

# Customer Satisfaction Survey

*prepared for*

**Worcester Regional Transit Authority**

*prepared by*

**Cambridge Systematics, Inc.**

*with*

MLD Services



*draft report*

# Customer Satisfaction Survey

*prepared for*

**Worcester Regional Transit Authority**

*prepared by*

**Cambridge Systematics, Inc.**  
101 Station Landing, Suite 410  
Medford, MA 02155

*with*

MLD Services

*date*

**June 2024**

---



# Table of Contents

<b>1.0</b>	<b>Introduction .....</b>	<b>1-1</b>
<b>2.0</b>	<b>Methodology .....</b>	<b>2-2</b>
2.1	Sampling Methodology .....	2-2
2.1.1	Total Ridership by Day Type .....	2-2
2.1.2	Ridership by Route Type and by Day Type .....	2-3
2.1.3	Surveying Approach .....	2-6
2.1.4	Response Bias Approach .....	2-7
2.2	Analysis Methodology .....	2-7
2.2.1	Complete Surveys.....	2-7
2.2.2	Data Entry .....	2-8
2.2.3	Quality Assurance.....	2-8
2.2.4	Weighting .....	2-8
<b>3.0</b>	<b>Findings.....</b>	<b>3-10</b>
3.1	About the Responses.....	3-10
3.2	Demographic Profile .....	3-11
3.2.1	Gender .....	3-11
3.2.2	Age.....	3-11
3.2.3	Race/Ethnicity .....	3-12
3.2.4	Languages Spoken at Home .....	3-13
3.2.5	Household Income and Poverty Status .....	3-14
3.2.6	Educational Attainment.....	3-15
3.3	Weekday .....	3-15
3.3.1	Transfers.....	3-15
3.3.2	Trip Purpose .....	3-16
3.3.3	Travel to Bus Stop .....	3-16
3.3.4	Bus Use Frequency .....	3-17
3.3.5	Main Reason for Riding .....	3-17
3.3.6	Bus Information Sources .....	3-18
3.3.7	Service Ratings.....	3-18
3.3.8	WRTA Actions to Increase Ridership .....	3-19
3.3.9	Fare Collection.....	3-19
3.3.10	Access to Smartphone with Data Plan .....	3-20
3.4	Saturday and Sunday .....	3-20
3.4.1	Transfers.....	3-20

3.4.2	Trip Purpose .....	3-21
3.4.3	Service Ratings.....	3-21
3.4.4	WRTA Actions to Increase Ridership .....	3-22
<b>4.0</b>	<b>Conclusion.....</b>	<b>4-23</b>
	<b>Appendix A – Survey Instrument .....</b>	<b>A-24</b>
	<b>Appendix B – Survey Schedule.....</b>	<b>B-26</b>

## List of Tables

Table 1	Daily Ridership by Route by Day Type.....	2-3
Table 2	Route Tiers .....	2-4
Table 3	Proportional Survey Responses across Day Type and Route Type .....	2-5
Table 4	Sampling Targets by Day Type and Route Type .....	2-6
Table 5	Systemwide Survey Weights .....	2-9
Table 6	Weekday Survey Weights .....	2-9

## List of Figures

Figure 1	Average Weekly Trips by Day Type .....	2-4
Figure 2	Average Weekly Ridership by Route.....	2-5
Figure 3	Survey Completion Rate.....	3-10
Figure 4	Responses by Day Type .....	3-10
Figure 5	Gender .....	3-11
Figure 7	Age.....	3-12
Figure 8	Race .....	3-12
Figure 9	Non-Hispanic White and People of Color .....	3-13
Figure 10	Languages Spoken at Home .....	3-13
Figure 11	Annual Household Income .....	3-14
Figure 12	Poverty Status .....	3-14
Figure 13	Educational Attainment.....	3-15
Figure 14	Weekday Transfer Behavior .....	3-15
Figure 15	Weekday Trip Purpose .....	3-16
Figure 16	Weekday Travel to Bus Stop .....	3-16
Figure 17	Weekday Bus Use Frequency .....	3-17
Figure 18	Weekday Main Reason for Riding .....	3-17
Figure 19	Weekday Bus Information Sources .....	3-18

Figure 20	Weekday Service Ratings .....	3-18
Figure 21	Weekday Actions WRTA Could Take to Expand Ridership .....	3-19
Figure 22	Weekday Use If Fare Collection Resumed .....	3-19
Figure 23	Weekday Smartphone Access .....	3-20
Figure 24	Weekend Transfer Behavior .....	3-20
Figure 25	Weekend Trip Purpose .....	3-21
Figure 26	Sunday Service Ratings .....	3-21
Figure 27	Actions to Increase Ridership .....	3-22





## 1.0 Introduction

The Worcester Regional Transit Authority (WRTA) is the public transportation provider for the City of Worcester and 36 surrounding communities. It is the second-largest regional transit authority (RTA) in Massachusetts and provides fixed route bus and paratransit service. In 2023, WRTA served 4.1 million unlinked passenger trips, over 95 percent of which were served on fixed route buses.

WRTA typically conducts a customer satisfaction survey every two years, but the COVID pandemic disrupted this survey cycle. The most recent customer survey was conducted in 2020, but due to the pandemic had to be delivered via online surveys only – in-person surveying was not feasible. The purpose of this project is to resume the regular biennial surveying cycle and return the process to in-person customer surveys.

The findings of this survey are intended to inform multiple decision points, gathering information such as:

- **Customer priorities** for improving service (e.g., more frequent service)
- **Customer travel patterns** to, through, and from the system (e.g., frequency of transfers)
- **Customer demographic characteristics** (e.g., languages spoken)

The statistically robust data presented in this report also provides the opportunity to drill down and answer specific questions as they arise over the next two years. For example, a communications strategy that relies heavily on smart phone access may exclude certain riders – this survey can help to determine if that is the case.

This report is divided into two main sections. The first lays out the methodology employed for conducting the survey, and explains the sampling approach, surveying modes, and quality assurance process. The second section describes the results of the surveying effort and breaks down the survey results into findings based on route tier and/or day type.

The findings presented in this report are only a preview of the deeper analytical potential that this survey dataset holds. This substantial effort is reflective of the strong commitment WRTA has to improving the experience of its customers and ensuring that they are provided with a safe, clean, efficient, reliable, and effective transportation system that connects them to all kinds of opportunities.

## 2.0 Methodology

This section reviews the sampling and analysis methodology for conducting this survey. As described in this section, the approach taken prioritizes developing a statistically robust sample that reflects the preferences, perspectives, and travel patterns of WRTA customers.

### 2.1 Sampling Methodology

The goal of collecting representative information requires gathering a sample of sufficient responses from a variety of people in the population – the population in this case being all WRTA bus riders. It is typically infeasible and cost prohibitive to contact each member of a population. A proper sample allows for analysis of the characteristics of the population that is highly reflective of the population as a whole.

A foundational surveying principle is that a statistically robust sample is one that has responses randomly taken from across the target population. The larger the sample, the smaller the margin of error within a 95 percent confidence interval (i.e., 95 percent certainty that the actual population characteristics fall between the high and low values of the margin of error).

The sampling approach for this effort was calculated using the methodology described below.

#### 2.1.1 Total Ridership by Day Type

As background, Cambridge Systematics (CS) calculated that the number of unique WRTA system riders could be as high as 18,000 people. The 2022 American Community Survey estimates that 1.7 percent of workers (7,119 people) in Worcester County used public transportation to commute to work. Similarly, in the 2023 Onboard for Data report and dashboard, the WRTA fixed route area has an average worker transit commuting rate of 2.1 percent (7,007 people). However, the survey found that 39 percent of surveyed transit riders were traveling for work purposes, thus, the number of people who use WRTA service could be as high as 18,000 (7,007 / 39%).

This surveying effort used ridership data provided by WRTA to develop the sampling approach. Total average boardings by day type are:

- **Weekday:** 14,849 boardings
- **Saturday:** 7,249 boardings
- **Sunday:** 2,592 boardings

CS committed to collecting at least 500 completed surveys<sup>1</sup>, approximately 100 more than were gathered in the most recent surveying effort. The assignment of these surveys across day type and route type is described in the next section.

---

<sup>1</sup> “Completed surveys” are surveys that have met the minimum threshold for the number of questions completed. This threshold is described in Section 2.2.

## 2.1.2 Ridership by Route Type and by Day Type

WRTA provided CS with average ridership by route and by day type (weekday, Saturday, Sunday) as shown in Table 1.

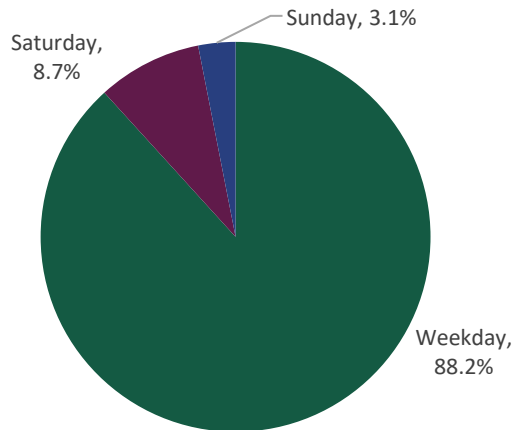
**Table 1 Daily Ridership by Route by Day Type**

Route	Weekday	Saturday	Sunday	Weekly*
1	370	224	140	2,214
2	320	132	136	1,868
3	267	122	0	1,457
4	308	276	99	1,915
5	340	206	93	1,999
6	406	201	0	2,231
7	958	429	212	5,431
11	1,171	618	397	6,870
12	418	0	0	2,090
14	502	0	0	2,510
15	299	123	0	1,618
16	533	207	0	2,872
19	1,649	900	351	9,496
23	806	384	188	4,602
24	704	255	130	3,905
26	1,344	1,004	366	8,090
27	1,473	1,135	318	8,818
29	239	167	0	1,362
30	870	398	162	4,910
31	764	287	0	4,107
33	660	0	0	3,300
42	331	226	0	1,881
825	117	0	0	585
<b>Total</b>	<b>14,849</b>	<b>7,294</b>	<b>2,592</b>	<b>84,131</b>

\*Weekly ridership calculated as Weekday \* 5 + Saturday + Sunday

As expected, the majority of ridership is observed Monday – Friday, with Saturday and Sunday comprising a much smaller share (approximately 12 percent combined). The breakdown of ridership by day type is shown in Figure 1.

**Figure 1 Average Weekly Trips by Day Type**



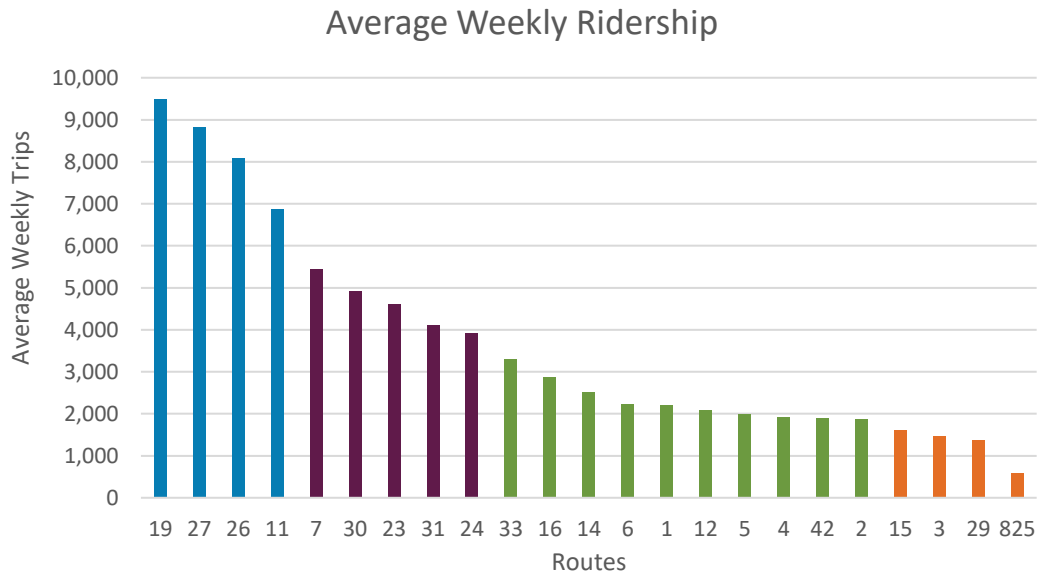
Using these trip counts by day type as the starting point, total weekly ridership was used to create four bins of service: Tier I through Tier IV service (Table 2 and Figure 2). Tier I has the highest weekly ridership with a range of 6,870 to 9,496 rides. Tier II has the second-highest ridership with an average weekly ridership ranging between 3,905 and 5,431. Tier III has an average weekly ridership ranging between 1,868 and 3,300. Tier IV has the lowest average weekly ridership range of 585 to 1,618 rides.

**Table 2 Route Tiers**

Class	Route	Avg. Weekly Ridership	Percent
Tier I	19	9,496	11.3%
Tier I	27	8,818	10.5%
Tier I	26	8,090	9.6%
Tier I	11	6,870	8.2%
Tier II	7	5,431	6.5%
Tier II	30	4,910	5.8%
Tier II	23	4,602	5.5%
Tier II	31	4,107	4.9%
Tier II	24	3,905	4.6%
Tier III	33	3,300	3.9%
Tier III	16	2,872	3.4%
Tier III	14	2,510	3.0%
Tier III	6	2,231	2.7%
Tier III	1	2,214	2.6%
Tier III	12	2,090	2.5%
Tier III	5	1,999	2.4%
Tier III	4	1,915	2.3%
Tier III	42	1,881	2.2%
Tier III	2	1,868	2.2%

Class	Route	Avg. Weekly Ridership	Percent
Tier IV	15	1,618	1.9%
Tier IV	3	1,457	1.7%
Tier IV	29	1,362	1.6%
Tier IV	825	585	0.7%

**Figure 2** Average Weekly Ridership by Route



Based on the distribution of trips across day type and across route tier, a proportional distribution of survey responses is shown in Table 3.

**Table 3** Proportional Survey Responses across Day Type and Route Type

	Weekday	Saturday	Sunday	Total
Tier I	175	17	7	<b>199</b>
Tier II	120	12	4	<b>136</b>
Tier III	120	12	4	<b>136</b>
Tier IV	26	3	*	<b>29</b>
<b>Total</b>	<b>441</b>	<b>43</b>	<b>15</b>	<b>500</b>

\*No Tier IV routes run on Sundays

However, best practice in survey methodology is to gather at least 40 (or ideally 50 or more) surveys in order to make statistically robust inferences on the total population. For instance, it is not reasonable to assume that four responses from Sunday riders on a Tier III route would be representative of all Tier III Sunday riders.

Therefore, CS set a higher overall goal in order to capture a total of 50 surveys on each service day, with a minimum of 40 completed surveys. Similarly, CS planned to oversample Tier IV routes on weekdays to capture 50 survey responses. This approach is shown in Table 4.

**Table 4 Sampling Targets by Day Type and Route Type**

	Weekday	Saturday	Sunday	Total
Tier I	175	-	-	<b>175</b>
Tier II	120	-	-	<b>120</b>
Tier III	120	-	-	<b>120</b>
Tier IV	50*	-	-	<b>50*</b>
<b>Total</b>	<b>465*</b>	<b>50*</b>	<b>50*</b>	<b>565*</b>

\*These numbers include an aspirational oversampling

In order to achieve those survey quotas, CS and its subconsultant, MLD Services, used the following survey staffing approach:

- **Surveyors** – In partnership with its subconsultant MLD Services, the project team utilized a mix of MLD staff and three bilingual surveyors local to Worcester. In all, there were nine surveyors and three supervisors conducting the surveying activity.
- **Staffing by Time** – The nine surveyors were assigned to four-hour shifts spread throughout the week. Weekday surveying started as early as 5:30 AM and ran as late as 9:30 PM in order to capture early morning and late-evening riders.
- **Staffing by Location** – In general, there were two surveyors located at the WRTA hub in downtown Worcester at all times during the surveying effort. As this is the central locus of transit and the primary transfer point, this was an efficient method of intercepting riders during their trips. However, surveyors would also conduct on-board surveying, with a special focus on riding Tier III and Tier IV routes in order to meet the quotas described above.

To ensure safety, surveyors at Union Station conducted surveying with at least one other surveyor present at all times. In all, there were 212 surveyor hours dedicated to this effort, not counting supervisory and other administrative time. The surveyor schedule can be found in Appendix B.

### 2.1.3 Surveying Approach

The survey was conducted Monday, April 22, 2024 through Sunday, April 28, 2024. This week was chosen because it did not include any regional or national holidays or school vacation week, was during the school year and so was more likely to capture student responses, and had a higher likelihood of fair weather than a survey conducted during the winter.

The survey was conducted as an intercept-style survey, where surveyors had clipboards with printed paper surveys as well as QR codes that would send a customer to an online version of the same survey. Two surveyors were stationed at the WRTA hub and intercepted customers as they transferred or waited for their bus to arrive. As available, additional surveyors rode the buses and conducted intercept surveys on board the vehicles.

All surveyors spoke English and several were bilingual English/Spanish. If a rider spoke a language that the surveyor did not speak, then the surveyors used the following protocol:

1. Attempt to find someone nearby who could help to interpret;
2. Direct the rider to the translated version of the survey;
3. Use an online translation/interpretation tool, such as Google Translate.

Surveyors assisted riders to the extent requested or needed in order to facilitate filling out the surveys. This could include reading the questions and marking the answers on their behalf or responding to any clarifying questions the riders might have. Surveyors did everything in their power to remove any barriers to survey participation, including limited literacy, disabilities (e.g., poor eyesight), or language.

At the end of their shifts, surveyors deposited completed surveys into marked envelopes identifying the date, location(s), and surveyor who administered the completed surveys. Surveys were sampled several times during the course of the week by the project team to confirm adherence to established surveying protocols, in addition to frequent on-the-ground check-ins and site visits with the surveyors.

### *2.1.4 Response Bias Approach*

Response bias is a threat to achieving a truly random and representative sample. CS paid careful attention to this issue in order to achieve a statistically robust sample of WRTA ridership. In addition to the temporal and geographic sampling described in the previous section, CS made deliberate efforts to reduce response bias due to linguistic or cultural barriers.

CS translated the survey into the six “Safe Harbor” languages identified in the WRTA Language Assistance Plan (Spanish, Vietnamese, Chinese, Portuguese, Arabic, and Polish) via a professional translation service. As Spanish is the most common non-English language spoken among riders, three bilingual surveyors were hired and had coverage across the survey time period.

It was identified during the project kickoff meeting that the region’s Vietnamese population is particularly underrepresented in rider surveying efforts. CS worked with WRTA to distribute surveys to Vietnamese-serving organizations in order to confirm the inclusion of this population in the survey sample.

## **2.2 Analysis Methodology**

Once the survey period was completed, the CS team entered the surveys into the digital database, cleaned the data, performed quality checks, and then weighted the responses by ridership. See Section 2.2.4 for more detail on the weighting methodology.

### *2.2.1 Complete Surveys*

The quotas identified in Section 2.1 are for surveys that are considered “complete”. WRTA considers any survey with valid responses to questions 1, 3, 4, and 5 to be “complete” surveys. It should be noted that the majority of survey responses include valid responses to most or all of the questions. See Appendix A for the survey instrument.

## 2.2.2 Data Entry

The vast majority of responses were paper surveys (97 percent), with only a small percentage done via the online survey link (3 percent). These paper surveys were entered into the SurveyMonkey database on an ongoing basis during the survey period and the two weeks thereafter.

There were questions which allowed only one response (e.g., “What was the first bus route you rode today?”). In instances where the respondent provided multiple answers, those responses were not coded into the online database. Additionally, surveys which were omitted due to invalid responses did not count toward the survey quotas described in Section 2.1.

In general, where there was uncertainty or confusion about a survey response, those doing data entry erred on the side of excluding responses. For example, there may have been illegible handwriting or markings which were otherwise difficult to decipher or code into the database. As described in greater detail in the quality assurance section, if the project team could not agree on the intent behind the markings, then those responses were not included in the digital database.

The coded data from paper surveys was combined with the online data gathered from customers using the survey link to provide the raw database for the analysis presented in Section 3.0.

## 2.2.3 Quality Assurance

The Quality Assurance lead performed a quality check on 50 (five percent) of the digital survey records and compared those responses against the paper records to confirm accuracy of data entry and concurrence with any interpretation of unclear or ambiguous responses. The quality check did not reveal any significant quality issues and the Quality Assurance lead cleared the team to proceed to data analysis.

## 2.2.4 Weighting

The purpose of weighting is to ensure that the proportion of surveys gathered from each tier properly represented the ridership of that tier. The sampling approach was divided along route tiers for weekdays with separate targets for Saturday and Sunday surveys. As such, the weighting was done by route tier to account for any differences between observed ridership by tier versus survey results by tier.

For the analysis presented in Section 3.0, findings are presented at the following level of analysis and use the following weighting:

- **Systemwide:** Some information is shown for all riders, regardless of route tier or day type. Those findings are weighted using the Systemwide Tier Weights shown in Table 5.

**Day Type:** Some information is shown for riders by day type. In that case, weekday summaries are weighted by tier using the Weekday Tier Weights shown in

- Table 6.
- **By Tier:** Some information is shown by tier. This information is not weighted, as it is not combined with other information that would require weighting.



The systemwide weights were calculated by comparing total weekly ridership counts by tier with the number completed surveys by tier.

**Table 5 Systemwide Survey Weights**

Route Tier	Trips	Percent of Total Trips	Completed Surveys	Percent of Total Completed Surveys	Weight
Tier I	33,274	39.6%	254	30.9%	128.15
Tier II	22,955	27.3%	271	27.2%	100.25
Tier III	22,880	27.2%	222	32.7%	83.20
Tier IV	5,022	6.0%	76	9.2%	64.64

Weekday weights were calculated by comparing total weekday ridership counts by tier with the number of completed weekday surveys by tier.

**Table 6 Weekday Survey Weights**

Route Tier	Trips	Percent of Total Trips	Completed Surveys	Percent of Total Completed Surveys	Weight
Tier I	5,637	38.0%	225	31.0%	125.27
Tier II	4,102	27.6%	195	26.9%	105.18
Tier III	4,188	28.2%	240	33.1%	87.25
Tier IV	922	6.2%	66	9.1%	69.85

These weights were applied to the descriptive statistics and charts shown in the next section.

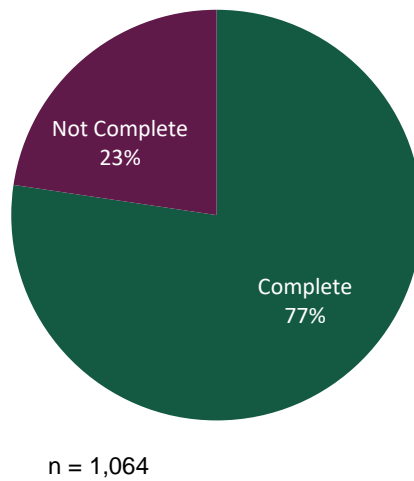
## 3.0 Findings

The results of the survey are presented in this section. Because this is a robust dataset with many potential applications, the analysis shown below is descriptive in nature. It is divided into weekday data by route tier, followed by Saturday and Sunday responses. There is also general survey data shown to provide information about the survey responses overall.

### 3.1 About the Responses

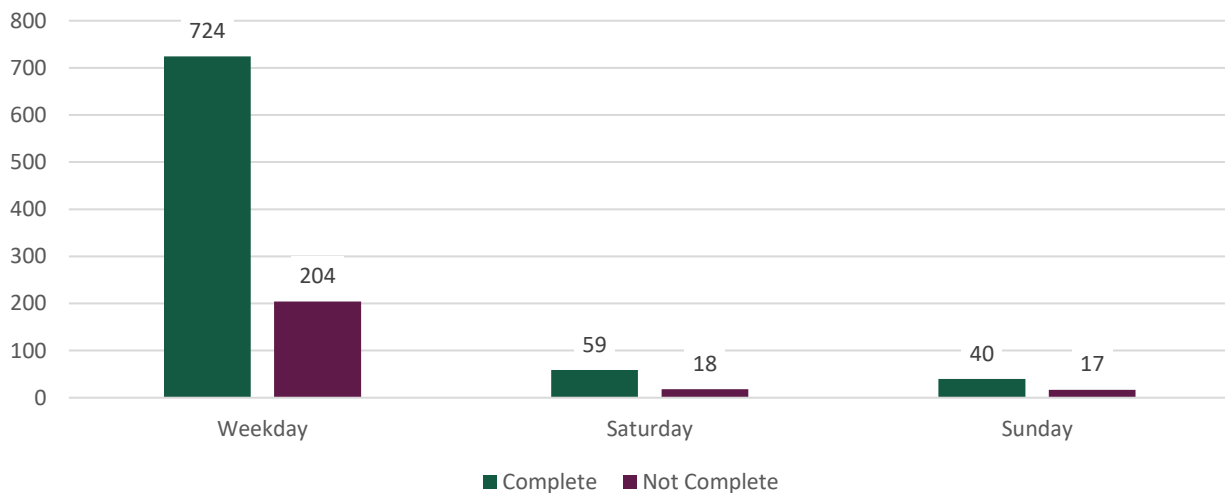
In all, WRTA gathered 1,064 survey responses. Approximately three-quarters of surveys that were returned were considered “complete”, as shown in Figure 3.

**Figure 3** Survey Completion Rate



The vast majority of survey responses were gathered on weekdays, with a much smaller proportion on Saturday and Sunday. Each day saw a survey completion rate between 70 and 80 percent.

**Figure 4** Responses by Day Type



n = 1,064

Only 44 out of the 1,064 responses were received using the online SurveyMonkey form. The other responses were paper surveys.

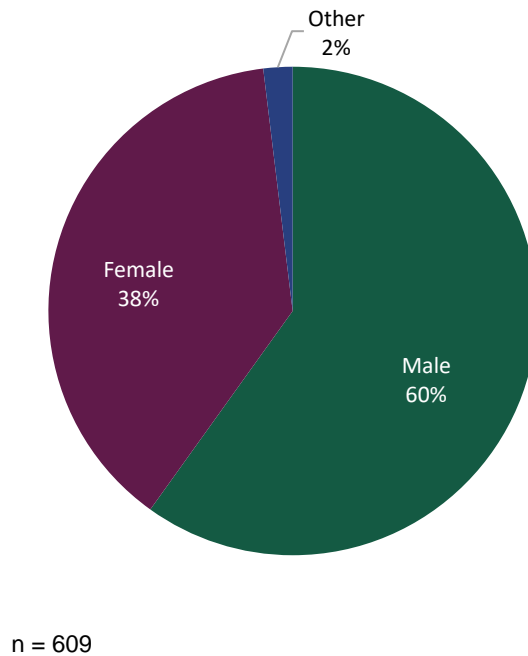
## 3.2 Demographic Profile

The survey asked several demographic questions of riders. This section presents the results for each question at the systemwide level for weekday, Saturday, and Sundays.

### 3.2.1 Gender

Survey respondents were asked to provide their gender as an open text box. Survey respondents identified as male (60 percent) disproportionate to the population as a whole for Worcester County (49.7 percent). This is potentially reflective of response bias or could indicate barriers to using the system for female-identifying riders. There was roughly 50-50 split between male and female surveyors.

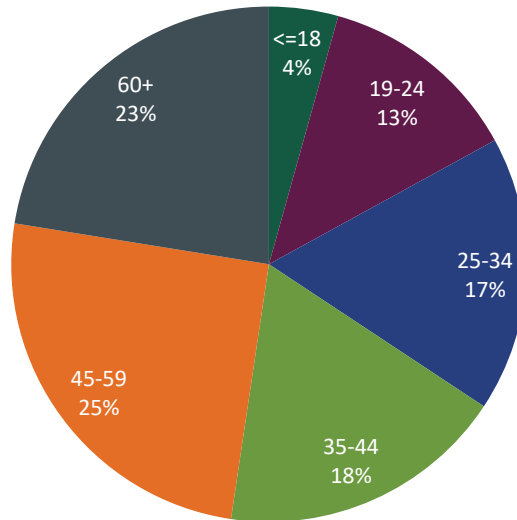
**Figure 5** Gender



### 3.2.2 Age

The largest share of riders belongs to the 45 - 59 age group at 25 percent, which is a slight overrepresentation compared to Worcester County as a whole (20.9 percent). People 60+ comprised the second-largest age group at 23 percent, which is approximately the same as Worcester County (23.2 percent). People under 18 are underrepresented, at only four percent of riders as compared to 23.8 percent of Worcester County residents. The other age groups are slightly overrepresented, with the strongest overrepresentation among college-aged students (12 percent compared to 6.7 percent of Worcester County residents). This may be due to the strong presence of colleges in the region.

**Figure 6** Age

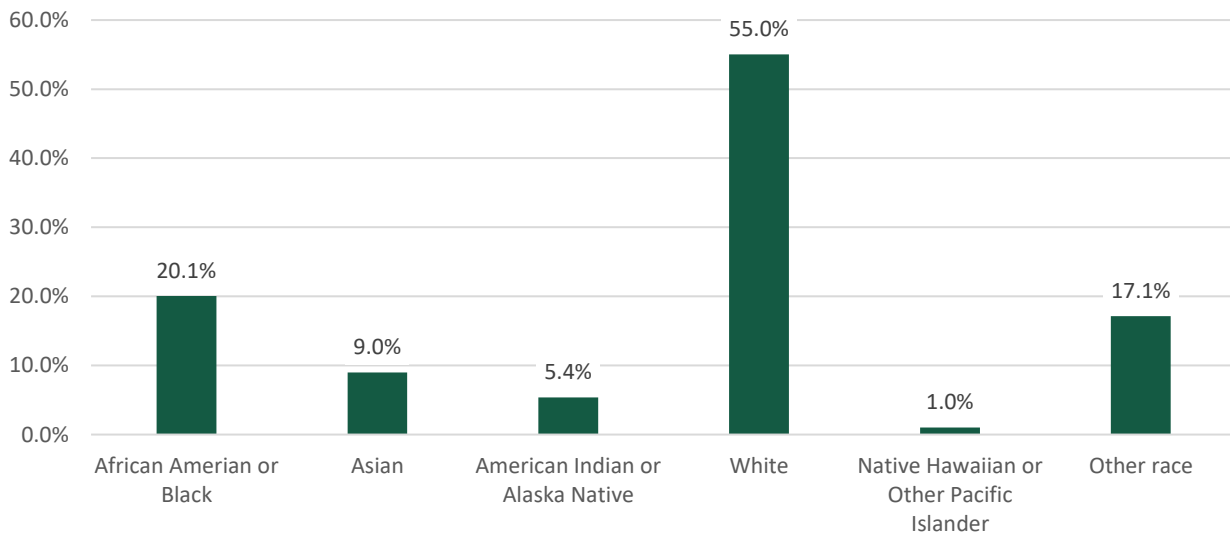


n = 609

### 3.2.3 Race/Ethnicity

Race and ethnicity are defined by the US Census Bureau as two separate dimensions of demographic identity. Racial categories include African American or Black, Asian, American Indian or Alaska Native, White, Native Hawaiian or Other Pacific Islander, or Other. The majority, 55 percent, of WRTA riders identify as white, with the next largest racial identity category being African American or Black. This is different than Worcester County as a whole, in which 78.2 percent of the population identifies as white and only 5.2 percent identify as African American or Black.

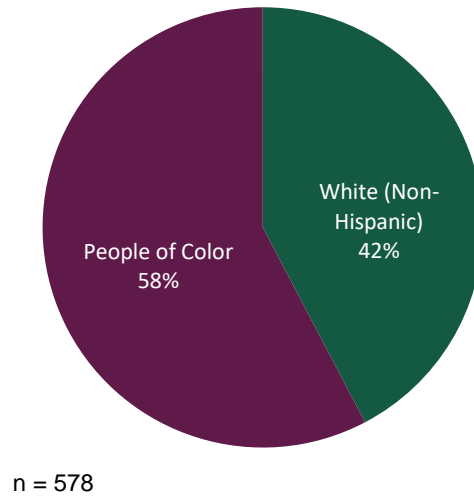
**Figure 7** Race



n = 578

Ethnicity asks whether a person identifies as Hispanic or Latino. Identity as Hispanic or Latino is separate from race, and so a person identifying in any racial category could also identify as Hispanic or Latino. For the purposes of Title VI civil rights monitoring, a person identifying as other than non-Hispanic white is considered a “minority” (or person of color). The majority of WRTA ridership is people of color, with 58 percent of riders identifying as other than non-Hispanic white. This stands in contrast to Worcester County as a whole, which has 73.4 percent of people identifying as non-Hispanic white.

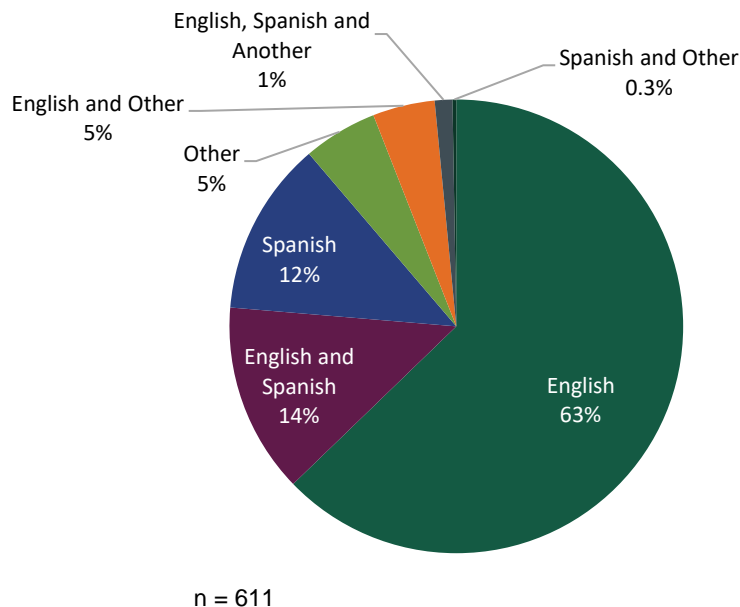
**Figure 8 Non-Hispanic White and People of Color**



### 3.2.4 Languages Spoken at Home

The majority of survey respondents, 63 percent, reported speaking English in their home. This is much lower than the average for Worcester County, which has 78.8 percent of all households speaking only English at home. This was followed by English and Spanish both (14 percent), followed by just Spanish (12 percent). The remainder spoke other languages at home, including Haitian Creole, Portuguese, and Arabic.

**Figure 9 Languages Spoken at Home**

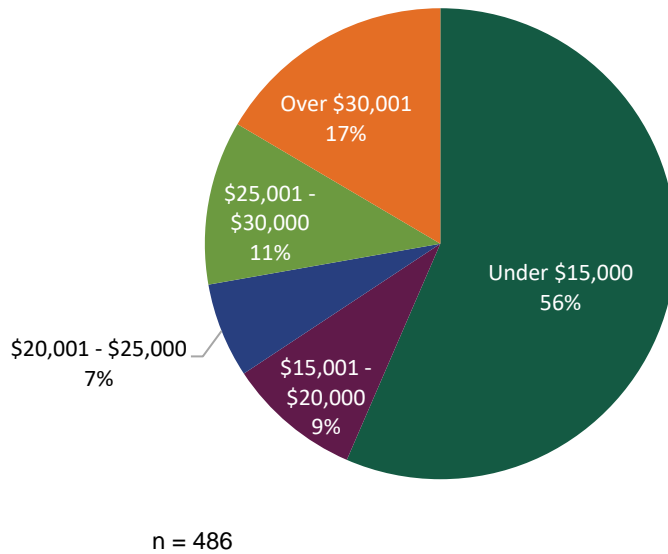


### 3.2.5 Household Income and Poverty Status

The survey asked two related questions, one on annual household income and the second on household size. Together, the questions can establish poverty status for the survey respondent.

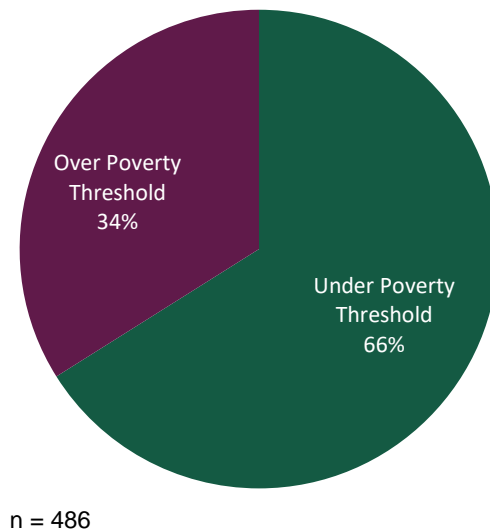
The majority of survey respondents (56 percent) lived in households that had an annual income under \$15,000 per year. Worcester County residents as a whole reported household incomes under \$15,000 at 7.6 percent, much lower than what was reported in this survey. The threshold for poverty status for a one-person household is approximately \$15,000, and so the poverty rate for riders in that income bracket is 100%.

**Figure 10 Annual Household Income**



When combined with the poverty status thresholds for the various household sizes, estimated poverty rate is approximately 66 percent among WRTA riders. This is much higher than the estimates for Worcester County as a whole, which shows a poverty rate for individuals of 10 percent.

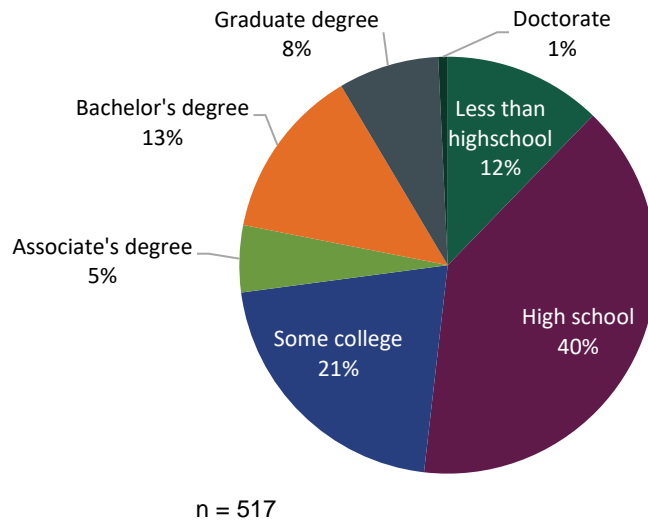
**Figure 11 Poverty Status**



### 3.2.6 Educational Attainment

The plurality of respondents had a high school diploma as their terminal degree, at 40 percent. Approximately one-fifth had completed some college, and a little over one-fifth had a bachelor's degree or higher. Twelve percent had not received a high school diploma. This stands in contrast to the population of Worcester County as a whole, of which only 8.6 percent had not completed high school, 22.4 percent have a bachelor's degree, and 16 percent have a graduate or professional degree.

**Figure 12 Educational Attainment**



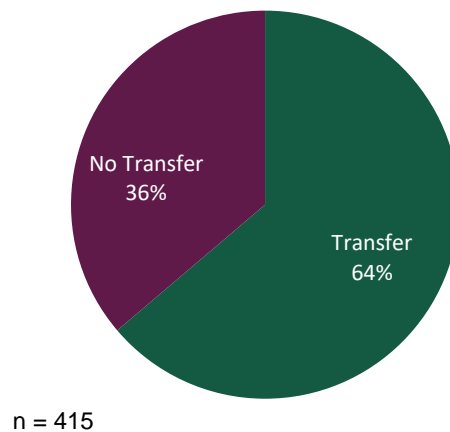
## 3.3 Weekday

This section provides an overview of travel behavior and attitudes by question for weekday riders.

### 3.3.1 Transfers

The second question on the survey asked about transfers. Of weekday riders, just under two-thirds reported transferring. This large proportion of transfers is not surprising due to the hub-and-spoke design of the WRTA system which connects many outlying destinations to the central WRTA Hub.

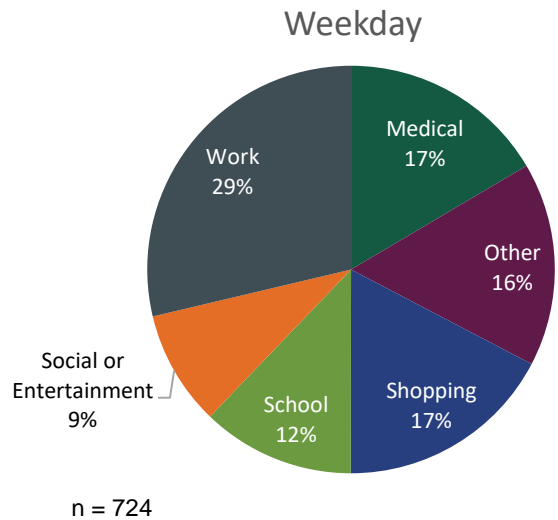
**Figure 13 Weekday Transfer Behavior**



### 3.3.2 Trip Purpose

The third question of the survey asked what the main purpose of the rider's trip was. This question only allowed one response. The largest share of riders was traveling primarily for work, while medical and shopping each comprised approximately 17 percent of trips. These findings are not surprising as WRTA's peak ridership is midday as opposed to peak commuting times of 7 – 9 AM and 4 – 6 PM.

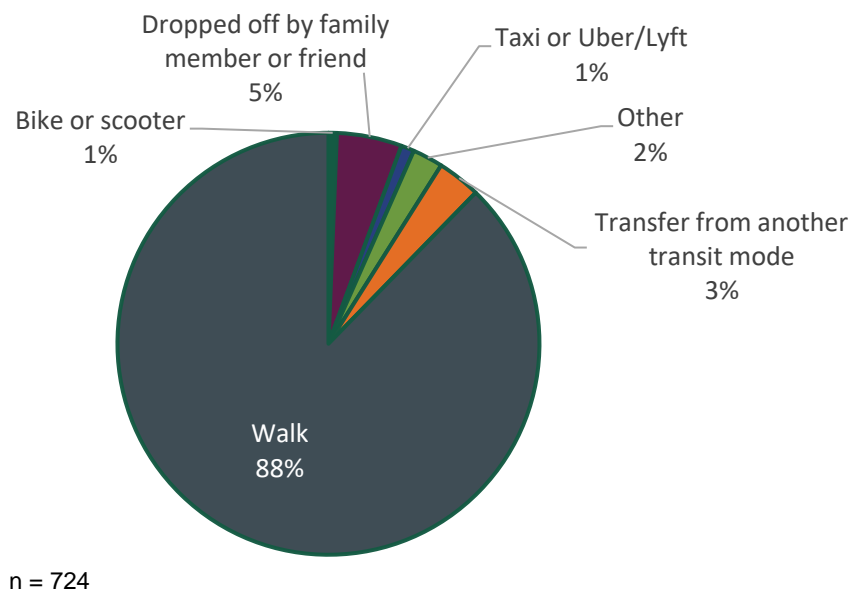
**Figure 14** Weekday Trip Purpose



### 3.3.3 Travel to Bus Stop

The vast majority of survey respondents (88 percent) traveled to the bus stop on foot. The second-most common answer at only five percent was being dropped off.

**Figure 15** Weekday Travel to Bus Stop

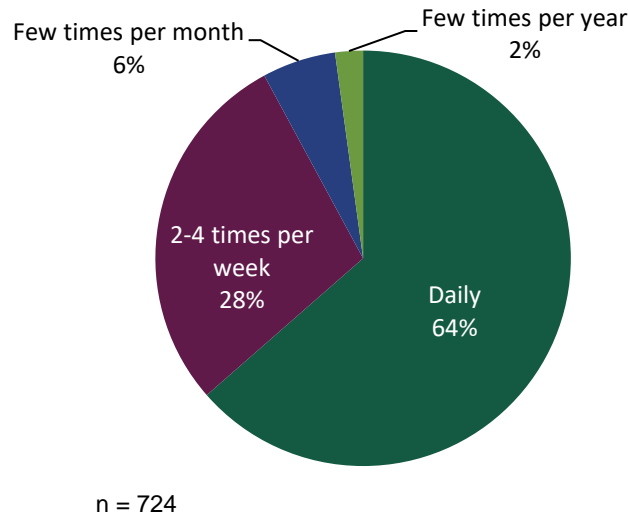




### 3.3.4 Bus Use Frequency

Nearly two-thirds of respondents indicated daily use of the bus, followed by 28 percent who indicated using the bus multiple times per week, which indicates that over 90 percent of the existing ridership use the bus regularly during the week. Only two percent indicated only using the service a few times per year, and no one responded that they never use bus service.

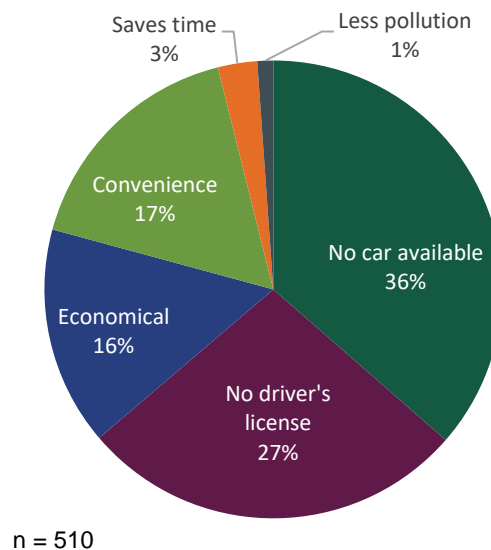
**Figure 16** Weekday Bus Use Frequency



### 3.3.5 Main Reason for Riding

Survey respondents indicated that the two main reasons for using the bus are either lack of a car (36 percent) or lack of a driver's license (27 percent). The third-most common reason is that it is economical to use the service, which may also be reflective of a lack of access to a car (due to cost). In contrast, a very small proportion cited environmental (one percent) or time-saving (three percent) reasons.

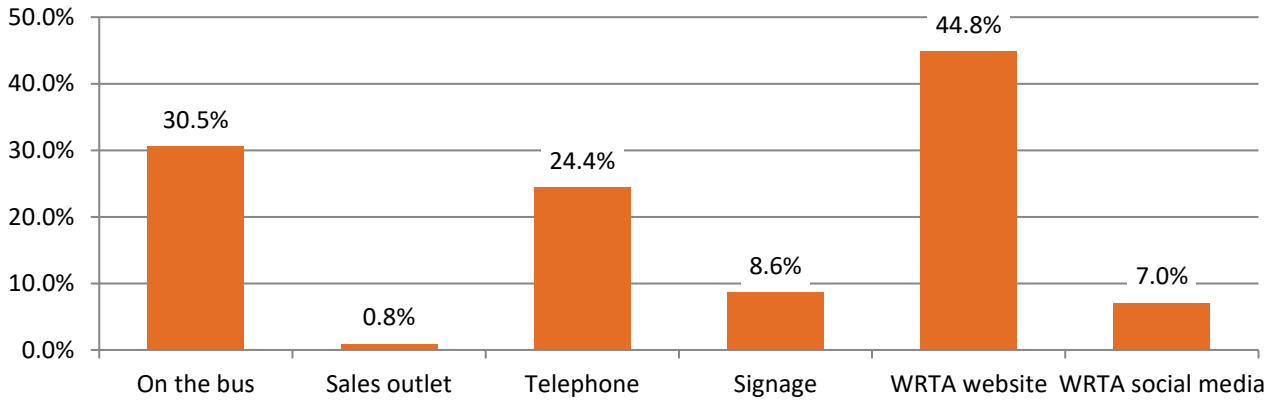
**Figure 17** Weekday Main Reason for Riding



### 3.3.6 Bus Information Sources

Respondents could select all sources they use to receive information about WRTA service, such as route destinations. The plurality of respondents indicated that they receive information from the WRTA website, and just under one-third of respondents reported that they receive information while riding the bus. Less than one percent of respondents said that they receive information from the sales outlet.

**Figure 18 Weekday Bus Information Sources**



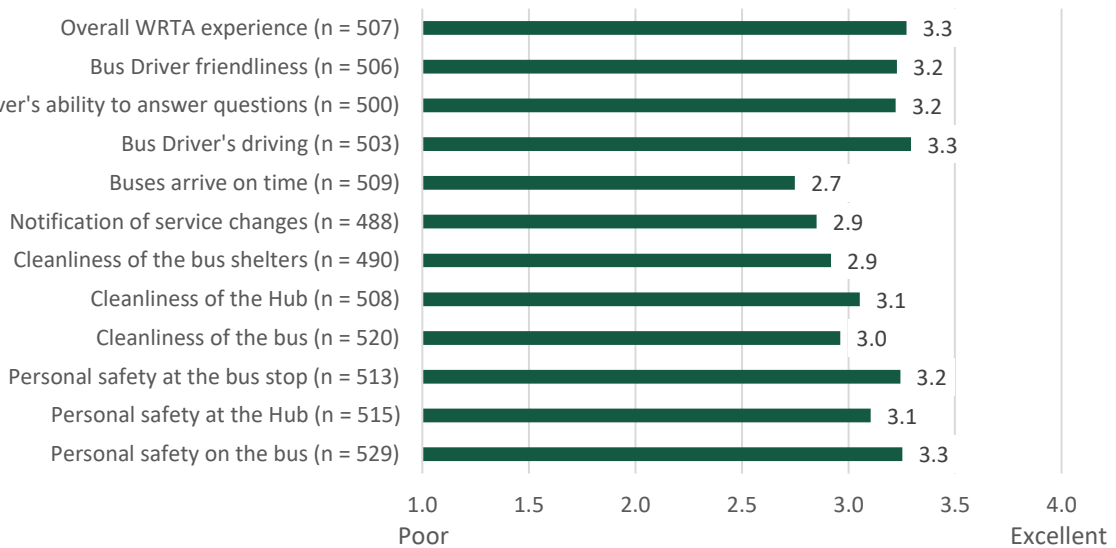
n = 616

\*Respondents could select multiple options

### 3.3.7 Service Ratings

In general, weekday respondents rated the service and state of WRTA facilities 3.3 on a scale of one to four, where one is poor and four is excellent. Perceptions around personal safety and bus driver performance were generally rated the highest (3.1 – 3.3), while on-time performance was rated the lowest at 2.7.

**Figure 19 Weekday Service Ratings**

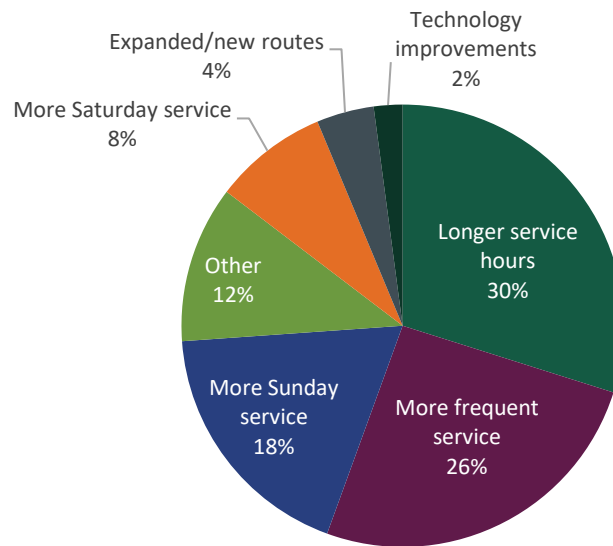


### 3.3.8 WRTA Actions to Increase Ridership

The survey asked riders to identify the top item that would motivate them to use WRTA service more often. Thirty percent of respondents identified a longer span of service (earlier in the morning and later at night) while 26 percent identified more frequent service. The third-most common response at 18 percent was more Sunday service, which suggests that even weekday riders saw value in expanded Sunday hours.

At only four percent, the least-chosen option was expanding routes. However, potential riders wanting to access areas not currently served may not be using the WRTA system at all, and so this is not necessarily reflective of the ridership increase potential of new or expanded routes.

**Figure 20** Weekday Actions WRTA Could Take to Expand Ridership

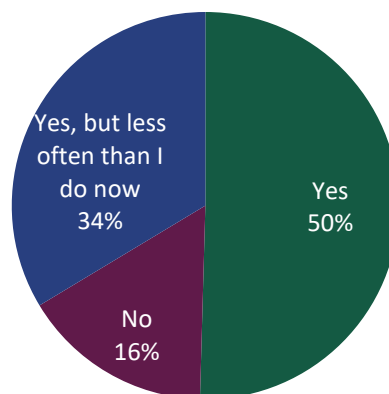


n = 427

### 3.3.9 Fare Collection

The survey asked respondents how they would react if fare collection were to resume. Half of respondents indicated that they would continue using WRTA at the same levels they currently do were fare collection to resume. Approximately one-third of respondents indicated that they would continue to use the service, but less often than they do currently. The remainder said they would cease riding WRTA service.

**Figure 21** Weekday Use If Fare Collection Resumed

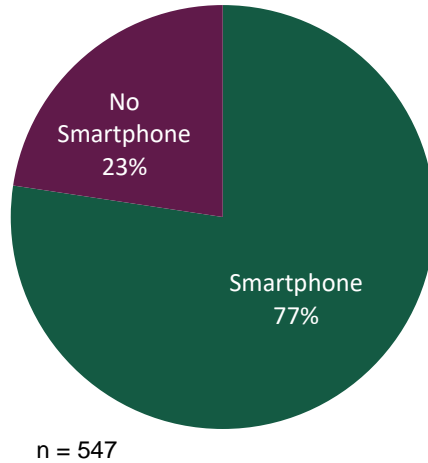


n = 567

### 3.3.10 Access to Smartphone with Data Plan

Survey respondents were asked if they have a smartphone with a data plan. Approximately three-quarters of weekday respondents indicated that they did have access to a smartphone with a data plan, and the remainder did not.

**Figure 22** Weekday Smartphone Access



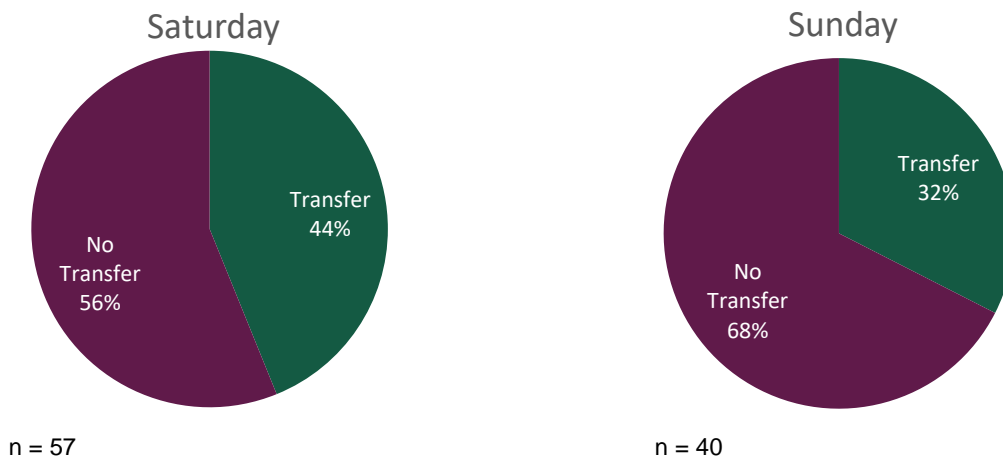
## 3.4 Saturday and Sunday

This section provides a summary of findings from responses received on Saturday and Sunday that differ significantly from the findings on weekdays. In general, responses to the survey questions for all day types were similar. However, where there were notable deviations, those findings are presented below.

### 3.4.1 Transfers

While the majority (64 percent) of weekday riders did report a transfer, Saturday and Sunday riders reported much lower rates of transfers. This could be reflective of the lower level of service on weekends, which could encourage other modes of transportation on one leg of the trip (e.g., Uber or Lyft) to reduce overall travel time, or shift trips that require a transfer entirely to another mode.

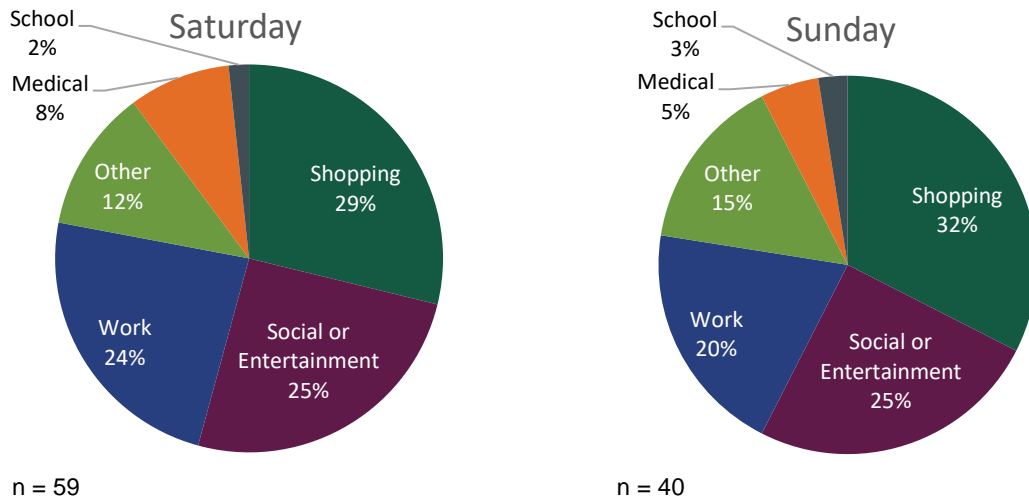
**Figure 23** Weekend Transfer Behavior



### 3.4.2 Trip Purpose

In contrast to weekday trips, weekend riders indicated much higher rates of social or entertainment travel with relatively lower rates of trips for the other categories, especially shopping. This may be a product of more limited store hours and work/school schedules.

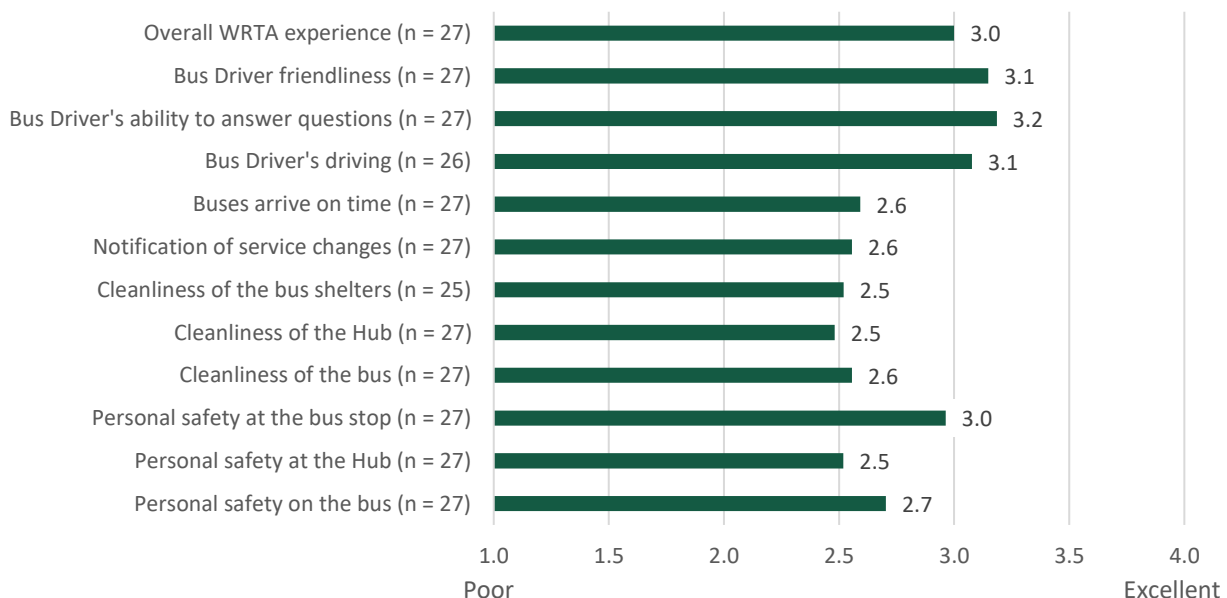
**Figure 24 Weekend Trip Purpose**



### 3.4.3 Service Ratings

While Saturday showed similar service ratings compared to weekday, Sunday respondents showed substantially lower ratings than either weekday or Saturday respondents. While the ratings for bus driver performance were comparable to weekday or Saturday ratings, ratings of safety were lower – between 2.5 (at The Hub) to 3.0 (at the bus stop). This difference could potentially be connected to a feeling of isolation at the Hub caused by lower ridership and therefore fewer people at the Hub. The lower-frequency of bus service also results in longer wait times, which could also impact feelings of safety.

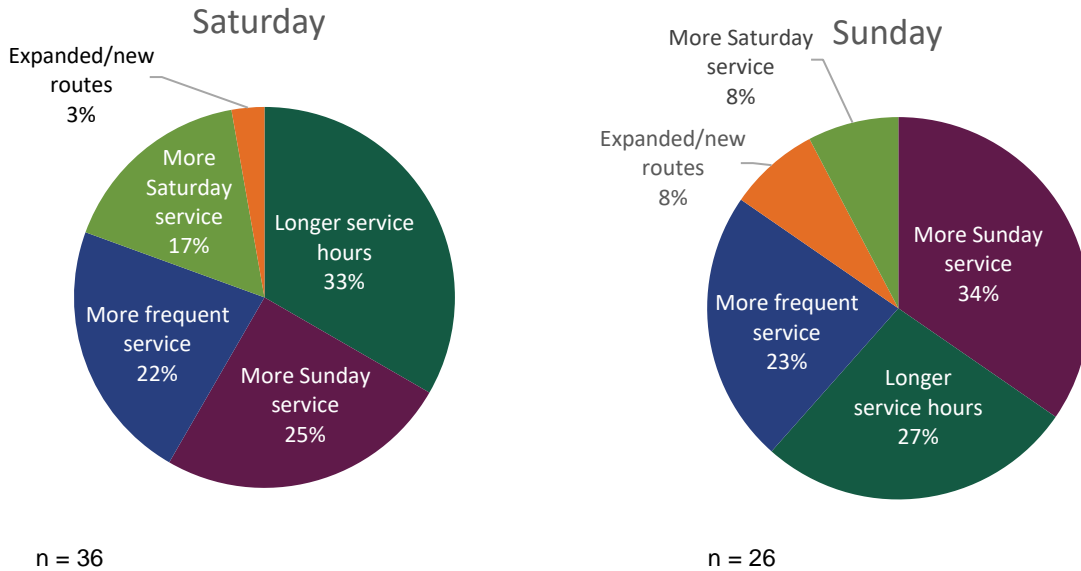
**Figure 25 Sunday Service Ratings**



### 3.4.4 WRTA Actions to Increase Ridership

Unsurprisingly, Saturday and Sunday riders put a stronger emphasis on the importance of level of service on weekends relative to weekday riders. In general, weekend riders prioritize Sunday service more than weekday riders, and did not have “Other” actions which would prompt them to ride more often than they currently do.

**Figure 26**    **Actions to Increase Ridership**



## 4.0 Conclusion

Overall, this customer satisfaction survey shows that customers are generally satisfied with the service, value the fact that the service is fare free, and use the service for a variety of trip purposes. The survey reflects a diverse population using the WRTA service, the majority of which reported very low incomes under the poverty line. There are fewer white (non-Hispanic) people and more people of color that use WRTA service when compared to the overall Worcester County demographics. From these findings, there are a few potential areas of further analysis:

- **Frequency versus Span:** Riders seem to put a strong value on frequency of service and span of service. In general, these are in tension with one another (if a bus system operates more hours of the day, then the frequencies tend to be lower – and vice versa). There is potential for focus groups or follow-up surveying that focuses just on this question in order to understand what customers most value.
- **Safety:** The area rated lowest by customers was the feeling of safety, especially safety at the WRTA Hub. Follow-up surveying, focus groups, or interviews could help to identify ways to enhance feelings of safety while using the WRTA system (e.g., better lighting, security presence, or other interventions).
- **Sunday Service:** There was a strong preference for those who ride on weekends – both Saturday and Sunday riders – to expand service on Sunday.

WRTA plans to use these survey findings to make meaningful progress in improving the customer experience when using the system. WRTA will develop a follow-up companion document that will identify short-, medium-, and long-term actions that respond to these identified needs. This document will also identify any additional analyses that should be completed using the data gathered from this study or if additional data is necessary to answer any additional questions.

Overall, this surveying effort generated a statistically robust dataset that can help to develop data-driven decisions for WRTA for years to come. The findings presented in this report only scratch the surface of cross-tabulations and statistical analysis that can be developed to understand how different demographics use and value the service, what kinds of technologies may be successful, and where service investments can maximize equitable distribution of resources. This dataset and report can provide a solid foundation for these and other decisions made by WRTA and its Advisory Board.

# Appendix A – Survey Instrument



## 2024 Customer Survey

<b>For Office Use Only</b>	
Date:	SID:
Location:	RID: «RID_Number»

**WRTA is conducting a customer satisfaction survey, your opinions are very important to us. We look forward to hearing your feedback. Thank you!**

1. What was the first bus route you rode today?  
Bus route number: \_\_\_\_\_
2. Did you transfer from one bus route to another?
  - Yes, I had a transfer
    - If yes, to which route? \_\_\_\_\_
  - No, I only rode one bus
3. What is the main purpose of this bus trip?
  - Work
  - Shopping
  - Social or Entertainment
  - School
  - Medical (Hospital, Doctor's Appt., etc.)
  - Other: \_\_\_\_\_
4. When you started this trip, how did you get to your bus stop?
  - Walk
  - Dropped off by family or friend
  - Bike or scooter
  - Taxi or Uber/Lyft
  - Transfer from other transit mode (e.g., commuter rail)
  - Other: \_\_\_\_\_
5. How often do you ride WRTA buses?
  - Daily
  - 2-4 times per week
  - Few times per month
  - Few times per year
  - Never
6. What is the main reason you ride WRTA?
  - Economical
  - No driver's license
  - No car available
  - Convenience
  - Saves time
  - Less pollution
7. Where do you receive bus information? (Select all)
  - On the bus
  - Telephone
  - Sales outlet
  - Signage
  - WRTA Website
  - WRTA social media
  - Other: \_\_\_\_\_
8. Rate your perception of the following items. (1 = Poor, 2 = Fair, 3 = Good, 4 = Excellent)

	1 Poor	2 Fair	3 Good	4 Excellent
Personal safety on the bus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Personal safety at the Hub	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Personal safety at the bus stop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cleanliness of the bus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cleanliness of the Hub	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cleanliness of the bus shelters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notification of service changes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Buses arrive on time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus Driver's driving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus Driver's ability to answer questions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus Driver friendliness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall WRTA experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Which of the following would lead you to use the WRTA more often? (Choose one option)
  - Longer service hours (buses run earlier in the morning and later in the evening)
  - More frequent service (buses come more often)
  - More Saturday service
  - More Sunday service
  - Expanded/new routes
  - Technology improvements (such as trip planning)
  - Other: \_\_\_\_\_
10. WRTA paused bus fare collection in 2020. If WRTA began collecting bus fares again, would you still use WRTA?
  - Yes
  - No
  - Yes, but less often than I do now
11. Do you have a smartphone with a data plan?
  - Yes
  - No

**DEMOGRAPHIC QUESTIONS**

12. My gender is \_\_\_\_\_
13. I am \_\_\_\_\_ years old
14. I am... (Select all)
  - African American or Black
  - Asian
  - American Indian or Alaska Native
  - White
  - Native Hawaiian or Other Pacific Islander
  - Other: \_\_\_\_\_
15. My ethnicity is....
  - Hispanic or Latino/a
  - Not Hispanic or Latino/a
16. What languages are spoken in your household? (Select all)
  - English
  - Spanish
  - Other: \_\_\_\_\_
17. What is your total household income?
  - Under \$15,000
  - \$15,001 - \$20,000
  - \$20,001 - \$25,000
  - \$25,001 - \$30,000
  - Over \$30,001

18. How many people are in your household?
  - 1 (just me)
  - 2
  - 3
  - 4+
19. What is your educational attainment?
  - Less than high school
  - High school
  - Some college
  - Associate's degree
  - Bachelor's degree
  - Graduate degree
  - Doctorate





## Encuesta a clientes 2024

## For Office Use Only

Date: \_\_\_\_\_ SID: \_\_\_\_\_

Location: \_\_\_\_\_ RID: «RID\_Number»

La WRTA está llevando a cabo una encuesta de satisfacción del cliente, sus opiniones son muy importantes para nosotros. Deseamos conocer su opinión. Muchas gracias.

1. ¿Cuál fue la primera ruta de autobús en la que ha viajado hoy?  
Número de ruta del autobús: \_\_\_\_\_
2. ¿Hizo transbordo de una ruta de autobús a otra?  
 Sí, hice un transbordo  
     En caso afirmativo, ¿a qué ruta? \_\_\_\_\_  
 No, solo viajé en un autobús.
3. ¿Cuál es el principal objetivo de este viaje en autobús?  
 Trabajo                       Médico (hospital, consulta médica, etc.)  
 Compras  
 Social o de ocio             Otro: \_\_\_\_\_  
 Escuela
4. Cuando inició este viaje, ¿cómo llegó a su parada de autobús?  
 A pie  
 Transporte con un familiar o amigo  
 Bicicleta o scooter  
 Taxi o Uber/Lyft  
 Transbordo desde otro modo de transporte (por ejemplo, tren suburbano)  
 Otros: \_\_\_\_\_
5. ¿Con qué frecuencia utiliza los autobuses de la WRTA?  
 Diario                       Pocas veces al año  
 2-4 veces/semana       Nunca  
 Pocas veces al mes
6. ¿Cuál es la razón principal por la que utiliza la WRTA?  
 Económico                 Conveniencia  
 Sin permiso de conducir       Ahorra tiempo  
 Menos contaminación  
 No tengo carro
7. ¿Dónde recibe información sobre los autobuses? (Seleccione todos los que correspondan)  
 En el autobús             Página web de la WRTA  
 Teléfono                   Redes sociales de la WRTA  
 Tienda                     Otros: \_\_\_\_\_  
 Señalización
8. Valore su percepción de los siguientes aspectos. (1 = Mala, 2 = Regular, 3 = Buena, 4 = Excelente)

	1	2	3	4
	Mala	Regular	Buena	Excelente
Seguridad personal en el autobús	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seguridad personal en Hub	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seguridad personal en la parada de autobús	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limpieza del autobús	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limpieza del Hub	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limpieza de las marquesinas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notificación de cambios de servicio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Los autobuses llegan puntuales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conducción del conductor del autobús	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Capacidad del conductor de autobús para responder a preguntas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amabilidad del conductor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Experiencia general con la WRTA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. ¿Cuál de las siguientes opciones le llevaría a utilizar la WRTA más a menudo? (Elija una opción)  
 Horarios de servicio más amplios (los autobuses circulan más temprano por la mañana y más tarde por la noche)  
 Servicio más frecuente (los autobuses pasan más a menudo)  
 Más servicio los sábados  
 Más servicio los domingos  
 Ampliación/nuevas rutas  
 Mejoras tecnológicas (como la planificación de viajes)  
 Otra(s): \_\_\_\_\_
10. La WRTA interrumpió el cobro de billetes de autobús en 2020. Si la WRTA volviera a cobrar el billete, ¿seguiría utilizándola?  
 Sí                       Sí, pero con menos frecuencia que ahora  
 No
11. ¿Tiene un smartphone con plan de datos?  
 Sí                       No

## PREGUNTAS DEMOGRÁFICAS

12. Mi género es \_\_\_\_\_
13. Tengo \_\_\_\_\_ años
14. Soy de raza... (Seleccione todos los que correspondan)  
 Afroamericana o negra                       Blanca  
 Asiática                       Nativa de Hawai u otras islas del Pacífico  
 India americana o nativa de Alaska                       Otra(s): \_\_\_\_\_
15. Mi etnia es...  
 Hispana o latina                       No hispana o latina
16. ¿Qué idiomas se hablan en su casa? (Seleccione todos los que correspondan)  
 Inglés                       Español                       Otros: \_\_\_\_\_
17. ¿Cuáles son los ingresos totales de su hogar?  
 Menos de \$15,000                       \$25,001 - \$30,000  
 \$15,001 - \$20,000                       Más de \$30,001  
 \$20,001 - \$25,000
18. ¿Cuántas personas viven en su hogar?  
 1 (sólo yo)                       2                       3                       4+
19. ¿Cuál es su nivel de estudios?  
 Menos de secundaria                       Diploma de 2 años  
 Secundaria                       Licenciatura  
 Estudios universitarios parciales                       Maestría  
 Doctorado

## Appendix B – Survey Schedule

# MLD Services, WRTA Survey Schedule

Week of: 22-Apr-24

	4/22/2024	4/23/2024	4/24/2024	4/25/2024	4/26/2024	4/27/2024	4/28/2024
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
5:30 - 9:30 AM	Filled	Filled	Filled	Filled	Filled	Filled	Filled
5:30 - 9:30 AM	Filled	Filled	Filled	Filled	Filled	Filled	Filled
9:30 - 1:30 PM	Filled	Filled	Filled	Filled	Filled	Filled	Filled
9:30 - 1:30 PM	Filled	Filled	Empty	Filled	Filled	Filled	Filled
9:30 - 1:30 PM	Filled	Filled	Empty	Filled	Filled	Filled	Filled
9:30 - 1:30 PM	Filled	Filled	Empty	Filled	Filled	Filled	Filled
1:30 - 5:30 PM	Filled	Filled	Empty	Filled	Filled	Filled	Empty
1:30 - 5:30 PM	Filled	Filled	Empty	Filled	Filled	Filled	Filled
1:30 - 5:30 PM	Filled	Filled	Empty	Filled	Filled	Filled	Filled
1:30 - 5:30 PM	Filled	Filled	Empty	Filled	Filled	Filled	Filled
5:30 - 9:30 PM	Filled	Filled	Filled	Filled	Filled	Filled	Filled
5:30 - 9:30 PM	Filled	Filled	Filled	Filled	Filled	Filled	Filled

Filled Shift