortable train cars ⑧ More late-night trains

③ Better connections at station ⑨ More weekend trains

④ More reliable arrival times ⑩ Reduced fares

⑤ More early morning trains ⑪ Faster travel times

⑥ More midday trains ⑫ Other: _____

26. How IMPORTANT are the following *amenities to you* when riding a Metrolink train?

	Not Important	Somewhat Important	Very Important
a. Bike car	①	②	③
b. Quiet car	①	②	③
c. WI-FI	①	②	③
d. Water fountains	①	②	③
e. Electrical outlets	①	②	③
f. Food and beverage	①	②	③
g. Emergency call button	①	②	③
h. Security video cameras	①	②	③
i. Onboard security personnel	①	②	③
j. Seat tray tables	①	②	③
k. USB ports at seat	①	②	③
l. Other: _____	①	②	③

☐ ■ ☐ ☐ ☐ ☐ ☐ ☐ ☐

27. PLEASE RATE METROLINK'S PERFORMANCE IN THE FOLLOWING AREAS: 😞 😊

OVERALL	Very Poor	Poor	Fair	Good	Excellent	N/A
a. How would you rate Metrolink's performance overall?	①	②	③	④	⑤	⓪

RIDING METROLINK	Very Poor	Poor	Fair	Good	Excellent	N/A
b. Convenience of Metrolink train schedules	①	②	③	④	⑤	⓪
c. Ease of buying tickets / ticket vending machine reliability	①	②	③	④	⑤	⓪
d. Availability of transit connections at station	①	②	③	④	⑤	⓪
e. Availability of seating on train	①	②	③	④	⑤	⓪
f. Cleanliness of train interior	①	②	③	④	⑤	⓪
g. Cleanliness of restrooms on train	①	②	③	④	⑤	⓪
h. Equipment on train in good working order	①	②	③	④	⑤	⓪
i. Value of Metrolink "Quiet Cars"	①	②	③	④	⑤	⓪
j. Train arriving at my destination on time	①	②	③	④	⑤	⓪
k. Behavior of other riders	①	②	③	④	⑤	⓪
l. Clarity of onboard announcements	①	②	③	④	⑤	⓪
m. Travel time on train compared to driving	①	②	③	④	⑤	⓪
n. Value of making good use of my time on the train	①	②	③	④	⑤	⓪
o. Value of Metrolink fare compared to driving	①	②	③	④	⑤	⓪
p. Riding experience overall	①	②	③	④	⑤	⓪

PERSONNEL	Very Poor	Poor	Fair	Good	Excellent	N/A
q. Helpfulness and courtesy of Metrolink conductors	①	②	③	④	⑤	⓪
r. Enforcement of Rules of Conduct among riders	①	②	③	④	⑤	⓪
s. Enforcement against fare evasion	①	②	③	④	⑤	⓪

STATION	Very Poor	Poor	Fair	Good	Excellent	N/A
t. Station experience overall	①	②	③	④	⑤	⓪
u. Clarity of station signage	①	②	③	④	⑤	⓪
v. Availability of parking at station	①	②	③	④	⑤	⓪

SAFETY	Very Poor	Poor	Fair	Good	Excellent	N/A
w. Safe operation of trains	①	②	③	④	⑤	⓪
x. Security in station parking lot	①	②	③	④	⑤	⓪
y. Feeling secure from crime while at station	①	②	③	④	⑤	⓪
z. Feeling secure from crime while riding train	①	②	③	④	⑤	⓪

COMMUNICATIONS	Very Poor	Poor	Fair	Good	Excellent	N/A
aa. Information on train delays overall	①	②	③	④	⑤	⓪
bb. Announcements of delay information at the station	①	②	③	④	⑤	⓪
cc. Announcements of delay information onboard the train	①	②	③	④	⑤	⓪
dd. Availability of train delay information on Twitter / mobile app	①	②	③	④	⑤	⓪
ee. Metrolink responsiveness to customer concerns	①	②	③	④	⑤	⓪
ff. Ease of obtaining information at Metrolinktrains.com	①	②	③	④	⑤	⓪
gg. Usefulness of printed materials onboard the train	①	②	③	④	⑤	⓪

28. How likely are you to recommend Metrolink to your friends or colleagues? (fill in number)
Not likely at all ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ Very likely

29. How likely are you to continue riding Metrolink 12 months from now? (fill in number)
Not likely at all ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ Very likely

☐ ☐ ■ ☐ ☐ ☐ ☐ ☐ ☐

30. In the *past six months, while riding Metrolink,* have you personally experienced *any of the following types* of sexual harassment?

	Yes	No
a. Non-physical (comments, gestures, etc.)	①	②
b. Physical (unwanted touching, groping, fondling, etc.)	①	②
c. Indecent exposure (exposure of private parts)	①	②

31. Did you know that Metrolink *has a mobile ticketing app* for smart phones?

① No, I did not know that

② Yes, and I use it

③ Yes, I am aware of it and I intend to try it

④ Yes, I am aware of it and I am not interested

⑤ Yes, I have used it but stopped using it

32. Do you *use ride-hailing services* such as Lyft and Uber?

② No
① Yes →

32-a. Has your *use of Metrolink increased, decreased, or stayed the same* DUE TO your use of RIDE-HAILING SERVICES?

① Increased

② Decreased

③ Stayed the same

32-b. How do you use *ride-haling services IN RELATION to Metrolink*?

① To reach to Metrolink station

② To replace Metrolink service

③ For trips that Metrolink doesn't serve

33. Which of the following best describes your *employment status*? (mark ALL that apply)

① Not employed or Retired

② Student; Type: →

③ Employed full-time

④ Employed part-time

⑤ Self-employed

33-a.
① High School
② Trade / Technical School
③ College / University
④ Other School

33-b1. Which of the following benefits does *your employer* offer? (mark ALL that apply)

① None

② Compressed work week (9/80, 8/80)

③ Flexible start & stop times

④ Telecommuting/ Telework

⑤ Financial incentives to carpool/vanpool

⑥ Providing/subsidizing bus or rail passes

⑦ Free Parking

⑧ Shuttle

⑨ Other: _____

33-b2. Which category best describes *your industry*?

① Construction / manufacturing

② Wholesale / retail sales

③ Transportation / utilities

④ Finance / real estate / insurance / legal services

⑤ Food services / hotels

⑥ Health care / social services

⑦ Architecture / engineering / consulting / business services

⑧ Entertainment / media / design / internet

⑨ Educational services

⑩ Government

⑪ Other: _____

In order to comply with Federal regulations Metrolink is required to report the following ridership demographic information. This will be used for statistical reporting only.

34. Including yourself, how many *people live in your household*?

① 1 person
② 2 people
③ 3 people
④ 4 people
⑤ 5 people
⑥ 6 people
⑦ Other: _____

35. In what *year* were you *born*? ___ ___ ___ ___

36. Gender identity:
① Male
② Female

37. What is your HOME *zip code*: ___ ___ ___ ___ ___

38. Which category includes your *gross annual household income*?

① Less than $20,000
② $20,000 - $29,999
③ $30,000 - $39,999
④ $40,000 - $49,999
⑤ $50,000 - $59,999
⑥ $60,000 - $74,999
⑦ $75,000 - $99,999
⑧ $100,000 - $149,999
⑨ $150,000 - $199,999
⑩ $200,000 or more

39. Do *you* personally speak a l*anguage other than English* at home?
② No
① Yes →

39-a. *If yes*, what language do you speak at home?
① Spanish
② Chinese - Mandarin
③ Chinese - Cantonese
④ Tagalog
⑤ Other: _____

39-b. How well do you speak *ENGLISH*?
① Very well
② Well
③ Not well

40. Do you consider yourself...

① African American (Black)
② Hispanic
③ Asian
④ Native Hawaiian or other Pacific Islander
⑤ American Indian or Alaskan Native
⑥ Caucasian (non-Hispanic)
⑦ Other (specify): _____

Thank you for your time. If you have any additional comments you would like to share with Metrolink please go to:

https://goo.gl/rBj5nG

Completed surveys will be entered into a drawing for one of FIVE $200 Amazon gift cards. TO ENTER THE DRAWING, please provide your contact information below.

Name: _____ _____

Address: _____ City: _____ Zip: _____

Phone #: (___ ___ ___) ___ ___ ___ — ___ ___ ___ ___

E-mail: _____ @ _____ . ____

THANK YOU FOR YOUR FEEDBACK!

ENCUESTA DE PASAJERO 2018

Le queremos preguntar sobre su viaje DE IDA QUE ESTA HACIENDO AHORA MISMO EN ESTE TREN.
Para cada una, por favor MARQUE SOLAMENTE UNA CAJA
al menos que esté indicado de otra manera

¡Sea parte de una OPORTUNIDAD de de ganar $200 TARJETAS DE REGALO DE PARA AMAZON cuando llene esta encuesta!

● Correcto   ☑ Incorrecto
◐ Incorrecto   ☒ Incorrecto

1. ¿Cuándo *EMPEZÓ* a usar Metrolink?
(Use su mejor estimado para mes y año)
① m m / y y: ☐☐ / ☐☐
② Hoy es mi Primera vez
③ No lo uso Regularmente

INICIO DE SU *VIAJE* DE IDA

2. ¿Cuál es el nombre de la *PRIMERA* ESTACIÓN *DE METROLINK* QUE BORDÓ en este viaje de ida?
Nombre de estación: _____

3. ¿De dónde VENÍA *ANTES* de bordar su primera estación de Metrolink?
① Del Trabajo
② De Casa
③ De la Escuela
④ De una Cita de Negocios
⑤ De visita con Familia / Amigos
⑥ De una actividad Recreativa O Evento
⑦ De Otro Sitio: _____

4. ¿Dónde está ese lugar donde EMPEZÓ SU VIAJE?
(NO su primera estación)

Dirección: _____
Ejemplo: 201 S. Figueroa St.

O Intersección: _____ & _____
Ejemplo: Pico Blvd.   Figueroa St.

O Lugar Central: _____
Ejemplo: LA Convention Center

Y Ciudad: _____
Ejemplo: Los Angeles

5. ¿Cuántos *minutos* le tomó para llegar a la *ESTACIÓN DE METROLINK*? _____ minutos

6. ¿Cómo LLEGÓ A ESA ESTACIÓN de Metrolink DESDE EL LUGAR DONDE EMPEZÓ SU VIAJE? (seleccione la opción más **larga** de su viaje)

① Alguien me dejó en la parada
② Compartí el viaje con alguien más
③ Conduje mi coche →
④ Me transferí de otro tren →
⑤ Me transferí de un autobús →
⑥ Lyft/Uber
⑦ Llegué en bicicleta
⑧ Caminé todo el camino
⑨ Otra opción: _____

Si se estacionó en la estación, ¿dónde se estacionó?
① Directamente en el garage de Metrolink
② Me estacioné en la calle o fuera
③ Otra opción: _____

① Línea Verde de Metro
② Subterráneo de Metro (Línea Roja/Morada)
③ Línea Dorada de Metro
④ Amtrak

① Ruta de Metro: _____
② Ruta de OCTA #: _____
③ Dash
④ Lanzadera de LADOT Bunker Hill
⑤ LAX FlyAway
⑥ Otra compañía de autobús; Nombre: _____
⑦ Lanzadera de ciudad; Nombre: _____
⑧ Autobús privado; Nombre: _____

FÍN DE SU *VIAJE* DE IDA

7. ¿Cuál es el nombre de la *última* ESTACIÓN DE METROLINK de su viaje DE IDA hoy?
Nombre de estación: _____

8. ¿A dónde irá después de su *última* estación de Metrolink?
① Al Trabajo
② A Casa
③ A la Escuela
④ A una Cita de Negocios
⑤ A visitar Familia / Amigos
⑥ A una actividad Recreativa O Evento
⑦ A Otra Sitio: _____

9. ¿Dónde está localizado ese destino (donde TERMINARÁ SU VIAJE)? (NO la última estación)

Dirección: _____
Ejemplo: 888 Columbia Ave.

O Intersección: _____ & _____
Ejemplo: 6th St.   Claremont Blvd.

O Lugar Central: _____
Ejemplo: Claremont McKenna College

Y Ciudad: _____
Ejemplo: Claremont

10. ¿Cuántos *minutos* le tomará para llegar a ese destino *desde* la *ÚLTIMA ESTACIÓN DE METROLINK*? _____ minutos

11. ¿CÓMO SE IRÁ de esa ESTACIÓN DE METROLINK hasta su destino? (seleccione la opción más **larga** de su viaje)

① Alguien me recojerá de la parada
② Voy a compartir el viaje con alguien más
③ Voy a conducir mi coche →
④ Me voy a transferir a otro tren →
⑤ Me voy a transferir a un autobús →
⑥ Lyft/Uber
⑦ Me voy en mi bicicleta
⑧ Voy a caminar todo el camino
⑨ Otra opción: _____

Si se estacionó en la estación, ¿dónde se estacionó?
① Directamente en el garage de Metrolink
② Me estacioné en la calle o fuera
③ Otra opción: _____

① Línea Verde de Metro
② Subterráneo de Metro (Línea Roja/Morada)
③ Línea Dorada de Metro
④ Amtrak

① Ruta de Metro: _____
② Ruta de OCTA #: _____
③ Dash
④ Lanzadera de LADOT Bunker Hill
⑤ LAX FlyAway
⑥ Otra compañía de autobús; Nombre: _____
⑦ Lanzadera de ciudad; Nombre: _____
⑧ Autobús privado; Nombre: _____

Siga a la próxima página →

12. ¿TOMÓ O VA A TOMAR este viaje en la DIRECCIÓN OPUESTA HOY?

- ① Sí, estoy **tomando Metrolink de ida y vuelta hoy**.
- ② Sí, este viaje es de ida y vuelta, pero estoy **tomando Metrolink en una dirección solamente**.
- ③ No, **hoy** estoy **viajando solamente en una dirección**.

13. ¿Qué tipo de BOLETO está usando HOY? (marque UNA opción)

- ① Pase Mensual
- ④ Boleto de ida y vuelta
- ④ Ninguno
- ② Pase de 7 días
- ⑤ Boleto de ida
- ③ Pase de fín de semana
- ⑧ Otra opción : _____

14. ¿Qué tipo de PASE está usando hoy? (marque UNA opción)

- ① De adulto regular
- ④ Estudiante
- ⑦ PCA
- ② Persona mayor
- ⑤ Militar
- ⑧ Otra opción: _____
- ③ Discapacitado/a
- ⑥ Acceso

15. ¿Cuál es el PRECIO de su pase o boleto? $ _____ . _____

16. ¿Cómo compra su boleto o pase de Metrolink? (marque UNA opción)

- ① Máquina de boletos
- ③ Aplicación móvil de Metrolink para boletos
- ② Mi empleador/compañía
- ④ Otra opción: _____

17. ¿Su empleador paga por parte del precio o precio completo de su pase o boleto?

- ① No
- ② Sí – Mi empleador paga $ _____ . _____ por mes
- ③ No aplica (No estoy empleado/a / Trabajo por mi cuenta)

18. ¿Qué tan seguido usa Metrolink?

- ① 6 - 7 días a la **Semana**
- ⑤ 1 - 2 días a la **Semana**
- ② 5 días a la **Semana**
- ⑥ 1 - 3 días al **Mes**
- ③ 4 días a la **Semana**
- ⑦ Menos de una vez al **Mes;** ¿cómo cuántas veces al año? _____
- ④ 3 días a la **Semana**

19. DESDE EL AÑO PASADO, ¿usted está usando Metrolink ....?

- ① Igual
- ② **Más seguido**
- ③ **Menos seguido**

19-a. ¿POR QUÉ ha CAMBIADO su uso de Metrolink?

- ① Viajo más/menos
- ④ Uso Uber/Lyft
- ⑦ El precio de la gasolina
- ② Cambié de trabajo
- ⑤ El precio de estacionamiento
- ⑧ Otra opción: _____
- ③ Me mudé de casa
- ⑥ Los horarios de Metrolink

20. ¿Tuvo un coche disponible para hacer este viaje HOY en vez de tomar Metrolink? (marque UNA opción)

- ① Tengo un coche pero prefiero tomar Metrolink
- ④ No tengo un coche disponible para usar
- ② Mi coche no funciona / lo están arreglando
- ⑤ No puedo conducir / No sé conducir un coche
- ③ No tengo un coche, prefiero tomar Metrolink

21. ¿Cómo hacía este viaje ANTES DE empezar a usar Metrolink? (marque solamente UNA opción)

- ① Conducía sólo/a
- ④ Amtrak
- ② Compartía viaje en coche/ en van
- ⑤ Siempre he tomado Metrolink
- ③ En autobús o subterráneo
- ⑥ Otra opción: _____

22. Si el tren de Metrolink en el que está viajando ahora mismo NO existiera, ¿cómo haría usted este viaje? (marque UNA opción)

- ① Condujera mi coche / arrendaría un coche
- ⑥ Tomaría Amtrak
- ② Tomaría un tren de Metrolink más temprano
- ⑦ Compartiría un viaje con alguien más
- ③ Tomaría un tren de Metrolink más tarde
- ⑧ No haría este viaje
- ④ Tomaría un tren de Metro Rail (Línea Azul / Verde / Roja / Morada / Dorada)
- ⑨ Otra opción: _____
- ⑤ Tomaría el autobús
- ⑩ No sé

23. ¿PORQUÉ usó Metrolink hoy EN VEZ DE CONDUCIR? (marque TODAS que apliquen)

- ① Ahorrar dinero
- ⑥ Mi empleador paga mi boleto/pase
- ② Más relajante
- ⑦ Menos estrés en vez de conducir
- ③ No tuve un coche disponible
- ⑧ Mejor para el ambiente
- ④ No puedo conducir
- ⑨ Mejor uso de tiempo
- ⑤ El tren es más seguro
- ⑩ Otra opción: _____

24. ¿Cuál de las siguientes opciones le influenció su decisión para empezar a usar Metrolink por PRIMERA VEZ? (marque TODAS que apliquen)

- ① Tráfico
- ⑤ Descuento por parte de mi trabajo
- ⑨ Me encantan los trenes
- ② Nuevo trabajo
- ⑥ Oferta de un boleto gratis
- ⑩ Un evento de tren
- ③ Un sitio en el internet
- ⑦ Recomendación
- ⑪ Un viaje de grupo
- ④ Un anuncio
- ⑧ Nuevo hogar
- ⑫ Otra opción: _____

25. Si Metrolink podría hacer un cambio para el próximo año, ¿qué debería de ser? (marque solamente UNA opción)

- ① Trenes que vayan a más lugares
- ⑦ Más trenes por la tarde
- ② Coches de tren más comodos
- ⑧ Más trenes por la noche
- ③ Mejores conecciones el las estaciones
- ⑨ Más trenes durante el fin de semana
- ④ Tiempos de llegadas más confiables
- ⑩ Tarifas reducidas
- ⑤ Más trenes por la manana
- ⑪ Viajes mas rápidos
- ⑥ Más trenes por medio día
- ⑫ Otra opción: _____

26. ¿Qué tan IMPORTANTE son las siguientes comodidades cuando viaja en un tren de Metrolink?

	No importante	Más o menos	Muy importante
a. Coche para bicicletas	①	②	③
b. Coche silencioso	①	②	③
c. Wi-Fi (internet inalámbrico)	①	②	③
d. Fuentes de agua	①	②	③
e. Enchufes eléctricos	①	②	③
f. Comida y bebidas	①	②	③
g. Botón de emergencias	①	②	③
e. Cámaras de seguridad	①	②	③
f. Seguridad a borde del tren	①	②	③
g. Bandeja de asientos	①	②	③
h. Enchufes USB	①	②	③
i. Otra opcion: _____	①	②	③.

27. Por favor califique el rendimiento de Metrolink en las siguientes áreas:

EN GENERAL	Muy Mal	Mal	Más o Menos	Bien	Excelente	No Aplica (N/A)
a. ¿Cómo calificaría el rendimiento de Metrolink en general?	①	②	③	④	⑤	⓪

VIAJANDO EN METROLINK	Muy Mal	Mal	Más o Menos	Bien	Excelente	No Aplica (N/A)
b. La conveniencia de los horarios de los trenes de Metrolink	①	②	③	④	⑤	⓪
c. Lo fácil que es comprar boletos / confiabilidad de las taquillas	①	②	③	④	⑤	⓪
d. La disponibilidad de las coneccciones de tránsito en las estaciones	①	②	③	④	⑤	⓪
e. La disponibilidad de asientos en el tren	①	②	③	④	⑤	⓪
f. Lo limpio del interior del tren	①	②	③	④	⑤	⓪
g. Lo limpio de los baños a bordo del tren	①	②	③	④	⑤	⓪
h. El equipo en el tren funcionando bien	①	②	③	④	⑤	⓪
i. El valor de los "coches silenciosos"	①	②	③	④	⑤	⓪
j. El tren llegando a mi destino a tiempo	①	②	③	④	⑤	⓪
k. El comportamiento de los pasajeros	①	②	③	④	⑤	⓪
l. La claridad de los anuncios a bordo	①	②	③	④	⑤	⓪
m. El tiempo de viaje comparado a conducir	①	②	③	④	⑤	⓪
n. El valor de aprovechar mi tiempo en el tren	①	②	③	④	⑤	⓪
o. El valor de los pases de Metrolink comparado a conducir	①	②	③	④	⑤	⓪
p. La experiencia viajando a bordo en general	①	②	③	④	⑤	⓪

PERSONAL	Muy Mal	Mal	Más o Menos	Bien	Excelente	No Aplica (N/A)
q. Lo servicial y la cortesía de los conductores de Metrolink	①	②	③	④	⑤	⓪
r. La aplicación de las reglas de conducto entre los pasajeros	①	②	③	④	⑤	⓪
s. Cumplimiento contra evasión de tarifas	①	②	③	④	⑤	⓪

ESTACIONES	Muy Mal	Mal	Más o Menos	Bien	Excelente	No Aplica (N/A)
t. La experiencia en general en las estaciones	①	②	③	④	⑤	⓪
u. La claridad de señalización en las estaciones	①	②	③	④	⑤	⓪
v. La disponibilidad de estacionamiento en las estaciones	①	②	③	④	⑤	⓪

SEGURIDAD	Muy Mal	Mal	Más o Menos	Bien	Excelente	No Aplica (N/A)
w. La operación segura de los trenes	①	②	③	④	⑤	⓪
x. Seguridad en el estacionamiento de las estaciones	①	②	③	④	⑤	⓪
y. Sentirse a salvo de la delincuencia, mientras en la estación	①	②	③	④	⑤	⓪
z. Sentirse a salvo de la delincuencia, mientras a bordo del tren	①	②	③	④	⑤	⓪

COMUNICACIONES	Muy Mal	Mal	Más o Menos	Bien	Excelente	No Aplica (N/A)
aa. Información en general sobre retrasos de tren	①	②	③	④	⑤	⓪
bb. Anuncios de información de retrasos en la estación	①	②	③	④	⑤	⓪
cc. Anuncios de información de retrasos a bordo del tren	①	②	③	④	⑤	⓪
dd. Disponibilidad de información sobre retrasos en Twitter / aplicación móvil	①	②	③	④	⑤	⓪
ee. La capacidad de respuesta de Metrolink a las preocupaciones del cliente	①	②	③	④	⑤	⓪
ff. La facilidad de obtener información en Metrolinktrains.com	①	②	③	④	⑤	⓪
gg. Utilidad de los materiales impresos a bordo del tren	①	②	③	④	⑤	⓪

28. ¿Qué tan probable sería que usted recomiende a Metrolink a sus amigos o compañeros de trabajo? (rellene un número)

No muy probable ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ Muy probable

29. ¿Qué tan probable sería que usted continuara usando Metrolink después de 12 meses a partir de hoy? (rellene un número)

No muy probable ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ Muy probable

☐ ☐ ☐ ☐ ☐ ☐ ■ ☐ ☐

30. En los *ultimos seis meses, durante sus viajes con Metrolink*, ¿usted ha *sido victima de una de los siguientes tipos de acoso sexual*?

	Sí	No
a. No físico (comentarios, gestos, etc.)	①	②
b. Físico (caricias no indeseados, etc.)	①	②
c. Exposición indecente (exposición de partes privada)	①	②

31. ¿Usted sabía que Metrolink *tiene una aplicación móvil para boletos*?

① No, no lo sabía   ③ Sí lo sabia, y lo quiero usar   ⑤ Sí antes lo usaba pero lo paré de usar

② Sí, lo uso   ④ Sí lo sabia, pero no estoy interesado/a

32. ¿Usted usa *servicios de taxi* como Lyft o Uber?

② No
① Sí

32-a. ¿Y su *uso de Metrolink ha incrementado, disminuido, o se ha quedado igual por su* USO de SERVICIOS DE TAXI COMO Lyft o Uber?

① Incrementado
② Disminuido
③ Quedado igual

32-b. ¿Cómo usa los servicios *de taxi* como Lyft o Uber EN RELACION con sus viajes en Metrolink?

① Para llegar a la estación de Metrolink
② Para reemplazar el servicio de Metrolink
③ Para viajes que Metrolink no ofrece

33. ¿Cuál de las siguientes opciones describe mejor su estado de empleo? (marque TODAS que apliquen)

① No empleado/a o Retirado/a
② Estudiante; Tipo: ➡
③ Empleado/a de tiempo completo
④ Empleado/a de medio tiempo
⑤ Empleado/a por mi cuenta

① Secundaria (High School)
② Comercio / Escuela Técnica
③ Colegio/Universidad
④ Otra Escuela

33-b1. ¿Cuál de los siguientes beneficios ofrece *su empleador*? (marque TODAS que apliquen)

① Ninguno
② Semana de trabajo compacto (9/80, 8/80)
③ Tiempos flexibles de empezar y terminar

④ Teletrabajo
⑤ Incentivos financieros de compartir viaje en coche/en van
⑥ Prestar o subvencionar pases de autobús o ferrocarril

⑦ Estacionamiento gratis
⑧ Lanzadera
⑨ Otra opicon: _____

33-b2. ¿Cuál categoría describe mejor *su industria*?

① Construcción/ fabricación
② Venta de mayoreo / minoreo
③ Transportación / utilidades
④ Finanzas/ bienes raíces / aseguranzas / servicios legales
⑤ Servicios de alimentación / hoteles
⑥ Cuidado médico / servicios sociales

⑦ Arquitectura / ingeniería/ consultoría / servicios para negocio
⑧ Entretenjimiento/ los medios/ diseño / internet
⑨ Servicios educativos
⑩ Gobierno
⑪ Otra opción: _____

Para poder cumplir con las regulaciones federales, Metrolink está obligado a reportar la siguiente información demográfica de pasajeros. Esto será usado sólo para informes estadísticos.

34. Incluyéndose a usted, ¿cuántas *personas viven en su hogar*?

① Una persona   ④ Cuatro personas   ⑦ Otra opción:
② Dos personas   ⑤ Cinco personas   _____
③ Tres personas   ⑥ Seis personas

35. ¿En qué *año nació*? ___ ___ ___ ___

36. Identidad de género: ① Hombre
② Mujer

37. ¿Cuál es el *código postal* de su DOMICILIO?: ___ ___ ___ ___ ___

38. ¿Cuál categoría incluye los *ingresos de su familia por año*?

① Menos de $20,000   ⑥ $60,000 - $74,999
② $20,000 - $29,999   ⑦ $75,000 - $99,999
③ $30,000 - $39,999   ⑧ $100,000 - $149,999
④ $40,000 - $49,999   ⑨ $150,000 - $199,999
⑤ $50,000 - $59,999   ⑩ $200,000 o más

39. ¿Usted habla otro idioma además *de Inglés* en su hogar?

② No   ① Sí

39-a. *Si es el caso,* ¿Cuál idioma habla en su hogar?

① Español   ④ Tagalo
② Chino - Mandarín   ⑤ Otra opción:
③ Chino - Cantonés   _____

39-b. ¿Qué tan bien habla el *Inglés*?

① Muy bien   ② Bien   ③ No muy bien

40. ¿Cuál de las siguientes opciones describe mejor su orígen étnico?

① Afroamericano   ⑤ Nativo/a Americano o de Alaska
② Hispano   ⑥ Caucásico/Blanco (no hispano)
③ Asiático
④ Nativo/a de Hawaii otra Isla Pacífica   ⑦ Otra opción: _____

Gracias por su tiempo. Si tiene algunos otros comentarios que le gustaría compartir con Metrolink, favor de visitar el sitio de:

https://goo.gl/rBj5nG

Encuesta completadas serán parte del concurso para una oportunidad de **ganar 1 de 5 tarjetas de regalo de $200 para Amazon. PARA PARTICIPAR,** favor de llenar su información de contacto.

Nombre: _____ _____

Domicilio: _____ Ciudad:_____ Zona Postal: _____

Teléfono: (__ __ __) __ __ __ – __ __ __ __

Correo Electrónico_____@_____ . _____

¡GRACIAS POR SU COLABORACIÓN!

Appendix C: Methodology

Data collection was conducted during a six-week period between May 11 and June 23, 2018. In 2018 the AM Peak was split out from total peak ridership resulting in four time segments; AM Peak, Midday, PM Peak/Night, and Weekend services. All lines and daypart combinations were surveyed in both inbound and outbound directions. Outbound trips consist of all trips departing from Los Angeles Union Station with the exception of the Inland Empire-OC Line which is anchored to the San Bernardino Downtown station.

Surveyors were assigned train consists in which they distributed a four-page survey instrument to all boarding passengers. The paper surveys were produced in English and Spanish with sequential serial numbers to assist in the post processing, identifying the train-boarding station combination where the survey was distributed to boarding riders. During surveying, surveyors also recorded the number of passengers boarding the train at each stop. Boarding passenger counts were later used in the data expansion to minimize over or under-representation of completed surveys.

In order to avoid short-trip survey bias, postage-free reply envelopes were made available to passengers who boarded the train near terminal stations. These envelopes were also provided to passengers who requested one if they were unable to complete the survey onboard for other reasons. Overall, 134 unique trains were surveyed out of 208 total trains. This is comprised of 102 weekday and 32 weekend trains.

Among the 23,129 passengers who were considered eligible (observed to be at least 16 years old) to participate in the survey, a total of 14,956 surveys were distributed with an initial participation rate of 65 percent. The majority of distributed surveys were returned to surveyors with a response rate of 95 percent. However, only 91 percent of the distributed surveys were returned with at least some of the questions filled out. Out of the 13,017 returned surveys, 59 percent were complete and fully geocoded (compared to 54 percent in the 2015 study). Based on the completion criteria enumerated in the scope of work, a completed survey shall have:

- Train number,
- Trip purpose,
- Ticket type,
- Boarding and alighting station,
- Mode of access and mode of egress, and
- 80 percent of completed surveys are required to have a complete, geocoded, and validated O-B-A-D data.

Overall, the 7,751 completed surveys exceed the minimum quota and completion requirements for each line and daypart combination in the sampling plan.

Figure 42: Survey Completion Distribution
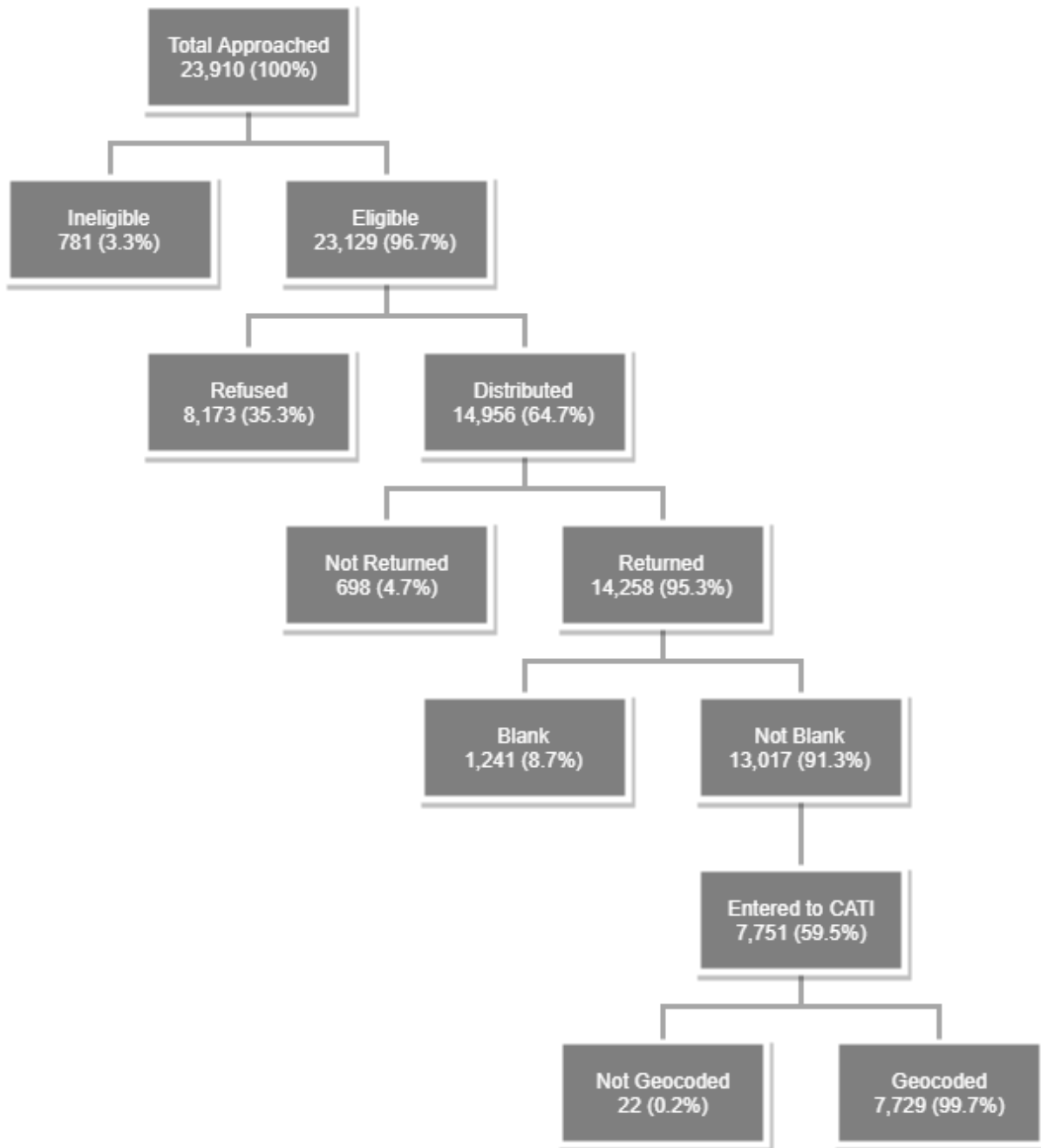
Passengers were informed that their input was important in order to understand their perspective on current Metrolink service quality prior to distributing the onboard survey. Despite the high proportion of eligible respondents (97%), approximately 35 percent of the respondents were unwilling to participate in the onboard survey. Surveyors attempted to identify the age category and ethnicity of those who refused based on observation.

Table 20: Refusals by Total Eligible Approaches

Count	Gender		Ethnicity				
	Male	Female	Asian	Black	Hispanic	White	Other
< 20	307	290	108	122	176	181	10
20 - 40	1,987	1,649	564	671	1,057	1,212	132
41 - 60	1,681	1,267	495	452	861	1,021	119
61+	578	414	185	136	248	370	53
Total	4,553	3,620	1,352	1,381	2,342	2,784	314

Percent	Gender		Ethnicity				
	Male	Female	Asian	Black	Hispanic	White	Other
< 20	1%	1%	0%	1%	1%	1%	0%
20 - 40	9%	7%	2%	3%	5%	5%	1%
41 - 60	7%	5%	2%	2%	4%	4%	1%
61+	2%	2%	1%	1%	1%	2%	0%
Total	20%	16%	6%	6%	10%	12%	1%

The table of refusals above does not include the eight percent of respondents who initially took the survey but did not return it to the surveyor because the demographic information of this group is unknown. When comparing the distribution of the refusals to the completed survey, the result is similar to the 2015 study in which:

- Passengers under 20 are more likely to participate and participation decreases with age, and
- Male passengers are less likely than female passengers to participate

Prior to 2010, the onboard passenger surveys were traditionally conducted biennially to maintain consistent time periods when identifying ridership characteristics and customer needs over time. The current study updates and expands survey results from previous onboard surveys conducted in 2008, 2010, and 2015. In 2008, the onboard study coincided with Metrolink's pre-recessionary ridership peak and provided retrospective information about ridership characteristics before the onset of the Great Recession. The 2010 study summarized the impacts of the severe economic downturn on Metrolink's ridership and

changing travel patterns. The previous study in 2015 revealed new travel trends and positive attitudes about Metrolink as the economy recovered.

Refining the research method used in 2015, the current study was designed to yield empirically valid trip characteristics, customer satisfaction, and demographic information at both the system and line levels with ridership proportionately reflected at the boarding station level. In addition, the sampling plan provides identification of major origin-destination points at the line level for the purpose of regional transportation modeling needs.

Table 21: Statistical Precision by Daypart

Line	AM Peak	Midday	PM Peak/Night	Weekend	Total
VN	± 4.6%		± 4.4%		± 3.2%
AV	± 4.3%	± 4.6%	± 4.6%	± 4.9%	± 2.3%
SB	± 4.4%	± 5.0%	± 4.7%	± 4.9%	± 2.4%
RV	± 4.9%		± 4.9%		± 3.5%
OC	± 4.1%		± 4.1%	± 4.6%	± 2.5%
91	± 4.9%		± 4.6%	± 5.0%	± 2.8%
IE-OC	± 4.4%		± 4.8%	± 4.6%	± 2.7%
System	± 1.7%	± 3.4%	± 1.7%	± 2.2%	± 1.0%

Table 21 shows the statistical precision levels at a 95% confidence level for weekday and weekend operations by line and time of the day based on the completed survey counts and Metrolink boarding counts used on the sampling plan. The results provide accuracy of ± 5 percent or better. The distribution breakdown for completed survey by line, time of day, and train number is provided in Appendix A.

Appendix C.1   Sampling Methodology

Using passenger boarding counts as the sampling unit, the sampling frame was developed to provide statistical precision of ± 5 percent at a 95 percent confidence level for each line and daypart combination. The average ridership data was provided by Metrolink in three different time periods: (i) January to March 2017, (ii) April to June 2017, and (iii) January to March 2018. The daypart for each train on the ridership data was carefully reviewed for accuracy and recoded as necessary to reflect Metrolink's current schedule.

Since the data collection period was planned to begin from May to June, the ideal sampling plan would have been developed using Metrolink's ridership for the second quarter of 2017. However, due to the ridership decline observed between the first quarter of 2017 and 2018, the second quarter ridership was expected to follow a similar trend. For this reason, the ridership data used to build the sampling plan was extrapolated to capture the expected ridership changes in the second quarter of 2018.

Table 22: Sampling Plan

Line	AM Peak	Midday	PM Peak/Night	Weekend	Total
VN	300		309		**608**
AV	323	282	327	324	**1,256**
SB	341	304	341	342	**1,328**
RV	321		323		**644**
OC	340		344	322	**1,006**
91	288		310	256	**854**
IE-OC	323		317	270	**910**
System	2,235	586	2,271	1,514	**6,606**

Once the sampling plan was established, the train numbers were selected to provide a representative sample for each line and daypart segment while maintaining schedule and cost efficiency. The selected trains were surveyed and other trains were added until adequate passengers were surveyed to produce desired goal for each market segment.

Appendix C.2   Data Weighting Methodology

The main principle of data weighting is based on balancing the ratio of completed surveys to known boardings for each sampling segment. This comparison produces a set of weights to expand the survey data from each segment in the sampling plan to the corresponding ridership in the target population. This ensures that the reported results more closely represent the actual ridership of Metrolink's riders than would be possible using survey counts alone.

Weight development is a four-step process to expand the survey data from the smallest unit of Metrolink's ridership, surveys and boarding counts at each train-station combination, to Metrolink's total average daily boardings (see Figure 43). The weighting and expansion process ensures that the survey results are balanced to reflect the ridership for all cars on all trains since not all 208 trains were surveyed, and not every car on each surveyed train was surveyed.

Figure 43: The Hierarchy of Metrolink's Ridership Used in Weighting

- Metrolink Daily Ridership
- Line by Weekday /Weekend
- Line by Daypart, & Direction
- Train Number
- Boarding by Train Consist & Station

Data Expansion Upward
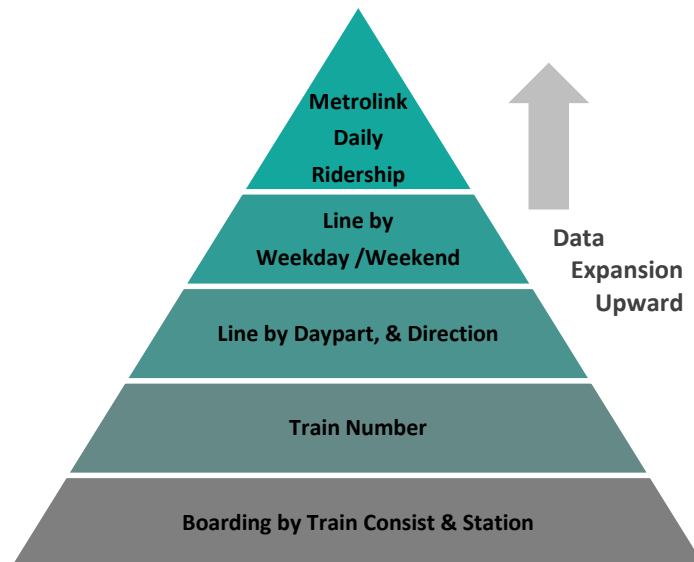
There are several important attributes underlying the development of weights:

1. Response factor – initial weights were calculated based on the boarding counts and completed surveys for each car and station pair with the number of boardings divided by the number of completed surveys to calculate the initial weight for the station-car combination for that train.
2. Car factor – since data collection was not always performed on all cars for each train that was surveyed, the boarding counts and completed surveys were expanded using the car factor to the total number of cars on the train. For example, if three out of the four cars on a train were surveyed, then the counts and completed surveys were expanded to the full train using the car factor of 1.33 (4 cars in consist/3 cars surveyed). In a few cases, where a certain train was surveyed multiple times, the car factor was averaged across the number of times the train was surveyed.
3. Train factor – the updated boarding counts were compared with Metrolink's boarding counts by train number. The train factor was then calculated as an expansion factor to adjust the survey boarding counts to Metrolink's boarding counts by train number.
4. Line factor – the last part of the weighting process is the application of the line factor where the survey counts after the train factor were expanded by Metrolink's boarding counts by line to account for the fact that not all trains for each line were surveyed.

The final weights were produced by multiplying all factors, and were assigned to each survey record based on the smallest unit of ridership category, that is, the train number and boarding station. The aggregate final weighted data closely represent the total number of Metrolink riders as typically observed on an average weekday or weekend. In other words, the final weights only reflect Metrolink ridership for a single day. For analysis where weekday and weekend survey data are combined, the final weight values are multiplied by five and two for weekdays and weekend days respectively.

Appendix D: Line Profile – Combined Weekday and Weekend

	SYSTEM	VENTURA	ANTELOPE VALLEY	SAN BERNARDINO	RIVERSIDE	ORANGE	91/PVL	INLAND EMPIRE
Home-Based Trip Purpose								
Work	74%	86%	63%	67%	90%	74%	78%	83%
School	4%	3%	4%	5%	3%	3%	3%	2%
Business Appointment	1%	1%	2%	2%	1%	1%	1%	0%
Visiting Friends/Family	7%	2%	15%	9%	2%	6%	5%	3%
Leisure	6%	1%	4%	9%	0%	7%	6%	6%
Other	1%	1%	2%	1%	1%	2%	1%	0%
Non-Home Based	7%	6%	9%	7%	4%	7%	5%	5%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Fare Media								
Monthly Pass	47%	65%	36%	42%	62%	51%	45%	44%
7-Day Pass	12%	10%	9%	11%	13%	9%	12%	23%
Weekend Pass	4%	0%	3%	6%	0%	4%	5%	5%
Round-trip Ticket	16%	10%	17%	18%	15%	16%	16%	16%
One-Way Ticket	19%	15%	29%	21%	10%	18%	20%	12%
None	0%	0%	0%	0%	0%	0%	0%	0%
Other	2%	0%	6%	1%	1%	1%	2%	1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Ticket Purchase Location								
Vending Machine	51%	52%	54%	58%	48%	51%	45%	38%
Employer	5%	4%	5%	5%	7%	5%	4%	3%
Mobile Ticketing App	39%	39%	35%	30%	35%	39%	47%	58%
Other	5%	5%	6%	7%	10%	4%	3%	0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Ticket Subsidy								
No	60%	50%	64%	60%	52%	58%	65%	73%
Yes	34%	46%	28%	32%	46%	37%	31%	24%
Does Not Apply	6%	3%	8%	8%	2%	5%	4%	3%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Round Trip								
Yes, Both Metrolink	75%	79%	65%	73%	85%	75%	77%	84%
Yes, One Direction	6%	6%	6%	7%	5%	5%	6%	7%
No Round Trip	19%	16%	29%	21%	10%	19%	17%	9%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

	SYSTEM	VENTURA	ANTELOPE VALLEY	SAN BERNARDINO	RIVERSIDE	ORANGE	91/PVL	INLAND EMPIRE
Tenure								
First Time	3%	2%	2%	4%	1%	4%	3%	4%
< 6 Months	17%	20%	19%	16%	18%	17%	19%	16%
6 -12 Months	11%	10%	10%	9%	11%	11%	13%	12%
1 - 2 Years	13%	11%	12%	13%	13%	15%	14%	16%
2 - 4 Years	16%	18%	16%	13%	15%	19%	15%	17%
4 - 6 Years	8%	9%	9%	8%	7%	8%	10%	8%
6+ Years	31%	30%	33%	36%	35%	26%	27%	26%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Ridership Frequency								
6-7 Days/Week	4%	2%	6%	5%	3%	3%	4%	3%
5 Days/Week	56%	67%	47%	50%	69%	53%	57%	65%
4 Days/Week	10%	13%	9%	9%	12%	9%	10%	10%
3 Days/Week	6%	4%	5%	6%	6%	7%	6%	5%
1-2 Days/Week	7%	4%	11%	7%	6%	8%	7%	4%
1-3 Days/Month	8%	6%	13%	8%	3%	7%	9%	4%
<1/Month	10%	3%	10%	16%	2%	14%	7%	8%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Automobile Available for Trip								
Yes, Prefer Metrolink	83%	87%	68%	80%	90%	86%	84%	91%
Yes, Broken	2%	1%	3%	3%	0%	1%	0%	1%
No, Prefer Metrolink	4%	4%	8%	5%	3%	4%	3%	1%
No Car	8%	5%	15%	9%	4%	7%	8%	5%
Unable to Drive	3%	3%	7%	3%	2%	3%	4%	2%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Overall Satisfaction								
Very Poor	1%	0%	0%	1%	0%	1%	0%	1%
Poor	2%	1%	1%	1%	4%	3%	3%	1%
Fair	15%	11%	17%	14%	21%	13%	15%	16%
Good	57%	56%	54%	58%	52%	61%	56%	56%
Excellent	26%	32%	28%	26%	23%	22%	25%	27%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Appendix E: Weekday Line Profile

	SYSTEM	VENTURA	ANTELOPE VALLEY	SAN BERNARDINO	RIVERSIDE	ORANGE	91/PVL	INLAND EMPIRE
Home-Based Trip Purpose								
Work	81%	86%	68%	77%	90%	82%	87%	90%
School	4%	3%	5%	5%	3%	3%	3%	2%
Business Appointment	1%	1%	2%	2%	1%	2%	1%	0%
Visiting Friends/Family	5%	2%	11%	5%	2%	4%	3%	2%
Leisure	2%	1%	3%	3%	0%	3%	2%	1%
Other	1%	1%	2%	1%	1%	2%	1%	0%
Non-Home Based	6%	6%	8%	6%	4%	6%	4%	5%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Fare Media								
Monthly Pass	52%	65%	40%	49%	62%	56%	51%	48%
7-Day Pass	13%	10%	10%	13%	13%	10%	14%	25%
Round-trip Ticket	16%	10%	18%	18%	15%	16%	17%	15%
One-Way Ticket	17%	15%	27%	18%	10%	17%	17%	11%
None	0%	0%	0%	0%	0%	0%	0%	0%
Other	2%	0%	5%	1%	1%	1%	2%	1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Ticket Purchase Location								
Vending Machine	50%	52%	53%	56%	48%	50%	43%	35%
Employer	5%	4%	6%	6%	7%	6%	4%	4%
Mobile Ticketing App	39%	39%	35%	31%	35%	39%	49%	61%
Other	6%	5%	6%	8%	10%	4%	4%	0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Ticket Subsidy								
No	58%	50%	62%	57%	52%	55%	62%	72%
Yes	37%	46%	31%	37%	46%	41%	35%	26%
Does Not Apply	4%	3%	7%	6%	2%	4%	3%	1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Round Trip								
Yes, Both Metrolink	78%	79%	69%	75%	85%	78%	81%	86%
Yes, One Direction	6%	6%	6%	7%	5%	6%	6%	7%
No Round Trip	16%	16%	26%	18%	10%	16%	13%	7%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

	SYSTEM	VENTURA	ANTELOPE VALLEY	SAN BERNARDINO	RIVERSIDE	ORANGE	91/PVL	INLAND EMPIRE
Tenure								
First Time	2%	2%	2%	2%	1%	3%	2%	3%
< 6 Months	17%	20%	18%	16%	18%	17%	19%	16%
6 -12 Months	11%	10%	10%	10%	11%	11%	13%	13%
1 - 2 Years	14%	11%	11%	14%	13%	15%	14%	16%
2 - 4 Years	16%	18%	17%	13%	15%	20%	15%	18%
4 - 6 Years	8%	9%	9%	9%	7%	8%	10%	9%
6+ Years	31%	30%	33%	37%	35%	26%	28%	25%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Ridership Frequency								
6-7 Days/Week	4%	2%	5%	5%	3%	3%	4%	3%
5 Days/Week	61%	67%	51%	57%	69%	58%	64%	70%
4 Days/Week	11%	13%	10%	10%	12%	10%	11%	10%
3 Days/Week	6%	4%	5%	6%	6%	7%	6%	6%
1-2 Days/Week	6%	4%	10%	6%	6%	7%	6%	4%
1-3 Days/Month	6%	6%	11%	6%	3%	6%	6%	3%
<1/Month	6%	3%	8%	10%	2%	9%	3%	3%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Automobile Available for Trip								
Yes, Prefer Metrolink	85%	87%	71%	84%	90%	88%	89%	93%
Yes, Broken	1%	1%	2%	2%	0%	1%	0%	1%
No, Prefer Metrolink	4%	4%	7%	4%	3%	3%	2%	1%
No Car	7%	5%	13%	7%	4%	5%	6%	4%
Unable to Drive	3%	3%	6%	3%	2%	2%	3%	1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Overall Satisfaction								
Very Poor	1%	0%	0%	1%	0%	1%	0%	1%
Poor	2%	1%	0%	1%	4%	3%	3%	1%
Fair	16%	11%	17%	15%	21%	14%	16%	17%
Good	58%	56%	56%	59%	52%	62%	57%	57%
Excellent	24%	32%	26%	24%	23%	21%	23%	24%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Appendix F: Weekend Line Profile

	SYSTEM	VENTURA	ANTELOPE VALLEY	SAN BERNARDINO	RIVERSIDE	ORANGE	91/PVL	INLAND EMPIRE
Home-Based Trip Purpose								
Work	9%	0%	18%	8%	0%	3%	11%	8%
School	3%	0%	1%	2%	0%	5%	8%	4%
Business Appointment	2%	0%	2%	2%	0%	1%	1%	0%
Visiting Friends/Family	29%	0%	43%	30%	0%	24%	26%	15%
Leisure	40%	0%	16%	42%	0%	47%	39%	62%
Other	2%	0%	3%	2%	0%	2%	1%	1%
Non-Home Based	15%	0%	17%	14%	0%	19%	12%	9%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**
Fare Media								
Monthly Pass	3%	0%	3%	2%	0%	4%	3%	0%
7-Day Pass	1%	0%	2%	1%	0%	1%	2%	1%
Weekend Pass	42%	0%	29%	43%	0%	44%	44%	53%
Round-trip Ticket	15%	0%	13%	16%	0%	14%	11%	21%
One-Way Ticket	36%	0%	45%	35%	0%	34%	39%	23%
None	0%	0%	0%	1%	0%	0%	0%	0%
Other	3%	0%	8%	1%	0%	2%	1%	3%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**
Ticket Purchase Location								
Vending Machine	66%	0%	67%	71%	0%	57%	61%	69%
Employer	0%	0%	0%	0%	0%	0%	1%	0%
Mobile Ticketing App	31%	0%	27%	28%	0%	42%	36%	28%
Other	2%	0%	6%	2%	0%	1%	2%	4%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**
Ticket Subsidy								
No	81%	0%	86%	77%	0%	81%	85%	82%
Yes	2%	0%	2%	2%	0%	2%	1%	0%
Does Not Apply	18%	0%	13%	21%	0%	17%	14%	18%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**
Round Trip								
Yes, Both Metrolink	50%	0%	35%	57%	0%	47%	43%	62%
Yes, One Direction	6%	0%	7%	6%	0%	5%	8%	7%
No Round Trip	44%	0%	58%	37%	0%	48%	48%	31%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**

	SYSTEM	VENTURA	ANTELOPE VALLEY	SAN BERNARDINO	RIVERSIDE	ORANGE	91/PVL	INLAND EMPIRE
Tenure								
First Time	17%	0%	8%	23%	0%	16%	13%	18%
< 6 Months	18%	0%	24%	15%	0%	19%	21%	18%
6 -12 Months	8%	0%	9%	6%	0%	11%	12%	8%
1 - 2 Years	10%	0%	14%	7%	0%	12%	12%	9%
2 - 4 Years	12%	0%	9%	13%	0%	11%	15%	13%
4 - 6 Years	7%	0%	9%	6%	0%	7%	8%	6%
6+ Years	27%	0%	28%	30%	0%	25%	20%	28%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**
Ridership Frequency								
6-7 Days/Week	4%	0%	9%	3%	0%	1%	5%	4%
5 Days/Week	4%	0%	8%	3%	0%	2%	3%	3%
4 Days/Week	3%	0%	6%	2%	0%	3%	2%	1%
3 Days/Week	3%	0%	6%	2%	0%	1%	4%	1%
1-2 Days/Week	12%	0%	15%	10%	0%	12%	14%	8%
1-3 Days/Month	24%	0%	24%	24%	0%	23%	29%	20%
<1/Month	51%	0%	32%	56%	0%	58%	42%	63%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**
Automobile Available for Trip								
Yes, Prefer Metrolink	57%	0%	40%	56%	0%	64%	51%	77%
Yes, Broken	5%	0%	9%	6%	0%	2%	2%	1%
No, Prefer Metrolink	10%	0%	11%	11%	0%	8%	12%	5%
No Car	21%	0%	26%	22%	0%	18%	21%	13%
Unable to Drive	8%	0%	14%	6%	0%	8%	15%	4%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**
Overall Satisfaction								
Very Poor	0%	0%	0%	0%	0%	1%	0%	0%
Poor	1%	0%	1%	1%	0%	1%	1%	0%
Fair	8%	0%	14%	6%	0%	9%	5%	3%
Good	49%	0%	44%	50%	0%	55%	50%	41%
Excellent	42%	0%	41%	42%	0%	34%	45%	56%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**

Appendix G: Line Demographics – Combined Weekday and Weekend

	SYSTEM	VENTURA	ANTELOPE VALLEY	SAN BERNARDINO	RIVERSIDE	ORANGE	91/PVL	INLAND EMPIRE
Gender								
Male	48%	55%	47%	44%	40%	54%	46%	52%
Female	52%	45%	53%	56%	60%	46%	54%	48%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Age								
Under 30	21%	11%	25%	24%	16%	21%	23%	17%
30 - 44	30%	26%	27%	26%	31%	35%	30%	31%
45 - 54	23%	30%	22%	23%	23%	21%	22%	26%
55 - 64	20%	25%	21%	19%	23%	17%	18%	21%
65+	6%	8%	6%	7%	7%	5%	7%	5%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Ethnicity								
Black	10%	2%	19%	13%	9%	4%	14%	7%
Hispanic	30%	19%	29%	41%	29%	20%	26%	33%
Asian/Pacific Islander	21%	26%	12%	13%	35%	34%	21%	15%
White	33%	48%	33%	27%	22%	37%	31%	40%
Other	6%	4%	6%	5%	5%	5%	7%	6%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Household Income								
< $20,000	8%	3%	17%	10%	4%	4%	8%	3%
$20K-$29K	4%	3%	7%	5%	4%	3%	4%	2%
$30K-$39K	5%	2%	7%	6%	4%	3%	6%	5%
$40K-$49K	6%	8%	7%	6%	5%	4%	5%	6%
$50K-$59K	8%	6%	7%	10%	6%	6%	9%	12%
$60K-$74K	11%	8%	8%	14%	13%	8%	12%	13%
$75K-$99K	14%	16%	12%	12%	17%	15%	15%	18%
$100K-$149K	22%	29%	18%	20%	24%	24%	20%	24%
$150K-$199K	12%	10%	8%	10%	14%	18%	12%	10%
$200K+	10%	15%	8%	7%	10%	15%	10%	7%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Employment Status (Mult. Resp.)								
Not Employed/Retired	5%	2%	10%	7%	1%	3%	3%	2%
Student	17%	11%	19%	20%	16%	16%	19%	15%
Full-Time	79%	87%	68%	74%	86%	81%	81%	86%
Part-Time	6%	5%	9%	6%	4%	4%	5%	6%
Self-Employed	4%	2%	4%	5%	2%	5%	4%	2%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

	SYSTEM	VENTURA	ANTELOPE VALLEY	SAN BERNARDINO	RIVERSIDE	ORANGE	91/PVL	INLAND EMPIRE
Industry								
Construction	6%	5%	8%	5%	4%	6%	6%	9%
Wholesale/Retail	6%	6%	7%	5%	6%	5%	8%	8%
Transportation/Utilities	7%	5%	4%	7%	7%	7%	5%	9%
Finance/Legal	19%	22%	18%	17%	19%	22%	17%	16%
Food Services	3%	1%	6%	2%	2%	3%	2%	1%
Health Care/Social Services	14%	11%	12%	16%	18%	10%	15%	20%
Architecture	8%	10%	7%	5%	7%	12%	7%	13%
Media	8%	13%	13%	6%	6%	9%	8%	4%
Education Services	9%	5%	7%	13%	7%	7%	10%	6%
Government	16%	19%	11%	20%	20%	15%	17%	10%
Other	4%	3%	7%	3%	4%	3%	5%	4%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Household Size								
1 Person	11%	14%	13%	12%	8%	12%	9%	6%
2 People	27%	33%	26%	25%	27%	29%	26%	29%
3 People	22%	23%	19%	21%	23%	23%	23%	20%
4 People	21%	17%	20%	19%	23%	21%	22%	22%
5 People	12%	8%	13%	13%	11%	9%	12%	16%
6 People	6%	5%	7%	7%	6%	4%	6%	6%
Other	2%	1%	2%	3%	3%	1%	3%	2%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Appendix H: Weekday Line Demographics

	SYSTEM	VENTURA	ANTELOPE VALLEY	SAN BERNARDINO	RIVERSIDE	ORANGE	91/PVL	INLAND EMPIRE
Gender								
Male	48%	55%	47%	43%	40%	55%	46%	53%
Female	52%	45%	53%	57%	60%	45%	54%	47%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Age								
Under 30	19%	11%	23%	21%	16%	20%	19%	15%
30 - 44	30%	26%	26%	27%	31%	36%	32%	32%
45 - 54	24%	30%	23%	25%	23%	22%	23%	26%
55 - 64	20%	25%	22%	20%	23%	17%	19%	21%
65+	6%	8%	6%	7%	7%	5%	7%	5%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Ethnicity								
Black	10%	2%	19%	14%	9%	4%	14%	7%
Hispanic	29%	19%	28%	41%	29%	19%	25%	33%
Asian/Pacific Islander	22%	26%	12%	13%	35%	35%	22%	15%
White	33%	48%	35%	27%	22%	36%	32%	39%
Other	5%	4%	6%	5%	5%	5%	7%	5%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Household Income								
< $20,000	6%	3%	15%	8%	4%	3%	6%	2%
$20K-$29K	4%	3%	6%	4%	4%	3%	3%	1%
$30K-$39K	4%	2%	6%	5%	4%	3%	5%	5%
$40K-$49K	5%	8%	7%	5%	5%	3%	5%	6%
$50K-$59K	8%	6%	8%	10%	6%	6%	9%	12%
$60K-$74K	11%	8%	8%	15%	13%	8%	12%	13%
$75K-$99K	15%	16%	13%	12%	17%	16%	16%	18%
$100K-$149K	23%	29%	19%	22%	24%	25%	21%	25%
$150K-$199K	12%	10%	9%	10%	14%	19%	13%	11%
$200K+	10%	15%	9%	7%	10%	15%	11%	7%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Employment Status (Mult. Resp.)								
Not Employed/Retired	3%	2%	8%	5%	1%	2%	1%	1%
Student	16%	11%	18%	19%	16%	14%	15%	13%
Full-Time	82%	87%	71%	78%	86%	84%	86%	89%
Part-Time	5%	5%	8%	5%	4%	4%	5%	6%
Self-Employed	3%	2%	4%	3%	2%	4%	4%	2%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

	SYSTEM	VENTURA	ANTELOPE VALLEY	SAN BERNARDINO	RIVERSIDE	ORANGE	91/PVL	INLAND EMPIRE
Industry								
Construction	6%	5%	8%	4%	4%	6%	6%	9%
Wholesale/Retail	6%	6%	6%	4%	6%	5%	8%	8%
Transportation/Utilities	7%	5%	4%	7%	7%	7%	5%	10%
Finance/Legal	20%	22%	19%	18%	19%	23%	18%	16%
Food Services	2%	1%	5%	2%	2%	2%	2%	1%
Health Care/Social Services	15%	11%	12%	17%	18%	10%	15%	20%
Architecture	9%	10%	7%	5%	7%	12%	7%	13%
Media	8%	13%	14%	6%	6%	9%	7%	3%
Education Services	8%	5%	7%	13%	7%	7%	9%	5%
Government	17%	19%	11%	21%	20%	15%	18%	10%
Other	4%	3%	7%	3%	4%	3%	4%	4%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Household Size								
1 Person	10%	14%	13%	11%	8%	11%	8%	6%
2 People	27%	33%	25%	25%	27%	29%	26%	29%
3 People	22%	23%	20%	21%	23%	24%	23%	18%
4 People	21%	17%	20%	20%	23%	21%	23%	23%
5 People	12%	8%	13%	14%	11%	10%	12%	16%
6 People	6%	5%	7%	6%	6%	4%	5%	6%
Other	2%	1%	2%	2%	3%	1%	3%	2%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Appendix I: Weekend Line Demographics

	SYSTEM	VENTURA	ANTELOPE VALLEY	SAN BERNARDINO	RIVERSIDE	ORANGE	91/PVL	INLAND EMPIRE
Gender								
Male	48%	0%	47%	52%	0%	49%	40%	44%
Female	52%	0%	53%	48%	0%	51%	60%	56%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**
Age								
Under 30	42%	0%	41%	46%	0%	32%	59%	33%
30 - 44	23%	0%	28%	20%	0%	27%	15%	24%
45 - 54	13%	0%	12%	9%	0%	16%	12%	20%
55 - 64	13%	0%	12%	12%	0%	14%	10%	15%
65+	10%	0%	7%	12%	0%	12%	5%	7%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**
Ethnicity								
Black	11%	0%	23%	10%	0%	4%	12%	4%
Hispanic	37%	0%	41%	45%	0%	26%	32%	29%
Asian/Pacific Islander	14%	0%	8%	12%	0%	21%	21%	11%
White	32%	0%	18%	28%	0%	45%	26%	49%
Other	6%	0%	9%	5%	0%	4%	8%	7%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**
Household Income								
< $20,000	24%	0%	37%	27%	0%	14%	25%	13%
$20K-$29K	10%	0%	15%	9%	0%	8%	13%	5%
$30K-$39K	12%	0%	10%	14%	0%	8%	10%	14%
$40K-$49K	7%	0%	6%	8%	0%	6%	6%	8%
$50K-$59K	7%	0%	6%	5%	0%	9%	11%	9%
$60K-$74K	9%	0%	6%	9%	0%	11%	8%	11%
$75K-$99K	10%	0%	9%	7%	0%	11%	7%	22%
$100K-$149K	10%	0%	6%	8%	0%	16%	12%	9%
$150K-$199K	6%	0%	3%	7%	0%	7%	5%	5%
$200K+	6%	0%	2%	6%	0%	11%	3%	3%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**
Employment Status (Mult. Resp.)								
Not Employed/Retired	19%	0%	21%	20%	0%	17%	15%	18%
Student	31%	0%	29%	30%	0%	30%	45%	29%
Full-Time	45%	0%	44%	40%	0%	50%	42%	54%
Part-Time	11%	0%	13%	12%	0%	8%	11%	7%
Self-Employed	9%	0%	8%	13%	0%	8%	3%	7%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**

	SYSTEM	VENTURA	ANTELOPE VALLEY	SAN BERNARDINO	RIVERSIDE	ORANGE	91/PVL	INLAND EMPIRE
Industry								
Construction	9%	0%	9%	11%	0%	5%	11%	9%
Wholesale/Retail	11%	0%	14%	12%	0%	7%	12%	9%
Transportation/Utilities	6%	0%	5%	11%	0%	2%	3%	3%
Finance/Legal	7%	0%	3%	5%	0%	13%	3%	8%
Food Services	8%	0%	15%	4%	0%	10%	8%	6%
Health Care/Social Services	11%	0%	13%	9%	0%	7%	15%	16%
Architecture	7%	0%	6%	9%	0%	6%	7%	7%
Media	10%	0%	10%	10%	0%	10%	13%	7%
Education Services	16%	0%	10%	16%	0%	16%	15%	24%
Government	7%	0%	6%	8%	0%	12%	4%	4%
Other	8%	0%	8%	6%	0%	11%	8%	7%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**
Household Size								
1 Person	16%	0%	13%	17%	0%	20%	12%	9%
2 People	27%	0%	27%	27%	0%	28%	24%	25%
3 People	20%	0%	15%	21%	0%	18%	20%	33%
4 People	16%	0%	19%	12%	0%	21%	17%	15%
5 People	10%	0%	12%	8%	0%	7%	15%	10%
6 People	7%	0%	8%	9%	0%	3%	7%	4%
Other	5%	0%	6%	7%	0%	3%	4%	3%
Total	**100%**	**0%**	**100%**	**100%**	**0%**	**100%**	**100%**	**100%**

Appendix J: Average Satisfaction Ratings by Ridership Frequency

Rating Description	6-7 D/Wk.	5 D/Wk.	4 D/Wk.	3 D/Wk.	1-2 D/Wk.	1-3 Days Mnth.	<1 Mnth.
Overall							
Overall Performance	3.94	3.95	4.03	4.11	4.27	4.30	4.37
Riding Metrolink							
Convenience of Schedules	3.60	3.67	3.65	3.68	3.69	3.75	3.89
Ticket Vending Machine Reliability	3.78	4.08	4.10	3.98	4.15	4.07	4.18
Availability of Transit Connection	3.70	3.83	3.78	3.92	3.97	3.97	4.09
Availability of Seating	3.48	3.72	3.79	3.84	4.08	4.16	4.27
Cleanliness of Interior	3.55	3.60	3.85	3.81	3.99	4.06	4.28
Cleanliness of Restrooms	3.20	3.29	3.44	3.39	3.62	3.63	3.95
Equipment in Good Working Order	3.76	3.79	3.94	3.93	4.09	4.14	4.24
Value of Quiet Cars	4.01	4.03	4.08	4.09	4.15	4.12	4.23
Train Arriving on Time	3.72	3.56	3.74	3.89	4.11	4.15	4.29
Behavior of Others	3.60	3.72	3.81	3.79	3.80	3.88	4.08
Clarity of Announce.	3.84	3.92	3.96	3.91	4.10	4.03	4.15
Travel Time vs. Driving	4.12	4.09	3.98	3.98	4.11	4.10	4.18
Value of Making Good Use of Time	4.19	4.37	4.33	4.38	4.38	4.33	4.38
Value of Metrolink Fare vs. Driving	4.02	3.84	3.83	3.81	3.96	4.05	4.21
Riding Experience Overall	4.08	4.08	4.10	4.10	4.25	4.33	4.37
Personnel							
Helpfulness & Courtesy of Conductors	4.34	4.37	4.37	4.22	4.44	4.35	4.39
Enforcement of Rules of Conduct	4.04	3.86	3.90	4.01	4.02	4.05	4.21
Enforcement Against Fare Evasion	4.07	3.88	3.91	4.03	4.12	3.99	4.20
Station							
Station Experience Overall	3.98	3.96	3.98	3.99	4.14	4.14	4.25
Clarity of Station Signage	3.90	3.91	3.94	3.89	4.01	4.01	4.04
Availability of Parking at Station	4.01	4.03	4.10	4.02	4.05	4.05	4.27
Safety							
Safe Operation of Trains	4.28	4.25	4.31	4.39	4.38	4.37	4.43
Security in Station Parking Lot	3.60	3.65	3.74	3.64	3.89	3.98	4.08
Feeling Secure From Crime at Station	3.74	3.79	3.89	3.78	3.97	4.00	4.10
Feeling Secure From Crime in Train	3.88	4.02	4.12	4.17	4.20	4.17	4.22
Communications							
Info on Train Delays Overall	3.30	3.17	3.25	3.41	3.57	3.66	3.96
Announce. of Delay Info at Station	3.36	3.13	3.23	3.36	3.62	3.69	3.96
Announce. of Delay Info Onboard the Train	3.55	3.46	3.57	3.65	3.85	3.88	4.04
Availability of Train Delay Info on Twitter	3.64	3.44	3.45	3.47	3.72	3.86	4.05
Responsiveness to Concerns	3.50	3.24	3.41	3.40	3.75	3.81	4.16
Ease of Obtaining Info on Website	3.78	3.65	3.65	3.79	3.97	4.01	4.22
Usefulness of Materials Onboard the Train	3.67	3.65	3.61	3.62	3.89	3.90	4.15

Appendix K: Weekday Average Satisfaction Ratings by Ridership Frequency

Rating Description	6-7 D/Wk.	5 D/Wk.	4 D/Wk.	3 D/Wk.	1-2 D/Wk.	1-3 Days Mnth.	<1 Mnth.
Overall							
Overall Performance	3.93	3.95	4.03	4.11	4.25	4.30	4.36
Riding Metrolink							
Convenience of Schedules	3.59	3.67	3.65	3.68	3.69	3.76	3.88
Ticket Vending Machine Reliability	3.79	4.08	4.10	3.97	4.15	4.13	4.14
Availability of Transit Connection	3.68	3.83	3.78	3.93	3.98	4.03	4.07
Availability of Seating	3.44	3.71	3.79	3.83	4.04	4.17	4.25
Cleanliness of Interior	3.53	3.60	3.85	3.80	3.99	4.05	4.32
Cleanliness of Restrooms	3.19	3.29	3.44	3.39	3.60	3.66	3.96
Equipment in Good Working Order	3.73	3.78	3.94	3.92	4.09	4.15	4.24
Value of Quiet Cars	3.98	4.03	4.09	4.09	4.16	4.14	4.22
Train Arriving on Time	3.69	3.56	3.74	3.89	4.13	4.14	4.30
Behavior of Others	3.58	3.73	3.81	3.78	3.81	3.91	4.10
Clarity of Announce.	3.83	3.92	3.96	3.91	4.10	4.03	4.15
Travel Time vs. Driving	4.12	4.09	3.99	3.98	4.12	4.12	4.19
Value of Making Good Use of Time	4.19	4.37	4.33	4.39	4.40	4.35	4.40
Value of Metrolink Fare vs. Driving	4.04	3.84	3.83	3.80	3.94	4.01	4.21
Riding Experience Overall	4.08	4.08	4.10	4.10	4.24	4.33	4.36
Personnel							
Helpfulness & Courtesy of Conductors	4.36	4.37	4.38	4.22	4.44	4.37	4.43
Enforcement of Rules of Conduct	4.03	3.85	3.91	4.00	3.99	4.08	4.25
Enforcement Against Fare Evasion	4.07	3.88	3.92	4.03	4.11	4.02	4.24
Station							
Station Experience Overall	3.97	3.96	3.98	3.99	4.15	4.15	4.26
Clarity of Station Signage	3.88	3.91	3.94	3.89	4.01	4.06	4.03
Availability of Parking at Station	4.01	4.03	4.09	4.02	4.06	4.01	4.22
Safety							
Safe Operation of Trains	4.28	4.24	4.31	4.40	4.40	4.36	4.45
Security in Station Parking Lot	3.57	3.65	3.73	3.63	3.91	3.99	4.07
Feeling Secure From Crime at Station	3.71	3.79	3.89	3.78	4.00	4.00	4.12
Feeling Secure From Crime in Train	3.86	4.02	4.12	4.17	4.23	4.16	4.22
Communications							
Info on Train Delays Overall	3.30	3.17	3.24	3.40	3.54	3.67	4.03
Announce. of Delay Info at Station	3.36	3.13	3.23	3.34	3.60	3.71	4.03
Announce. of Delay Info Onboard the Train	3.56	3.46	3.57	3.64	3.84	3.91	4.09
Availability of Train Delay Info on Twitter	3.65	3.44	3.44	3.46	3.74	3.90	4.09
Responsiveness to Concerns	3.52	3.24	3.40	3.38	3.75	3.82	4.25
Ease of Obtaining Info on Website	3.78	3.64	3.64	3.79	3.96	4.02	4.29
Usefulness of Materials Onboard the Train	3.64	3.65	3.61	3.60	3.87	3.91	4.21

Appendix L: Weekend Average Satisfaction Ratings by Ridership Frequency

Rating Description	6-7 D/Wk.	5 D/Wk.	4 D/Wk.	3 D/Wk.	1-2 D/Wk.	1-3 Days Mnth.	<1 Mnth.
Overall							
Overall Performance	4.03	4.00	4.26	4.05	4.37	4.29	4.38
Riding Metrolink							
Convenience of Schedules	3.71	3.59	3.60	3.60	3.67	3.74	3.90
Ticket Vending Machine Reliability	3.65	4.00	4.07	4.15	4.15	3.91	4.23
Availability of Transit Connection	3.95	3.78	3.67	3.71	3.94	3.82	4.11
Availability of Seating	3.88	3.92	4.08	3.93	4.28	4.15	4.30
Cleanliness of Interior	3.81	3.75	3.67	3.97	3.98	4.09	4.22
Cleanliness of Restrooms	3.30	3.23	3.31	3.39	3.74	3.55	3.93
Equipment in Good Working Order	4.05	3.99	4.06	4.20	4.12	4.14	4.23
Value of Quiet Cars	4.29	4.09	3.81	4.09	4.10	4.06	4.25
Train Arriving on Time	4.10	3.52	3.68	3.82	3.98	4.17	4.27
Behavior of Others	3.81	3.39	3.48	3.85	3.77	3.82	4.06
Clarity of Announce.	3.97	4.19	4.00	4.11	4.10	4.02	4.15
Travel Time vs. Driving	4.05	3.90	3.72	3.86	4.05	4.03	4.16
Value of Making Good Use of Time	4.16	4.35	4.07	4.05	4.23	4.27	4.36
Value of Metrolink Fare vs. Driving	3.86	3.57	3.85	3.99	4.09	4.15	4.21
Riding Experience Overall	4.11	4.02	4.19	4.03	4.29	4.31	4.39
Personnel							
Helpfulness & Courtesy of Conductors	4.17	4.27	4.14	4.30	4.45	4.31	4.32
Enforcement of Rules of Conduct	4.13	4.05	3.73	4.21	4.20	3.98	4.17
Enforcement Against Fare Evasion	4.14	3.82	3.70	4.04	4.20	3.94	4.13
Station							
Station Experience Overall	4.08	4.04	3.87	3.92	4.07	4.14	4.22
Clarity of Station Signage	4.08	3.94	3.88	3.86	4.03	3.90	4.06
Availability of Parking at Station	4.06	4.00	4.28	4.12	4.03	4.14	4.33
Safety							
Safe Operation of Trains	4.24	4.36	4.42	4.37	4.28	4.38	4.40
Security in Station Parking Lot	3.98	3.82	3.97	4.17	3.80	3.97	4.09
Feeling Secure From Crime at Station	3.99	3.83	3.82	3.99	3.81	3.97	4.08
Feeling Secure From Crime in Train	4.05	3.99	4.04	4.03	4.04	4.21	4.23
Communications							
Info on Train Delays Overall	3.28	3.37	3.49	3.70	3.73	3.62	3.86
Announce. of Delay Info at Station	3.41	3.50	3.46	3.80	3.75	3.64	3.87
Announce. of Delay Info Onboard the Train	3.49	3.72	3.78	4.04	3.91	3.80	3.98
Availability of Train Delay Info on Twitter	3.44	3.54	3.65	3.95	3.65	3.76	3.99
Responsiveness to Concerns	3.36	3.29	3.71	3.89	3.78	3.78	4.03
Ease of Obtaining Info on Website	3.82	3.74	3.80	3.84	4.06	3.97	4.12
Usefulness of Materials Onboard the Train	3.96	3.95	3.70	3.99	3.99	3.87	4.08

Appendix M: Census Demographics by County

Source: U.S. Census Bureau, 2010-2017 American Community Survey 1-Year Estimates

GENDER						
COUNTY	**2010**		**2015**		**2017**	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**
Los Angeles	49%	51%	49%	51%	49%	51%
Orange	49%	51%	49%	51%	49%	51%
Riverside	50%	50%	50%	50%	50%	50%
San Bernardino	50%	50%	50%	50%	50%	50%
San Diego	50%	50%	50%	50%	50%	50%
Ventura	50%	50%	49%	51%	50%	50%
Total	**50%**	**50%**	**50%**	**50%**	**50%**	**50%**

AGE					
COUNTY	**2010**				
	< 30	**30-44**	**45-54**	**55-64**	**65+**
Los Angeles	43%	22%	14%	10%	11%
Orange	42%	21%	15%	11%	12%
Riverside	45%	20%	13%	10%	12%
San Bernardino	48%	20%	14%	10%	9%
San Diego	43%	21%	14%	11%	11%
Ventura	42%	20%	15%	11%	12%
Total	**43%**	**21%**	**14%**	**10%**	**11%**

AGE					
COUNTY	**2015**				
	< 30	**30-44**	**45-54**	**55-64**	**65+**
Los Angeles	41%	21%	14%	12%	13%
Orange	40%	20%	15%	12%	14%
Riverside	43%	19%	13%	11%	14%
San Bernardino	46%	20%	13%	11%	11%
San Diego	42%	21%	13%	12%	13%
Ventura	41%	19%	14%	13%	14%
Total	**42%**	**21%**	**14%**	**12%**	**13%**

AGE					
COUNTY	**2017**				
	< 30	**30-44**	**45-54**	**55-64**	**65+**
Los Angeles	40%	21%	14%	12%	13%
Orange	39%	20%	14%	13%	14%
Riverside	43%	19%	13%	11%	14%
San Bernardino	45%	20%	12%	11%	11%
San Diego	41%	21%	13%	12%	14%
Ventura	40%	19%	14%	13%	15%
Total	**41%**	**21%**	**13%**	**12%**	**13%**

HISPANIC ORIGIN						
	2010		**2015**		**2017**	
COUNTY	**Hispanic (of any race)**	**Non-Hispanic**	**Hispanic (of any race)**	**Non-Hispanic**	**Hispanic (of any race)**	**Non-Hispanic**
Los Angeles	35%	65%	36%	64%	37%	63%
Orange	24%	76%	25%	75%	25%	75%
Riverside	31%	69%	34%	66%	35%	65%
San Bernardino	33%	67%	37%	63%	38%	62%
San Diego	23%	77%	24%	76%	25%	75%
Ventura	28%	72%	30%	70%	31%	69%
Total	**30%**	**70%**	**32%**	**68%**	**33%**	**67%**

ETHNICITY						
2010						
COUNTY	**Caucasian**	**African American**	**Asian/PI**	**American Indian/ Alaska Native**	**Some Other Race**	**Two or More Races**
Los Angeles	53%	8%	14%	0%	0%	24%
Orange	61%	2%	18%	0%	0%	18%
Riverside	67%	6%	6%	1%	0%	19%
San Bernardino	64%	9%	7%	1%	0%	19%
San Diego	72%	5%	11%	1%	0%	12%
Ventura	75%	2%	7%	1%	0%	15%
Total	**60%**	**7%**	**12%**	**1%**	**0%**	**20%**

ETHNICITY						
2015						
COUNTY	**Caucasian**	**African American**	**Asian/PI**	**American Indian/ Alaska Native**	**Some Other Race**	**Two or More Races**
Los Angeles	52%	8%	15%	1%	0%	24%
Orange	63%	2%	20%	0%	0%	15%
Riverside	63%	6%	7%	1%	0%	23%
San Bernardino	61%	8%	7%	1%	0%	22%
San Diego	71%	5%	12%	1%	0%	11%
Ventura	81%	2%	8%	1%	0%	9%
Total	**60%**	**6%**	**13%**	**1%**	**0%**	**20%**

COUNTY	ETHNICITY					
	2017					
	Caucasian	**African American**	**Asian/PI**	**American Indian/ Alaska Native**	**Some Other Race**	**Two or More Races**
Los Angeles	50%	8%	15%	1%	0%	26%
Orange	60%	2%	21%	1%	0%	17%
Riverside	57%	7%	7%	1%	0%	29%
San Bernardino	61%	8%	8%	1%	0%	22%
San Diego	70%	5%	12%	1%	0%	12%
Ventura	80%	2%	8%	1%	0%	9%
Total	**60%**	**6%**	**13%**	**1%**	**0%**	**20%**

MEDIAN HOUSEHOLD INCOME (ADJUSTED FOR INFLATION)			
COUNTY	**2010**	**2015**	**2017**
Los Angeles	$52,684	$59,134	$65,006
Orange	$70,880	$78,428	$86,217
Riverside	$54,296	$58,292	$63,944
San Bernardino	$52,607	$53,803	$60,420
San Diego	$59,923	$67,320	$76,207
Ventura	$71,864	$80,032	$82,857
Median	**$57,110**	**$63,227**	**$70,607**

EMPLOYMENT STATUS						
	2010		**2015**		**2017**	
COUNTY	**Employed**	**Not Employed**	**Employed**	**Not Employed**	**Employed**	**Not Employed**
Los Angeles	57%	43%	59%	41%	61%	39%
Orange	60%	40%	61%	39%	63%	37%
Riverside	52%	48%	54%	46%	55%	45%
San Bernardino	52%	48%	54%	46%	55%	45%
San Diego	55%	45%	59%	42%	60%	40%
Ventura	61%	40%	60%	40%	62%	38%
Total	**56%**	**44%**	**58%**	**42%**	**60%**	**40%**

COUNTY	LANGUAGE SPOKEN				
	2010				
	English	Spanish	Indo-European	Asian/PI	Other
Los Angeles	43%	40%	5%	11%	1%
Orange	55%	27%	4%	14%	1%
Riverside	59%	34%	2%	4%	1%
San Bernardino	59%	34%	1%	4%	1%
San Diego	62%	25%	3%	8%	2%
Ventura	62%	30%	3%	4%	1%
Total	**51%**	**34%**	**4%**	**9%**	**1%**

COUNTY	LANGUAGE SPOKEN				
	2015				
	English	Spanish	Indo-European	Asian/PI	Other
Los Angeles	43%	40%	5%	11%	1%
Orange	54%	26%	4%	15%	1%
Riverside	59%	34%	2%	4%	1%
San Bernardino	58%	35%	2%	5%	1%
San Diego	62%	25%	3%	8%	2%
Ventura	61%	31%	2%	5%	1%
Total	**50%**	**35%**	**4%**	**10%**	**1%**

COUNTY	LANGUAGE SPOKEN				
	2017				
	English	Spanish	Indo-European	Asian/PI	Other
Los Angeles	43%	39%	5%	11%	1%
Orange	54%	25%	4%	15%	1%
Riverside	59%	34%	2%	4%	1%
San Bernardino	59%	34%	1%	5%	1%
San Diego	62%	25%	3%	8%	2%
Ventura	61%	30%	3%	4%	1%
Total	**50%**	**35%**	**4%**	**10%**	**1%**

Appendix N: Origin and Destination Maps by Line

Metrolink: Ventura County Line - 100 Series
Rider Origins & Destinations - Home-Based Trips: 2018

METROLINK.

Metrolink Stations ◇
Metrolink Lines —

SANTA CLARITA
VIA PRINCESSA
NEWHALL
SYLMAR/SAN FERNANDO
MOORPARK
SIMI VALLEY
VENTURA-EAST
CHATSWORTH
NORTHRIDGE
CAMARILLO
OXNARD
VAN NUYS
SUN VALLEY
BURBANK AIRPORT-NORTH
BURBANK AIRPORT-SOUTH
BURBANK-DOWNTOWN
GLENDALE
LA UNION STATION
CAL STATE LA
COMMERCE

Union Station Region

GLENDALE
CAL STATE LA
LA UNION STATION
COMMERCE
MONTEBELLO

Rider Destinations •

Home Count by ZIP Code
- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 60
- 61 - 100

0   2.5   5 Miles

0   5   10   20   30   40 Miles

Metrolink: Antelope Valley Line - 200 Series
Rider Origins & Destinations - Home-Based Trips: 2018

METROLINK.

Union Station Region

GLENDALE

LA UNION STATION

CAL STATE LA

MONTEBELLO

COMMERCE

0   2.5   5
Miles

◇ Metrolink Stations

── Metrolink Lines

LANCASTER

PALMDALE

VINCENT GRADE/ACTON

SANTA CLARITA
VIA PRINCESSA
NEWHALL

SYLMAR/SAN FERNANDO

SIMI VALLEY

CHATSWORTH

NORTHRIDGE

VAN NUYS

SUN VALLEY

BURBANK AIRPORT-NORTH
BURBANK AIRPORT-SOUTH
BURBANK-DOWNTOWN

GLENDALE

LA UNION STATION
CAL STATE LA

EL MONTE   BALDWIN PARK   COVINA

CLAREMONT MONTCLAIR UPLAND   RANCHO CUCAMONGA   FONTANA   RIALTO
POMONA-NORTH   SAN BERNARDINO DEPOT
POMONA-DOWNTOWN

ONTARIO - EAST

INDUSTRY

MONTEBELLO
COMMERCE

HUNTER PARK/UCR
RIVERSIDE-DOWNTOWN

NORWALK   JURUPA VALLEY

MORENO VALLEY

BUENA PARK   FULLERTON   CORONA-WEST   RIVERSIDE-LA SIERRA
                          CORONA-NORTH MAIN
ANAHEIM CANYON

ANAHEIM
ORANGE

SANTA ANA

TUSTIN

• Rider Destinations

Count_

	1 - 10
	11 - 20
	21 - 30
	31 - 60
	61 - 100
	110 - 140

0   5   10   20   30   40
Miles

Source: Redhill Group, Inc. 2018; Metrolink 2018; 2016 TIGERLINE/shapefiles

Metrolink: San Bernardino Line - 300 Series
Rider Origins & Destinations - Home-Based Trips: 2018

METROLINK.

Union Station Region

Legend

• Rider Destinations

Home Count by ZIP Code
- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 60
- 61 - 100

◇ Metrolink Stations
— Metrolink Lines

Station labels: SYLMAR/SAN FERNANDO, SUN VALLEY, VAN NUYS, BURBANK AIRPORT-NORTH, BURBANK AIRPORT-SOUTH, BURBANK-DOWNTOWN, GLENDALE, EL MONTE, BALDWIN PARK, COVINA, CLAREMONT, MONTCLAIR, UPLAND, POMONA-NORTH, RANCHO CUCAMONGA, FONTANA, RIALTO, SAN BERNARDINO DEPOT, SAN BERNARDINO-DOWNTOWN, LA UNION STATION, CAL STATE LA, MONTEBELLO, COMMERCE, POMONA-DOWNTOWN, INDUSTRY, ONTARIO - EAST, HUNTER PARK/UCR, JURUPA VALLEY, RIVERSIDE-DOWNTOWN, NORWALK, MORENO VALLEY, BUENA PARK, FULLERTON, ANAHEIM CANYON, CORONA-WEST, CORONA-NORTH MAIN, RIVERSIDE-LA SIERRA, ANAHEIM, ORANGE, SANTA ANA, TUSTIN, IRVINE, PERRIS-DOWNTOWN, PERRIS-SOUTH, SAN CLEMENTE, SAN CLEMENTE PIER

Inset station labels: GLENDALE, CAL STATE LA, LA UNION STATION, MONTEBELLO, COMMERCE

0 2.5 5 Miles

0 5 10 20 30 40 Miles

Metrolink: Riverside Line - 400 Series
Rider Origins & Destinations - Home-Based Trips: 2018

Legend:
- ◇ Metrolink Stations
- — Metrolink Lines
- ● Rider Destinations

Home Count by ZIP Code
- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 60
- 61 - 100

Union Station Region

0 2.5 5 Miles

0 5 10 20 30 40 Miles

Metrolink: Orange County Line - 600 Series
Rider Origins & Destinations - Home-Based Trips: 2018

METROLINK.

Legend:
- ◇ Metrolink Stations
- —— Metrolink Lines
- ● Rider Destinations

Home Count by ZIP Code
- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 60
- 61 - 100

Union Station Region

0 2.5 5 Miles

0 5 10 20 30 40 Miles

Source: Redhill Group, Inc. 2018; Metrolink 2018; 2016 TIGERLINE/shapefiles

Metrolink: 91/Perris Valley Line - 700 Series
Rider Origins & Destinations - Home-Based Trips: 2018

METROLINK.

Union Station Region

Rider Destinations

Home Count by ZIP Code

- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 60
- 61 - 100

◇ Metrolink Stations

— Metrolink Lines

0   2.5   5 Miles

0   5   10   20   30   40 Miles

Source: Redhill Group, Inc. 2018; Metrolink 2018; 2016 TIGERLINE/shapefiles

Metrolink: Inland Empire-OC Line - 800 Series
Rider Origins & Destinations - Home-Based Trips: 2018

METROLINK.

Rider Destinations •

Home Count by ZIP Code
- 1 - 10
- 11 - 20
- 21 - 30
- 31 - 60
- 61 - 100

◇ Metrolink Stations

⎯ Metrolink Lines

Santa Ana / Tustin / Irvine Region

0   2.5   5 Miles

Union Station Region

0   2.5   5 Miles

0   5   10   20   30   40 Miles

Source: Redhill Group, Inc. 2018; Metrolink 2018; 2016 TIGERLINE/shapefiles