ALAMEDA
County Transportation Commission

AFFORDABLE STUDENT TRANSIT PASS PILOT PROGRAM

Year Two Evaluation Report November 2018

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Executive Summary

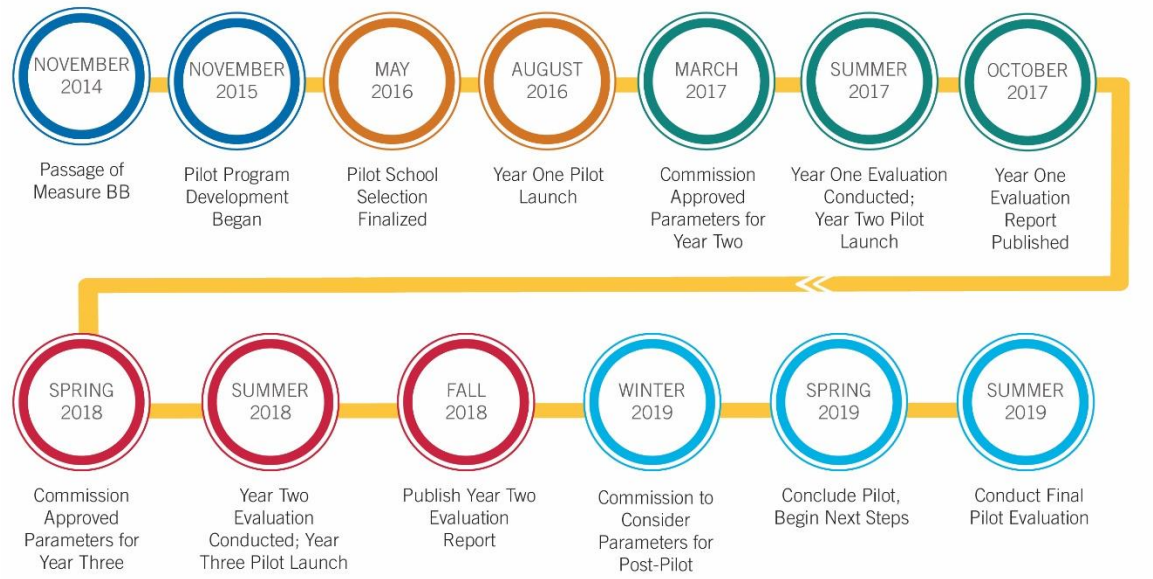
In 2014, Alameda County taxpayers approved the Measure BB transportation sales tax which included an Affordable Student Transit Pass Pilot (STPP) to improve access to schools and increase transit use among middle and high school students. In 2016, Alameda CTC launched a three-year pilot program to test and evaluate different program models across different geographies with the aim of identifying successful models for future program implementation.

The STPP seeks to accomplish the following goals:

- Reduce barriers to transportation access to and from schools
- Improve transportation options for Alameda County's middle and high school students
- Build support for transit in Alameda County
- Develop effective three-year pilot programs
- Create a basis for a countywide student transit pass program (funding permitting)

The overall timeline for STPP development, implementation, and evaluation is shown below.

Figure 1 Timeline for STPP Development, Implementation, and Evaluation



The 2017-18 school year represents the second year of the pilot, referred to as Year Two. Year Two of the STPP was designed to respond to lessons learned from Year One of the pilot. During Year Two, two program models were implemented across five school districts and fifteen schools, as shown in Figure 2.

Figure 2 Summary of Year Two Program Models and Participation (2017-18 Year-End)

School District	Participating Schools	Program Model	Number of Eligible Students	Number of Participants	Year-End Participation Rate
Oakland Unified School District (OUSD)	▪ Castlemont HS ▪ Fremont HS ▪ Frick MS ▪ McClymonds HS ▪ Westlake MS	Free/ Universal	2,706	2,543	94%
San Leandro Unified School District (SLUSD)	▪ San Leandro HS ▪ John Muir MS	Free/ Universal	3,609	1,787	50%
Hayward Unified School District (HUSD)	▪ Hayward HS ▪ Bret Harte MS	Free/ Means-Based	1,598	497	31%
New Haven Unified School District (NHUSD)	▪ Cesar Chavez MS ▪ James Logan HS	Free/ Means-Based	2,581	841	33%
Livermore Valley Joint Unified School District (LVJUSD)	▪ East Avenue MS ▪ Christensen MS ▪ Livermore HS ▪ Del Valle HS	Free/ Universal	3,416	960	28%
5 Districts	**15 schools**	**2 models**	**13,910**	**6,628**	**48%**

Summary of Key Findings

Program Participation and Transit Ridership

Compared to Year One, overall STPP participation increased from 36 percent to 48 percent of all eligible students. Between Year One and Year Two, the total number of eligible students increased by 70 percent (8,168 to 13,910) while the number of participants more than doubled (from 2,928 to 6,628, 126 percent increase). While a higher share of students are signing up to participate, students are not using the pass as regularly in Year Two; average bus boardings per participant declined, from 17 trips per month to ten trips per month overall. This change is particularly noticeable in the school districts that changed models between Year 1 and Year 2 from a discounted to a free program model, which may indicate more occasional riders taking advantage of the pass or students trying transit for the first time.

Participation rates increased significantly in districts where the pilot model was simplified (New Haven USD and Livermore USD). The STPP was significantly simplified between Years One and Two. Program models being tested were reduced from four to two, all passes were valid for the full year, all passes were free, and all grades were eligible at all participating schools. Where programs were significantly simplified, participation increased; in NHUSD participation rose from 9 percent to 33 percent and in LVJUSD participation rose from 3 percent to 28 percent.

Oakland USD participants used their transit pass more than students in any other school district. During the school year, Oakland USD participants took an average of 19 bus trips per month, which is almost twice as many trips as the next highest district, New Haven USD, where participants took an average of 11 trips per month, on average.

High school participants reported riding the bus more often than middle school participants, and they reported broader benefits of the transit pass than middle school participants. In the student survey, a larger share of high school students reported that they miss fewer days of school since obtaining their transit pass than their middle school counterparts. High school participants also indicated that they are using the pass more and for more diverse activities.

Financial need correlates to students' participation and bus usage. Higher levels of financial need are correlated with higher participation rates and higher bus usage (average bus boardings per participant per month). There is some evidence that the amount and quality of transit service may also be related to the rate at which students participate in the STPP and ride the bus, and qualitative factors may also contribute to differences in outcomes, including factors such as variation in land use type, density, and demographics in different areas of Alameda County.

In New Haven USD, where all participants received passes for both AC Transit and Union City Transit in Year Two, nearly 70 percent of participants used both transit operators. This indicates appetite for a multi-agency pass; however, complications exist in addressing a single pass for two agencies with different fare products.

The addition of BART tickets to the program this year revealed demand for BART among participants, but significant challenges exist with pass format, administering ticket inventory, and unused fare value. In Year Two, participating high school students within the BART service area could receive a free $50 BART ticket. Almost 40 percent of eligible high school students requested a BART ticket, however nearly a third of those who requested tickets have not used them. As of the end of July 2018, 56 percent of the BART fare value distributed in Year Two has not been used. Most BART rides on STPP tickets occurred within Alameda County, and the Year Two student survey indicated that nearly 50 percent of participants who ride BART access BART stations by bus.

Findings Related to Students and Families

Though the impact of the STPP on attendance rates is inconclusive at the school-wide level, the pass is critical in overcoming individual attendance issues. Many factors affect school-wide statistics on attendance and chronic absenteeism (e.g. flu seasons, lack of family support systems, etc.); there is no observable direct correlation between the availability of the student transit pass and attendance. However, some participants reported missing fewer days of school since obtaining their transit pass, and anecdotally, school staff, families, and students have indicated that the transit pass is a critical tool in helping students who have attendance challenges and at-risk families.

The STPP supports students' ability to participate in extra-curricular activities. While students use their transit passes mostly for travel to and from school, students also report using the pass to attend a variety of other activities including their sports games, jobs, and volunteer commitments.

The STPP continues to help families overcome cost barriers for accessing school. As in Year One, about 60 percent of Year Two participants who responded to the student survey said that the cost savings from the transit pass is "critical" or "helpful" to them and their families. Participants also reported that the cost savings of the BART ticket was a benefit; 70 percent of participants who received a BART ticket reported that associated savings was "critical" or "helpful."

Participants continue to report positive perceptions of transit. Over 70 percent of participants in each Year Two school district report that they feel safe on the bus and that transit meets their needs. This is a slight decline from Year One levels, but could be attributable to having more younger students in the program this year or because of changes in the participant profile due to increased participation.

Families express interest in the program regardless of income level. At schools with a Free/Means-based program, students and families that do not currently qualify for the program expressed interest in having a pass, suggesting that a transit pass is helpful for many families at all income levels.

Administration, Cost and Implementation

Simplifications to the program in Year Two reduced the burden on school site administrators, but the program still requires time, especially at the start of the school year, and challenges arise when institutional knowledge is lost due to staff turnover. School site administrators appreciate simplified processes that reduced the time needed to administer the program. However, school staff report that the STPP workload can be substantial at the beginning of the year when the bulk of program enrollment occurs and that there is a learning curve for new site administrators when institutional knowledge is lost due to staff turnover.

Consolidating passes onto one Clipper Card reduced the administrative burden between Year One and Year Two, but the addition of BART Orange tickets added complexity. Overall the administration of the program was much more streamlined in Year Two, especially at schools that participated in Year One. However, there were many new administrative complexities and challenges with adding BART tickets to the program in Year Two, including that paper tickets are harder to track and cannot be replaced, and that no BART period pass is available. In addition, BART has discontinued the Orange ticket and it will not be available post-pilot, which poses additional challenges for continuation of this program component.

Feedback Highlights

Over the course of Year Two, the project team collected feedback about the STPP from students, school site administrators, and staff at each participating school district and transit operator. The following representative quotes highlight major themes from the second year of the pilot.

"Anecdotally yes, the attendance is improving. Especially for the kids with first period tardies."
—School site administrator from Hayward USD

"The stories that are the most touching are the ones where the student has had some trauma… where they are trying to escape their home life because their parents aren't able to provide reliable options for them. Those kids take the initiative, and they are making it on their own because of the bus pass. They come and they try hard, and you see their grades improve so much when their attendance improves. They don't take it for granted."
—Parent and family coordinator from San Leandro USD

"A lot of our juniors and seniors who have the card have been able to use it for work. They can leave school and not have to worry about getting a ride. They know exactly what time they have to leave, and they know they are going to get to work on time, and they have a way to get home, so it's allowed them to work and get that experience."
—School site administrator from Oakland USD

"I talked to a family today, and it was a significant part of deciding where her child is going to school. She checked and said, 'Okay, the program is here, here, and here.' So it does impact school choice."

—School site administrator from Oakland USD

"I never took the bus before, once I got the transit pass I do take it. My family encouraged me to take the pass. It has given me a little more independence."

—Focus group participant from San Leandro USD

"Hard to connect attendance to one aspect or program… I do believe it has a positive supportive impact on attendance even if you can't prove it with data."

—School district contact from Livermore Valley JUSD

"Before I had the Clipper card – I used to pay cash – now I have money for emergencies."

—Focus group participant from New Haven USD

"We have a lot of after-school clubs, and most of our kids who participate use the pass."

—School site administrator from New Haven USD

"[There was] a lot more knowledge this year. Kids were telling their friends. I can tell the students are receptive about it."

—School site administrator from Livermore Valley JUSD

Road Ahead

Year Three Program Design and the Road Ahead

The program design for Year Three is based on lessons learned to date, program evaluation, available budget, and accounts for student need and geographic equity in pilot implementation. The same two program models (Free/Universal and Free/Means-Based) are continuing to be implemented and assessed in Year Three. Six new schools and two new school districts are participating in the program, bringing the total to 21 schools in seven school districts.

The STPP has been, and will continue to be, an opportunity to assess program models and approaches that work well and aspects that need improvement. Key factors for success are strong school support – site administrators and supportive staff members that are dedicated to the effort – simple program models, and streamlined administrative processes.

1. Introduction

Background and Timeline

The cost of transportation to school is often cited as a barrier to school attendance and participation in after-school activities by middle and high school students. In recognition of this issue, the 2014 Measure BB Alameda County Transportation Expenditure Plan (TEP) included $15 million dedicated to implementation of an affordable transit pass pilot program for students. The purpose of this program is to test and evaluate different approaches to a transit pass program for public middle and high school students in Alameda County over a three-year time period to identify a successful long-term approach.

The goals of the Affordable Student Transit Pass Pilot (STPP) are:

- Reduce barriers to transportation access to and from schools
- Improve transportation options for Alameda County's middle and high school students
- Build support for transit in Alameda County
- Develop effective three-year pilot programs
- Create a basis for a countywide student transit pass program (funding permitting)

The program accounts for the geographic diversity of Alameda County and includes passes that can be used on the various transit providers that serve schools, after-school activities and job locations throughout Alameda County.

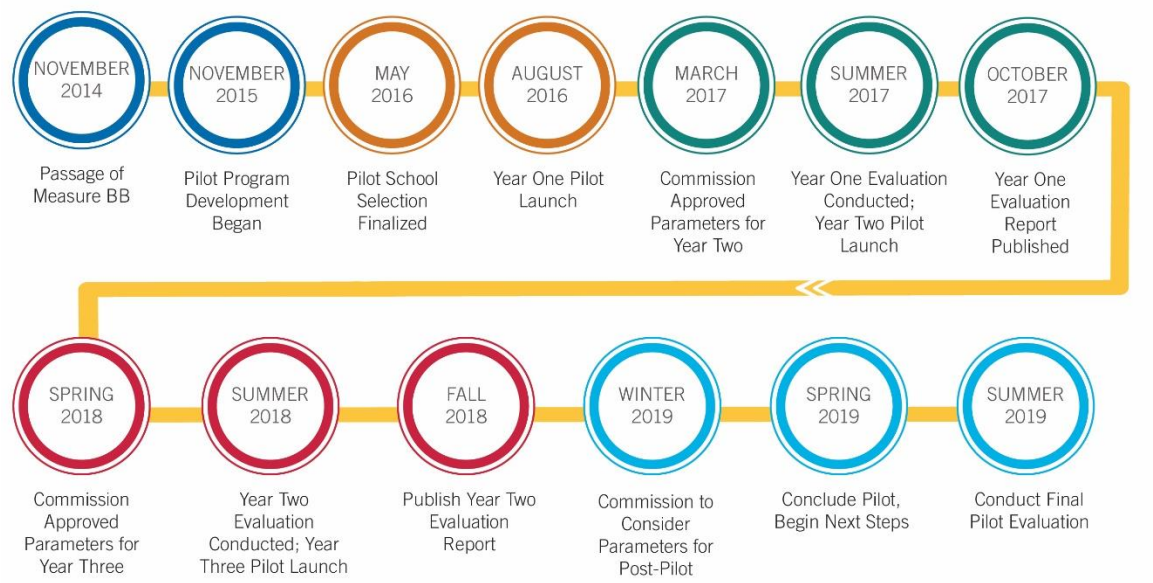
In 2015, working with community groups and regional stakeholders, Alameda CTC began design and development of the three-year pilot to test and evaluate various program models. In the spring of 2016, the Commission approved a framework for selecting schools and program models, and approved the design for the first year of

the STPP. In Year One (2016-2017 academic year), Alameda CTC implemented four program models at nine middle and high schools in four school districts.

Following the successful implementation of Year One, the Commission approved the design for Year Two (2017-2018 academic year), which expanded the program to 15 schools in five school districts, implementing the two successful program models from Year One across these schools. This report is an evaluation of that effort, providing a detailed assessment of the successes and challenges that came up in the second year of the pilot.

In Year Three (2018-2019 academic year), the final year of the pilot, the STPP will be in 21 schools across seven school districts, continuing implementation of the two models from Year Two. In the fall of 2019, Alameda CTC will present the Commission with a final evaluation report. The final evaluation report will encompass Year Three findings, as well as overall takeaways from the full three-year pilot. See Figure 3 for an overview of the STPP timeline.

Figure 3 Timeline for STPP Development, Implementation, and Evaluation



Site Selection and Evaluation Frameworks

In March 2016, the Commission approved two frameworks as part of the development of the STPP:

1. **Site Selection Framework**: To select pilot program sites in the four planning areas of Alameda County.
2. **Evaluation Framework**: To evaluate the effectiveness of several pilot program models.

School Site Selection

The site selection framework was a two-stage process that (1) produced a short list of 36 schools eligible to participate in the three-year pilot and (2) identified a sub-set of schools for Year One of the pilot. The first stage assessed the following factors: financial need, proximity to transit service, student population size, school day structure, school readiness, school feeder relationship, as well as other characteristics. After this screening analysis, the program team reached out to a sub-set of candidate schools to evaluate schools' interest in being active partners in the STPP and their ability to implement a pilot program. Figure 4 presents the characteristics used in the site selection process; the short list of 36 schools is contained in Appendix A.

Schools participating in Year Two were selected based on lessons learned from the implementation and administration of Year One, feedback from schools, students, and families, the Year One Evaluation Report, student need and an analysis of budget resources available.[1] Program design for each pilot year is described in the following section.

Figure 4 STPP School Site Selection Characteristics for Assessment

Category	Characteristic(s)
School Type	▪ Middle, high, mixed ▪ Charter/non-charter traditional
School Need	▪ Income level as indicated through free and reduced-price meal (FRPM) eligibility
Transit Presence	▪ Bus stop within ¼ mile of the school ▪ Number of routes serving schools
Geographic Location	▪ North, Central, South, East County planning areas ▪ Paired schools (e.g., schools located near one another, middle schools that feed a particular high school, a high school that draws from select middle schools, etc.)
Existing Programs	▪ Presence of Safe Routes to Schools programs and other unique attributes of potential school sites
Other Characteristics	▪ Percent minority of student population ▪ Ethnic diversity of student population ▪ School interest ▪ School readiness ▪ Availability of crossing guards ▪ Potential student and community participation

[1] Additional detail regarding the site selection process can be found in the March 2016 Commission memo: http://www.alamedactc.org/files/managed/Document/18434/6.6_Combo.pdf. Background on Year Two and Three expansion can be found in subsequent Commission memos, March 2017: https://www.alamedactc.org/files/managed/Document/20719/8.2_Combo.pdf; and February 2018: https://www.alamedactc.org/files/managed/Document/22507/8.2_ASTPP_Yr2Update_Yr3Recs_Rev_011718.pdf.

Evaluation Framework

When the Commission first approved the STPP, they also adopted an evaluation framework to measure performance of the program. The evaluation framework includes 18 quantitative and qualitative metrics, some of which have been refined since initial program approval to better reflect available data and a reasonable level of effort for school site and transit operator staff.[2] Figure 5 identifies how the metrics align with the adopted program goals.[3] For additional information, refer to Appendix B, which contains a more detailed rationale and data requirements used for each metric. The figure also indicates the relevant pages where each metric is discussed within this Year Two Evaluation Report.

Figure 5 Alignment of Program Goals and Performance Measures

Goals/Indicators	Goal 1: Reduce access barriers to school	Goal 2: Improve transportation options for MS/HS students	Goal 3: Build support for transit	Goal 4: Develop effective pilot programs	Report Location
Quantitative Metrics					
Transportation costs to families (participant cost)	■	■		■	p. 66
Participant or student attendance	■				p. 53, APP E-18
Pass availability and use	■				pp. 19, 39, APP E-1, E-10
After-school activity participation		■			p. 59, APP E-21
Student ridership (including non-passholders)		■	■		pp. 25, 38, 39, APP E-3, E-7, E-10, E-16
Diverse participant reach				■	APP E-26
Program cost per participant				■	p. 83
Administrative costs as a proportion of total program costs				■	p. 85

[2] After Commission approval, the metric "Inclusion of students, parents, community members, administrators" was moved from quantitative to qualitative due to an initial mis-categorization. The table presented here shows the current metrics after this change.

[3] Note that the STPP's fifth goal – to create a basis for a countywide program – does not have associated performance metrics. Rather, the results of this evaluation process help identify the value of and refine Alameda CTC's approach to a potential future countywide program.

Goals/Indicators	Goal 1: Reduce access barriers to school	Goal 2: Improve transportation options for MS/HS students	Goal 3: Build support for transit	Goal 4: Develop effective pilot programs	Report Location
Qualitative Metrics					
Student perception of transit options and barriers	■	■	■		p. 64, APP E-14, E-21
Inclusion of students, parents, community members, administrators			■	■	APP E-26
Effectiveness of marketing and outreach	■		■	■	p. 71, APP E-28
Linkages with existing fare payment option(s)		■	■		p. 75, APP E-34
Leverage with other school-based transportation programs	■	■			p. 59, APP E-35
Leverage with other funding and administration programs		■			APP E-36
Transit operator response(s)	■	■	■	■	pp. 32, 47, 78
Ease of participation	■	■		■	p. 62, APP E-38
Ease of administration (countywide, site-level, operator-level)	■	■		■	p. 71
Cost performance against expectations[4]				■	**N/A**

Program Design

Year One Program Design

For Year One, the program team developed four pilot program models, one in each of the four planning areas per Commission direction. In order to explore the effectiveness of different pass features, Year One program models varied in pass format, student eligibility and pass price. Nine schools from four school districts participated in Year One. An information-only program was developed for two

[4] This metric will only be evaluated at the end of the three-year pilot.

schools in a fifth school district, but this program was discontinued before the end of Year One due to lack of interest.

The pilot parameter applied in each program model generally reflected the school's financial need and transit service availability as determined in the site selection process. For instance, schools with the greatest level of financial need participated in pilots with free transit passes. At the time of implementation, Union City Transit and LAVTA/Wheels did not have an appropriate transit pass product available on Clipper; therefore, schools served by these systems received transit passes in the format of a flash pass, i.e., stickers affixed to student ID cards that students show upon boarding the bus.

The program team designed the Year One program with financial limitations in mind, recognizing the need to run the STPP for three years and to avoid spending the allotted funding too quickly. As such, the Year One pilot program models were designed to test different ways of limiting budget impacts. For example, several program models involved providing transit passes at a discount or limiting student eligibility to certain grades to diminish the financial burden on Alameda CTC. For those programs where STPP transit passes were sold at a discount, students could purchase them on a quarterly and trimester basis for Union City Transit and LAVTA/Wheels, respectively, to break up the cost of the pass throughout the year.

Year Two Program Design

The Year One assessment concluded that the first year of the STPP made a positive impact on students and their families and generated support for transit. The program team gained valuable insight for implementing additional phases of the STPP and identified opportunities for streamlining program design and administrative processes. Specific lessons learned from Year One include:

- Limiting student eligibility to certain grades reduced interest in the program due to families who have students in multiple grades.
- In discounted programs, the high up-front cost for a transit pass limited students' ability to participate in the program.
- Programs that require collecting funds from students entail significant administrative cost and burden on school and program staff.
- Programs with multiple pass formats within a school site have higher administrative complexity and higher program administrative costs.
- It was difficult to draw conclusions from Year One participation rates about student transit need and behavior in different parts of the county due to the fact that a different program model was tested in each area.

Based on these lessons, the project team narrowed the number of program models to test in Year Two to two:

(1) Free/Universal model

(2) Free/Means-based (income-based) model

Cash handling was eliminated at all schools and programs were opened to all grades at each participating school. Based on budget availability, six new schools and one new school district joined the program in Year Two, bringing the total to 15 participating schools in five school districts. For the continuing schools, three program model changes were made between Years One and Two:

1. The model at New Haven USD (South County) changed from a discounted and grade-limited program to a free and means-based program.
2. The model at San Leandro USD (Central County) changed from a free and grade-limited program to a free and universal program.
3. The model at Livermore Valley JUSD changed from a two-tiered discounted/means-based program to a free and universal program using an eco-pass payment model where Alameda CTC will pay the transit agency a lump sum for enrollment of all students at the schools.

During Year One, appropriate Clipper card pass products became available for both LAVTA/Wheels and Union City Transit. To further facilitate integration with existing payment systems, enable better management of passes, and improve data availability, all STPP transit passes were provided on Clipper cards for Year Two.

BART passes were also integrated into the STPP during Year Two.[5] Due to limitations of the BART fare structure and Clipper card system, BART passes could not be loaded on Clipper cards. Therefore, all eligible high school students within the BART service area could request one free BART Orange Ticket with a $50 value each year. These tickets are not restricted by time or day but, unlike Clipper cards, they are non-refundable and non-replaceable and cannot be canceled remotely. Figure 6 provides a summary of the key features of the program models assessed during Year Two. Additional details about the program parameters for Year Two are provided in Appendix C.

[5] BART youth ticket options are distinct from all other pass types used in the STPP because they have a fixed monetary value rather than a period of validity with unlimited usage. Given the different nature of the passes and budget limitations, Alameda CTC determined that BART passes would be rolled out in Year Two of the Pilot (2017-18 academic year) to give the program team time to determine the best strategy for providing BART tickets to students.

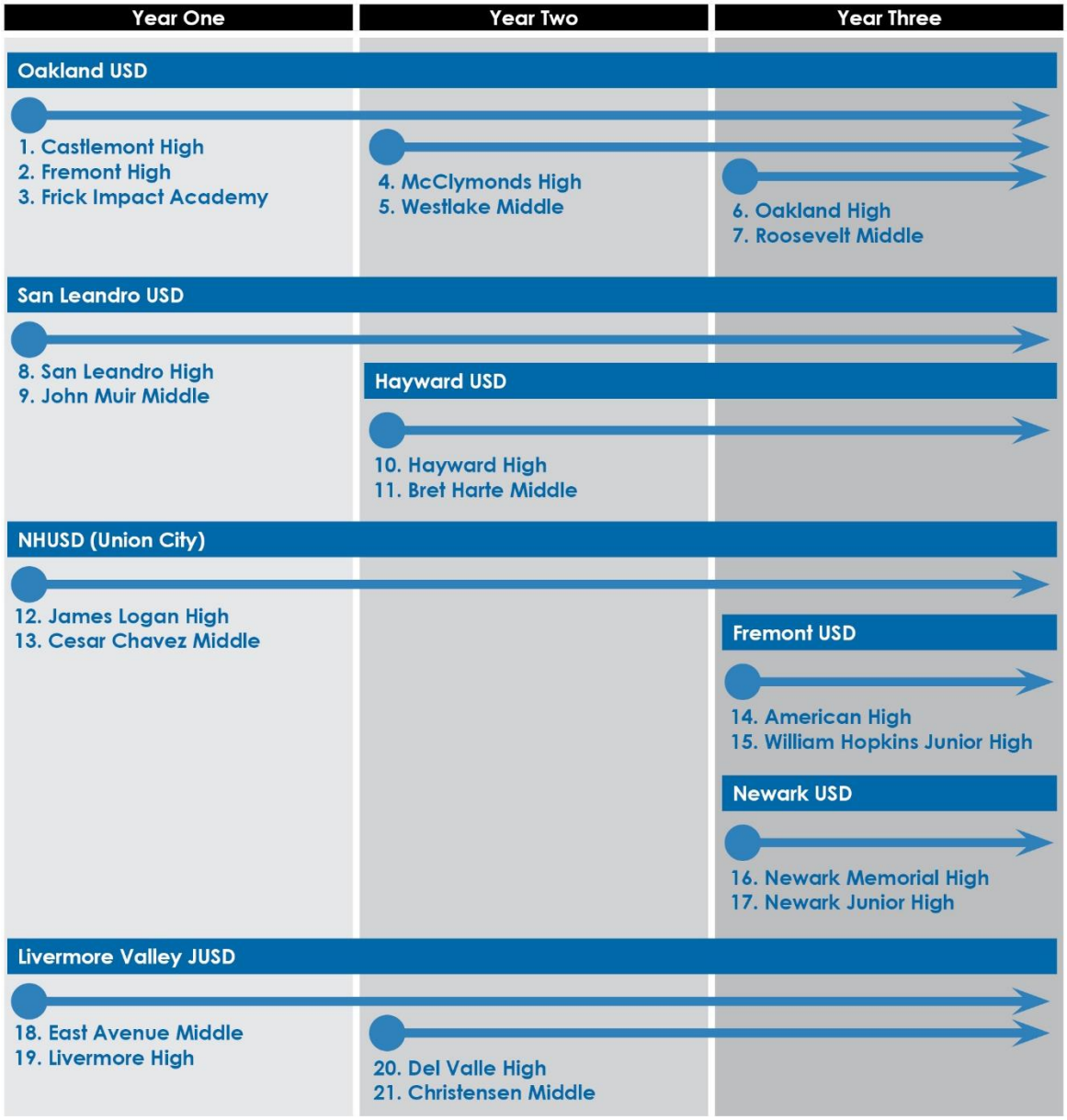
Figure 6 Program Models Tested in Year Two

Year Two Program Model	School District	Participating Schools
Free / Universal	**OUSD**	McClymonds High (HS)
		Fremont High (HS)
		Castlemont High (HS)
		Westlake Middle (MS)
		Frick Impact Academy (MS)
	SLUSD	San Leandro High (HS)
		John Muir Middle (MS)
	LVJUSD	Livermore High (HS)
		Del Valle High (HS)
		East Avenue Middle (MS)
		Christensen Middle (MS)
Free / Means-Based	**HUSD**	Hayward High (HS)
		Bret Harte Middle (MS)
	NHUSD	James Logan High (HS)
		Cesar Chavez Middle (MS)

Year Three Program Design and the Road Ahead

The program design for Year Three was based on lessons learned, program evaluation, available budget and accounted for student need and geographic diversity in pilot implementation. The same two program models (Free/Universal, and Free/Means-Based) will continue to be tested during Year Three as six new schools and two new school districts join the program, bringing the total to 21 schools in seven school districts. During fall/winter 2018/19, Alameda CTC staff will present recommendations to the Commission for the future of the program beyond the three-year pilot.

Figure 7 Participating Schools and School Districts by Year



Organization of This Report

Following this Introduction, this report contains four additional chapters and five supporting appendices, organized as follows:

- **Chapter 2** contains key findings from Year Two related to **program participation and use of participating transit providers**. It covers both bus and BART findings.

- **Chapter 3** contains the key findings from Year Two related to the **experience of students and their families with the pilot**. It addresses student attendance, perceptions of the program and transit overall, and a discussion of family perspectives on cost issues.
- **Chapter 4** contains the key findings from Year Two related to **administrative and implementation topics**, including staffing, back-office processes, and the overall cost of the STPP.
- **Chapter 5** provides a discussion of the **road ahead** for the STPP in Year Three and beyond.
- *Appendix A* contains the short list of schools that were approved to participate in the pilot by the Commission in March 2016.
- *Appendix B* provides a detailed listing of the performance indicators used to evaluate the program in this report.
- *Appendix C* provides a detailed description of the program design for Year Two.
- *Appendix D* provides a detailed discussion of the limitations of certain data sources used to produce this Evaluation Report.
- *Appendix E* includes additional details on performance indicators, including illustrative quotes from student surveys, focus groups, and debrief sessions with school site administrators and transit agency staff.

Evaluation Data Sources and Limitations of Analysis

The STPP evaluation utilizes data from multiple sources, including the following:

- Program participation rates and pass quantities from Alameda CTC and transit agency tracking databases
- Transit ridership data from Clipper transactions and BART fare gates from transit agencies
- Student responses to school-wide surveys conducted in spring 2018
- Student responses to survey questions included on enrollment forms for BART tickets
- School-specific data on enrollment, attendance and chronic absenteeism from school districts
- Debrief sessions with school site administrators, school district staff and transit agency staff conducted by Alameda CTC
- Focus groups conducted by STPP program staff and community groups

- Testimonials collected by school staff and comments by parents and students noted during on-site registration sessions and travel training activities
- The data and analysis from the Year One Evaluation Report

These data sources have various constraints and limitations that should be kept in mind while reviewing this report. In particular, participation rates vary throughout the county, and the share of students who responded to the survey varied by school. As a result, overall averages, summary statistics, or survey results for the program as a whole will tend to be dominated by the experiences and behavior of the highest participation areas and the highest responding schools, and may not be representative or generally applicable to all parts of Alameda County. Additional details about the limitations of the analysis presented in this report are provided in Appendix D.

Although all Year Two Clipper cards are loaded with full-year transit passes, as a general policy, the STPP allows students to enroll (and un-enroll) throughout the school year, and cards are activated upon student enrollment and deactivated if a student leaves a participating school. As such, student participation can fluctuate from month to month. This report will distinguish between participants (students who had an activated pass assigned to them at any point during the year) and non-participants (students who did not receive a pass).

2. Program Participation and Transit Ridership Findings

Program Participation

Over 6,600 students participated in Year Two of the STPP; this is more than double the size of the Year One program. Across all participating schools, 48 percent of eligible students received a transit pass, versus 36 percent in Year One.[6] Participation rates vary between school districts from about 25 percent to over 90 percent. This variation across school districts is likely due to multiple factors including differences in transit service coverage and quality, demographics, land use and urban form throughout the county.

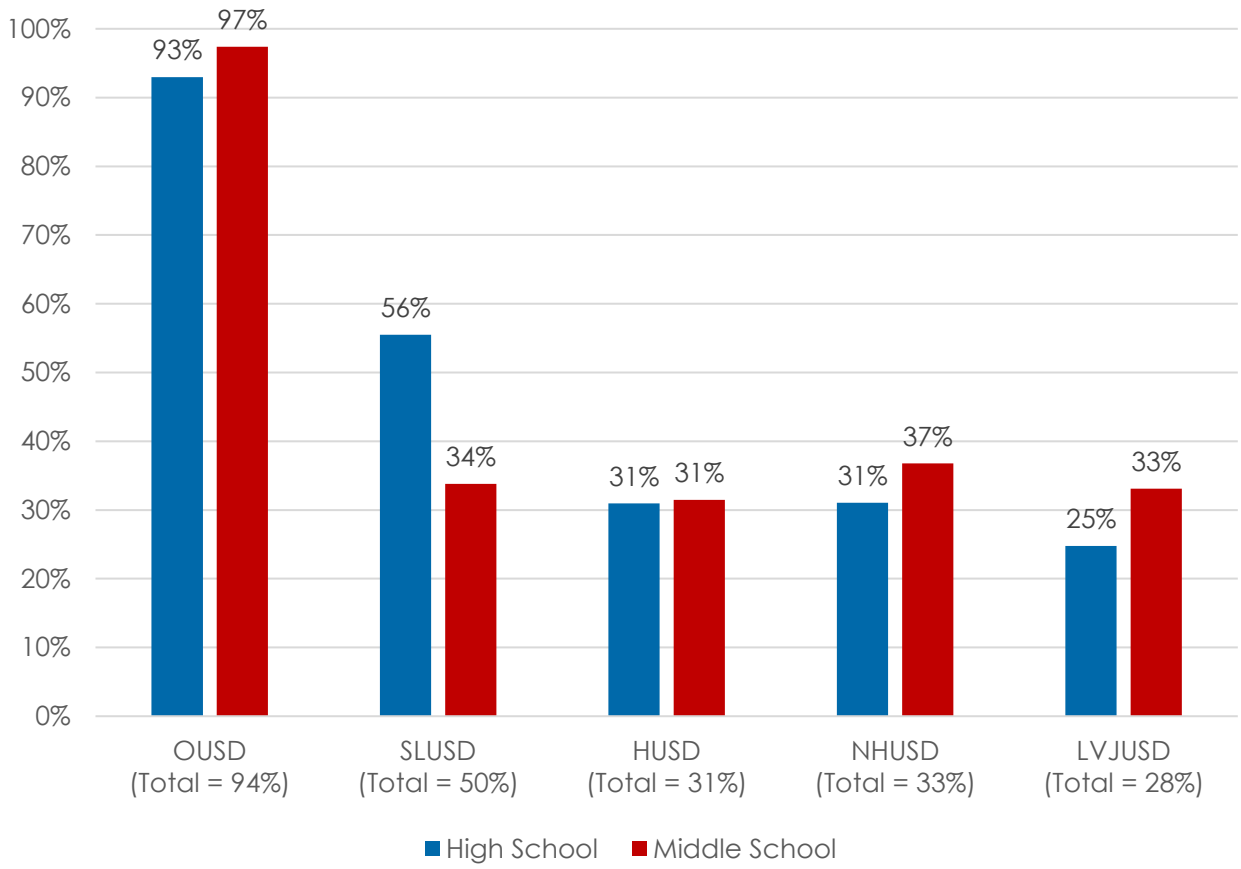
Similar to Year One, program participation was the highest in Oakland USD, with 94 percent of Oakland USD students participating in Year Two. San Leandro USD had the second highest participation at 50 percent. This is the same participation rate as last year, but it represents nearly twice as many students due to the program expansion to all grades. Livermore, New Haven, and Hayward USDs all had between one-quarter and one-third of their eligible students participate.

Figure 8 shows district level participation rates in Year Two for middle school and high school students separately and District total participation below the bar chart; Figure 9 shows participation rates for each school, grouped for middle and high schools, and Figure 10 shows the same data grouped by program model; Figure 11 provides a year-over-year comparison of participation rates by school district. A comprehensive summary of program participation is provided in Figure 12.

> *"[There was] a lot more knowledge this year. Kids were telling their friends. I can tell the students are receptive about it."*
> *—School site administrator from Livermore Valley JUSD*
>
> *"I talked to a family today, and it was a significant part of deciding where her child is going to school. She checked and said, 'Okay, the program is here, here, and here.' So it does impact school choice."*
> *—School site administrator from Oakland USD*

[6] Participation rates vary across the year as new students sign up or drop out of the program; participation rates shown here are year-end participation rates, generally representing the maximum level reached during the school year.

Figure 8 Year Two Participation Rate by School District (Participants as Share of Eligible Students, 2017-18 Year-End)



There was no consistent trend in high school versus middle school participation rates, however about 70 percent of eligible students and approximately three-quarters of participants are high school students, due to larger school sizes, so their behavior and opinions will tend to outweigh middle school students in any aggregate results presented in this report; disaggregated results are presented where appropriate to understand differences between these two populations. [7]

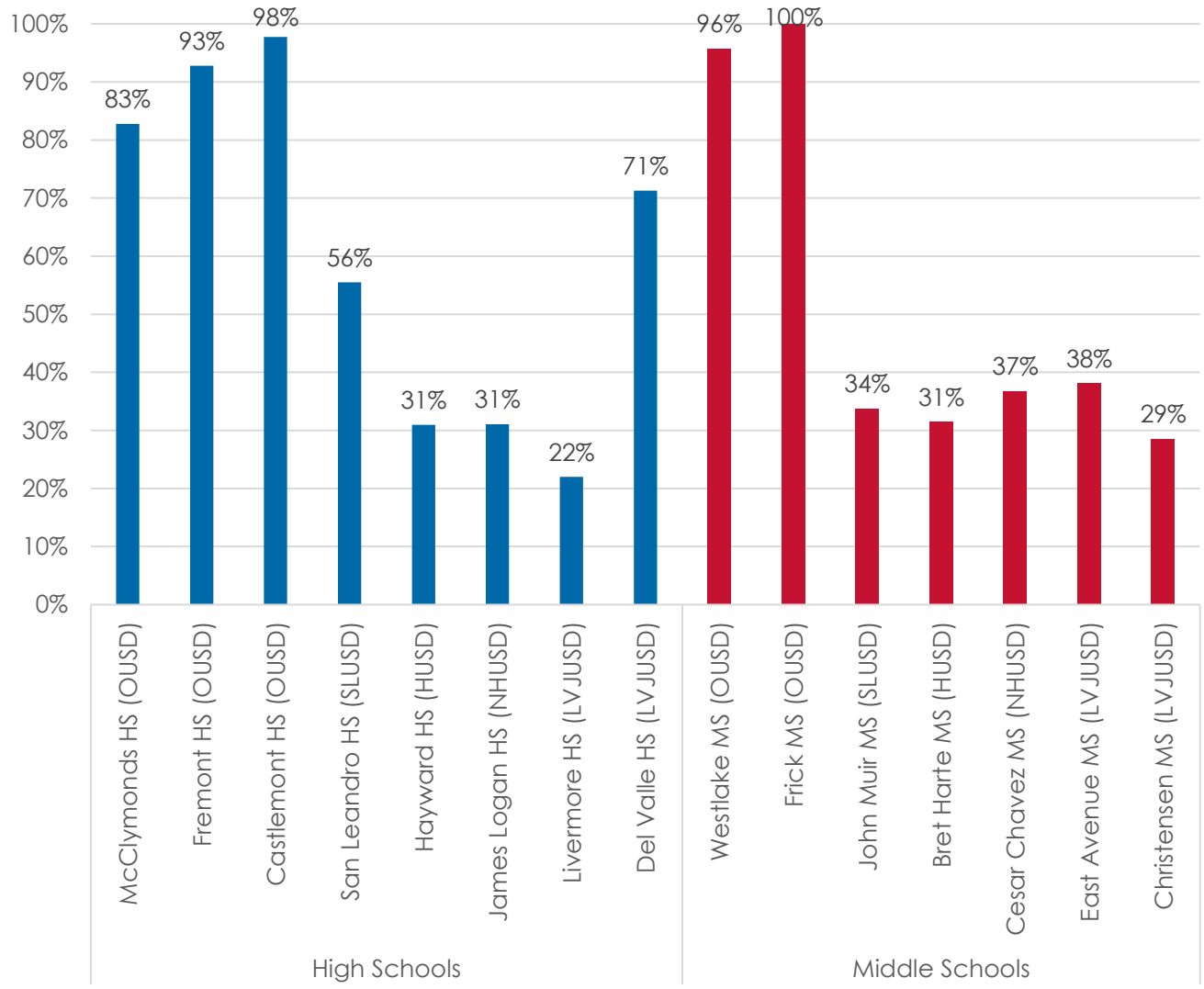
School-Level Participation

When looking at the participation rates by individual school, the values range from 22 percent to 100 percent. All of the schools in Oakland USD schools had participation rates above 80 percent, two other schools had participation rates above 50 percent: San Leandro HS (56 percent) and Del Valle HS (71 percent). The eight remaining schools had participation rates below 40 percent. The highest participation rate in Year Two was at a

[7] Approximately 40 percent of all participants are in North County (Oakland USD) with almost 35 percent in the two school districts located in Central County (San Leandro USD, Hayward USD). The remaining 25 percent of participants are split almost evenly between South County (New Haven USD) and East County (Livermore Valley JUSD). About 90% of participants are in the Free/Universal programs, while about 10% are in Free/Means-Based programs.

middle school (Frick Middle School at 100 percent participation) and the lowest rate was at a high school (Livermore High School at 22 percent participation). Results for each school are presented in Figure 9.

Figure 9 Year Two Participation Rates at Middle Schools and High Schools (Participants as Share of Eligible Students, 2017-18 Year-End)



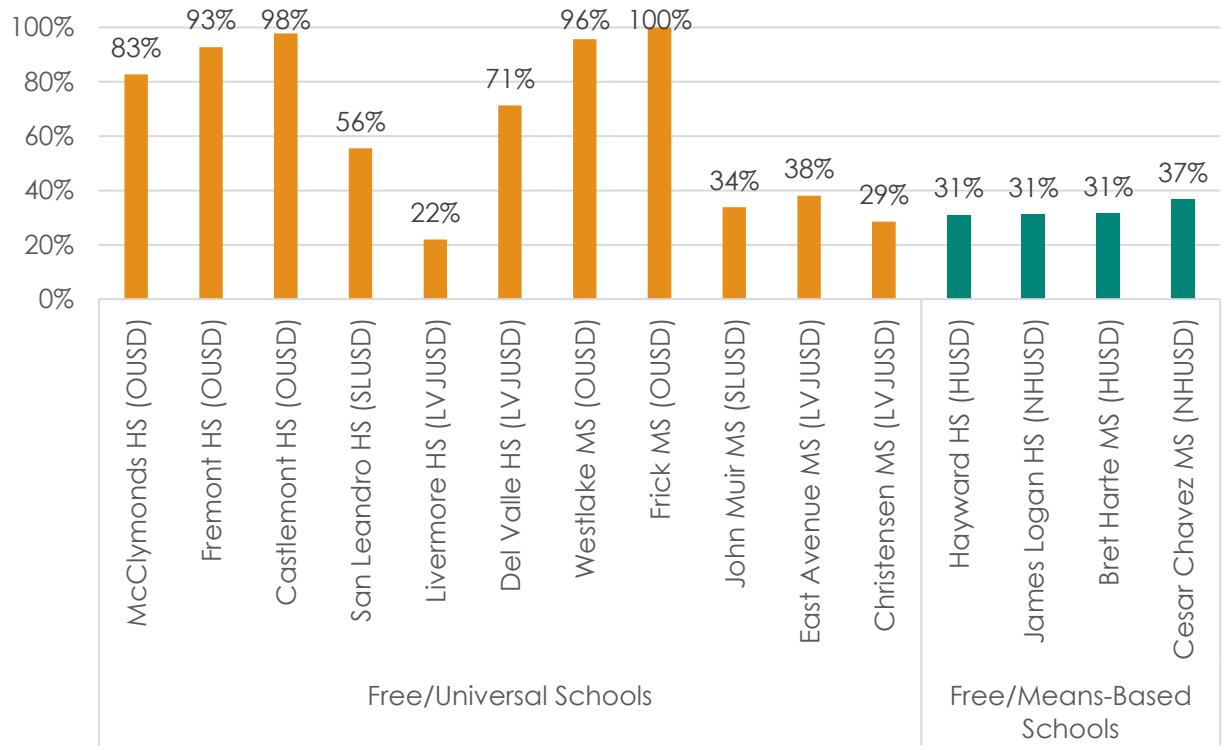
"I think most all of our students have a card—the ones that don't, their friends tell them to get it."

—School site administrator from Oakland USD

Participation is generally higher at schools that have the Free/Universal program model, which was assigned to schools with student populations with higher levels of financial need and broader transit availability.

As a group, the highest participation rates were observed at schools that tested the Free/Universal program model, with relatively lower participation rates at schools where the Free/Means-Based model was tested.[8] However, the lowest participation rate of all schools was at Livermore High School which is a Free/Universal program, so there are exceptions to the this trend. Results are presented in Figure 10.[9]

Figure 10 Year Two Participation Rates by Program Model (Participants as Share of Eligible Students, 2017-18 Year-End)



Unlike Year One, Year Two of the program did not have pass periods where students moved in and out of the program at scheduled intervals. Over the course of Year Two, most schools had a relatively steady participation rate that stabilized after the first few months of the school year. The two exceptions were the two largest schools – James Logan High and

[8] Participation rates for all schools are calculated as the number of participants as a share of those who are *eligible* for the program, so the relatively lower participation rates seen at Free/Means-Based schools is not because only a sub-set of students qualify for the program in those locations.

[9] It should be noted that the selection of which program model to use at each school was based, in part, on school and district characteristics such as the overall level of financial need so the difference in outcomes may be attributable to overall need and other factors. Additional analysis (described later in this chapter) shows that participation rates are also correlated with factors such as better overall transit service coverage and may be influenced by land use and geographic factors as well.

Livermore High – where the number of participants continued to climb throughout the spring; participation at James Logan High School continued to increase all of the way through the end of the school year. Livermore High School also had a burst of interest in the last few months of the year which may be attributable to end-of year marketing efforts.[10]

Year Two Participation Compared to Year One

When comparing the participation rates in Year Two to those of Year One, some of the continuing schools had very similar rates of participation, while others experienced significant changes. Results by school district for continuing schools only are shown in Figure 11.[11]

Program model changes introduced in Year Two led to significant increases in participation.

Oakland USD

In Oakland USD, the three continuing schools (Castlemont High School, Fremont High School, and Frick Middle School) kept the same program model as Year One and the participation rates were similar in both years, in the high 90%s.

San Leandro USD

In San Leandro USD, the program model remained Free/Universal but eligibility was expanded to all grades in Year Two. This program change had no observed impact on the overall participation rate which remained around half of students.

New Haven USD

In New Haven USD, the program model at both James Logan High School and Cesar Chavez Middle School was overhauled from a model in which students in selected grades could purchase discounted transit passes for AC Transit (Clipper card), Union City Transit (flash pass), or both operators to a model in which a free transit pass for both transit operators was available on a single Clipper card to students from low-income- families. Overall, participation in New Haven USD grew from 9 percent to 33 percent. At the school level, James Logan High School more than tripled its participation rate from 10 percent in Year One to 31 percent in Year Two and Cesar Chavez Middle School rose even more dramatically from 2 percent in Year One to 37 percent in Year Two.

Livermore USD

Similarly, the program offered in Livermore Valley JUSD was overhauled from a two-tiered model where low income students were eligible for free flash pass and all other students eligible for a discounted flash pass, to a Free/Universal model in which all students could get a free Clipper card. Participation increased significantly at both of these continuing schools from 3 percent in Year One to 26 percent in Year Two: East Avenue Middle School

[10] Additional data on participation rates at individual schools is available in "Program Participation" in Appendix E.

[11] *See* Appendix E: "Program Participation" for additional data on participation rates at individual schools.

increased its participation rate from 7 percent to 38 percent and Livermore High School went from 2 percent to 22 percent. T

Figure 11 Year Over Year Change in Participation Rate by School District (continuing schools only)

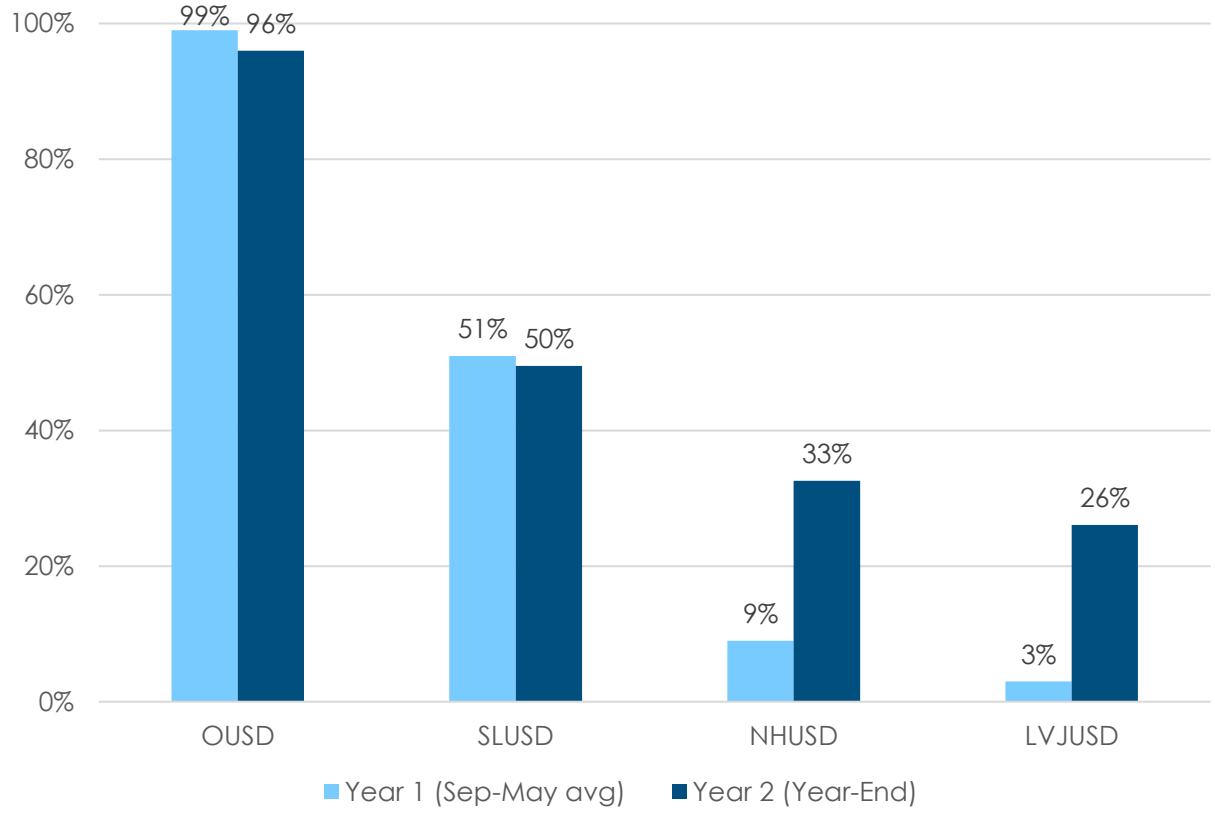


Figure 12 Summary of Bus Pass Participation in Year Two (2017-18 Year-End)

School District	Participating Schools	Year Two Program Model	Students Eligible in Year Two	Year Two Participation (as of July 2018)		Year One Participation Rate for Comparison (Sept-May Avg.)
				Number of Participants	Share of Eligible Students	
OUSD	McClymonds High	Free / Universal	400	331	83%	n/a
	Fremont High		803	745	93%	100%
	Castlemont High		891	871	98%	98%
	Westlake Middle		372	356	96%	n/a
	Frick Middle		240	240	100%	99%
	Oakland USD Total		***2,706***	***2,543***	***94%***	***99%***
SLUSD	San Leandro High	Free / Universal	2,612	1,450	56%	54%
	John Muir Middle		997	337	34%	38%
	San Leandro USD Total		***3,609***	***1,787***	***50%***	***51%***
HUSD	Hayward High	Free / Means-Based	1,175	364	31%	n/a
	Bret Harte Middle		422	133	31%	n/a
	Hayward USD Total		***1,597***	***497***	***31%***	***n/a***
NHUSD	James Logan High	Free / Means-Based	1,891	587	31%	10%
	Cesar Chavez Middle		690	254	37%	2%
	New Haven USD Total		***2,581***	***841***	***33%***	***9%***
LVJUSD	Livermore High	Free / Universal	1,936	426	22%	2%
	Del Valle High		115	82	71%	n/a
	East Avenue Middle		648	247	38%	7%
	Christensen Middle		717	205	29%	n/a
	Livermore Valley JUSD Total		***3,416***	***960***	***28%***	***3%***
Countywide			**13,909**	**6,628**	**48%**	**36%**

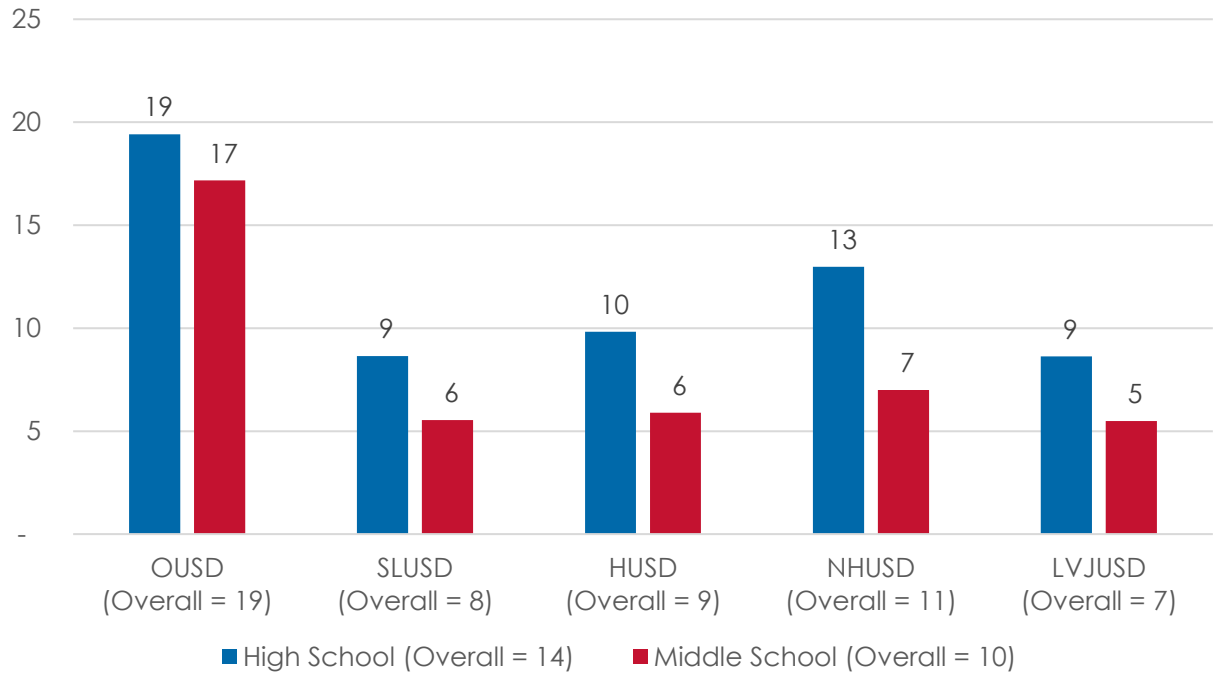
Bus Usage and Ridership

Since the start of the program in August 2016, STPP students have taken over 1.4 million trips on the bus. During Year Two, participants completed over 859,000 bus transit boardings. Most of the Year Two boardings were on AC Transit (over 773,000 or 90 percent) due to the size of the system and number of schools enrolled. Approximately 31,000 boardings (almost 4 percent) were on Union City Transit and almost 55,000 boardings (over 6 percent) were on LAVTA/Wheels. These totals work out to an average of over 2,350 bus boardings each day of the calendar year (higher on school days, lower on weekends).

During the core months of the school year (September-May), Year Two participants took an average of 12 bus trips per month. However, it is important to note that this average value

varies a great deal by school, school district and transit operator. Across all districts, high school students rode the bus more often than middle school students. At the district level, Oakland USD shows the most usage, with an average of 19 boardings per participant each month. The other four districts range from 7 to 11 boardings per participant per month. This data is shown by school district in Figure 13 and for individual schools in Figure 14. An overall summary of Year Two bus ridership in each school and district is shown in Figure 15.

Figure 13 Average Monthly Bus Boardings Per Participant, by School District – 2017-18 School Year (Sep-May)



At a school level, the most active school was McClymonds High School where students took nearly 22 trips per month on average; students at the other OUSD schools also rode often, at 16-19 times per month on average. At the low end, students at Christensen Middle School took four trips per month on average and students at both John Muir Middle School and Bret Harte Middle School took six trips per month on average. Average trips per month also varied by transit operator. On average during all twelve months of of Year Two, there were 12 boardings per participant on AC Transit, six boardings per participant on LAVTA and four boardings per participant on Union City Transit. Monthly boardings per participant by school during the school year and by operator during the school year and full year are shown in Figure 14 and Figure 15.[12]

> *"I used to take the bus in 8th grade. Now that I have a free Clipper card, I use it three to four times a week. I use it a lot more than before."*
> *—Focus group participant from San Leandro USD*

[12] Additional charts showing bus usage for individual schools is available in "Bus Transit Ridership and Usage" in Appendix E.

Figure 14 Average Monthly Boardings Per Participant, by School and Transit Operator – 2017-18 School Year (Sep-May)

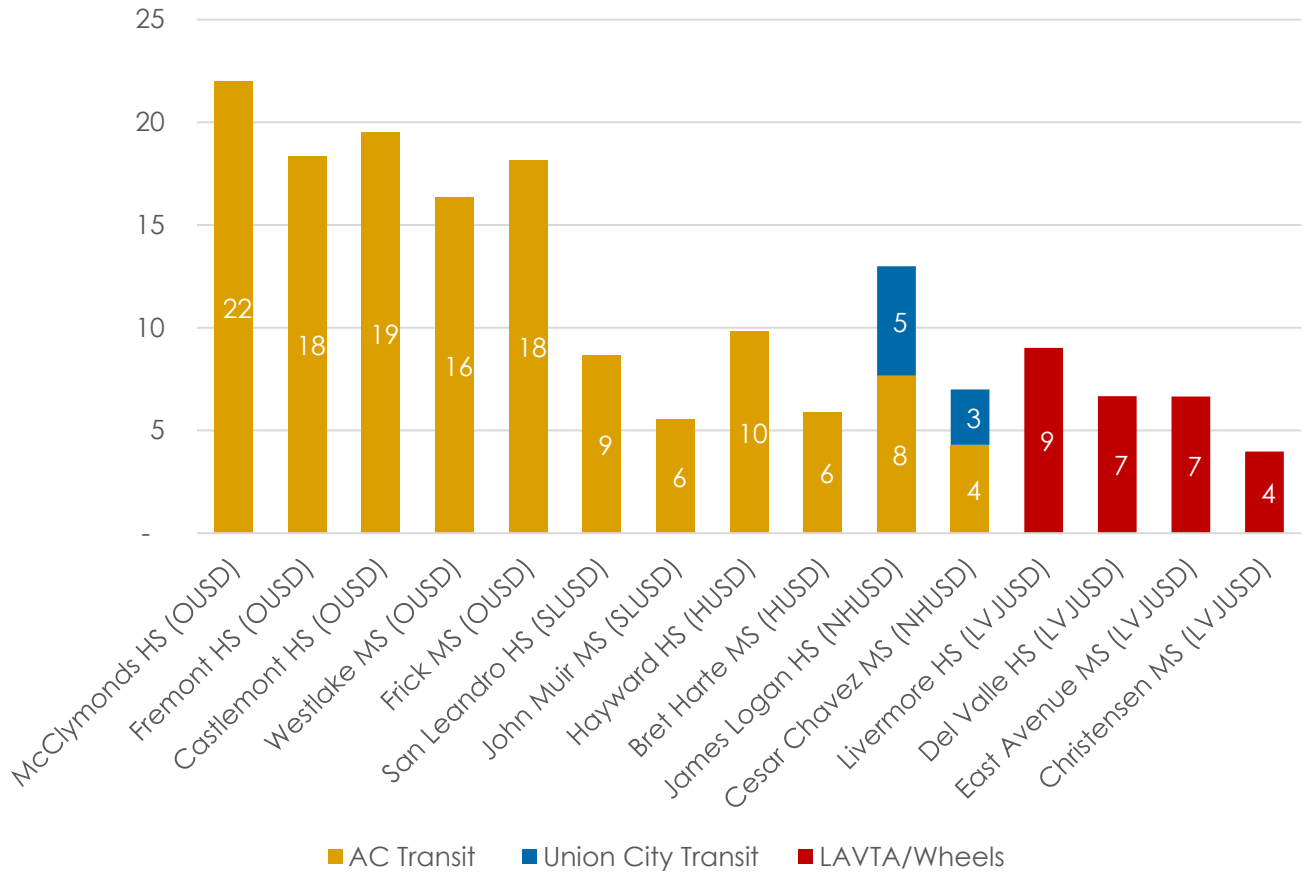


Figure 15 Summary of Bus Ridership in Year Two

School District	Participating Schools	Year Two Program Model	Average Monthly Boardings Per Participant[13]		Total Bus Boardings By Transit Operator (Aug-2017 through Jul-2018)		
			School Year (Sep-May)	Year Two Overall (Aug-Jul)	AC Transit	Union City Transit	LAVTA
OUSD	McClymonds High*	Free / Universal	22	21	73,539		
	Fremont High		18	17	168,997†		
	Castlemont High		19	18	192,123†		
	Westlake Middle*		16	15	55,843		
	Frick Middle		18	16	51,586†		
	Oakland USD Total		***19***	***18***	***542,088***		
SLUSD	San Leandro High	Free / Universal	9	8	126,198†		
	John Muir Middle		6	5	19,252		
	San Leandro USD Total		***8***	***7***	***145,450***		
HUSD	Hayward High*	Free / Means-Based	10	9	30,853		
	Bret Harte Middle*		5	5	6,423		
	Hayward USD Total		***9***	***8***	***37,276***		
NHUSD	James Logan High	Free / Means-Based	13	12	38,498†	25,017	
	Cesar Chavez Middle		7	6	9,898	6,123	
	New Haven USD Total		***11***	***10***	***48,396***	***31,140***	
LVJUSD	Livermore High	Free / Universal	9	8			29,364
	Del Valle High*		7	6			4,517
	East Avenue Middle		7	6			14,359
	Christensen Middle*		4	3			6,528
	Livermore Valley JUSD Total		***7***	***6***			***54,768***
Countywide			**12**	**10**	**773,210**	**31,140**	**54,768**
Overall average per participant by operator:					*12*	*4*	*6*

* Schools participating for the first time in year Two

† Includes estimated allocation of additional boardings for August, 2017 recorded on Clipper cards that were still coded with Year One pass product information.

[13] Average boardings per participant is calculated separately by school, by school district, and by transit operator for each month of the year. The monthly values are then averaged across relevant time period for either the core of the school year (Sep-May) or Year Two overall (Aug-Jul). For New Haven USD, where there are two bus transit operators, the calculation is performed separately for each operator, and the results are summed together.

Frequency of Bus Transit Use

The data on average boardings per participant per month that is presented above includes participants who do not use their pass at all, and it blends together the travel behavior of students who take the bus all of the time with other students who may take transit only a few times a year. To understand typical behavior of program participants, it is useful to breakdown the overall average into sub-groups that illustrate the differences between high frequency users and low frequency users. Clipper data provides a way to make this comparison. Each month, Clipper reports show the number of unique users (the sub-set of pass holders who had at least one ride in the month). Figure 16 shows that the average number of unique users in a month is typically well below the number of participants in each district.

Figure 16 Unique Users Per Month, by School District during School Year (Sep-May)

School District	Average Number of Unique Users Per Month during School Year (Sep-May)	Average Share of Passes Used Per Month[14]
Oakland USD	1,515	57%
San Leandro USD	774	40%
Hayward USD	213	51%
New Haven USD[15]		
AC Transit	313	47%
Union City Transit	282	42%
Livermore Valley JUSD	433	56%

Monthly Clipper reports also group the unique users into one of four categories: users who made 1-10 boardings in the month, 11-20 boardings per month, 21-40 boardings per month, or more than 40 boardings per month. Given that there were 20 to 23 weekdays during the months of the 2017-18 school year, any participant with 40 or more boardings per month could be riding transit to and from school virtually every day. This level of transit use could also occur for other reasons: students may ride less frequently but have to transfer between buses and thus have more boardings to accomplish a single trip; students may take more than two trips on the days they ride transit (trip-chaining, e.g., if they go to an after-school

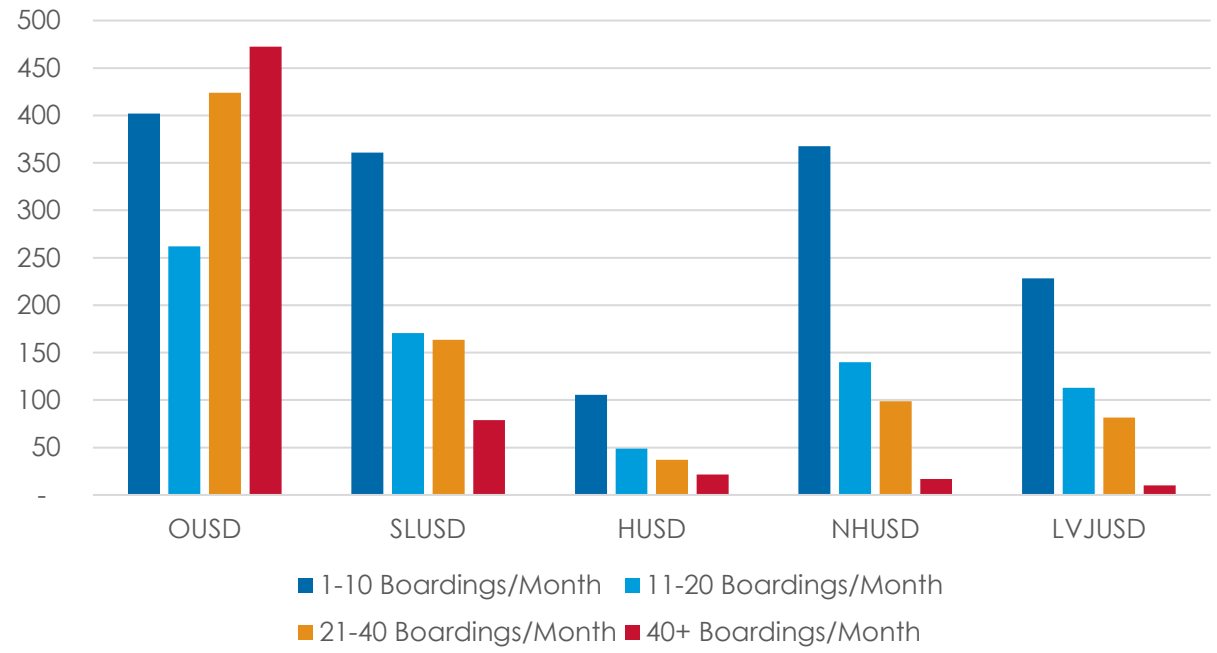
[14] The average share of passes used per month is calculated separately by school district and transit operator for each month of the year, and then the monthly results for Sep-May are averaged together to determine the annual average value.

[15] Students in New Haven USD receive a Clipper card that allows them to travel on both AC Transit and Union City Transit. Unique users are tallied separately for each transit operator, so a student who travels at least once on each operator in a given month will be counted in both operators' data for that month. A separate analysis of Clipper data for New Haven USD showed that almost 70% of participants who used their pass during Year Two did travel on both operators at some point during the school year. The analysis is described further in a later section of this chapter called, "Experience With Multiple Transit Operators."

activity between school and home); or students may regularly use transit on weekends in addition to their travel to and from school.

Figure 17 presents the number of users who fall into each of the four ranges of average boardings per month.[16] The differences between Oakland USD and the other school districts are striking. Oakland is the only district where the number of frequent transit users outweighs the number of infrequent users. And in all districts except Oakland USD, over 45 percent of transit riders in a given month are taking fewer than 10 trips. These differences are likely influenced by the availability of transit service in each community; the existence of higher quality bus routes can make transit a convenient option for more types of travel than just trips to and from school. It may also be related to transferring behavior, which is more common in a dense network of transit routes as is seen in the northern part of Alameda County. These differences in the distribution of users should be kept in mind when comparing data on overall monthly averages.

Figure 17 Average Number of Unique Users, Grouped by Boardings Per Month during School Year (2017-18, Sep-May Average)



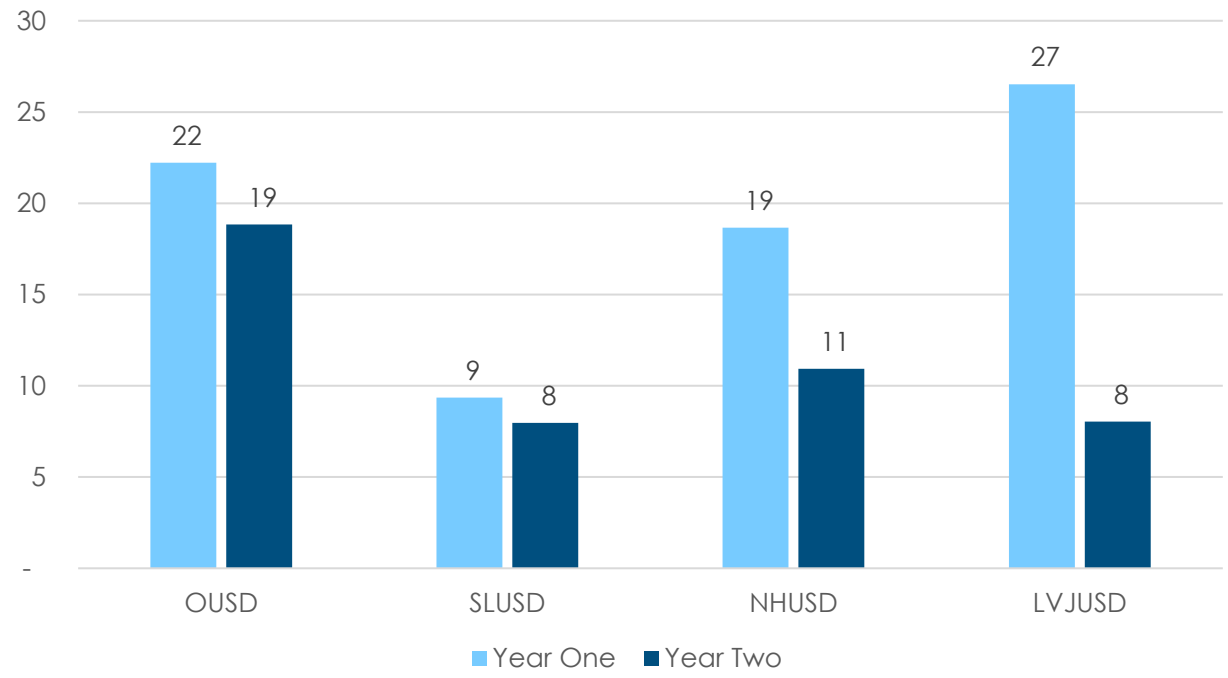
Year Two Transit Use Compared to Year One

In Year Two, the schools that continued from Year One all showed lower average monthly boardings per participant than the prior year. This trend is particularly notable in the two

[16] The data for New Haven USD in the figure includes the sum of separate unique user counts for AC Transit and Union City Transit. Clipper data does not allow for tracking of individual students in order to determine the combined results across both transit operators. In cases where the same student uses both transit operators in a given month, they are counted twice in the graph.

districts where major changes were made in the program model: New Haven USD and Livermore Valley JUSD. In Year One, both districts had very low participation, with only regular riders participating who could really benefit from the discounts offered. With cost barriers removed in Year Two, many more students signed up; these students may not be regular riders, but students who may be trying transit for the first time or riding more occasionally; their modest rates of usage would tend to hold down the overall average boardings per month A year-over-year comparison of average boardings per month in each school district is shown in Figure 18.

Figure 18 Year One to Year Two Comparison of Average Monthly Boardings per Participant during School Year (Continuing Schools Only, Sep-May Average)[17]



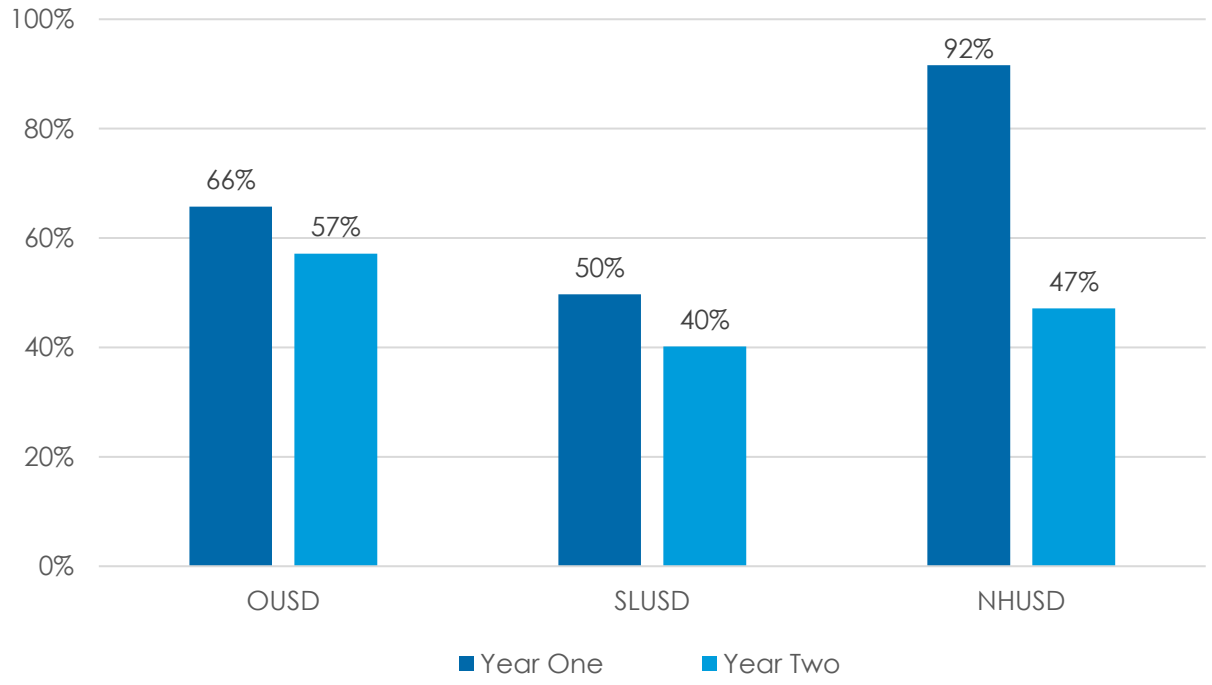
As noted above, a possible reason for the reduced number of average boardings is the fact that some students who signed up for a pass may not be using their pass at all. To compare the rate of overall pass utilization between Year One and Year Two, it is necessary to focus only on AC Transit, because they are the only transit operator that used Clipper in both years. Similar to the calculations in Figure 16, the share of participants who used their pass is determined by comparing the average number of unique users during each month of the school year to the total number of participants with AC Transit passes in each district.

In all three school districts that continued from Year One, the share of participants who used their pass declined from Year One to Year Two. The decline in New Haven USD was the most significant, most likely because of the change in program model. In Year One,

[17] Average boardings per participant is calculated separately by school district and by transit operator for each month of the year, and then the monthly results for Sep-May are averaged together to determine an annual average value for the school year period. For New Haven USD, where there are two bus transit operators, the calculation is performed separately for each operator, and the results are summed together.

students in New Haven USD had to pay for their transit passes, so they would be unlikely to sign up unless they felt confident they would use transit regularly; it is not surprising that the rate of pass usage is above 90%. In Year Two, the transit pass was free to all eligible students in each district, and the results in New Haven USD are closer to those seen in Oakland USD and San Leandro USD. It should also be noted that variations in results could also be driven by marketing and outreach efforts; some districts may have marketed the program more.

Figure 19 Year One to Year Two Comparison of Average Share of Participants Who Used Their Pass Each Month during School Year (AC Transit Passes Only, Sep-May Average)[18]



Systemwide Ridership Changes

During Year Two, the program team has continued its coordination with the three bus transit operators to monitor operational changes and crowding issues as well as overall trends in systemwide youth ridership and revenue.

Based on available data, it appears that ridership generated by the STPP has supported growth and stabilization of transit ridership levels in several areas.

The STPP is a pilot program and represents a very small portion of overall boardings on each transit operator, so impacts on systemwide trends are difficult to discern. Although new transit boardings are being generated by the pilot, it is likely that some STPP participants rode transit before the start of the pilot; so those boardings represent a substitution of one fare product for another, rather than ridership growth for the transit agencies.

[18] The average share of passes used per month is calculated separately by school district for each month of the year, and then the monthly results for Sep-May are averaged together to determine the annual average value for the school year period.

To try to isolate the effects of the pilot, trends in youth ridership as well as overall boardings on the specific bus routes that serve STPP schools were analyzed to explore potential changes that might be associated with the pilot. At this time, the data required to make these comparisons is not uniformly available from all three bus transit operators, so the analytical approach varies for each operator, as described below.

Data currently on hand suggests that overall ridership trends on the three bus operators have stabilized somewhat in Year Two and that the STPP may be helping to support recent ridership growth in some instances and stemmed recent declines in ridership in others. Alameda CTC will continue to work with operators to refine the data analysis presented below, in order to determine the nature of ridership changes that can be attributed to the STPP.

AC Transit

STPP participants made 521,836 boardings on AC Transit routes in Year One and 773,210 boardings on AC Transit routes in Year Two, a year-over-year increase of 48 percent.

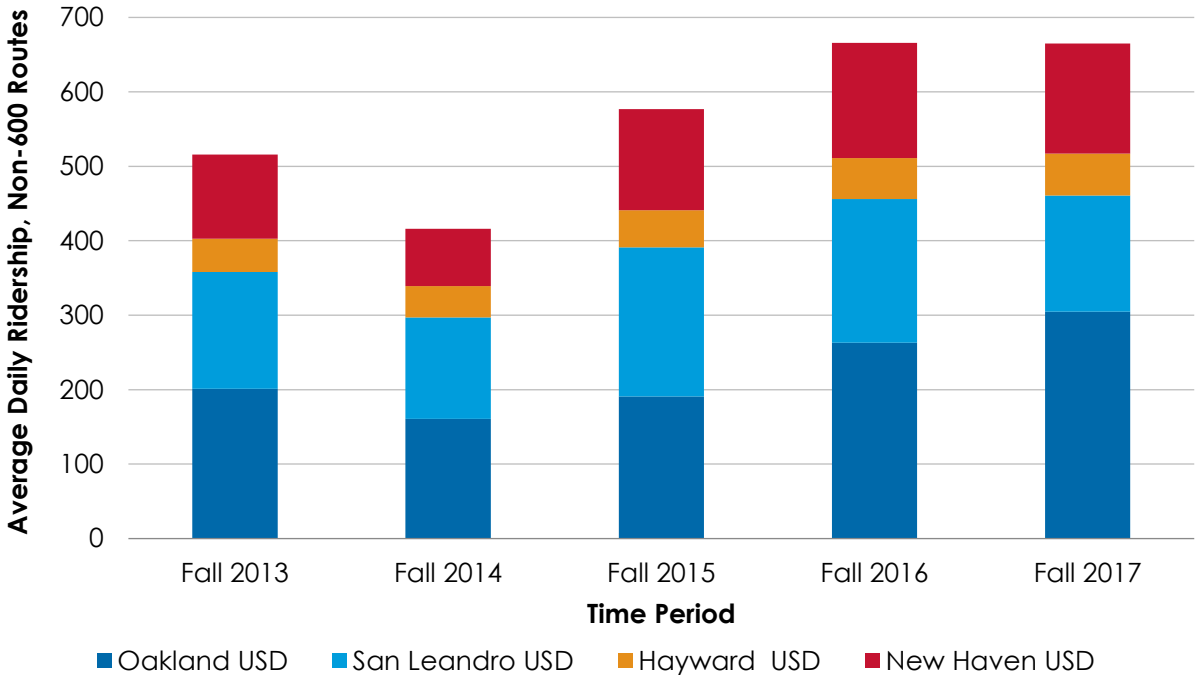
Route-Based Ridership Analysis

AC Transit conducted a trend analysis of ridership on school-serving routes over the five years from 2013-14 through 2017-18. The analysis focused on boardings and alightings at bus stops located near Year Two STPP pilot schools in the AC Transit service area and the specific bus departures around school bell times. The ridership data was summed by school district, as shown in Figure 20.

Changes in ridership at bus stops near participating schools do not appear to be solely correlated to the launch or expansion of the STPP, but the STPP may have boosted ridership to help maintain overall growth trends.

Overall ridership on the routes and stops that serve the pilot schools was rising before the STPP began – ridership increased 39 percent between fall 2014 and fall 2015. Ridership rose again about 15 percent between fall 2015 and fall 2016 when the STPP launched and this increase has been sustained through fall 2017. These overall results blend varying trends at different schools and districts. For example, combined ridership on the routes serving Oakland USD and Hayward USD schools has steadily increased since fall 2014, while ridership on the routes serving San Leandro USD and New Haven USD schools had shown some increases prior to the pilot, but then declined somewhat within the past year or two. Looking more closely at just Oakland USD, ridership growth on routes serving the continuing schools (Castlemont HS, Fremont HS, and Frick MS) stabilized or declined slightly since the beginning of the pilot, but at the same time, the two schools added in Year Two (McCymonds HS and Westlake MS) had ridership declines the year before they joined the program, followed by sizeable year-over-year ridership growth between fall 2016 and fall 2017 (+91 percent and +43 percent, respectively). These mixed trends point to the possibility that the STPP is helping to build and maintain transit ridership near participating schools.

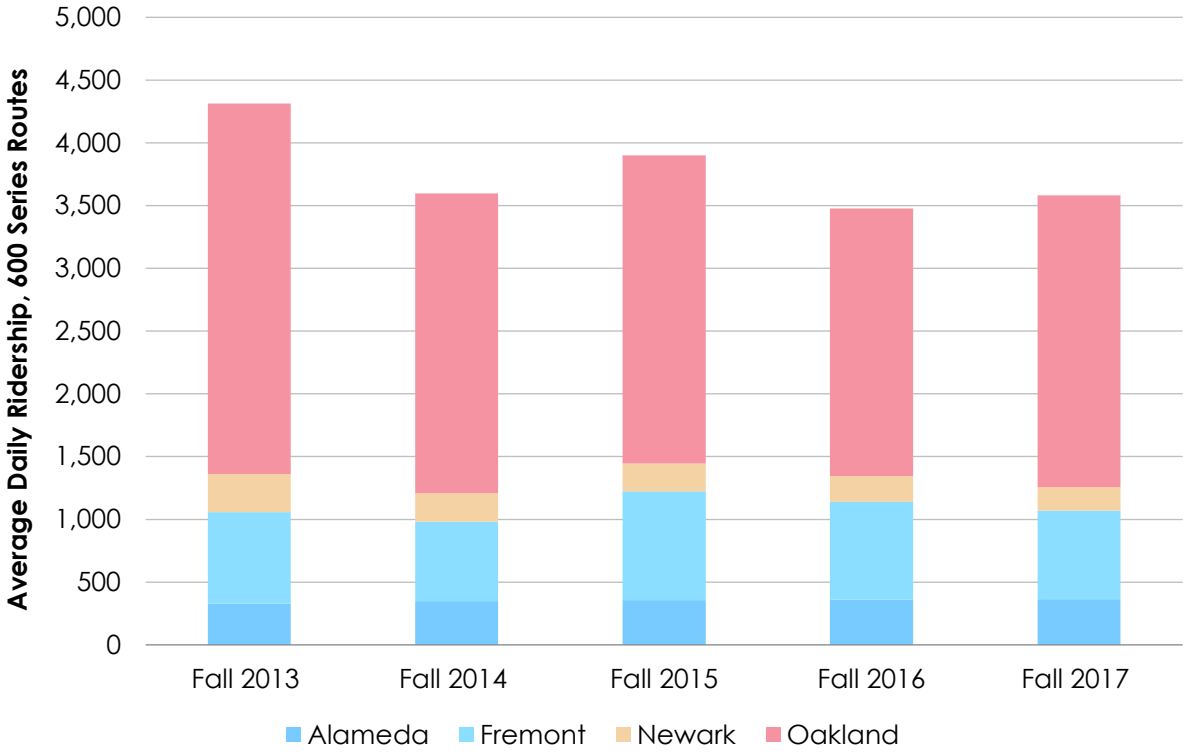
Figure 20 AC Transit Analysis of School-Related Ridership at Year Two Schools, by School District



As a control, these trends were compared to ridership on the 600-series supplementary services that serve several school districts that were not a part of the STPP in Year Two: Newark USD, Fremont USD and Alameda USD, as well as supplementary service to non-participating Oakland USD schools.[19] The total ridership by district for the 600-series routes is shown in Figure 21. The ridership for these routes follows the same trend as the STPP routes from fall 2013 through fall 2015, but ridership on the 600-series falls in 2016 in contrast to the trend for the participating schools where the fall 2016 and fall 2017 were generally higher than the 2013 through 2015 period. At many of the non-participating schools, these declines continued in fall 2017. Although the degree of causation is not entirely clear, it appears the STPP may have contributed to sustaining the increased levels of school-related AC Transit boardings near participating Year Two schools.

[19] AC Transit provides basic fixed-route bus service to many schools in Alameda County. In addition, the District also provides supplementary trips to meet the demand for increased capacity at bell times. AC Transit routes 600-699 are timed to match the instruction hours of local schools, and operate only when schools are in session. They may have altered schedules when local schools have minimum day or alternative schedules. These lines are open to all passengers at regular fares. Source: http://www.actransit.org/wp-content/uploads/board_memos/17-186%20Supplementary%20Service%20Web.pdf

Figure 21 AC Transit Analysis of School-Related Ridership for Non-Participating Schools, by School District



It should be noted this data analysis is specifically focused on school-serving routes and travel around school bell times, rather than all-day statistics. There could be additional changes in ridership that are not counted in this particular summation. For example, participants who stay on campus for after-school activities well after regular dismissal might travel home by bus using a pass, when they previously would have been picked up in a car by a family member. Or, students who took the bus to/from school before the program started might be using the bus more often for other travel outside of school hours because they have the pass. Neither of these cases would be captured in this stop-level analysis focused on school bell times.

Capacity Analysis

AC Transit staff also conducted a capacity analysis of routes serving the participating schools. Of the 18 routes analyzed, six have been either very near or over capacity since before the STPP began, including routes serving four of the five Oakland USD schools plus San Leandro High School and James Logan High School.

No new capacity issues have been documented due to the STPP and no complaints have been recorded as a result of this program.

To the extent that the available buses are already crowded or full, it could prevent students who want to ride from being able to board; this may be a somewhat circular reason for the lack of more obvious ridership changes on the school-serving routes in the ridership analysis above.

Additional analysis on systemwide ridership based on limited available data is included in Appendix E. Alameda CTC will continue to work with AC Transit to identify STPP impacts on systemwide ridership trends.

> *"I see more kids standing at the bus stop. It's noticeable. I stand out there every day."*
>
> *—School staff from San Leandro USD*

Union City Transit

STPP participants made 18,045 boardings on Union City Transit routes in Year One and 31,140 boardings on Union City Transit routes in Year Two, a year-over-year increase of 73 percent. Systemwide ridership data from Union City Transit is currently available only on a fiscal year basis, rather than the August to July academic year used elsewhere in this report. Summing STPP ridership for the fiscal year period (July 1 to June 30), participants made 17,634 boardings in 2016-17 and 30,194 boardings in 2017-18. Annualized data provided by staff at Union City Transit show that total systemwide ridership decreased each year from 2013-14 to 2016-17 but then plateaued in 2017-18 (the year-over-year change in total sytemwide ridership was a decrease of less than 200 boardings, or effectively zero).[20]

Over the same historical period, total youth boardings have also decreased each year up to 2016-17, but then increased slightly (2,500 boardings, 3 percent) in 2017-18. These youth ridership totals include boardings on all youth pass products: cash fares, retail passes, and STPP passes. Youth boardings by fare product are shown in Figure 22. The change in 2017-18 appears to be a combination of robust growth in STPP boardings and continued decline in youth ridership using other fare products, and likely represents a substitution effect from the retail fare products to the STPP pass for some students. This conclusion is bolstered by a clear trend in declining youth pass sales in general; the number of youth passes purchased has been trending downward each year, and by the end of 2017-18, just a small handful of passes were being purchased each month (Figure 23).

[20] Data may be inconsistent with prior year submittals due to revisions to the contractor reports where errors were found due to hard number entries as opposed to formulas for the calculations. Union City Transit will continue to strengthen the data in the future.

Figure 22 Youth Ridership on Union City Transit by Fare Product

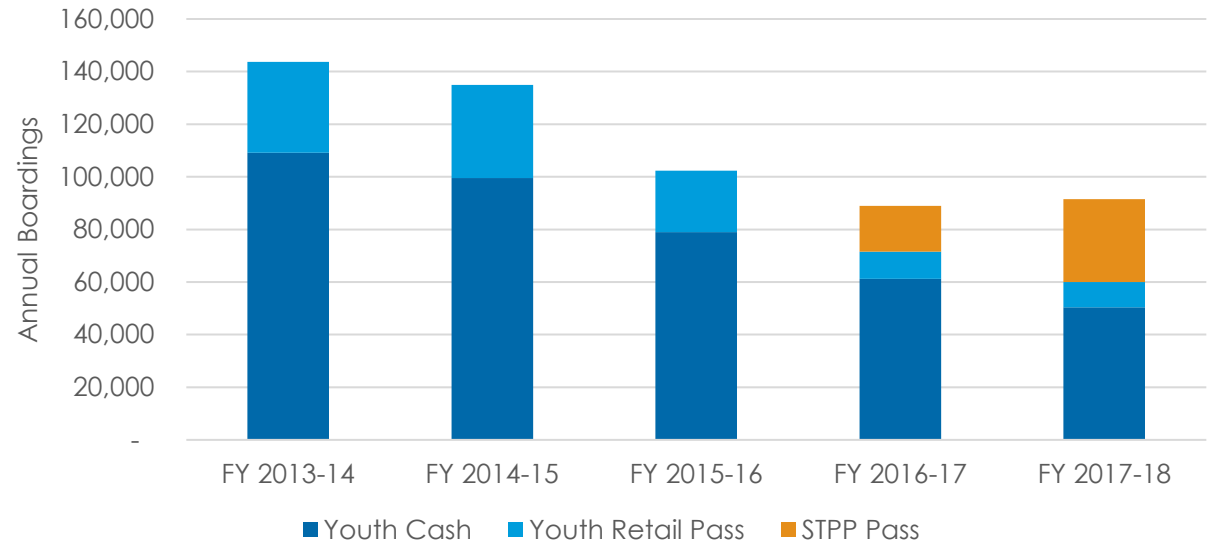
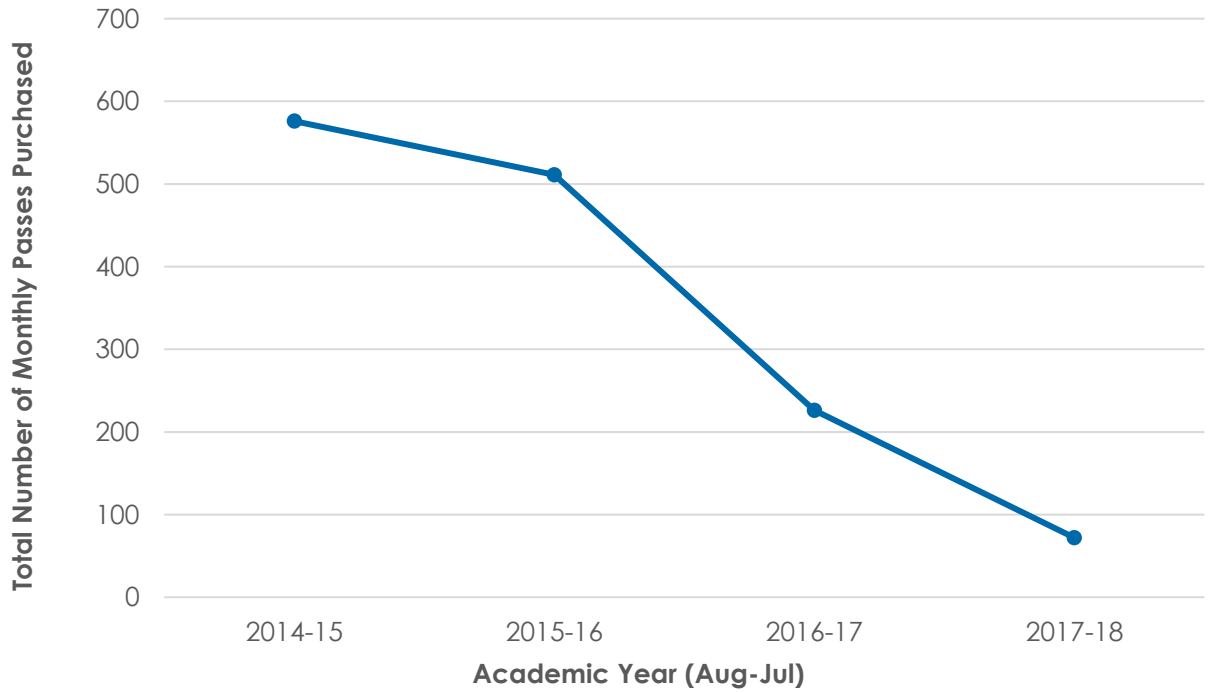


Figure 23 Union City Transit Retail Youth Pass Sales



LAVTA

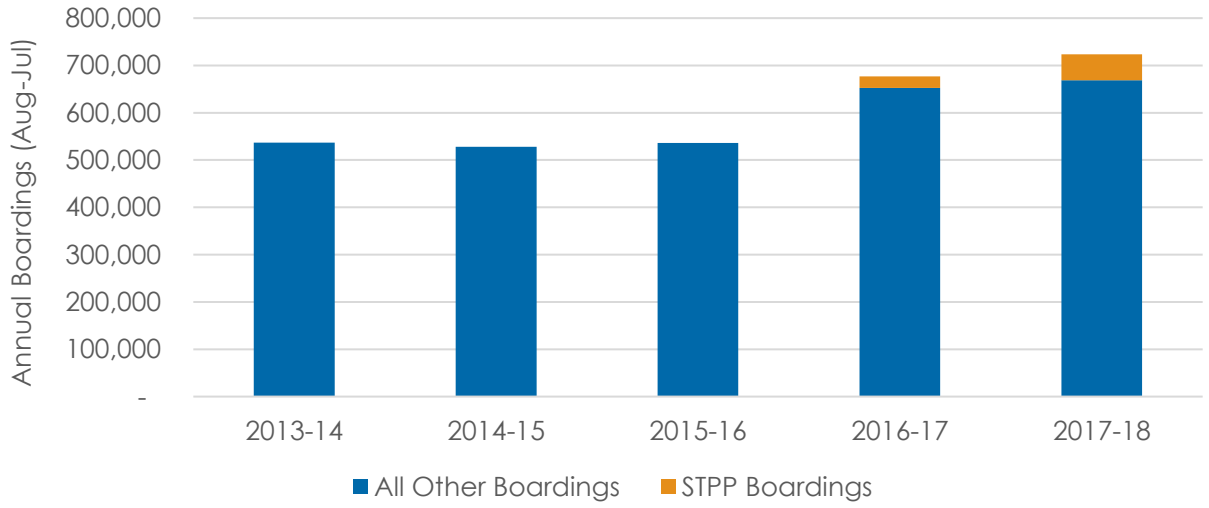
STPP participants made 24,254 boardings on LAVTA routes in Year One and 54,768 boardings on LAVTA routes in Year Two, a year-over-year increase of 126 percent.

During Year Two, increased boardings by STPP participants on LAVTA contributed to a resurgence in systemwide ridership after a period of decline and continued to support recent growth on school-serving routes in Livermore.

Similar to the systemwide trend for Union City, LAVTA boardings had been declining in each of the past five years until an increase in the 2017-18 school year.[21] There were 122,000 more total boardings in 2017-18 as compared to 2016-17, an increase of 8 percent. Approximately one-quarter of this increase could be attributable to the year-over-year increase in STPP boardings, which grew by 30,514 in 2017-18.

LAVTA does not have a separate youth pass product that would allow for comparison of ridership changes at a fare-product level. However, analyzing trends in the bus routes that specifically serve schools can provide some insights as to overall trends. The bus routes that serve Year Two schools in Livermore Valley JUSD include the 14, 15 and 30R. As shown in Figure 24, annual boardings on these three routes were relatively steady at an average of 534,000 per year for the three historical years prior to the start of the STPP. In 2016-17, these three routes had almost 677,000 boardings, an increase of 27 percent, and in 2017-18, the ridership increased again, to about 723,000 boardings, an increase of nearly 7 percent. The 31,000 increase in STPP boardings is equivalent to approximately 66 percent of the overall increase in ridership on the routes serving Livermore Valley JUSD in the last year (between 2016-17 and 2017-18). Although the STPP is not the only driver of the gains, participant boardings are supporting higher levels of ridership in general on these routes.

Figure 24 Ridership on LAVTA Routes Serving Livermore Valley JUSD Schools



[21] The annual statistics quoted in this section are expressed based on August to July ridership totals, in order to align with the reporting year used for the STPP. As such, the values will vary from LAVTA publications based on fiscal year reporting.

Analysis of Variations in Participation and Usage

In reviewing Year Two as a whole, the program team investigated whether variations in program participation and transit usage were clearly attributable to underlying differences between schools, school districts and their communities. The team evaluated three potential factors: availability of transit service, level of financial need, and other qualitative attributes.

Availability of Transit Service

There is preliminary evidence that the availability and quality of transit service plays a role in STPP participation and usage of the transit pass.

AC Transit has developed a methodology for quantifying variations in transit service within their district boundaries that is used to determine pricing tiers for their Easy Pass Program. Known as Level of Transit Service (LTS), the LTS methodology uses a ¼ mile radius to evaluate the amount and type of transit service near a given location and assigns each location a score of 1 to 4, with 1 being the highest tier (highest quality service) and 4 being the lowest tier (lower quality service).

For the purposes of this evaluation, the LTS ratings were used as a proxy measure of transit quality near each of the Year Two participating schools served by AC Transit. The service provided by Union City Transit in New Haven USD is not reflected in AC Transit's LTS scoring, so that district was excluded from the analysis, leaving three school districts where AC Transit is the only bus operator: Oakland USD, San Leandro USD, and Hayward USD. When the STPP participation rates and average transit usage results are compared to the AC Transit LTS scores for Year Two participating schools in these three school districts, there is a modest statistical correlation, indicating that transit availability is likely a contributing factor in determining program participation and usage. Figure 25 portrays the relationship between the LTS ratings and the participation rate at each school; Figure 26 shows the relationship between the LTS ratings and the average monthly boardings per participant at each school.

It should be noted that the LTS methodology does not include a way to measure student access to transit from student residences, both for trips to school as well as other destinations such as jobs, after-school activities and other destinations. Also, the findings based on LTS ratings may not be transferable to other parts of Alameda County with different transit service attributes.

Figure 25 Comparison of AC Transit LTS Rating and Participation Rate (2017-18 School Year)

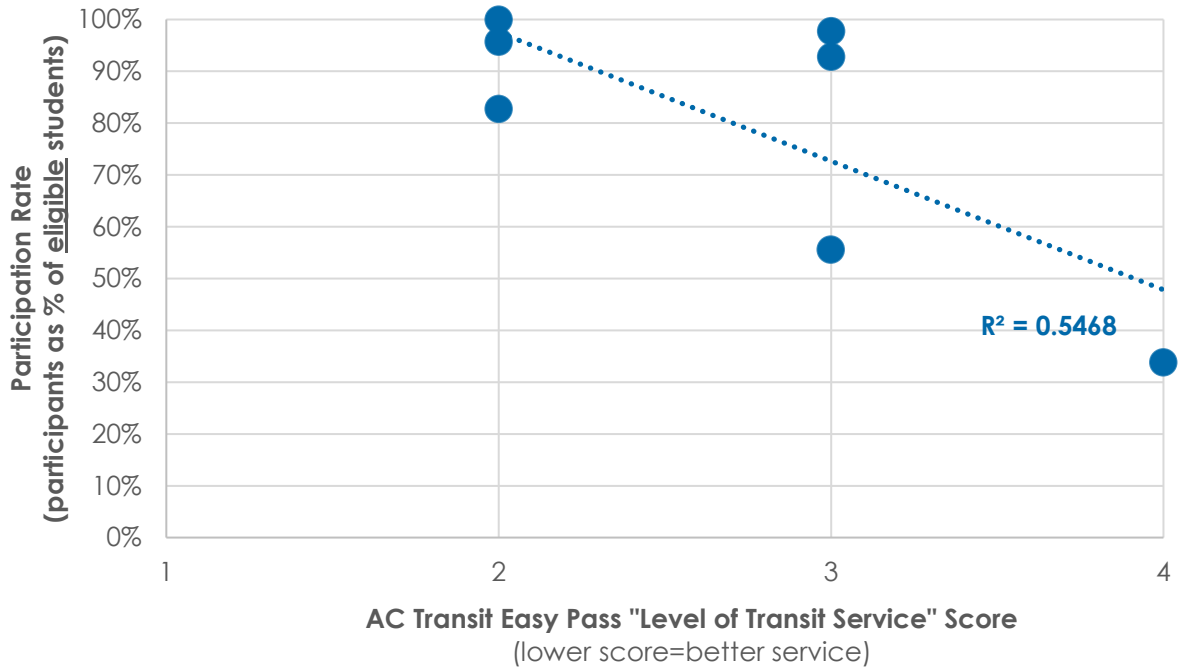
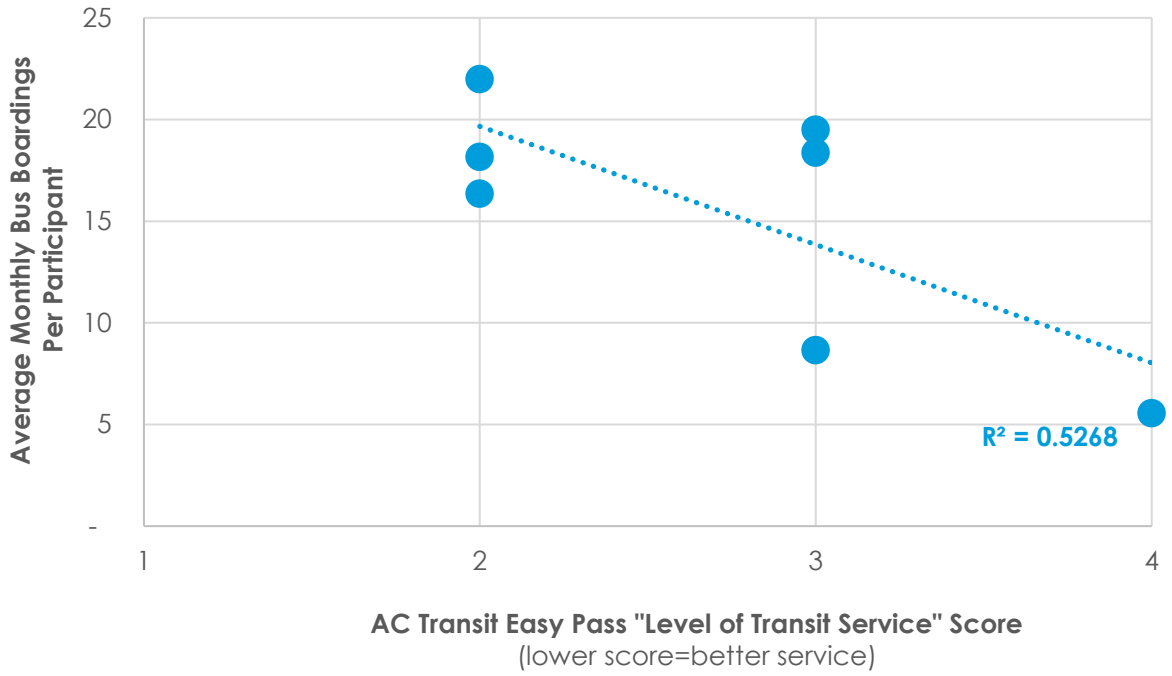


Figure 26 Comparison of AC Transit LTS Rating and Transit Use (2017-18 School Year, Sep-May Average)



> *"[Students] like the fact that it's not just to-and-from school; they can use it on the weekends, or to/from the babysitter's house. They can get places in a timely manner."*
>
> *—School site administrator from Oakland USD*

Level of Financial Need

This pilot uses a proxy metric for financial need in each school: the percentage of enrolled students who qualify for Free or Reduced Price Meals (FRPM), which is based on family income level relative to federal poverty guidelines. The two figures below graph participation rates (Figure 27) and bus transit usage rates (Figure 28) against this financial need metric to test whether a clear relationship exists.[22]

One possible hypothesis is that families with greater financial need would be more interested in a free transit pass, because it helps expand transit access at no cost. Indeed, higher rates of participation are seen at Free/Universal schools with higher shares of students that qualify for the FRPM program. However, these differences also follow geographic lines, so there may be other land use and demographic factors influencing participation and usage rates, not just financial need. For example, the Oakland USD schools having the highest need and the highest usage, but more dense areas such as Oakland also have more transit options and higher frequencies than students living in more suburban parts of the county. The participation rate at Free/Means-Based schools appears more consistent across schools, but this is partly because the number of students eligible for the program is based on the share who are eligible for FRPM in the first place.

Interestingly, Figure 28 shows that students at schools with higher levels of financial need also use the bus more than those at schools with lower FRPM rates. As mentioned above, a causal relationship cannot necessarily be inferred as there are other geographic factors at play. It could be that willingness to use transit is driving the difference in participation rates seen in Figure 27 more than financial need. Also, Year Two saw the inclusion of an alternative school in Livermore Valley JUSD: Del Valley High School. During a debrief session with school site administrators, staff explained that many of their students have non-traditional schedules and may not come to campus every day of the week. This factor may be more important than others in determining average boardings per participant per month at Del Valle HS.

[22] The data has been segmented by program model (Free/Universal and Free/Means-Based) prior to conducting the regressions, because the values on the two axes do not use the same denominator for both groups. Specifically, the FRPM statistic (X-axis) is always calculated as a share of total enrollment at the school. In the Free/Means-Based programs, students who do not qualify for FRPM are not eligible for the STPP, so they are not included in the denominator when calculating participation rate.

Figure 27 Comparison of Financial Need and Participation Rate (2017-18 School Year)

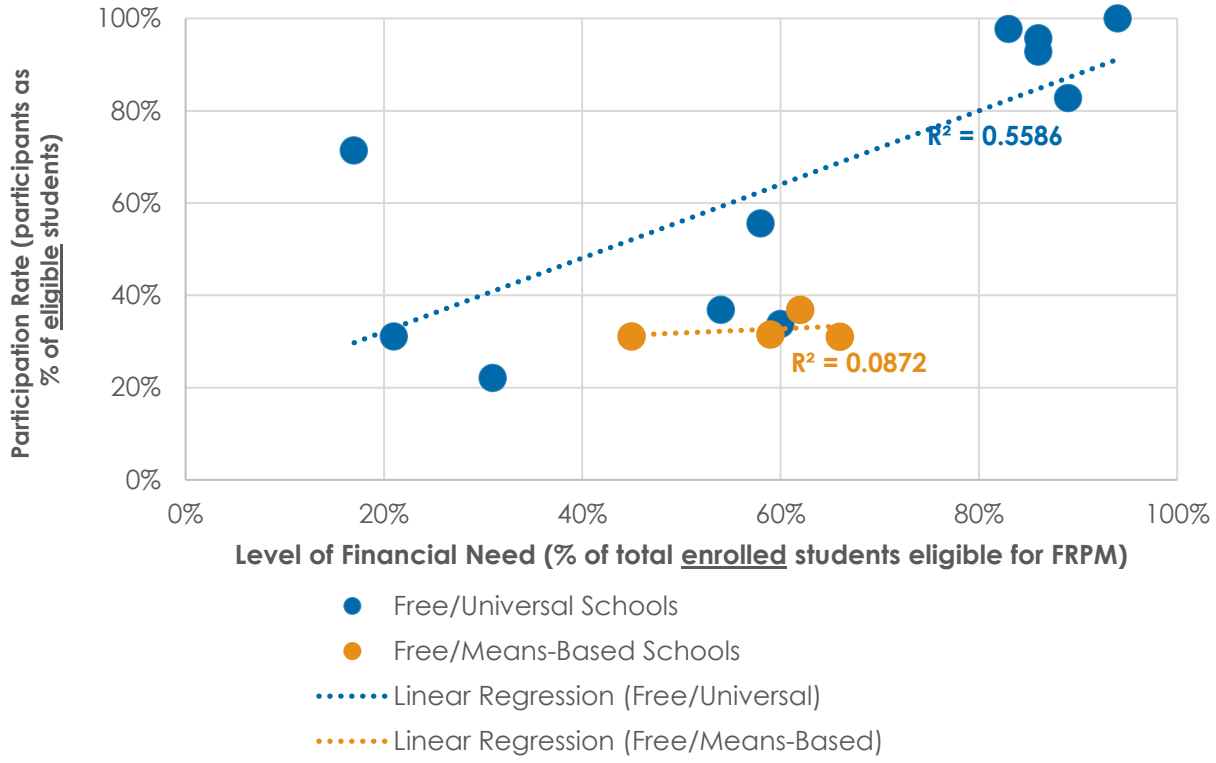
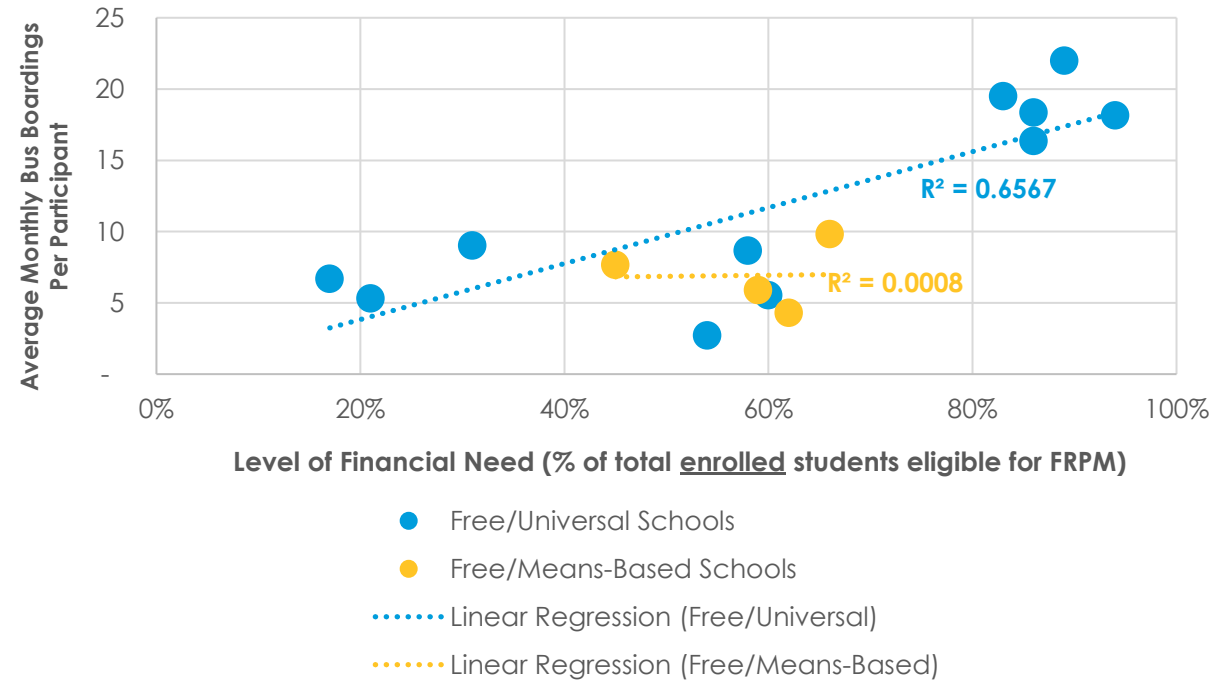


Figure 28 Comparison of Financial Need and Transit Usage (2017-18 School Year, Sep-May Average)



Qualitative Attributes

Several other factors may influence program participation and transit use besides those that have been quantified above, including: the street design and land use context where students live and attend school and student and family perceptions of transit.

Street design varies by city, by neighborhood, and by associated land use, and different street design elements can affect area-wide walkability and safety. Wide roadways, large intersections and long distances between marked crossings can make first-mile and last-mile connections more cumbersome, which makes transit a less appealing travel option. For example, in Union City, the walking distance between bus stops is upwards of 10 to 15 minutes along the main arterials. And while the nearest bus stops to James Logan High School and Cesar Chavez Middle School (located at Alvarado-Niles Road and H Street and Alvarado-Niles Road and Hop Ranch Road, respectively) are relatively short walking distances to the schools, students are required to cross and wait on a busy arterial road. Crossing major corridors can be intimidating and may discourage student ridership and, in some cases, it could also dissuade parents from giving their students permission to use the bus system.[23]

General attitudes and perceptions of public transit in communities can also influence willingness to sign up for and use a transit pass. While debrief meetings and focus groups indicated that students generally have positive perceptions of transit, parents and guardians in certain communities may be more hesitant than in others, and less willing to allow their children to take the bus. These conversations have been more prevalent in areas where taking public transportation is less common, particularly in Livermore. The travel training activities that were conducted at new middle schools in Year Two were designed to help students become more familiar and comfortable with how to ride transit.

> *"My parents are overprotective – even with the free Clipper card I only have taken the bus twice. My parents are overprotective even with the student transit pass. I would be interested in riding the bus more."*
>
> *—Student from San Leandro USD*

Arrival and Departure Mode

As in Year One, students were surveyed about their travel mode to and from school, in order to understand trends in transit usage at participating schools. The spring 2018 survey asked students to indicate how they arrive at and depart from school on most days. Responses were grouped by school level (middle school versus high school), school district and whether or not the students were participants. The Year Two survey data shows the following, largely similar to findings from Year One:

[23] TCRP Report 153, "Guidelines for Providing Access to Public Transportation Systems," reviews factors highly correlated with transit access decisions. Among these factors include the quality and continuity of pedestrian facilities.

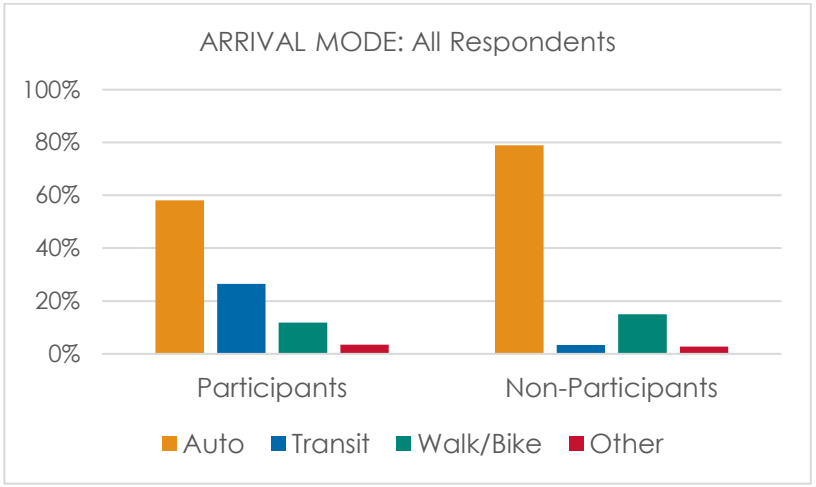
- Participants use transit to travel to and from school more than non-participants. 27 percent of participants take transit to school and 3 percent of non-participants. Transit mode share for departures is 40 percent for participants and 5 percent for non-participants.
- For both participants and non-participants, students use transit more for afternoon departures than for morning arrivals. The lower share using transit for morning arrivals is offset by increases in drop-offs by car.
- High school participants use transit more than middle school participants (Arrival: 33 percent for HS and 16 percent for MS; Departure: 48 percent for HS and 29 percent for MS).
- The countywide trends are generally valid across individual school districts, i.e., transit is used more by participants (vs. non-participants), by high school students (vs. middle school students), and for afternoon departures (vs. morning arrivals). Transit mode share is higher in Oakland USD and New Haven USD than the other three school districts, especially among STPP participants and for afternoon departures. In all five school districts, high school participants use public transit for their afternoon departures as much or more than any other mode.

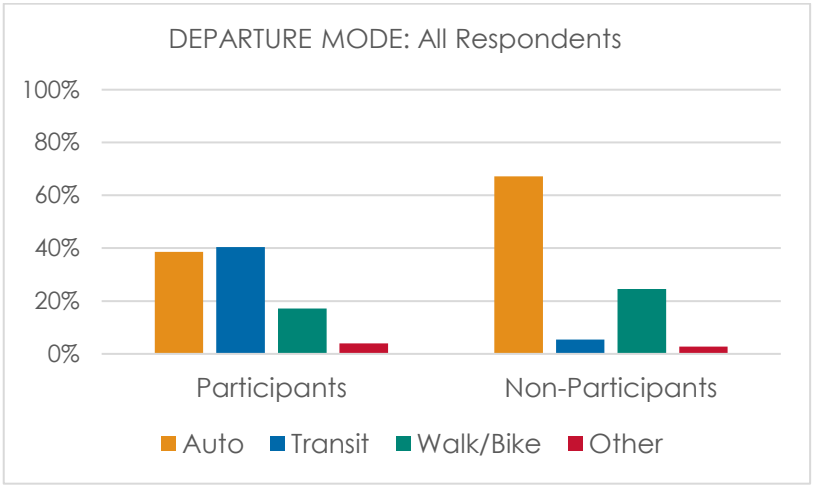
Figure 29 portrays the arrival and departure mode share for Year Two participants and non-participants as reported in the spring 2018 survey. Figure 30 portrays the arrival and departure mode share for by participants only, segmented by school district. Additional graphs for different cross tabulations of the survey responses are shown in Appendix E under the "Additional Mode Share Data" section.

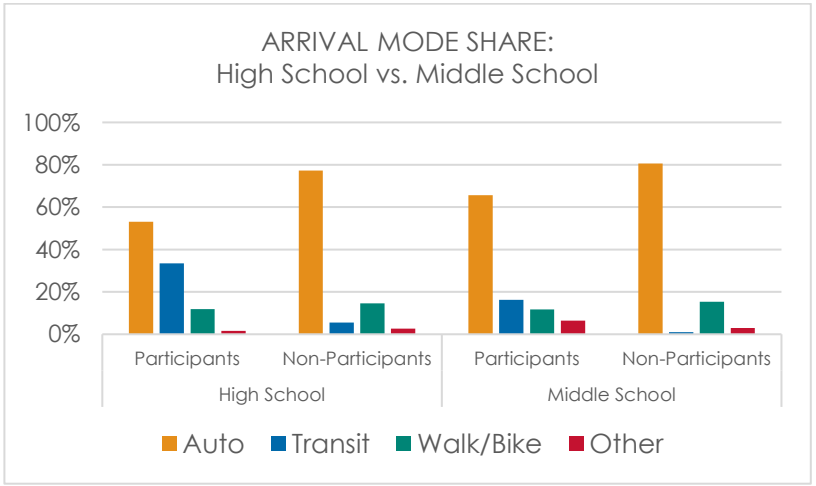
When comparing the results described above to similar survey results from Year One, there is a decrease in transit mode share for participants at the schools that continued from Year One into Year Two. This is true for both morning arrivals and afternoon departures, and at a countywide level as well as for each school district. The reasons for this are likely similar to those in the frequency of usage findings: with program changes that removed cost and other barriers in Year Two, many more students signed up in SLUSD, NHUSD, and LVJUSD; these students may not be regular riders, but rather students who may be trying transit for the first time or riding more occasionally.

> *"I never used the bus before the pass – now I use it a couple times a month. My parents normally drop me off."*
>
> *—Focus group participant from San Leandro USD*

Figure 29 Countywide Arrival and Departure Mode Share for Participants and Non-Participants







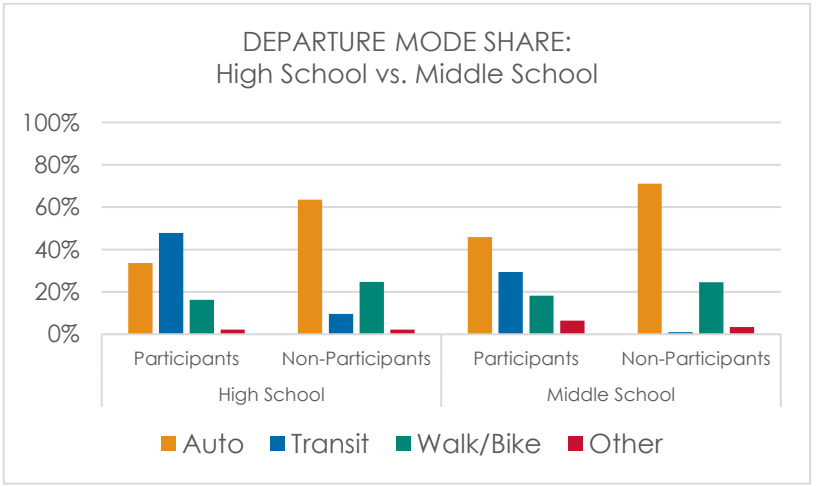
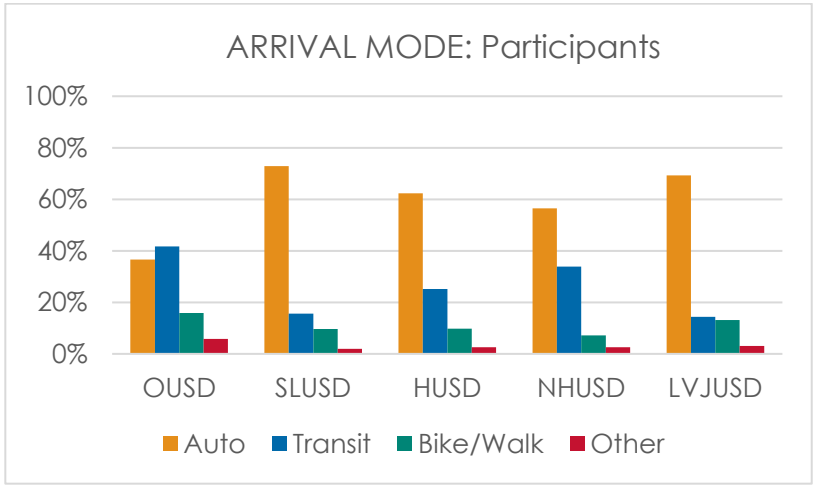
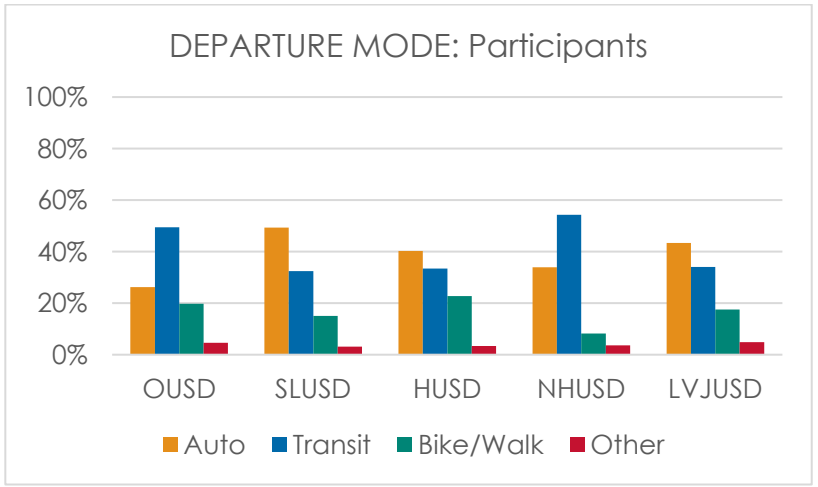


Figure 30 Participant Arrival and Departure Mode Share by School District





Experience With Multiple Transit Operators

One of the aspects tested during the pilot phase of the STPP is the degree to which students use multiple transit operators. This topic is particularly salient in New Haven USD, which is the only area where there are two bus operators – AC Transit and Union City Transit. During Year One, students had to choose to buy one or the other system's pass (students could buy both, but few did). In Year Two students at the two New Haven USD schools had access to one Clipper card that provided unlimited access to both AC Transit pass and Union City Transit, so students had the freedom to use whichever operator suited their needs.

Almost 70 percent of students in New Haven USD used both available transit operators.

Analysis of Clipper boarding data for September 2017 through March 2018 for participating students at James Logan High School and Cesar Chavez Middle School yielded the following trends:

- 69 percent of all New Haven USD Clipper cards were used on both transit agencies; a higher share of high school cards were used both agencies as compared to middle school cards:
  - Of the 167 cards used by Cesar Chavez Middle School participants, 66 percent were used on both transit agencies.
  - Of the 466 cards used by James Logan High School participants, 77 percent were used on both transit agencies.
- 60 percent of all boardings were on AC Transit and 40 percent were on Union City Transit; the 60-40 split is essentially consistent at both the middle school and high school level:
  - Cesar Chavez Middle School participants had 62 percent of boardings on AC Transit and 38 percent of boardings on Union City Transit.
  - James Logan High School participants had 59 percent of boardings on AC Transit and 41 percent of boardings on Union City Transit.
- Those students who used their card on both agencies tended to ride transit more often than those who used only one agency.

This data suggest that when given the opportunity, students will use both bus operators. Comments from the focus group at James Logan High School reinforce these statistics.

> *"I use UC Transit to get home and AC Transit to go to the mall."*
> *—Focus group participant from New Haven USD*

On a related note, students in both of the focus groups (at James Logan High School and San Leandro High School) and the 2018 survey expressed an interest in having other transit operators and transportation services added to their Clipper cards:

> *"It would improve the program if we could have the pass include Muni or rides to SF."*
>
> *—Focus group participant from New Haven USD*
>
> *"Let the clipper card be used for FORD bikes"*
>
> *—Survey respondent from Oakland USD*

Students also indicated a desire for the BART value to be provided on a Clipper card.

BART Participation and Usage

BART tickets were added to the STPP for the first time at the beginning of Year Two at all high schools within BART's service area. Due to limitations of the Clipper system, BART passes cannot be loaded onto STPP Clipper cards, so BART agreed to allow Alameda CTC to use youth Orange Tickets. Each participating high school student was able to receive one BART Orange Ticket with a $50 value.[24]

BART Orange Tickets cannot be deactivated remotely; they are non-replaceable if lost or stolen. Unlike bus agencies which offer unlimited ride pass products, BART has no pass products. As such, for the STPP BART tickets are not intended to provide unlimited travel, but rather to enable students to use BART for essential trips while providing baseline information to understand demand for BART and inform the extent to which BART should be included in a Student Transit Pass Program.[25]

BART Ticket Participation

Overall, students requested BART tickets at lower rates than they requested bus passes.

Six high schools were eligible to receive BART tickets in Year Two. Through the end of the school year, a total of 3,018 program participants received a BART ticket across the six schools. Compared to bus passes, demand for BART tickets is generally lower. Only 39 percent of students eligible for a BART ticket opted to get one, while 56 percent of students at these high schools signed up for a Clipper card. That said, BART participation rates were only slightly lower at most schools with the exception of two Oakland USD schools – Castlemont HS and Fremont HS - where far fewer students requested BART tickets than bus

[24] To receive a ticket a student must register for the STPP and submit a BART Ticket Request Form that includes a few basic questions on intended ticket use. Starting on January 1, 2018, BART began charging a paper ticket surcharge of $0.50 on each ride. For STPP students, the surcharge is $0.25, because youth receive a 50% discount off of the standard adult fare. In this report, references to average fare or cost of travel include the surcharge in the amount being quoted.

[25] The $50 monetary value aimed to balance the value on one BART ticket that is subject to loss by a student with the budgetary implications and administrative burden on school staff required for ticket distribution.

passes. BART participation for in each BART-eligible high school is shown in Figure 31. The comparison between bus and BART participation rates is shown in Figure 32.

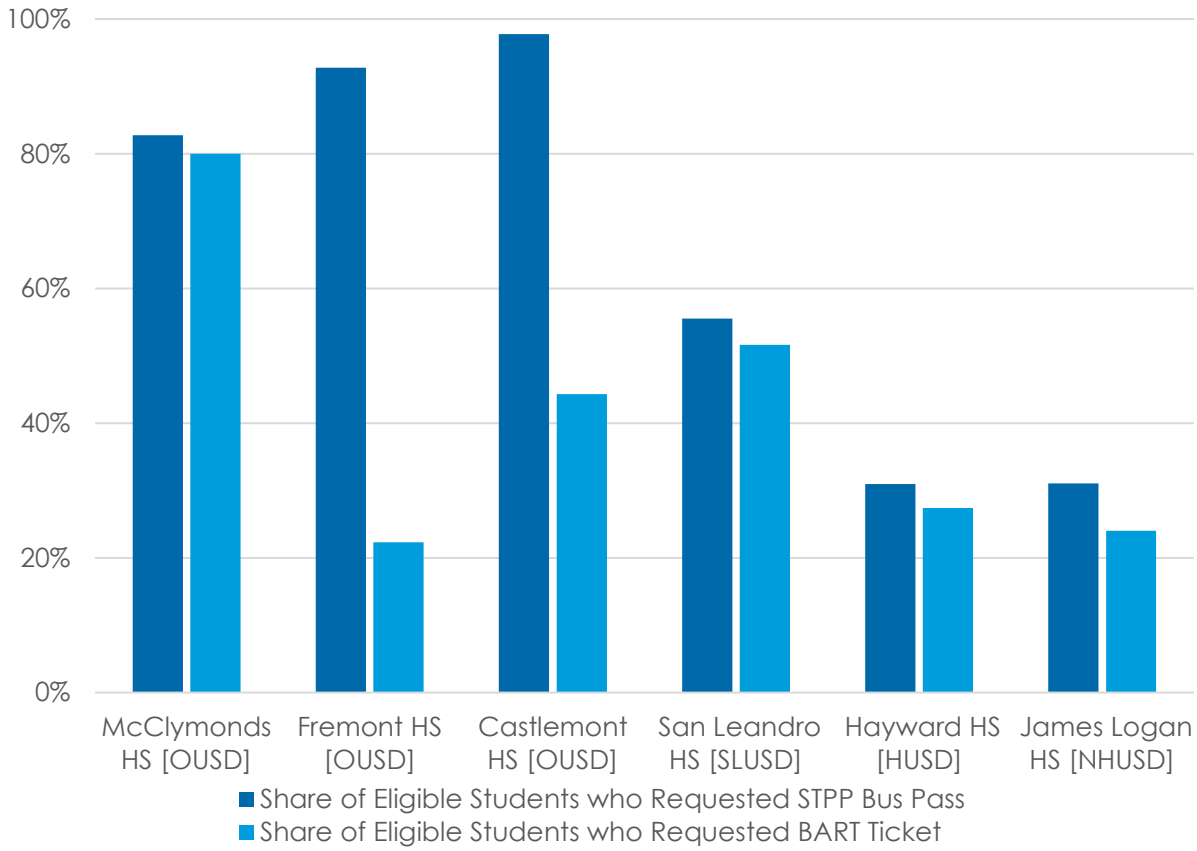
Distance between the schools and BART stations does not appear to be the sole determinant of differences in BART participation rates.

McClymonds HS had the highest BART participation rate at 80 percent; it is just over a mile from 19th Street BART and 1.3 miles from both 12th Street and MacArthur BART stations. Fremont High School, however, is one mile from Fruitvale BART and had the lowest rate of participation at only 22 percent of students opting to get a BART ticket. The responses to the survey question about frequency of BART travel suggest that McClymonds High School students use BART much more than students from the other Oakland USD high schools, possibly due to proximity to three stations, and the higher quality of the downtown Oakland walking environment. Other possible explanatory factors include the possibility that different schools marketed the BART passes differently to their student body, perhaps in anticipation of field trips or other known travel needs.

Figure 31 Summary of BART Ticket Participation in Year Two

School District	Participating High Schools in BART Service Area	Total Eligible Students	Number of STPP Participants (July 2018)	Year Two BART Participation (as of July 2018)		Distance to Nearest BART Station (miles)
				Number of BART Tickets Distributed to Students	Share of Eligible Students	
OUSD	McClymonds High	400	331	320	80%	1.3
	Fremont High	803	745	179	22%	1.0
	Castlemont High	891	871	395	44%	2.5
	Oakland USD Total	***2,094***	***1,947***	***894***	***43%***	
SLUSD	San Leandro High	2,612	1,450	1,348	52%	1.4
HUSD	Hayward High	1,175	364	322	27%	1.3
NHUSD	James Logan High	1,891	587	454	24%	1.2
Countywide		**7,772**	**4,348**	**3,018**	**39%**	

Figure 32 Comparison of Bus and BART Participation Rates – Year-End (Jul-2018)



BART Ticket Usage

Of the 3,018 BART tickets distributed in Year Two, 70 percent (2,126 tickets) were used for one or more trips through the end of July 2018. During this period, the 2,126 tickets that have been used have facilitated more than 19,400 one-way BART trips.

Almost a third of the BART tickets that were distributed have not been used at all; 56 percent of the BART value distributed has not been used.

Based on available data through the end of July, nearly 30 percent of the BART tickets distributed during Year Two have not been used at all. Of the $150,900 in total BART fare value distributed during Year Two, $84,528 (56 percent) has not been used. At the school level, the share of distributed tickets that have been used for actual travel ranges from 52 percent (Hayward High School) to 93 percent (Castlemont High School). Distance from BART does not appear to affect the degree to which requested BART tickets have been used to date. The highest rate of tickets being used is at Castlemont High School, which is the furthest from BART at more than two and a half miles away.

There are several possible explanations for tickets not being used. It is possible that some students requested a BART ticket very recently and have not been able to use it yet; during debrief meetings with school site administrators, it was suggested that some students may have decided to request the BART ticket at the end of the school year for anticipated travel

over the summer, activities such as college courses or work opportunities. School staff also acknowledge that in some cases they asked their students to request the Clipper Card and/or BART tickets if they were likely to be useful for a field trip, but the students may not have found independent utility in the cards. It is also possible that some students have lost the BART cards and will not be able to use it at all. Unfortunately, the value stored on paper tickets cannot be replaced if the ticket is lost.

BART Travel Patterns

The majority of all trips on BART were taken within Alameda County.

Almost two-thirds of trips taken on STPP BART tickets were trips that occurred entirely within Alameda County. The next most popular county for BART travel was San Francisco, which was involved in a little over a quarter of all student trips on BART. These patterns generally hold across all four school districts, although travel by New Haven USD students is noticeably more concentrated within Alameda County than the other three districts. A matrix of the share of trip origins and destinations by county is shown in Figure 33.

Figure 33 Origin and Destination Patterns of BART Trips in Year Two (Share of Total BART trips)

	Destination County				
Origin County	Alameda Co.	Contra Costa Co.	San Francisco Co.	San Mateo Co.	Grand Total
Alameda Co.	66%	3%	14%	1%	**84%**
Contra Costa Co.	3%	0%	0%	0%	**3%**
San Francisco Co.	11%	0%	1%	0%	**12%**
San Mateo Co.	1%	0%	0%	0%	**1%**
Grand Total	**81%**	**3%**	**15%**	**1%**	**100%**

BART fares are distance-based, so students deplete their $50 at different rates depending on where they travel. On average, students have taken nine one-way trips with each BART ticket that has been used to date. Through the end of July, the number of trips that have been taken with a single ticket range from just one trip (157 tickets) to 26 trips (11 tickets). Across all trips taken to date, the average fare per ride is $3.45. The average amount of fare value that has been used per ticket to date is $28.85, with individual tickets ranging from a low of $1.95 to a high of $55.05 per ticket.[26]

[26] BART allows riders who enter a station with at least the minimum fare value on their ticket to exit at any station even if there is insufficient fare on the card to pay the full fare for the trip. Fare values discussed here are determined from an origin-destination fare matrix based on entry and exit stations listed in the trip record; the amounts are the monetary value of the students' travel, not the amount actually deducted from each card.

Frequency of BART Travel

When students requested a BART ticket, they completed a request form that includes three questions about how the student will be using BART, including how often they typically ride. A total of 1,742 responses were received for this particular question. More than half of respondents reported that they ride two or more days per week. Respondents in Oakland USD report the most activity; the majority of respondents said that they ride four or more times per week. In both San Leandro USD and New Haven USD, the majority of respondents in each district said they ride once a week or less. It should be noted that this reflects student answers, not actual travel patterns.

The responses on the ticket request form are somewhat different from what students have reported in other surveys. For example, in Year One, the fall 2016 survey asked students how often they ride BART to gauge interest in adding BART to the program. Eighty six percent of all respondents indicated that they ride one day a week or less. Many students said they do not ride BART at all. Survey responses at high schools that would go on to receive BART tickets in Year Two matched overall results.

The results from the spring 2018 survey also show relatively lower overall BART use than the ticket request form responses. Among STPP participants at BART-eligible high schools, almost 70 percent of respondents report they ride one day a week or less. Restricting the analysis to only those survey respondents who affirmatively reported that they had received a BART ticket from the program, the share of respondents who ride one day a week or less drops to 62 percent -- still a healthy majority.

Although these survey results may seem inconsistent with the information provided on the ticket request forms, it should be noted that students may have responded to the ticket request form based on their aspirations for riding BART. The open comment section of the spring 2018 survey included numerous responses asking for more value on the BART ticket, showing that there is interest in students being able to ride BART more often than they do now.

Discussion of the ways in which BART tickets provided access and benefits for students and families is contained in Chapter 3. Discussion of the administrative processes and outcomes for BART tickets is contained in Chapter 4. Further data on BART ticket participation and usage can be found in Appendix E.

3. Findings Related to Students and Families

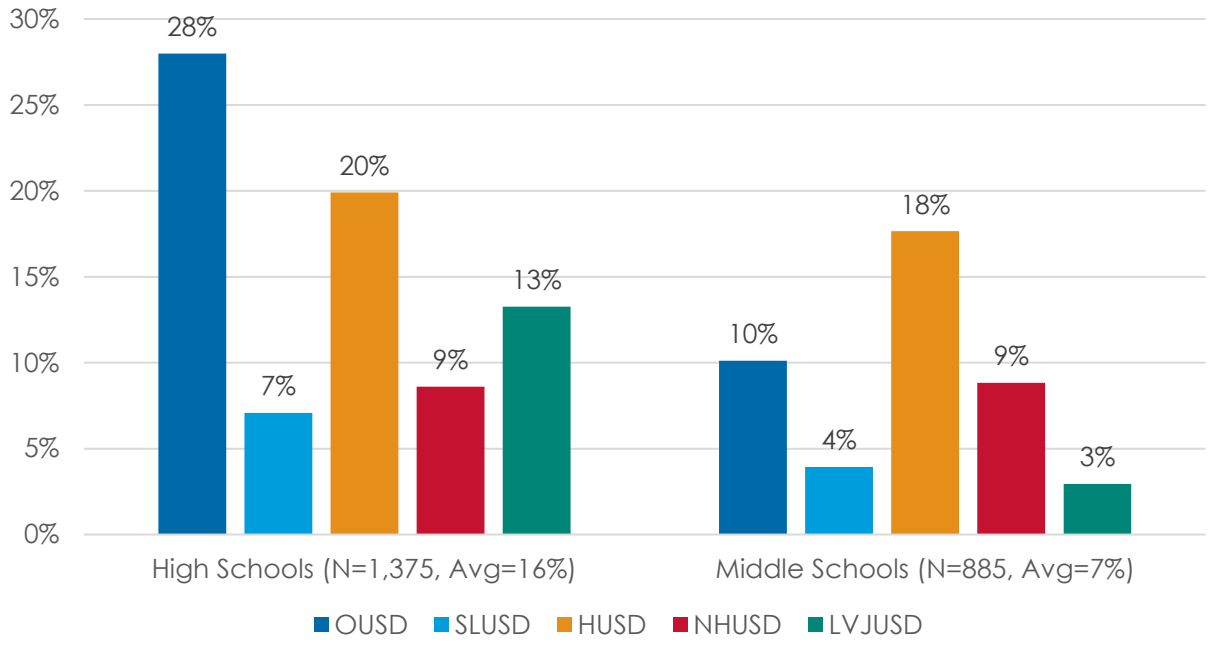
Attendance

One of the goals of the STPP is to improve transportation to and from school to help eliminate barriers to accessing education and support student attendance in school and related activities. From the data that was available this year, there is no clear trend that would suggest the STPP has affected school-wide attendance patterns at participating schools for several reasons described below. However, the anecdotal information and staff feedback collected during Year Two suggests that the transit pass is a valuable tool to support attendance, particularly for students with attendance challenges, high school students and students in Oakland USD and Hayward USD. This section includes several methods of measuring pilot impacts on attendance including survey results, data analysis and staff feedback. Quotes at the end of this section illuminate representative impacts on individual student lives.

Participant Experience

In the spring 2018 survey, Year Two participants were asked about whether the transit pass had affected their lives in different ways, including whether their attendance at school had changed since receiving the pass. A total of 2,297 participants answered at least one part of this question, and 13 percent of the respondents indicated that they miss fewer school days because of the transit pass. The overall rate of agreement is higher for high school students (16 percent) than middle school students (7 percent). This could be due, in part, to the fact that middle school students are more likely to be under their parents' supervision than high school students, so obtaining a transit pass might make more of a difference in the habits of older students than other contributing factors. At the same time, Figure 34 shows that there is significant variation around these average values between school districts, so the difference is not entirely attributable to the age of the students. For example, 28 percent of respondents who were high school students in Oakland USD report missing fewer school days, but only 7 percent of respondents who were high school students in San Leandro USD felt this way.

Figure 34 Share of Year Two Participants Who Report They Miss Fewer Days of School



School-wide Data

Year Two participating schools were asked to provide statistical data on their enrollment, average daily attendance and rates of chronic absenteeism for the pilot period, as well as three school years prior to joining the program. Unfortunately, this data was not uniformly available for all schools.[27] Based on what was available, Figure 35 portrays average daily attendance by school district, grouped by program model, and shows that rates fluctuate each year though the changes are relatively small, and the changes observed since the STPP began are within the range of variation prior to the start of the STPP.[28]

This data does not reveal a clear trend that would suggest the STPP has affected school-wide attendance patterns at participating schools. This is not surprising for several key reasons. First, outside of Oakland USD, most schools have participation rates near or below 50 percent. It would be difficult for STPP participants to change their attendance behavior enough to outweigh the behavior of the rest of the school population in school-wide statistics. Second, participation in the Free/Means-Based programs are restricted to a sub-set of overall students. Due to privacy issues, the behavior of eligible students cannot be

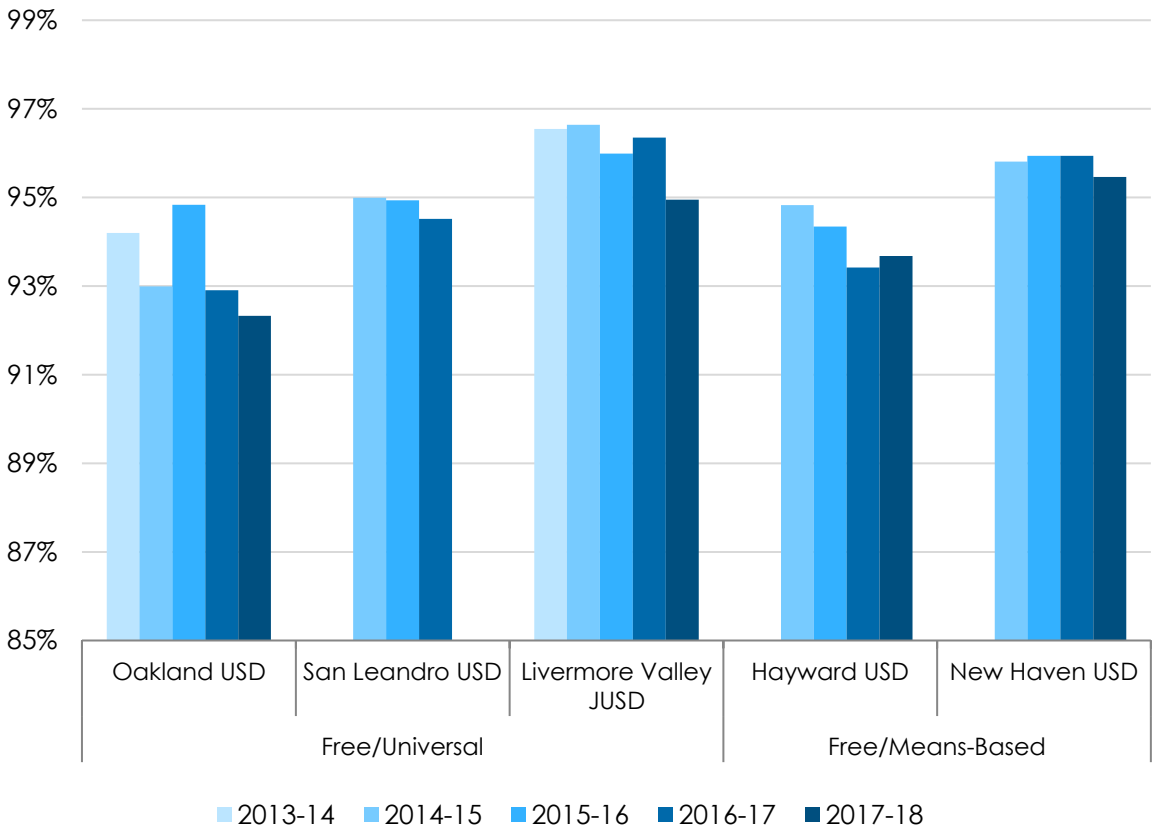
[27] Schools track several different types of attendance problems. Truancy rates focus on whether students miss a certain number of days in a single school year, but once established, this label remains with a student throughout the year, even if attendance later improves. In contrast, chronic absenteeism is calculated based on the share of cumulative school days missed as the year progresses. A student that has attendance problems early on may be initially designated as chronically absent, but if they develop better habits, they will no longer be included in that group, which then decreases the overall chronic absentee rate at the school. Chronic absenteeism is a relatively new data point for some school districts.

[28] Additional charts showing attendance data for individual schools are available in the "Attendance" section of Appendix E.

separated from the ineligible students, so the school totals reflect a combined result that includes many students who are ineligible for the STPP. Finally, changes in program model over time influence who is eligible for and interested in obtaining the transit pass. For example, New Haven USD changed models between years and the participation rate is much higher in Year 2 undermining the ability to make year over year comparisons.

> *"Some of our families have come to Westlake because they heard the program was available."*
>
> *—School site administrator from Oakland USD*

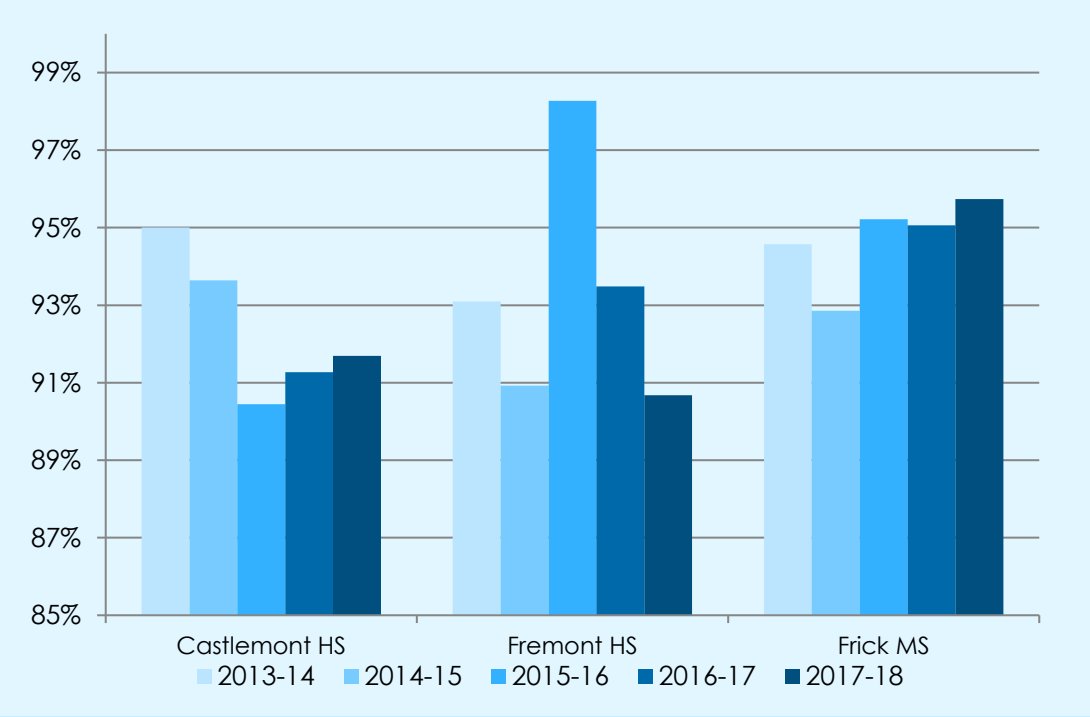
Figure 35 Average Attendance Rate by Year and School District (Annual Average of Monthly Values)



Average Daily Attendance

Figure 36 portrays average daily attendance for the Year Two schools that had no changes to their program model compared to Year One: Castlemont High School, Fremont High School, and Frick Middle School. All three of these schools are in Oakland USD, and they all had high participation rates in both years. Although attendance has recently improved at two of these schools, the longer-term trends show variability greater than more recent changes. The STPP may be contributing to improved attendance, but the gains cannot be attributed solely to the availability of the transit pass.

Figure 36 Average Attendance Rate by Year for Schools with Same Program Model (Annual Average of Monthly Values)



School Staff Feedback

> *"Hard to connect attendance to one aspect or program… I do believe it has a positive supportive impact on attendance even if you can't prove it with data."*
>
> *—School district contact from Livermore Valley JUSD*

Many factors influence student attendance besides just the availability of transportation options, including health issues (such as a particularly bad flu season), housing insecurity during a region-wide housing crisis, scheduling conflicts (such as families where students attend different schools with similar schedules) and a variety of other challenges in student and family lives. It can be difficult to identify a causal relationship between any one program and school-wide statistics and, similarly, it is difficult to tie any change in attendance and truancy to any one change in programmatic support offered by the school. However, students, their families and school staff have provided numerous examples of the ways this program has benefitted student attendance and reduced barriers on an individual basis, even if the effects are not apparent in school-wide data. These examples tend to cluster around several key themes. The following anecdotes and quotes provide strong support for the finding that the pass supported improved attendance, academic outcomes and student lives.

The STPP pass is a helpful tool for school staff when they are meeting one-on-one with families to address attendance and truancy issues

> *"When we do the truancy meetings, it's on the agenda for every meeting to talk about the pass. When parents come to school for parent days, we bring it up."*
>
> *—School site administrator from Hayward USD*
>
> *"We have a kid who has had some trouble and is now on his fourth middle school in Oakland. And [the pass] allowed me to have a non-threatening conversation with a family that has had a really challenging experience in this school district. It would have been an issue if I had showed up unannounced at the house for any other reason, but when I'm showing up with the form to check on whether they want the pass, that's a good thing."*
>
> *—School staff from Oakland USD*
>
> *"This serves as a nice resource when we are sitting in on [Student Attendance Review Board] meetings, where we bring in students with truancy issues. There have been a couple of cases where the family has children going to different schools, and they tell us they can't get everyone to school at the right times. We've been able to bring up the bus pass as a resource for those families. A lot of families say they didn't know about it or were new to a school and we were able to offer it to them. It is really helpful. The parents see the school is trying to help their children."*
>
> *—School district contact from San Leandro USD*

The STPP pass helps students travel more independently

"The stories that are the most touching are the ones where the student has had some trauma… where they are trying to escape their home life because their parents aren't able to provide reliable options for them. Those kids take the initiative, and they are making it on their own because of the bus pass. They come and they try hard, and you see their grades improve so much when their attendance improves. They don't take it for granted."

—Parent and family coordinator from San Leandro USD

"We had a parent call us to ask when the pass would be ready, because the student didn't have an alternative way to get to school."

—School site administrator from Livermore Valley JUSD

"Staff knows about it--if they have a problem with attendance, they send the kid to me to get a pass. Especially displaced families—they are very grateful for having this. A lot of our[middle school] students live on the [other] side of town closer to the high school, and it's a far walk, so being able to ride the bus is a big deal."

—School site administrator from New Haven USD

The STPP pass is especially helpful for students who have trouble arriving on time for the beginning of the school day

"Families are really reliant on it. Especially if they have kids in different schools with the same drop-off time."

—School staff from San Leandro USD

"Anecdotally yes, the attendance is improving. Especially for the kids with first period tardies."

—Principal from school in Hayward USD

"I would definitely say it has improved attendance. Any way to get them here sooner & quicker."

—School site administrator from Livermore Valley JUSD

School staff have observed that the STPP pass can be both a carrot and a stick

"Sometimes you can see a direct correlation with attendance for specific students. They come in for a replacement, and you stop seeing them [at school] until it gets replaced."

—School site administrator from Oakland USD

Transit pass participation can be somewhat circular: "the ones who are not coming in [to school] usually don't have a card, but that's because their card has been deactivated because they don't come to school, so they are not in the system anymore."

—School site administrator from Oakland USD

Trip Purpose and After-School Activity Participation

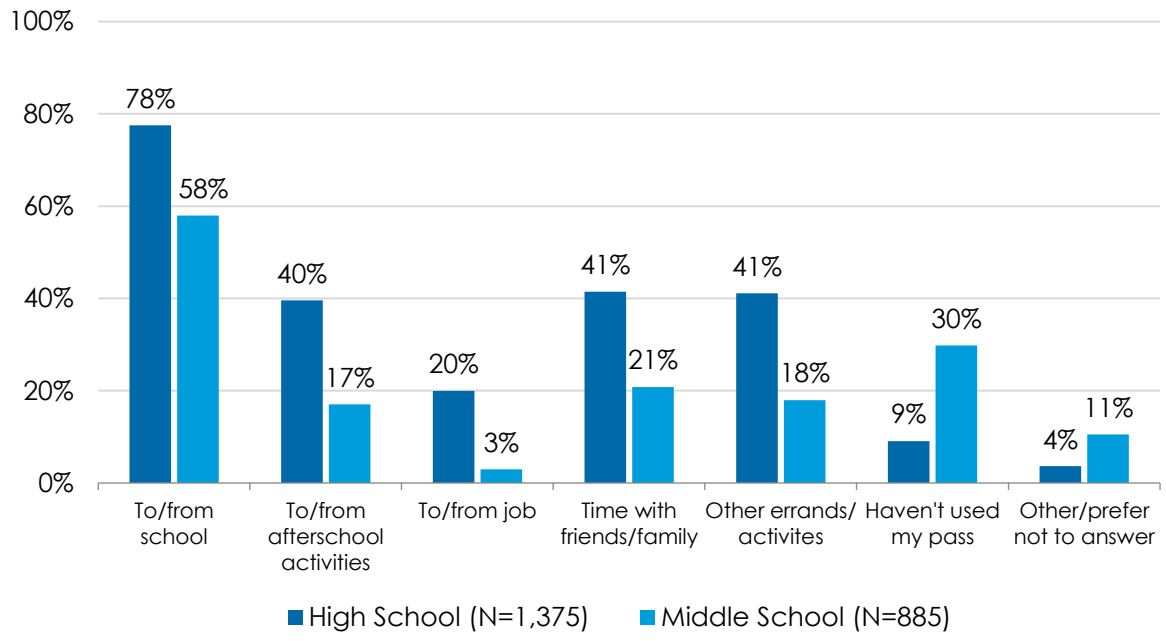
The STPP aims to improve school transportation options and also to build support for transit more generally. This section presents findings on the various ways in which participants have used their bus transit pass and BART tickets.

Participant Use of Bus Transit Pass

Student survey data from spring 2018 shows that, in Year Two, high school participants report higher rates of having used their bus pass for different trip purposes (school, activities, jobs) than middle school participants. A larger share of middle school participants report not having used their bus pass at all compared to high school participants. Responses for high school and middle school participants are shown in Figure 37.[29]

In a separate survey question, about 46 percent of high school participants and 16 percent of middle school participants report that the pass provides them better access to jobs and activities, with four of five school districts having more than 30 percent of their participants agree with the statement. This survey question is discussed more thoroughly in the next section on, "Student Perceptions of Program Benefits."

Figure 37 Reported Use of Transit Pass for Different Trip Purposes, by School Level



Students use their transit pass primarily to travel to and from school and school-related activities.

Whether grouping responses by grade level or by school district, travel to and from school is the most commonly cited trip purpose. Focus group participants and school staff indicated

[29] Additional charts of survey responses by school district are available in "Additional Student Survey Response Data" in Appendix E.

a variety of different ways in which the transit pass expands access to activities beyond the regular school day.

> *"Time is more flexible with the free bus pass, I can stay late if I want because of options such as the bus."*
> *—Focus group participant from San Leandro USD*
>
> *"We have a lot of after-school clubs, and most of our kids who participate use the pass."*
> *—School site administrator from New Haven USD*
>
> *"We knew we didn't have transportation home, so kids could enroll in the pass program, which allowed them to participate in our after-school activities."*
> *—Staff member from Union City Family Center (NHUSD)*

Students who have jobs value the flexibility offered by the transit pass.

Travel to/from a job tends to be the least common use cited, which is not surprising given that less than 20 percent of participant survey respondents in each school district reported having a job. However, those students who do use it for work seem to value it highly. Comments from school debriefs include the following:

> *"I hear that they are using the cards to get to work, plus in the mornings to/from school as well."*
> *—School site administrator from Livermore Valley JUSD*
>
> *"A lot of our juniors and seniors who have the card have been able to use it for work. They can leave school and not have to worry about getting a ride. They know exactly what time they have to leave, and they know they are going to get to work on time, and they have a way to get home, so it's allowed them to work and get that experience."*
> *—School site administrator from Oakland USD*
>
> *"A lot of students can't afford to go to a job if they have to pay for the bus as well. They can go to work and make a little bit of money, which helps."*
> *—School site administrator from Oakland USD*

The transit pass provides a significant benefit to schools who use the pass for enrichment opportunities.

One use of the transit pass which came up in multiple discussions with school site administrators was students' use of the passes for enrichment opportunities such as field trips. At the most basic level, the pass provides a financial benefit to the school, because they do not have to independently raise funds to support transportation to school-related activities. But also, the pass relieves a scheduling burden for teachers and administrators, because they know that students will be able to ride without any additional paperwork, cost or coordination with a transit operator or charter service. In fact, some school staff reported that teachers specifically choose destinations for enrichment activities that are

transit-accessible, so that students will be able to use their passes. The following comments from the school debriefs illustrate these points:

> *"It's not just the money. We have a lot of times where I'm trying to help a teacher plan a field trip, and I call the Transportation Office, and they are already booked for the rest of the school year. And it's an issue for sports, too. Let's say our team gets into finals, but they don't have any buses left. Sometimes they have to do a charter bus, and there's no other option. If we could take transit, that would help."*
>
> *—School staff from Hayward USD*
>
> *"We took a bunch of kids to Google Code Next, too. And even if we drive kids down there, it really helps work-life balance for staff, because we ask ahead of time who has the bus pass, and when more of the kids can get home by themselves, that lets staff that were only needed as drivers go home earlier."*
>
> *—School staff from Oakland USD*
>
> *"The field trips are planned way ahead, so we do let them know in advance, and encourage them to get the Clipper pass… For a lot of students it was their first time on the bus. They loved it. So we think they ride more after."*
>
> *—School staff from San Leandro USD*

Participant Use of BART Tickets

On the BART ticket request form, the majority of students (71 percent) reported that they intended to use their BART ticket to get "to and from school." However, feedback received later in the school year showed that students' use of the BART tickets was actually quite varied. For example, students in the San Leandro High School Focus Group reported they use BART to attend extra-curricular activities such as volunteering in San Francisco or taking college classes around the East Bay. Others mentioned shopping and activities at regional centers outside their home city.

> *I go to Embarcadero (in SF) a lot for grocery shopping, taking [my] brother to school."*
>
> *—Focus group participant from San Leandro USD*

In the spring 2018 survey, students were asked to indicate all of the ways in which they had actually used their BART ticket. A total of 552 responses were received from students who affirmatively indicated they had received a BART ticket. Similar to the focus group participants, survey responses were more evenly distributed across different trip purposes than previously reported on the ticket request forms.

BART tickets were useful for field trips.

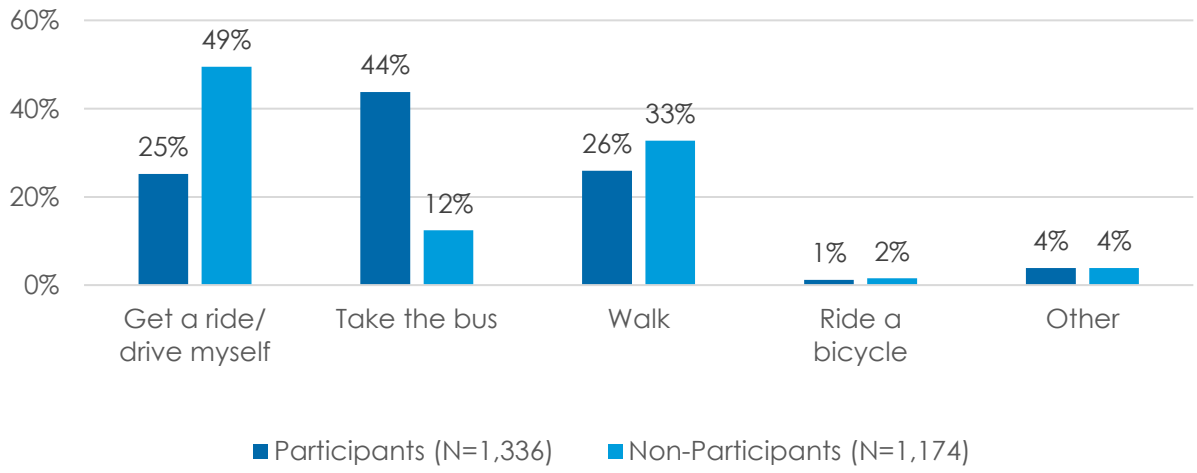
As with the bus transit pass, BART tickets were helpful for students and schools in providing access to enrichment opportunities off-campus. Although not the intended purpose for the BART tickets, at least 25 percent of survey respondents in each school district reported that they used their BART ticket for school programs and field trips. During debrief sessions with

site administrators, school staff also commented that field trips were a common use for the BART tickets and that BART tickets are especially valuable for expanding access to field trip opportunities. Despite not being an intended use for the BART element of the program, having the tickets available to any STPP participant revealed an underlying demand for BART that the program team was not aware of prior to Year Two.

The STPP supports bus travel to BART.

Based on responses to the spring 2018 survey, almost half of STPP participants who ride BART use the bus to access the station, which is three times the rate of non-participants (Figure 38).

Figure 38 Typical Travel Mode To and From BART, Year Two



Student Perceptions of Program Benefits

The 2018 survey asked students whether or not the student pass has benefitted them in specific ways, such as whether or not students feel they are more independent now that they have a transit pass. Survey results for STPP participants are shown below by school level (middle school versus high school) in Figure 39.[30] Generally high school students report higher levels of benefit than middle schoolers, indicating that they are using the pass more and for more diverse activities.

Across all school districts combined, about 58 percent of high school participants and 38 percent of middle school participants report riding the bus more often since obtaining the transit pass. More than half of all participants in Oakland USD, Hayward USD, and New Haven USD responded that they are riding more often.

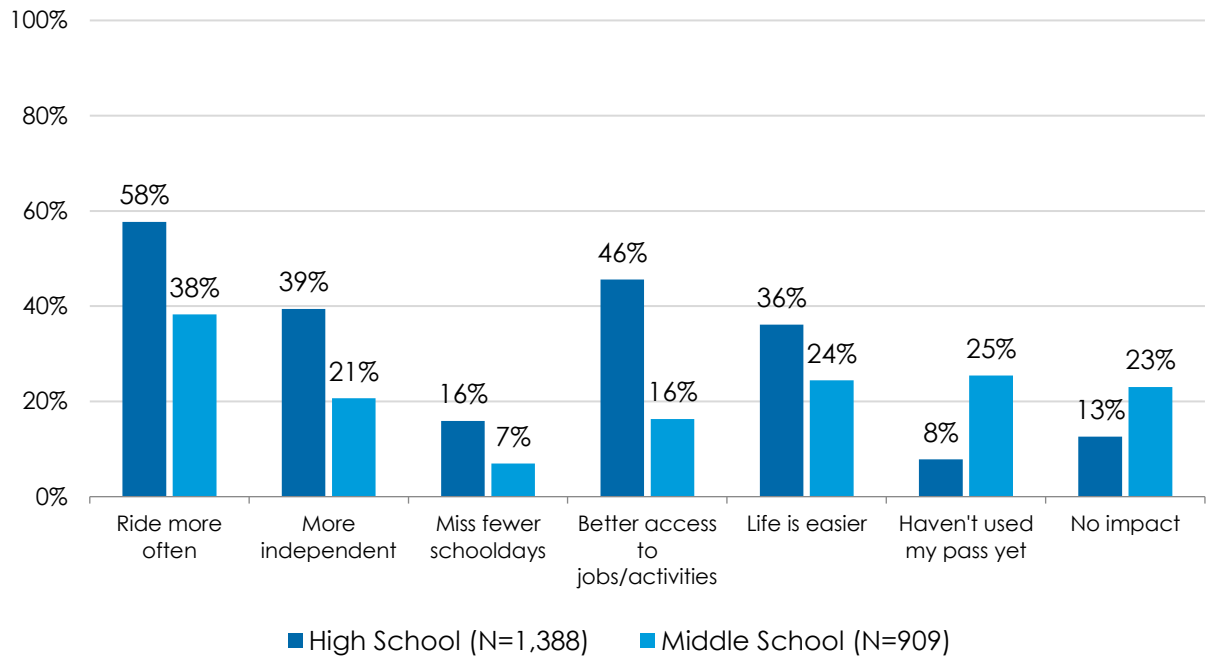
Two commonly reported program benefits were more independence and better access to jobs and activities. Nearly 40 percent of high school students report that the pass allows them to be more independent, and over 20 percent of middle school students reported the

[30] Additional charts of survey responses by school district are available in "Additional Student Survey Response Data in Appendix E.

same benefit. About 46 percent of high school participants and 16 percent of middle school participants report that the pass provides them better access to activities; infour of five school districts more than 30 percent of participants overall agree with this statement.

Across all potential program benefits, participants in New Haven USD and Oakland USD tend to report the highest level of agreement that the transit pass has helped them. Half of all New Haven USD participants report the pass has made their lives easier.

Figure 39 Participant Perceptions of Bus Pass Benefits, by School Level



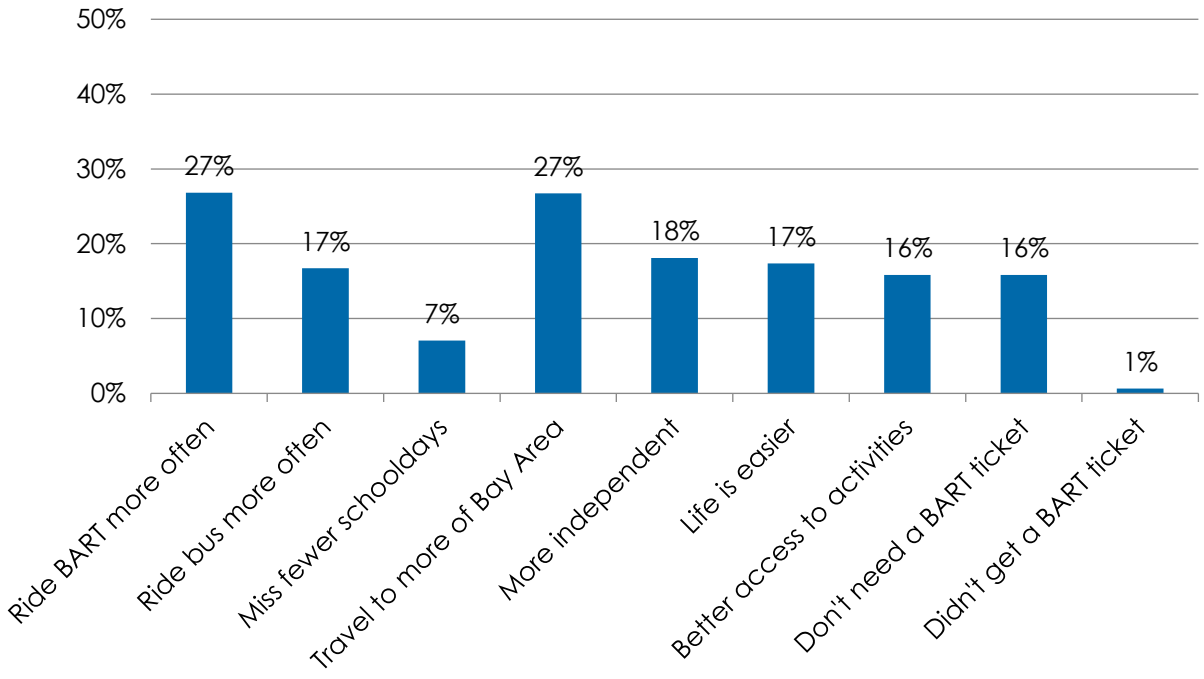
> *"I never took the bus before, once I got the transit pass I do take it. My family encouraged me to take the pass. It has given me a little more independence."*
>
> *—Focus group participant from San Leandro USD*

> *"It has given me responsibility. I have a pass, I don't need to ask my parents for a ride."*
>
> *—Focus group participant from New Haven USD*

In the same survey, a similar question was asked to BART-eligible high school participants about whether the BART ticket has had positive benefits on their lives. The levels of agreement with each of the potential benefits tend to be lower across the board than what was reported for the bus transit pass. The overall results are shown in Figure 40. The fact that fewer students report positive benefits for the BART-related question is likely due to the fact that the BART ticket has a limited value that can be used for no more than one or two dozen trips in a school year (and even less now that the $0.50 paper ticket surcharge

applies), so it would be less likely that a single ticket would have the same positive impact as an unlimited bus pass. Twenty-seven percent of respondents did indicate that BART gives them access to more of the Bay Area.

Figure 40 Participant Perceptions of BART Ticket Benefits



Student Perceptions of Transit

> *"We're teaching our students to use transit which is good for everyone in the long run."*
>
> *—School district contact from Livermore Valley JUSD*

Building support for transit is one of the overall goals for the STPP. The 2018 survey asked all students—participants and non-participants—about their general perceptions of transit as a travel mode. Generally speaking, a larger share of students agree with positive statements about transit than the share that agrees with negative statements for participants and non-participants, but participants report more positive associations than non-participants and there is some variation depending on the specific question posed.

In all Year Two school districts, at least two-thirds of all students (participants and non-participants) at pilot schools report that they feel safe riding the bus and more than half of students in each school district report that the bus meets their needs. When considering only participant responses 75 percent or more of participants reporting both of these positive associations with transit (Figure 41); this holds true across districts, see Figure 42.

Regarding negative perceptions, in most districts, about half of students report that riding the bus takes too long and about half say that they prefer not to travel by bus. Two-thirds of

survey takers who responded to this question reported at least one of these negative perceptions. Being embarrassed or intimidated to ride the bus does not appear to be as wide-spread an issue with only 10-27 percent of students agreeing with these statements, and a higher share of non-participants than participants reporting these associations.

> *"The kids don't have issues with the cards at all. It's with the buses—if the bus skips them, or there are stinky people on the bus, or if there are big kids that intimidate them"*
>
> *—School site administrator from Oakland USD*
>
> *"My parents are overprotective – even with the free Clipper card – I only took the bus twice. My parents are overprotective even with the student transit pass. I would be interested in riding the bus more."*
>
> *—Focus group participant from San Leandro USD*

When comparing each of the school districts, students in Oakland USD consistently have the highest level of agreement with the positive perceptions about bus travel and the lowest level of agreement with the negative perceptions. This is correlated with the highest participation rates in the pilot. Students in New Haven USD generally report the highest level of agreement with each of the negative perceptions about bus travel of any of the Year Two school districts; students in Livermore Valley JUSD have the highest level of agreement with the statement "I prefer not to travel by bus." District responses are shown in Figure 42.

Figure 41 Student Perceptions of Transit (Participants and Non-Participants)

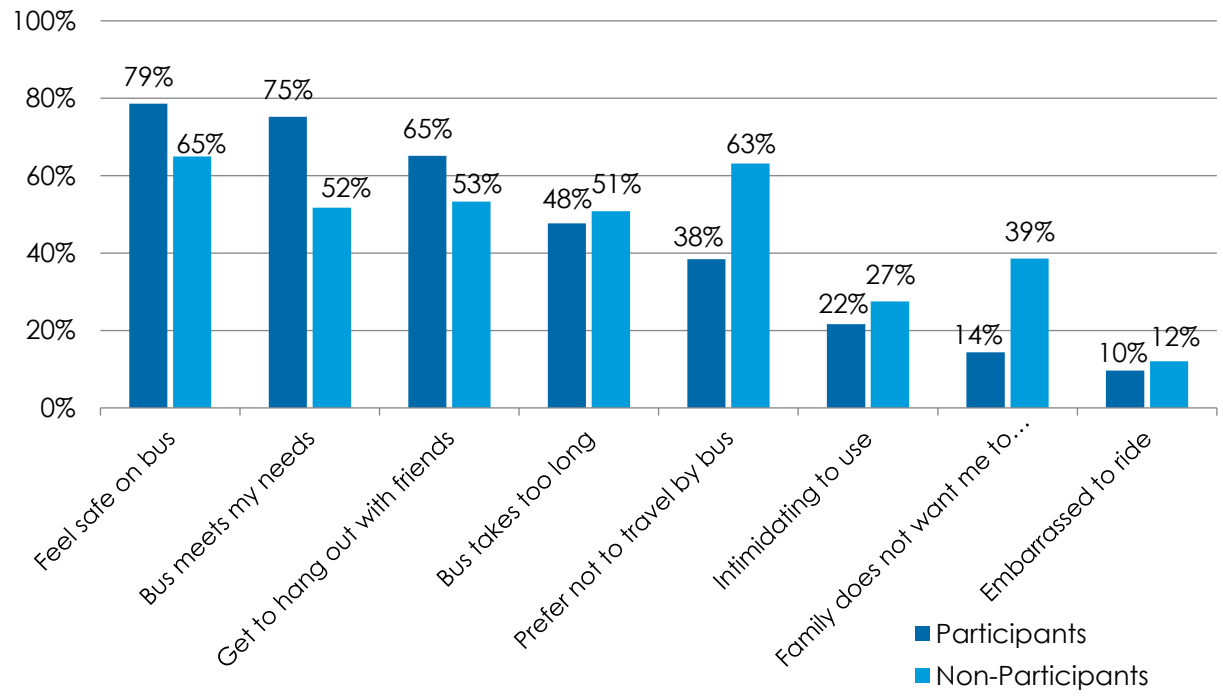
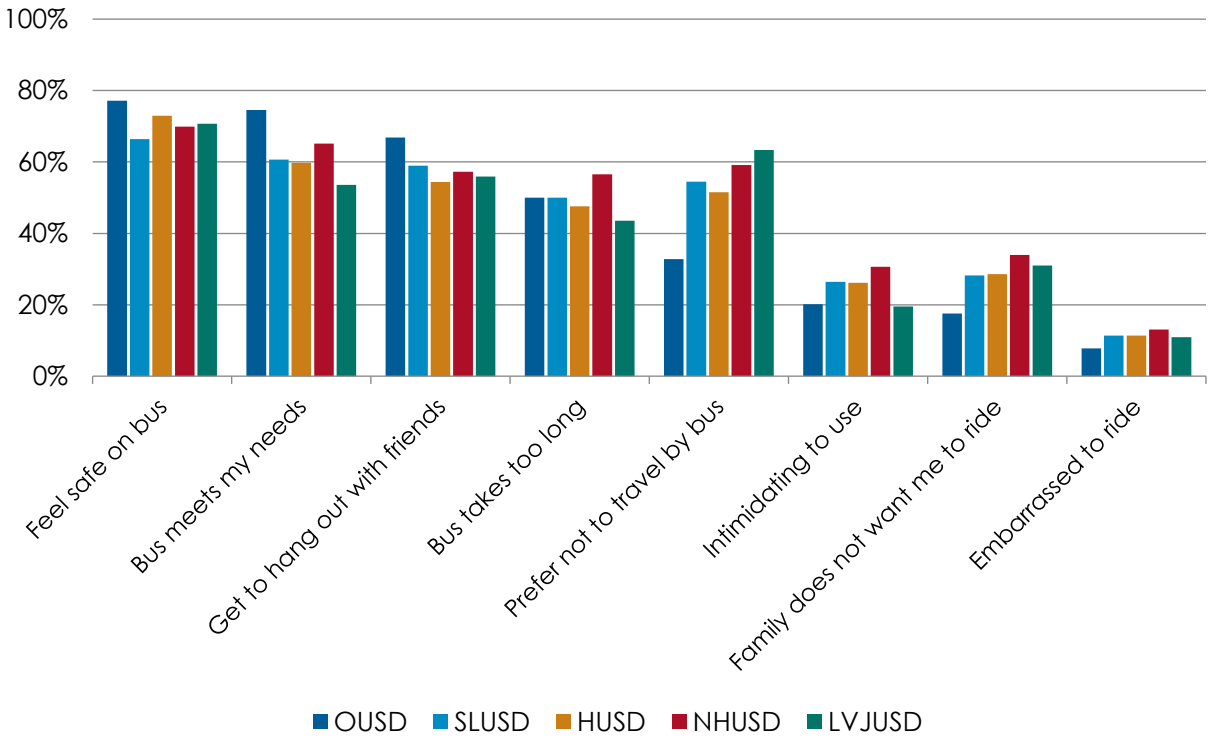


Figure 42 Student Perceptions of Transit, by School District



"Some 7th grade parents are hesitant to let their students ride the bus."
—School staff from Hayward USD

"But then also, some parents complain to us, because now that they have a Clipper card, they never see their kid. At first, they were complaining because they couldn't get their kid to school, and now they are upset the kid is never home."
—School site administrator from Oakland USD

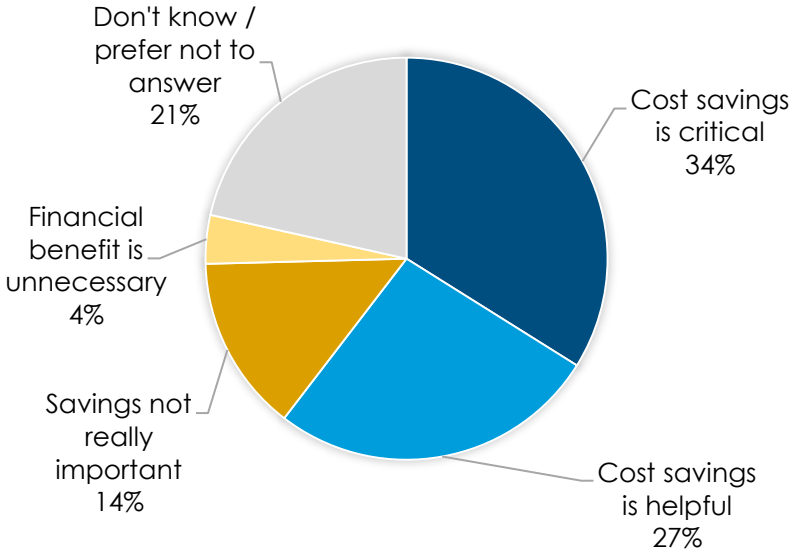
Cost to Families

The bus pass represents a critical or helpful cost savings to more than 60 percent of all survey respondents (Figure 43). Less than 4 percent of all respondents indicate that the financial benefit is unnecessary for their family. The survey responses are shown separately for high school and middle school participants in Figure 44.

New Haven USD, followed by Hayward USD, have the highest rate of students reporting that the bus pass offers critical or helpful cost savings. This result is expected, given that all participants in the means-based programs are from families below the FRPM income threshold.

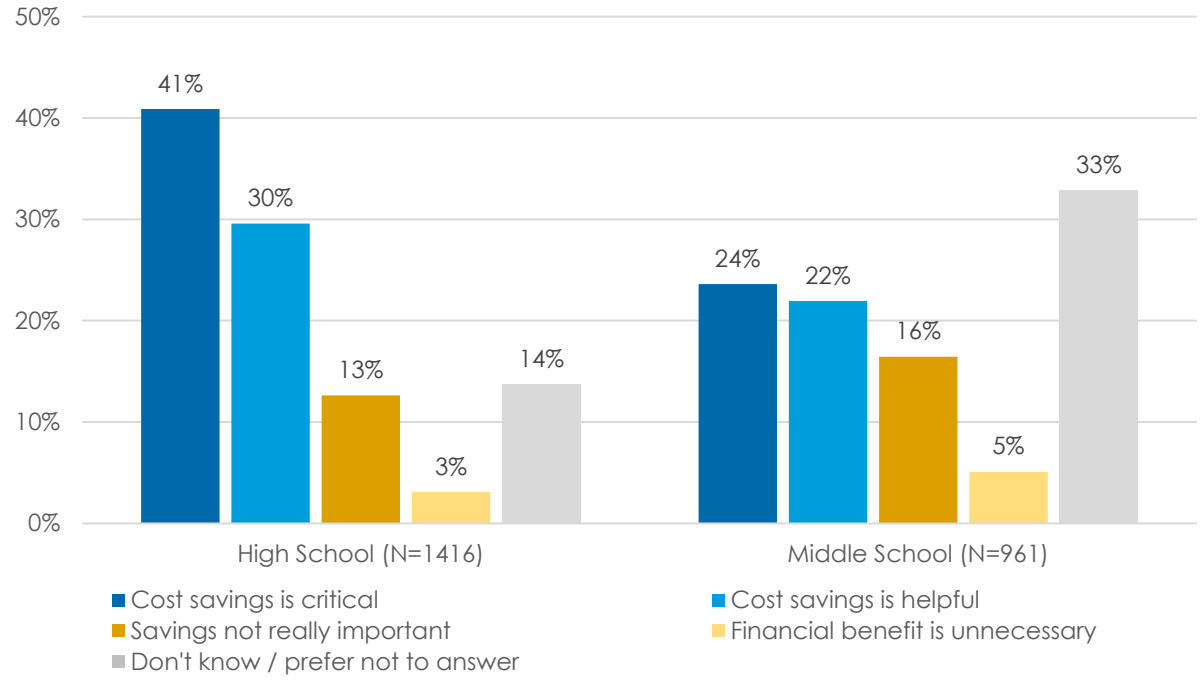
> *"The program has helped my family save money. My mom is happy about the program –the money we used to spend on transportation can now be used on food."*
>
> *—Focus group participant from San Leandro USD*

Figure 43 Importance of Bus Pass Cost Savings to Participant Families



> *"Well, when parents came through registration and found out about the Clipper card, right away they filled out the application. They were very grateful that it was free—it really helps them financially."*
>
> *—School site administrator from Oakland USD*

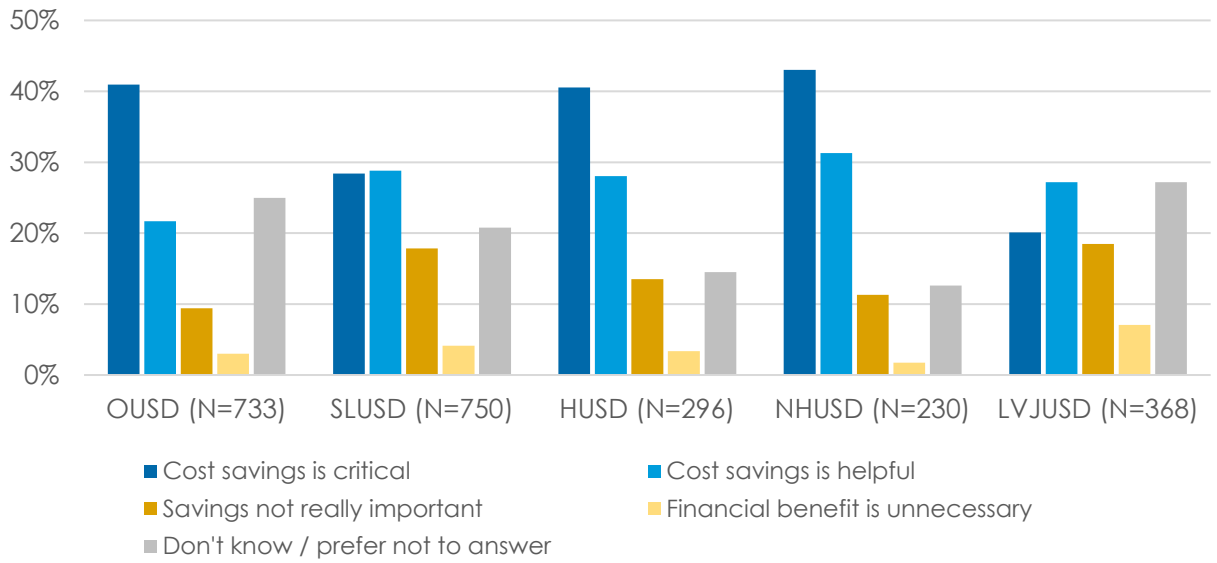
Figure 44 Importance of Bus Pass Cost Savings to Participant Families, by School Level



"Before I had the Clipper card – I used to pay cash – now I have money for emergencies."

—Focus group participant from New Haven USD

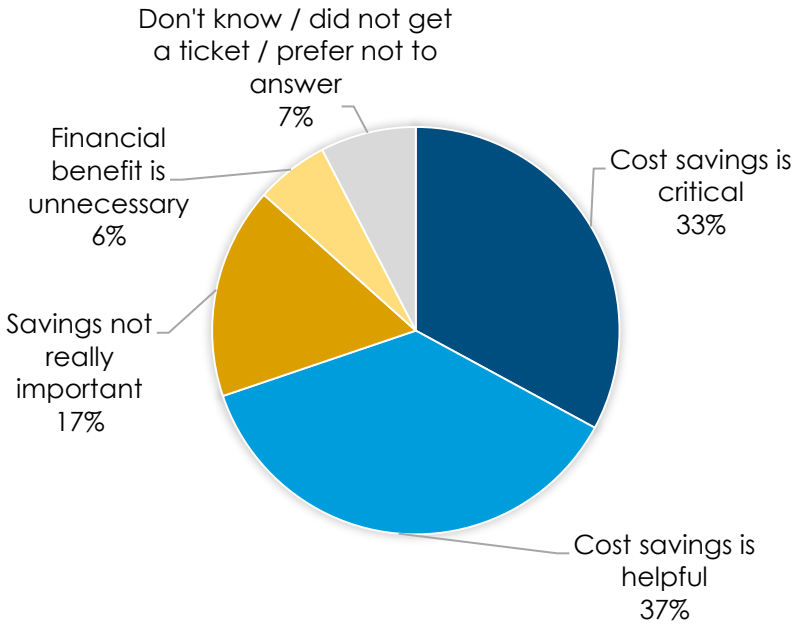
Figure 45 Importance of Bus Pass Cost Savings to Participant Families, by School District



> *"In the Tri-Valley, you don't have to be identified as low socio-economic to be struggling to survive in our community. Just living in the Tri-Valley is expensive, so sometimes that extra $10-20 a week can put a meal on the table for a family. So it's a big impact on a lot of families."*
>
> *—School district contact from Livermore Valley JUSD*

Among participant survey respondents who confirmed they received a BART ticket, the share who reported that the BART cost savings is critical or helpful is close to 70 percent, almost exactly equal to the share of high school students who reported a similar opinion regarding the bus pass cost savings. Similar to the parallel question regarding the cost savings from the bus pass, the two school districts with Free/Means-Based programs (Hayward USD and New Haven USD) had the highest rates of students indicating that the cost savings of the BART ticket was important to their family. The overall breakdown of responses is shown in Figure 46.

Figure 46 Importance of BART Ticket Cost Savings to Participant Families



> *"The bus pass saves me more money – I don't have to go to Walgreens to load the youth pass."*
>
> *—Focus group participant from San Leandro USD*

Participating students were asked about the importance of the cost savings from the bus pass in the student surveys in both Year One and Year Two. When comparing results year-over-year, it must be noted that most school districts had changes to their program design between the two years that would affect the responses, specifically:

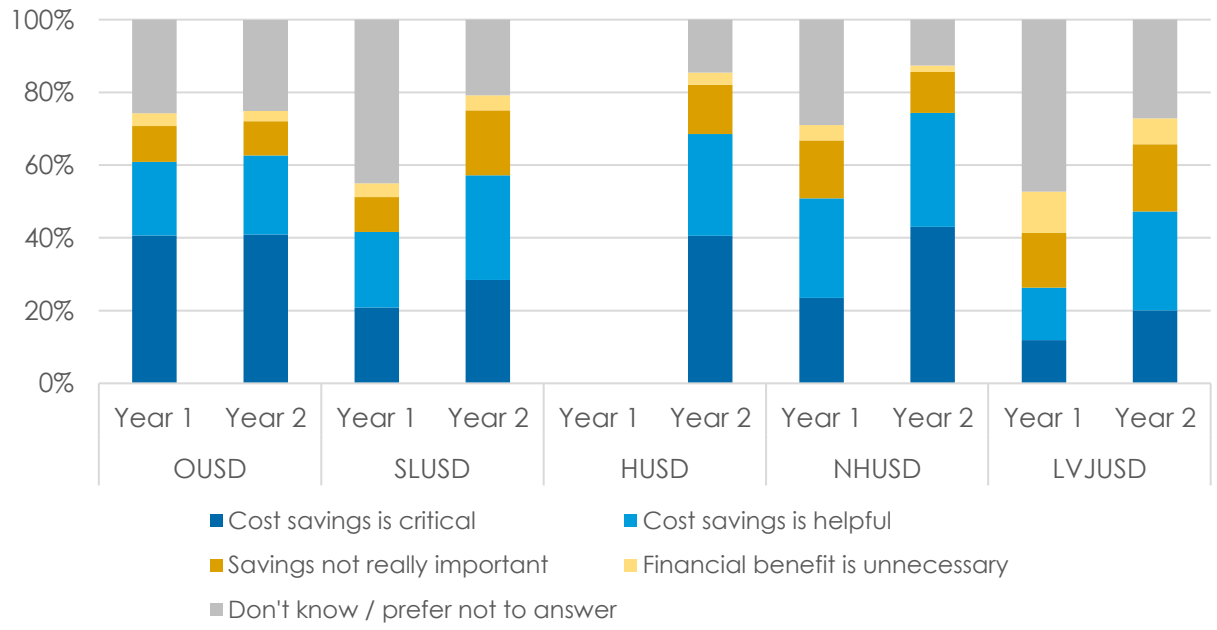
- The San Leandro USD program was opened to more grades in Year Two.

- The New Haven USD program was opened to all grades in Year Two, and instead of offering a discounted pass with a fee waiver for low-income families, it was offered for free, but participation was restricted to low-income families.
- The Livermore Valley JUSD program was made free and universal when it had previously been a discounted program with a means-based fee waiver for low income families.

As shown below in Figure 47, the survey responses at Oakland USD are very similar between Year One and Year Two, with a very slight increase in the combined share reporting that the bus pass represented a critical or helpful cost savings to their family. This was the only district where the program design was unchanged between the two years, although two new schools were added.

In the other three continuing school districts, the share of participants reporting that the bus pass offered a critical or helpful cost savings markedly increased between Year One and Year Two, with more than a ten-point gain in each of the three districts. This likely points to more students in the program feeling a benefit (especially in New Haven USD where the program moved from a model that was open to all families to one that was open only to low-income families).

Figure 47 Year-Over-Year Comparison of How Families View Bus Pass Cost Savings (All Participants, Unweighted)



"For our families, bus fare is really expensive. So to be able to go lots of different places without paying is a big deal. The parents say, 'Please make sure this program keeps going.'"
— School site administrator from Oakland USD

4. Administration, Cost and Program Management Findings

Marketing and Outreach

Summary of Outreach Activities

Marketing and outreach activities were conducted in preparation for Year Two and throughout the school year in order to encourage eligible students to sign up for the transit pass. Outreach methods used by the program team and school site administrators included:

- Program materials sent directly to families via print and electronic channels.
- Posters, flyers and banners placed around the school.
- Regular announcements about the program on campus and in school newsletters.
- Information added to the websites of schools and school districts.
- Tabling at school orientation sessions and briefings for teachers and school staff.
- Working directly with students and parents through family liaisons.

Figure 48 STPP Travel Trainings

Bret Harte (Hayward USD)

Westlake (Oakland USD)

Christensen (Livermore USD)

Also, in several cases, transit agencies provided complementary outreach such as:

- LAVTA has a two-week "Try Transit Free" period at the beginning of each school year to publicize transit use throughout the system (for all customers, not just STPP participants).
- Union City Transit added a blurb about the program on their website encouraging families to look into whether or not they meet eligibility requirements.
- LAVTA tabled at Del Valle High School in February.

In addition to general outreach to raise awareness of the transit pass, the program team also conducted travel training activities in Year Two at three middle schools – Bret Harte in

Hayward USD, Westlake in Oakland USD and Christensen in Livermore USD – all of which were new to the program this year.

More details about the specific outreach methods described above are included in Appendix E.

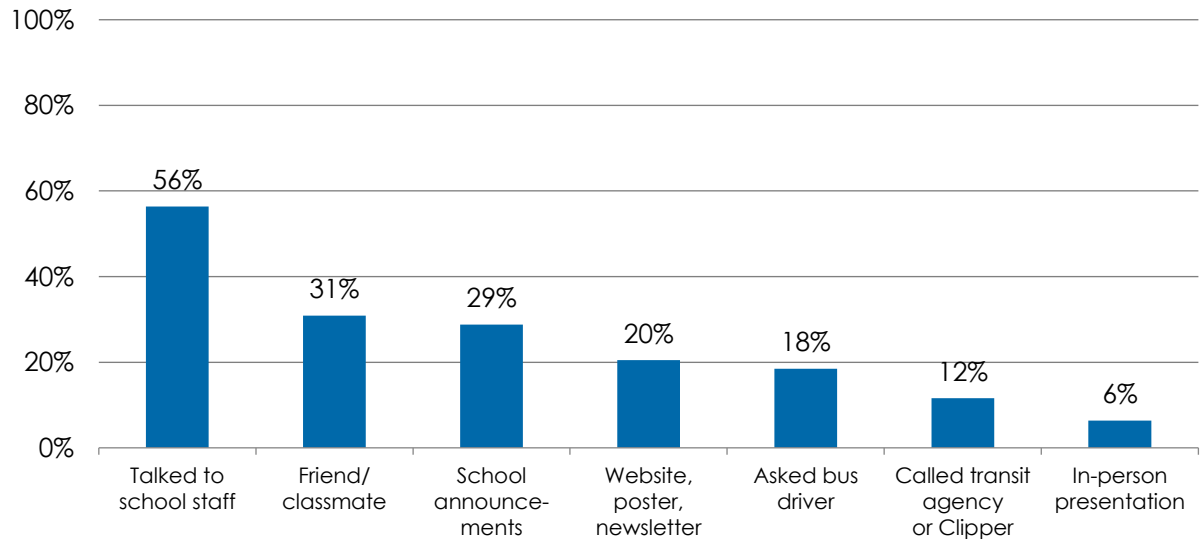
> *"For the families in our "Newcomers" program, parents can be really scared about sending their kid on the bus. So it would be great to do [travel training] with those families every year. Especially since there is a language issue with those families. And at the beginning of the year, when it's getting darker out, they get worried. They need to learn to walk in groups and travel together. It's a safety thing. I know it's a lot to ask to bring a bus out for just 40 kids. But some of our families are from a rural area, and they have no idea how this all works."*
>
> *—School site administrator from Oakland USD*

Student Feedback on Outreach Methods

When participants were asked how they obtained information about the program, the most popular method cited was to ask the school staff for assistance, including teachers and office staff. Across four of five school districts at least 50 percent of participants used this method.

Other relatively popular responses across the board include school announcements and talking to friends and classmates. In-person presentations and calling the transit agency or Clipper customer service were the least popular options overall. These results are portrayed in Figure 49.

Figure 49 Survey Responses on How Participants Sought Program Information (Year Two Participants)



Feedback from school debriefs and focus groups confirm that in-person contacts at school are the most common way to share program information. Students in the focus group

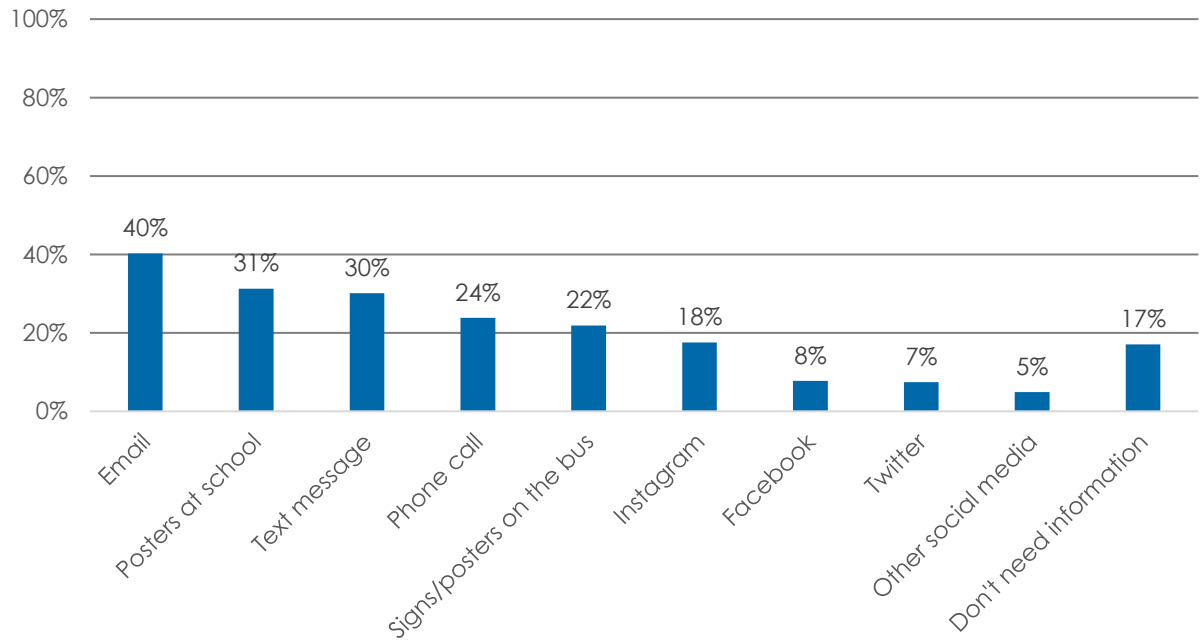
conducted at James Logan High School mentioned hearing about the program through contact from school staff, orientation sessions and Logan Live, the school's TV station. A school site administrator in Hayward USD noted, "If a friend has one, they see it, then they come in and ask."

A school site administrator at a continuing school described the difference between Year One and Year Two awareness of the program saying, "I feel like it's a bigger thing this year. You hear more about the Clipper cards this year. Staff will come in and ask me. I mean, maybe that's because I'm handling it myself, but I still hear people talking about it all the time, which seems like more than last year."

When participants were asked how they prefer to receive future information about the program, the most common response was school announcements. Other responses that were generally popular included email, text message and posters at school.

Social media was relatively unpopular across the board, especially among middle school students. That said, there were more responses favoring Instagram than Facebook or Twitter across all school districts. These results are portrayed in Figure 50.

Figure 50 Survey Responses on Preferred Methods to Share Program Information (Year Two Participants)



Best Practices For Marketing and Outreach

Participating schools have been encouraged to market the program as they see fit as site administrators and school staff have the best insights regarding how to effectively share information with their respective students. The following outreach approaches are seen as best practices based on pilot implementation to date – approaches that have been successful at encouraging students to sign up and participate in the pilot program. Figure

51 shows required and recommended communications activities for STPP participating schools.

Figure 51 Calendar of Required and Recommended Communications Activities

Time Points	Required Communications Channel	Recommended Communication Channels
Before the end of the school year leading up to launching the pilot (approx. May/June)	▪ Pilot information on the school website landing page ▪ Student mailer – Letter of introduction – FAQs – Registration/consent form or link to form online	▪ Email listserv ▪ Digital fliers, e.g. PeachJar ▪ School social media
Leading up to orientation (approx. August)	▪ Pilot information on the school website landing page ▪ Staffed table during orientation to collect registration/consent forms	▪ Voice robocalls and/or text message campaign ▪ Welcome letter ▪ Email listserv ▪ Digital fliers, e.g. PeachJar ▪ School social media
Beginning of winter semester (approx. January)	▪ Pilot information on the school website landing page	▪ Voice announcements at school ▪ School newsletter
Throughout school year	▪ Pilot information on the school website with Registration, Consent, and Release form for download	Physical posters at school

Program Model

During Year Two, only two program models were offered: a Free/Universal program open to all students at participating schools and a Free/Means-Based program in which a free transit pass was available only to students from families with income at or below the threshold to receive Free or Reduced Price Meals. Both programs have proven successful. The main criteria differentiating the two program models is a tradeoff between cost and coverage. Feedback and observations from students and families as well as school staff and administrators indicate that there is demand for a pass for families who do not qualify for free/reduced price meals, but costs of Free/Universal programs are much higher.

There is interest in the STPP from students and families at Free/Means-Based schools that do not currently qualify under the income guidelines established for the program.

> *"The parents wish it were open to more families. They say, 'I'd love for my kid to learn how to ride the bus.'"*
>
> *—School staff from Hayward USD*
>
> *"And then there are some families that may not qualify, but they are struggling, but they wish they could be a part of the program, too."*
>
> *—School site administrator from New Haven USD*

"A lot of parents thought this would be a great opportunity for them to learn, but they didn't qualify… The families have the money to afford to buy a pass, but for some reason it seems like something they would be more willing to try if it were free."

—School staff from Hayward USD

"I mean, even if the family is not low income, it helps them, because the parents might work late, and the student can take the bus home in the afternoon."

—School staff from San Leandro USD

"I heard 'school envy' from the [schools] that are not a part of the program."

—School district contact from Livermore Valley JUSD

"I am appreciative of the all-inclusiveness of the pass program. 100 percent eligible makes it easier for everyone to use it on weekends, for work, for extra-curricular activities. "

—School district contact from Livermore Valley JUSD

Pass Format

Clipper Cards

The use of a single Clipper card for all bus pass products was easier to manage and yielded better more consistent data compared to the flash pass stickers used in Year One.

Clipper cards loaded with unlimited transit pass products allow for unlimited travel, unconstrained by time of day or day of week. These cards also offer the advantage that they can be canceled remotely and are replaceable if lost. Clipper provides good data that is comparable across all programs, although some pre-existing reports have limitations.

In Year Two, all bus transit passes were provided on a Clipper card. This replaced the use of special stickers applied to student IDs to be used as "flash passes" for travel on Union City Transit and LAVTA. This change led to easier fare payment for students who use both transit operators in New Haven USD and simplified operating procedures for school site administrators in both New Haven USD and Livermore Valley USD.

Development of processes to enable a single Clipper card to provide access to multiple operators was a challenge in New Haven USD.

No joint pass product exists for AC Transit and Union City Transit, therefore development of a back-office procedure was necessary to enable students to have one card that allowed unlimited access to both operators. To avoid Clipper programming costs and time, regular coordination was necessary between Alameda CTC, AC Transit, and Union City Transit to ensure each New Haven USD Clipper card was properly loaded with both passes before being distributed to the students and for every replacement card that needed to be issued.

Youth Clipper cards loaded with unlimited pass products are optimal for a long-term program.

To get the pilot program up and running quickly without additional software programming in the Clipper system, the program team opted to use adult Clipper cards for the pilot phase. The adult cards do not require age verification, which makes the process of issuing the initial card much easier, but replacements are sometimes more complicated, especially if the student has not registered their card online, or if the customer service representative is not alerted to the fact that the student is a participant in the STPP. In addition, the adult card limits the students' ability to load additional youth fare products onto their card; if they add transit passes or stored value to their STPP-issued card, they will pay the adult fare. Due to these features, Youth Clipper cards loaded with unlimited transit passes may be a better choice for a long-term program.

In planning beyond the pilot phase of the project, Youth Clipper cards are recommended. With the next generation of Clipper (Clipper 2.0) in the planning process, there may be opportunity to improve on some of the challenges with using Clipper for this program.

BART Tickets

As was the case in Year One, using multiple fare products added complexity to the program.

BART does not have a pass product that can be added to a Clipper card in the same way as the bus passes so BART Orange youth tickets were used. This required staff to track and students to carry two transit payment mediums. As was discovered during Year One in New Haven USD, it is always challenging to manage multiple pass products and different fare media. Further, the BART tickets cannot be canceled or replaced. Due to the opportunities for abuse, distributing BART cards requires maintaining a reliable inventory and secure storage by the school administrator.

The limited fare value provided is not a good fit for students' travel needs.

It was also challenging to establish an appropriate value for the BART tickets to meet variable travel needs of students. Whereas bus passes allow for unlimited travel for a set price, Alameda CTC has to pay for a fixed amount of BART value for each student. To help control program cost during the pilot period, students were limited to one $50 BART card; this limits its utility as a school commute option and supports only occasional use to after-school activities or other irregular trips. Many school program administrators highlight the fact that a small sub-set of their students really need BART for commuting long distances, because of complex family situations or work opportunities that are far from their school location. Those students would benefit greatly from a higher value BART ticket, but it is not clear how to create an equitable system for allocating tickets to account for these factors.

Students may not use all of the fare value loaded onto their paper tickets, which could result in excess program expenditures.

Finally, there was some confusion about the intent of the BART ticket. The program team received comments from site administrators indicating that the tickets were being used for field trips, which was not the original intended purpose. Clearly there are some positives to this approach: enrichment opportunities are a benefit to the participating students, and school site administrators explained that using the STPP-provided tickets is much easier for

them than making a special advance order directly from BART. Also, the STPP tickets are provided to the schools free of charge, so they do not have to allocate funds from their own budget to pay for them. However, a single field trip is unlikely to use all of the value of the $50 ticket, and the unspent balance cannot be recovered, so the expense paid by Alameda CTC is far more than the travel being used.

Card Replacement

During Year Two, program staff refined processes for managing transit passes, including developing a more structured approach to Clipper card production and data transfers. Although day-to-day procedures are becoming more streamlined, the card replacement process continues to be one of the more challenging parts of the program.

For students and families, the card replacement process can be challenging to navigate.

AC Transit and Union City Transit

Card replacements for participants within the AC Transit service area (including students who use Union City Transit) are intended to be handled through the standard Clipper customer service channels. Students can call the Clipper telephone customer service center for assistance, or, if they know their card number, they can request a replacement through the Clipper website. Once a replacement request is received by Clipper and flagged as an STPP request, the information is forwarded to dedicated staff at AC Transit. Clipper cards are loaded with the correct student pass(es) and mailed out to the participating schools.[31]

Given the complexities of this system, students and families tend to communicate with their site administrators first before reaching out to Clipper on their own. However, if a student chooses to contact Clipper directly, he/she must stress to the agent that they are a part of the STPP. Without this information, the Clipper representative may route the request incorrectly, or process the replacement as a stand-alone e-cash card that does not have the STPP transit pass loaded on it. This results in the student waiting another week or two for a second replacement card.

> *"If they hear it's a special pass, then the customer service representatives know to look at a separate Excel list outside their master database. When students don't follow the process, it can be a challenge. If the replacement goes through Clipper [without being routed to AC Transit], then I have to tell Clipper to contact the student to tell them the card is waiting at the school, because privacy issues prevent us from calling the student directly."*
>
> *—AC Transit*

[31] Students attending schools in New Haven USD have access to both AC Transit and Union City Transit. As such, an extra step is required for replacement cards that are distributed to James Logan High School and Cesar Chavez Middle School. Every week, a member of the project team sends replacement card serial numbers to Union City Transit. Union City Transit staff load Union City Transit passes onto the cards via their Clipper backend system, activating and/or deactivating the cards, per request. It takes about three days for the Clipper card to recognize both passes.

Over the course of Year Two, AC Transit replaced a total of 924 cards, which is approximately 16 percent of the 5,668 STPP participants with AC Transit passes. At the individual school level, the number of card replacements as a share of the number of participants ranged from a low of 4 percent of participants at John Muir Middle School (San Leandro USD) to a high of 32 percent of participants at Fremont High School (Oakland USD).[32]

LAVTA/Wheels

The process for students in Livermore Valley JUSD is somewhat different. LAVTA handles all card production (including replacements) for participants in their service area. A participant who has lost their card fills out a special form and gives it to their school site administrator, who then forwards the request directly to LAVTA. If school is not in session, students can call LAVTA/Wheels customer service directly; Clipper representatives need not be involved.

Once LAVTA receives the request, agency staff print the replacement card, load it with the pass, and mail it out to the school. In general, the actual replacement process has gone smoothly in Livermore Valley JUSD, but has entailed additional work for transit agency staff. Also, ease of replacement may have an unintended effect. Some students have lost their card multiple times, which creates extra work and cost for LAVTA staff. Statistics on the exact rate of card replacements in Livermore Valley JUSD are not available from LAVTA at this time.

There are both positive and negative aspects to the card replacement fee charged by Clipper.

In the AC Transit and Union City Transit service area, students and families must pay $5 to Clipper to process a replacement card. This fee itself is a hardship for some families and making the payment can be a challenge in some cases. A credit or debit card is required for Clipper to accept payment, so at a minimum, students must get help from an adult, and students from unbanked families are generally unable to get a replacement through Clipper customer service. Many students are able to pay with cash instead of a card, so several site administrators have generously agreed to accept the money from the students and then use their personal credit or debit card to make the payment to Clipper. This step creates extra delay in getting the request submitted and is an added administrative burden for school staff.

LAVTA did not charge students to process a replacement card in order to simplify processing and eliminate barriers. As a result, there is no disincentive to not lose a card, and

[32] The replacement rate calculations cited here assume that no student requested more than one replacement within a year. Anecdotal information collected during debriefs with school administrators suggests that there are several students who have repeatedly lost their card, but this appears to be relatively uncommon in the AC Transit service area and should not have a material effect on these particular results.

they have had repeat card losses from the same students, which could become a problem over time.

Staff Level of Effort

Administration and management of the STPP in Year Two was more efficient than in Year One for several reasons. Simply having familiarity with the program, which was gained during Year One, made the program easier to manage and generally staff were better able to handle ad hoc questions. In addition, based on feedback from Year One, administrative processes at school sites were simplified. The other two bus operators were able to transition to Clipper, which made pass production and data reporting more streamlined. The more detailed findings about staff level of effort are grouped into three categories below: school and school district staff; transit agency staff; and Alameda CTC and consultant staff. Additional information on staffing-related expenses is included in the overall discussion of program costs later in this chapter.

School and School District Staff

Overall, the majority of staff characterized the level of effort they spend on this program as moderate, agreeing with the statement, "The start-up period required some extra effort, but things are running smoothly now." After the initial start-up period at the beginning of the year, most school site administrators report spending anywhere from 30 minutes to two hours a week supporting the program, with slightly more effort around the time of the monthly deadline for submitting requests for new cards. Site administrators at a few of the larger schools report that they spend as much as one to two hours a day on the program.

> *"I think because it's my first year, it was hard, it was difficult. I had all these different questions and concerns, but once I got them answered, I got the support I needed. It's a great program. Seeing a kid come in with a smile on their face when they get their card is really good. And they don't have to bother their parents for pocket money. It made me feel like, 'I gotta do this.' The kids come in and say, 'Thank you, because I have to leave here to go to work to support my family. Now, I don't have to leave school early and miss class just to make it to my job on time.'"*
>
> *—School site administrator from Oakland USD*

> *"I need to say that we really appreciate the people who are taking the time to implement this. They might say that it didn't affect their day to day jobs, but it did increase their workload, and they may not be willing to say so, because everyone understands how important this is to our kids."*
>
> *—School district contact from Livermore Valley JUSD, on behalf of school site staff*

> *"From my perspective, one of the reasons I think [the program] is better is because I haven't had to get involved. That means it's going well!"*
>
> *—School principal in New Haven USD*

Overall, school site staff lauded the program model changes that were implemented in Year Two: elimination of money handling, all bus passes being on the Clipper card and moving all student forms and transactions to cloud-based forms and databases. Staff at some continuing schools noted that things operated more smoothly in Year Two, and that the program has settled into more of a routine after the initial sign-ups at the beginning of the year. The exception was cases where there was staff turnover; the related loss of institutional knowledge at some schools made it seem like starting from scratch with a new program.

> *"Year Two was way better than Year One. Taking money off the plate was a huge factor… Using the income eligibility factor is so much easier."*
> *—School site administrator from New Haven USD*
>
> *"It's easier, because I don't have to worry about figuring out who's in the program or not. Before, I would have siblings asking for it, or kids who live close to an 8th grader saying, 'I have to walk and they get to ride. Why can't I get the pass, too?' Now, any student who walks through my door can get it."*
> *—School staff from San Leandro USD]*
>
> *"This year improved greatly over last year, so much complexity last year. [We appreciate] having the Google doc and standardized process."*
> *—School site administrator from Livermore Valley JUSD]*
>
> *"It has been going smoothly. Every time it gets easier."*
> *—School site administrator from San Leandro USD]*

Despite improvements to the program, there is a notable workload for school staff at the beginning of the year to register new students.

Although the overall level of effort spent on the program is manageable, staff did highlight that there is significant workload at the beginning of the year to register new participants.

The complexity of the card replacement process created challenges for site administrators.

School site administrators reported several challenges related to card management and replacement: 1) managing expectations of students and families, especially around replacement cards; 2) the extra effort required to pay card replacement fees for students without credit cards; and 3) challenges with the card replacement process in general.

As noted above the Clipper card replacement process is challenging. School site administrators are often the default point of contact for student and family questions about replacing lost Clipper cards. Although the card can be replaced using internet and phone options, school staff reported that many students and families need help to navigate the process. Once the request is submitted, it can take one to three weeks to receive the new card, so students and families are understandably anxious to know when they will be able to use the transit pass again, and school staff receive numerous inquiries on pass replacement status, even when they were not involved in submitting the request. If the

wrong type of card is received and it does not work properly on the bus, it has to be replaced a second time and school staff often field these complaints.

> *"Depending on who you get when you call the number [at Clipper], the level of service and knowledge varies a lot."*
> *—School site administrator in New Haven USD*
>
> *"The application form is so simple, that it's kind of a shock to them when they go to replace the card, and the process is so much more complicated."*
> *—School site administrator in Oakland USD*
>
> *"…for one kid, we paid the $5 replacement fee. Because it was more important to us to get the kid here every day."*
> *— School site administrator in Hayward USD*

BART tickets added administrative complexity and time.

School administrators generally characterized administration of the BART tickets as a medium level of difficulty, noting the complexity of ensuring that each student only receives one ticket and the student has submitted both the program registration/consent form and the ticket request form.

> *"Sometimes, we would get duplicate applications, because they would submit the main application for the Clipper card, and then later they would figure out that they want a BART ticket too, and they'd actually follow the directions and fill out the whole thing as if they were new. So we have to go back and forth to the trackers to be sure, and it was more time-consuming."*
> *—School site administrator in Hayward USD*

Transit Agency Staff

Staff level of effort varies a great deal between transit agencies, because each agency has a different set of tasks they are responsible for. However, most transit agencies reported improvements compared to Year One due to the transition to Clipper for those who were using flash passes before and streamlined administrative processes overall. For example, in Year One, new Clipper cards were processed by AC Transit on a rolling basis throughout the year; in Year Two, new card production has been limited to one batch per month to reduce staff workload, with card replacements processed once a week.

AC Transit

AC Transit has the largest administrative burden of the three bus operators, because they produce and manage about 90 percent of all Clipper cards in the STPP. Activities include routine card processing (production, replacements, maintaining card stock, shipping) as well as database management and general trouble-shooting. The amount of time required to administer the program varies considerably throughout the year. At the beginning of the school year, when new students are signing up, AC Transit staff dedicate as much as 20 hours a week over several weeks just for coding, printing, testing, and shipping all of the

new cards. After the initial signups are complete, the workload is less; it varies week to week depending on the monthly cycle of pass production and replacements and the number of follow-up inquiries received about card status. These one-off inquiries can sometimes require multiple interactions with Clipper Customer Service to resolve, which can be very time consuming. Nonetheless, AC Transit staff have noted an improvement in the level of effort compared to Year One.

Union City Transit

Staff involvement at Union City Transit is less than the other operators, but is still notable given the agency's small staff size. After AC Transit produces and ships the physical Clipper cards to the school site administrators, staff at Union City Transit make sure that each card number that is assigned to a student in New Haven USD also has a Union City Transit pass loaded onto it. Site staff at James Logan High School and Cesar Chavez Middle School hold their students' cards a few extra days after receiving them to make sure that there has been enough time to successfully load the second pass through the Clipper backend system. The workload for Union City Transit is minimal, but the time-sensitive nature of Clipper card replacement can be difficult for a smaller agency to accommodate along with other responsibilities.

Including monthly data reporting and general trouble-shooting, the overall effort by staff at Union City Transit is estimated to be 1-2 hours a week. Union City Transit noted that for every kid that gets a pass through this program, it might be saving time spent by the cashier at City Hall.

LAVTA

The staff experience at LAVTA in Year Two is somewhere between that of AC Transit and of Union City Transit. LAVTA handles all card production and replacements for participants in East County (Livermore Valley JUSD). Because of the transition to Clipper cards this year, staff had a lot of work at the beginning of the year to do the initial set up.

Alameda CTC and Consultant Staff

Alameda CTC has overall responsibility for managing the STPP, and is supported by consultant Nelson\Nygaard Consulting Associates. Staffing of the Student Transit Pass program was more efficient in Year Two due to the team, the schools and the transit agencies all being more accustomed to the program as well as process improvements described above.

Significant one-time expenditures were necessary in Year One to get this brand new program up and running. Staff and consultants had to create processes, protocols, procedures and templates for all aspects of the program, including: student registration, pass creation, distribution, deactivation and replacement procedures; school district and transit agency legal agreements, confidentiality agreements; storage, management and transfer protocols for sensitive student data; evaluation data collection, management and analysis approaches; and travel training curricula.

With this initial work largely complete, the Year Two effort consisted of refining processes and documents so the staff time required for Year Two was less, despite the increase in the

number of schools. Agency staffing was also more efficient due to the program and administrative changes mentioned above, including moving all bus passes to Clipper, eliminating cash handling and accounting and reducing the number of program models being tested throughout the county.

Consultant Staff

Similar to the experience of school site administrators and transit agency staff described above, significant effort was required by the consultant team at the start of the school year when new students register for the program. Additional effort was also necessary for incorporating one new school district and six new participating schools in Year Two. However, this on-boarding effort was more efficient in Year Two because consultant staff were able to rely on experience from Year One.

Throughout the pilot, Nelson\Nygaard has involved multiple staff members to administer the project. No single staff person is dedicated full time to the pilot. This effort is dedicated to the following primary tasks: coordination with transit agencies for data management; serving as the liaison to school site administrators; vendor and sub-consultant management; and registering students at the beginning of each new school year. Although the level of effort required for each school will go down over time as processes become more streamlined and familiar, there is a certain base level of effort required for every new school involved in the program, so the staffing required for day-to-day management will likely increase as the number of schools increases.

A cohesive team that has a handle on the many nuances of the program is critical to the success of the program. Long term, in a scenario where there are more schools participating each year, additional staff support will be required. This could take the form of a dedicated, full-time staff person who takes on a larger role or additional staff members that would share day-to-day project responsibilities. These roles could be performed at the transit agencies in the future for a long-term program.

Program Costs

Bus Transit Fare Costs

Each of the three bus transit providers that has partnered on the STPP has a different financial arrangement with Alameda CTC to compensate the transit operators for the fare products provided to STPP participants which has allowed the STPP to test different payment models during the pilot period. For AC Transit, Alameda CTC pays a flat monthly fee for each registered pass holder; in Year Two, this was the 2017-18 youth pass price of $26.50 per participant, per month. For Union City Transit, Alameda CTC pays a fixed amount per trip taken, equal to the current youth fare of $1.25 per trip, applied to the actual number of boardings recorded in the Clipper card data. LAVTA has implemented an Eco-Pass model, where Alameda CTC pays a highly-discounted fee based on the number of eligible (enrolled) students at participating schools, regardless of how many students sign up for the program or how many rides are taken. For Year Two, the Eco-pass cost for four participating LVJUSD schools was $75,000. Based on these fee arrangements, the total invoice amounts and cost per bus trip for Year Two are shown in the table in Figure 52.

Figure 52 Bus Pass Cost for Year Two

Transit Agency	Bus Pass Cost	Total Year Two Boardings	Alameda CTC Cost Per Trip
AC Transit	$1,611,147	773,210	$2.08
Union City Transit	$ 37,229	29,783[33]	$1.25
LAVTA	$ 75,000	54,768	$1.37
TOTAL	**$1,723,376**	**857,761**	**$2.01 (overall)**

BART Tickets

BART tickets are paid for up front, based on the number of cards ordered and programmed. Each ticket has $50 of fare value loaded on it, but is sold to Alameda CTC at a 50 percent discount (i.e., $25 each). At the start of Year Two, Alameda CTC purchased a total of 5,000 cards with a total stored value of $250,000 at a cost of $125,000.

Through the end of July, 2018, 3,018 tickets have been distributed; the remainder of the tickets are being used for Year Three. The total stored fare value on these distributed tickets was $150,900, and the corresponding cost to Alameda CTC was $75,450. As shown in Figure 53, a total of 18,928 trips have been recorded in Year Two, which makes the cost per trip to Alameda CTC about $4.

Based on actual travel records of the trips taken through the end of July 2018, the Year Two BART tickets have been used for $66,372 worth of travel. Compared to the total stored fare value of the distributed tickets ($150,900), this means that the total amount of unused fare value on distributed tickets as of the end of Year Two is $84,528. Although some of this value may be spent in the near future, some cards may have been lost or stolen, and the fare value stranded on missing cards cannot be replaced.

Figure 53 Fare Value Calculations for Year Two BART Tickets

Number of BART Cards Distributed	BART Pass Cost	Total BART Boardings	Alameda CTC Cost Per Trip
3,018	$75,450	18,928	$4

Cost Per Participant

Program participants use their transit passes to varying degrees, and some students may use their bus pass and BART ticket very little over the course of the year. In addition to determining the average cost per transit trip actually taken, the total costs of the transit fares purchased can be averaged over the total number of participants in the STPP to determine the unit cost per participant under the current financial arrangements. This calculation is portrayed by school district in Figure 55.

[33] Invoicing periods do not exactly match data reporting periods thus this number does not exactly match total rides taken reported in a prior section.

Figure 54 Annual Cost Per Participant (transit pass costs)

School District	Bus Passes Distributed	BART Tickets Distributed	Annual Cost Per Participant
Oakland USD	2,543	894	$293
San Leandro USD	1,787	1,348	$303
Hayward USD	497	322	$300
New Haven USD	841	454	$342
Livermore Valley JUSD	960		$78
TOTAL, All Districts	**6,628**	**3,018**	**$271**

Direct Expenses

In addition to the cost of the transit pass products provided by the four transit agency partners, there are a number of direct expenses required to distribute physical transit passes to students. Direct expenses include costs such as the Clipper cards used for the program, printing, shipping, and lanyards that each student receives when they pick up their card as a deterrent to students losing cards. For LAVTA, some direct costs are included in the eco-pass price. The total cost of direct expenses incurred by Alameda CTC and other transit operators in Year Two was just under $50,000.

Staffing Costs

Effort required to administer this program varies significantly over the course of the year. As described above, there is significant start-up effort required at the beginning of the school year for everyone involved in the program. Later in the year, the effort decreases to a more modest level. The "Staff Level of Effort" section earlier in this chapter provides more detailed findings about staffing the program. This section summarizes the cost implications of the staff time devoted to the STPP.

School district staffing is not paid for by the pilot. Staffing costs for LAVTA are considered included in the eco-pass price. Staffing costs for Union City Transit are minimal and not paid for by Alameda CTC during the pilot period. Staffing expenses for AC Transit were approximately $7,500 in Year Two. Alameda CTC and consultant staff cost during Year Two included day-to-day administration of the pilot and evaluation expenses, approximately $250,000 for Year Two. Total staffing costs for Year Two were $257,000.

Summary of Program Costs

The summary of budget to date is shown in Figure 55. The administrative/staffing costs as a share of total overall expenses for Year Two was 14 percent; the direct cost ratio to date for the program as a whole is 19 percent, not including startup costs before the pilot commenced. This percentage is anticipated to continue to go down in Year Three and after the pilot period as processes become more standard and streamlined. Staff is currently anticipating a budget surplus at the end of the pilot period which can be used for long-term program implementation.

Figure 55 Summary of Year Two Program Costs

	FY16/17	FY17/18	Total Costs through Year Two
Transit pass purchase (bus and BART pass costs)	$803,000	$1,849,000	$2,652,000
Direct costs	$24,000	$48,000	$72,000
Staff/consultant costs	$590,000	$257,000	$847,000
Totals	**$1,417,000**	**$2,154,000**	**$3,571,000**

Costs rounded to nearest $1,000

5. Road Ahead

As discussed in this report, Year Two showed that streamlined program designs were more feasible to implement and easier to understand for students, families, and school site administrators. And although the pass replacement process remains challenging, support for transit continues to grow and use of the transit pass is becoming a normed behavior among participants. The addition of BART tickets to the program expanded general transit access and has been helpful for students needing to travel greater distances across the county; however, it did add complexity to day-to-day procedures.

Key Lessons From Year Two

Year Two findings yield several key lessons that will be important when considering the design of a long-term program:

Simpler pass products and program models were better for students and administrators, in particular providing all passes on Clipper cards, making passes free to all eligible students and allowing all grade levels to participate .

Based on some of the challenges in Year One, the program team greatly simplified the program models in Year Two by: eliminating pass periods and having all passes valid for the full year; having all passes available on Clipper, opening the program to all grades at all participating schools; making all passes free to all eligible students who apply; and providing one single pass that gave access to two bus operators applicable in Union City.

These improvements led to noticeable increases in participation rates, especially in school districts that went from having to pay for passes to the free program model. School site administrators reported much higher satisfaction with the program as well, although this was tempered at schools that introduced BART tickets.

There is value in offering combined transit passes on one card in Union City.

In Year Two, the program offered one single Clipper card for access to AC Transit and Union City Transit in New Haven USD; over two-thirds of students used both passes frequently, showing that there is value in providing both passes rather than asking students to choose which agency they want to access.

Both financial need and transit availability determine students' participation and bus ridership.

Available data shows clear correlations suggesting that students will be more likely to participate and to ride transit when financial need is higher and transit availability is greater. At the same time, families expressed interest in the program regardless of income level.

Implementation of Year Three

As described in the Introduction, the third year of the pilot will continue to test the same two models and expand to six new schools, bringing the total to 21 schools in seven school districts. The program team will be deploying the final student survey in winter/spring of 2019, and formal evaluation of Year Three will begin during summer of 2019.