

Clean Air Express

Short Range Transit Plan

Prepared for:

**Santa Barbara County
Association of Governments**

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Contents

Executive Summary	2
Strategies for the Future	2
Short Range Transit Plan Outline	4
1. Introduction	5
Overview of Clean Air Express Service and History	5
Study Objectives	6
2. Travel Market Analysis	7
Overview of the Service Area	7
Where are People Traveling for Work, and How?	8
Who Lives in the Service Area	20
Areas and Connections Not Served by Clean Air Express	24
Travel Markets Summary and Conclusions	27
3. Outreach and Engagement	28
Understanding Clean Air Express Customers	28
Non-Rider Surveys	29
Operator Engagement	34
Planning for Future Public Engagement	36
4. Service Performance Evaluation	37
Clean Air Express Service and Schedules	37
Ridership	42
Destination Ridership	56
Service Productivity	58
On-Board Service Quality	60
Bus Stops and Service Access	64
Service Performance Considerations	66
5. Financial Assessment	68
Existing Financial Overview	68
Fare Revenues	72
Financial Comparisons to Other Express Bus Systems	75
Non-Fare Revenue Funding Current/Potential	76
The Financial Future of Clean Air Express	81
Financial Assessment Summary	87
6. Short Range Transit Plan Recommendations	88
Financial Plan	88
Service Concepts	88
Capital Program	88
Attracting and Retaining Customers	89
Fares and Fare Media	89
Staff Resources	89

Figures

Figure 1 Home Locations of Goleta Workers, Boardings for Goleta-Bound Routes	10
Figure 2 Home Locations of Santa Barbara Workers, Boardings for SB-Bound Routes	11
Figure 3 Goleta Workplaces and Ridership	16
Figure 4 Santa Barbara Workplaces and Ridership	17
Figure 5 Age Range of Clean Air Express Riders, from Rider Surveys	22
Figure 6 Working Age Population Density for CAE Communities	23
Figure 7 Average Years Riding Clean Air Express	28
Figure 8 Reasons for Riding	28
Figure 9 Solo Driver Work Arrival and Departure Times of "Target Market" Non-Riders	30
Figure 10 Household Income of "Target Market" Non-Riders	31
Figure 11 Employer Transit Benefits among "Target Market" Non-Riders	31
Figure 12 Arrival and Departure Times of City and County Employee Survey Respondents	33
Figure 13 City/County Employee Willingness to Use 'Sustainable Transportation' if Provided Incentives	33
Figure 14 Distribution of Morning Trips to Goleta	39
Figure 15 Clean Air Express Total Annual Ridership since 2003	42
Figure 16 Car Access of Rider Survey Respondents	43
Figure 17 Clean Air Express Monthly Ridership Total Compared with Gas Prices, 2009-2019	44
Figure 18 Average Daily Ridership by Day of Week, 2013-2019 (All Routes)	45
Figure 19 Average Daily Ridership by Home Community, 2013-2019	47
Figure 20 Average Daily Ridership by Work Community, 2013-2019	47
Figure 21 Lompoc to Goleta Average Daily Boardings, by Route	48
Figure 22 Lompoc to Goleta Average AM Ridership by Year	49
Figure 23 Lompoc to Goleta Average PM Ridership by Year	49
Figure 24 Santa Maria to Goleta Average Daily Boardings, by Route	50
Figure 25 Santa Maria to Goleta Average AM Ridership	51
Figure 26 Santa Maria to Goleta Average PM Ridership	51
Figure 27 Solvang/Buellton Average Daily Boardings	52
Figure 28 Lompoc and Santa Maria Average Daily Boardings to Santa Barbara, by Route	53
Figure 29 Lompoc to Santa Barbara Average AM and PM Riders, by Route	54
Figure 30 Goleta Afternoon Boardings by Stop and Route	56
Figure 31 Santa Barbara Afternoon Boardings by Stop and Route	57
Figure 32 Rider Satisfaction with On-Time Performance, 2010-2018	60
Figure 33 Rider Satisfaction with Bus Comfort, 2010-2018	61
Figure 34 Rider Satisfaction with Driver Safety, 2010-2018	62
Figure 35 Rider Satisfaction with Customer Service, 2010-2018	62
Figure 36 Rider Satisfaction with the WiFi Amenity, 2014 and 2018	63
Figure 37 Clean Air Express Operating Expenses, 2010-2017	68
Figure 38 Clean Air Express Fuel Costs, 2010-2017	69
Figure 39 Clean Air Express Fleet Replacement Schedule	70
Figure 40 Monthly Pass Price, CPI-Adjusted Pass Price, and Growth in Expenses	74

Tables

Table 1 Number of People Living in Home Service Area and Working in Goleta or Santa Barbara	9
Table 2 Commute Mode of Clean Air Express Communities	12
Table 3 Peak Period Passenger Vehicle Counts On US-101 and CA-154	13
Table 4 Sample Large Employers in the Service Area	14
Table 5 Regional Job Growth 2010-2015	19
Table 6 Population and Households in the Clean Air Express Service Area	20
Table 7 Clean Air Express Home Communities Population by Age Range	21
Table 8 North County Transit Connections	24
Table 9 Home ZIP of Non-Rider Survey Respondents	29
Table 10 Clean Air Express Trips	37
Table 11 Clean Air Express Morning Departures	38
Table 12 Clean Air Express Afternoon Departures	40
Table 13 Service Productivity by Trip, 12-Month Average July 2018-June 2019	59
Table 14 Average Fare Types by Trip	72
Table 15 Other California Express Bus Statistics	75
Table 16 Measure A Revenue Advances and Expenses	76
Table 17 Projected 2040 Outcomes of Clean Air Express Financial Scenarios	83
Table 18 Fare Increase Assumptions for Future Financial Scenarios (2-4)	84

Executive Summary

The Clean Air Express is a commuter bus service serving North Santa Barbara County communities whose residents work in and commute to Goleta and Santa Barbara. This is the first-ever Short Range Transit Plan and in-depth study of the service performance, funding, administration, management, and customer experience for the Clean Air Express service. The Santa Barbara County Association of Governments (SBCAG) funds, manages, and administers the Clean Air Express and sets service policy through recommendations by the North County Subregional Committee. A private contractor operates the service and maintains the SBCAG-owned buses under contract with SBCAG.

The Clean Air Express has long been a successful operation, carrying passengers safely and comfortably to work with high rates of customer satisfaction at an affordable price. Collectively these routes carry an estimated 6-10% of the commuter market from North Santa Barbara County to Goleta and Santa Barbara during the peak commute period each day, a significantly higher rate of market penetration than many other transit services.

Annual ridership in 2018 totaled approximately 177,000 trips, with average daily ridership of approximately 720 across all routes – representing roughly 360 individual riders each day. Many of the buses consistently carry over 50% of seated capacity, and with an average trip length of 59 miles, at current ridership levels the Clean Air Express eliminates over 10 million vehicle miles travelled every year. These statistics are very strong for a relatively small commuter bus service operation, and ridership and customer surveys show longtime loyalty and high satisfaction. The average customer in 2018 had been riding for over five years, and several customers stated they have been using the service for more than 20 years.

Despite being a highly productive and popular service, The Clean Air Express faces a challenging future. Santa Barbara County's local sales tax, Measure A, is currently the sole dedicated funding source other than passenger fares. This funding model has sustained the service since 2010, but is not sufficient to cover service expenses through the end of the Measure in 2040. The Measure A North County Interregional Transit Program provides about \$840,000 annually to support the service, but is currently in deficit due to advances to the program from future years. The funding shortfall will become more severe when bonding occurs to construct the 101 HOV lane, when annual Measure A Clean Air Express funding is projected to decline by a projected 15% to \$720,000 annually. Without action, due to rising operating expenses and capital replacement needs, Clean Air Express service will face a series of service reductions, beginning in approximately 2026 with a reduction of the current 13 round trips to 10, further reductions in 2029 from 10 to 7, followed by elimination of the remaining service in 2033.

Ridership decline over the last several years, a trend facing transit services across the County, is also a near-term concern for the Clean Air Express. The service experienced a peak annual ridership of over 222,000 trips in 2008. Ridership dipped for a couple of years following the Great Recession, but by 2013, it had nearly reached the same level again. Since that time, ridership declined from 2014 through 2017, despite growing population and jobs in the County. Although the trend has reversed in 2018 and the first half of 2019, there have now been a number of years where passenger revenues are down. Meanwhile, the long-time and loyal passengers are a point to be proud of, but also represent a cohort of customers who will ultimately retire and stop commuting in the future. The Clean Air Express ridership is generally aging with the service and younger riders are not replacing them at a sufficient rate, despite a growing young population in communities such as Santa Maria.

Strategies for the Future

The main objective of the SRTP is to examine the service performance and financial projections and identify strategies for ensuring a long-term funding solution for the Clean Air Express. The SRTP also identifies opportunities to improve the service, customer experience, and travel market share.

Fares and Funding

To address the long-term funding shortfall, SBCAG must explore a combination of alternatives to the existing funding mechanisms. The first and most simple strategy is to raise service fares in the near-term and plan for at least one additional increase in the 2030 timeframe. Customer surveys indicate that riders believe the service is highly valuable for the price. The economy has been strong for several years, and the cost of operating has increased by over 40% since the last fare increase in 2009. Given that many riders receive an employer transit benefit subsidizing or fully covering the cost of their pass, a fare increase should be easily absorbed by many customers and would help improve the farebox recovery ratio. Fare increases should be planned for 2020 and 2030, in order to recover from operating cost increases and keep pace over the next decade.

Increasing fares will lessen the need for other revenue, but additional financial support is needed if the service is to operate at current levels through the end of Measure A. Two major alternatives are considered: contracting with Santa Barbara MTD to operate the service at a lower cost-per-hour rate, and using Federal Transit Administration (FTA) formula 5307 funds to support the service, taking advantage of changes to funding availability anticipated as a result of the 2020 Census.

The Clean Air Express is not currently a direct recipient of FTA funding. Becoming a direct recipient would require some change to the administration of the service, including reporting operating data to the National Transit Database (NTD), planning for FTA compliance in required areas, and developing an agreement with MTD to become a direct recipient for the urbanized area. FTA funding could be available to Clean Air Express as soon as FY23 and, in combination with fare increases and a lower operating cost, could eliminate the structural deficit facing the service through FY40. Under the current federal transportation bill (FAST Act), the Clean Air Express could receive over \$500,000 annually in FTA 5307 funding, which would allow SBCAG to avoid the service reductions that will occur without this funding.

Service and Customer Experience

The routes and schedules that Clean Air Express operates have been mostly unchanged for years, and the SRTP finds no significant need to alter them in the near future. The most promising area for considering new service would be the addition of a later round-trip each from Lompoc and Santa Maria to Santa Barbara and possibly limited-stop service through Goleta. Based on a countywide survey of non-riders, the current schedule does not meet the needs of many commuters who might otherwise be interested in using the service. Surveys also suggest that at least 25% of the commuter market leaves work at or after 5:00PM, which, depending on the employment location, does not allow these commuters to catch the last northbound Clean Air Express trip. Initiating an additional trip and targeted marketing to major employers could be a success, and might also bolster ridership on other trips. Often people do not use commuter bus services because they fear being stranded if they miss the trip; having one additional trip on the schedule would make earlier trips more attractive.

Customers rate the Clean Air Express very highly, based on surveys from 2010-2018. The service is clean, comfortable, and reliable. The buses have provided WiFi for customers since 2008, which was very early for a small commuter bus service (many transit agencies in Southern California are only just now providing WiFi for the first time). Although the WiFi service provided has not kept up with customer expectations (it is limited to fewer connections than there are seats on the bus), this is a relatively minor complaint and easily addressed.

Reaching New Riders

The second-most significant challenge facing the Clean Air Express is the need to attract new customers. Although part of a national trend of declining transit ridership, the decline in Clean Air Express ridership over the last several years has occurred during a period when jobs were growing and unemployment has been low. At the same time, the current cohort of riders is aging with the service and many are approaching retirement age.

Attracting riders and filling seats on most trips is important for the long-term success of the service. While ridership always fluctuates year-to-year, transit agencies around the country have been in a marked decline since about 2013 that is not showing signs of reversal. Agencies can employ strategies to attract new riders and ensure a high-quality experience to keep them on board. Although SBCAG has not marketed or advertised the Clean Air Express in the past due to a lack of funding and staffing, developing a strategic marketing campaign to increase ridership should be a near term priority for the service.

SBCAG, through its Traffic Solutions division, can continue to build and maintain relationships with employers throughout Goleta and Santa Barbara to urge provision of employee transit benefits. Many employers already have successful programs that riders rely on. Helping to develop or encourage businesses to offer these options will attract new riders by making it effectively free or extremely cost-competitive with driving. The Clean Air Express can market its high-quality customer experience using data and stories from current riders. Making better use of the internet, social media, and technology to improve offerings for customers will be important in attracting young riders as well. Clean Air Express can take advantage of opportunities to be out in the community at job fairs as well. Finally, the exterior of the buses themselves provide an opportunity for low-cost marketing, particularly because they are often parked right outside of some of the businesses served on the route. Simple direction to a clean and informative website, and bus schedules searchable through Google Transit would help improve exposure.

Staffing

Since SBCAG began managing and administering the Clean Air Express in 2001, the program has relied on very limited staff resources to manage all aspects of operating and managing a transit service, including daily oversight, contract management, service planning, state and federal regulatory compliance, elevated customer service issues, marketing, employer outreach, pass distribution, revenue collection, and vehicle procurement, among other service needs. Several key aspects of the service, including marketing, route planning, development of electronic fare collection systems, WiFi services, customer acquisition, advertising revenue development, and customer communication, have not been pursued sufficiently due to a lack of staff resources. The Clean Air Express service is currently overseen part time by the SBCAG Rail and Transit Program Director, who allocates approximately 10-15% of the position's time to managing the service. Beginning in 2018, the Director has been supported part time by Traffic Solutions staff for customer service and SBCAG staff for finance and fare revenue processing. A program the size of the Clean Air Express should have at least one dedicated full time equivalent employee supporting the Program Director.

Short Range Transit Plan Outline

This study begins with an introduction of the service and a brief review of its administrative and operational history. Chapter 2 describes the market in which the Clean Air Express operates and evaluates how that market is currently served by the bus routes. Chapter 3 follows the market analysis by detailing the customer and non-customer engagement conducted as part of the SRTP, and how those data inform potential market opportunities.

Chapter 4 reviews operational data over the last decade, with a particular focus on ridership change since the end of the Great Recession.

Chapter 5 is an in-depth evaluation of the financial state of the Clean Air Express. This chapter illustrates the challenges the Clean Air Express faces as a public transit service funded almost exclusively by local revenues (which will not sustain expenses indefinitely), an arrangement that may be unique in the entire country.

Finally, the SRTP makes near-term recommendations for the service to secure long-term financial stability, increase ridership and passenger revenues, consider future lines of service, and develop sufficient staffing resources reflective of the size, scale, and productivity of the service.

1. Introduction

The Clean Air Express is a commuter bus program serving residents of Santa Maria, Lompoc, Solvang, Buellton, and unincorporated areas of North Santa Barbara County who commute to their jobs in Santa Barbara and Goleta. This is the first-ever Short Range Transit Plan and in-depth study of the service performance, funding, and customer experience. This study describes the market that the Clean Air Express operates in and evaluates how that market is currently served by the bus routes. It goes on to review operational data for much of the service's history, with a particular focus on ridership change since the end of the Great Recession. Next, a financial review illustrates the challenges that the Clean Air Express faces as a public transit service funded exclusively by local revenues (which will not sustain expenses indefinitely), an arrangement that may be unique in the nation. Finally, the SRTTP makes near-term recommendations for the service to secure long-term financial stability, increase ridership and passenger revenues, and consider future lines of service.

Overview of Clean Air Express Service and History

The Clean Air Express provides service to employment locations in Goleta and Santa Barbara from residential communities in North Santa Barbara County. Thirteen round-trips operate each weekday, with eight serving Goleta, one serving University of California, Santa Barbara (UCSB), and four serving downtown Santa Barbara. Seven trips originate in Lompoc, five originate in Santa Maria, and one originates in Solvang, which also serves Buellton.



The Clean Air Express was launched in 1989 as a technology demonstration program by the Santa Barbara County Air Pollution Control District. Administration of the service was transferred to SBCAG in 2001, which subsequently procured new vehicles and expanded service. Prior to 2001, the Clean Air Express operated one trip serving Ventura County. The most recently established route is the Solvang/Buellton service, which began in 2011 after MTD's Valley Express service was terminated. The thirteen trips currently operating collectively carried an average of about 360 individuals daily in 2018, a number that has ranged in from a high of about 440 in 2008 to a recent low of about 310 in 2017. Clean Air Express trips do not operate on weekends, although Saturday service was piloted in 2016/17 before being terminated due to low ridership. Throughout the history of the service, a private contractor has operated and maintained the vehicles under contract with SBCAG or one of its member agencies.

Although the SBCAG board is the policy board for the service, the SBCAG North County Subregional Committee provides recommendations to the board for any changes to Clean Air Express policy such as fares or significant service changes. The North County Committee is composed of representatives from Santa Maria, Guadalupe, Lompoc, Buellton, and Solvang and the County of Santa Barbara.

Study Objectives

The primary objective of this SRTP is to evaluate the funding for the Clean Air Express and identify recommendations for long-term financial stability. Without action, Clean Air Express could face complete elimination of service between 2028 and 2031, as the primary subsidy will not cover increasing expenses for operations and capital equipment.

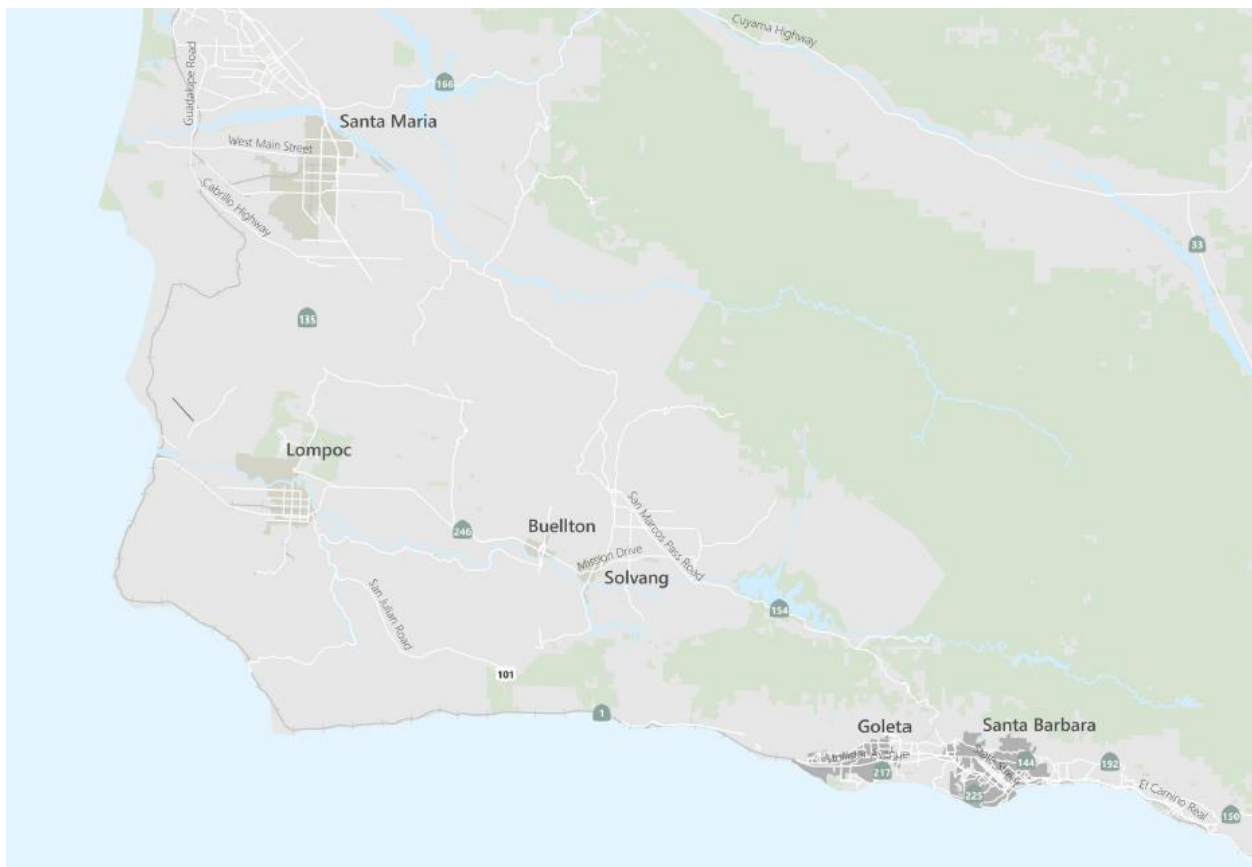
Secondly, the study evaluates the operations and customer experience to identify opportunities for improvement. As later chapters will demonstrate, the Clean Air Express has long been a successful operation, carrying customers safely and comfortably to work with high rates of customer satisfaction at an affordable price.

The study also considers potential opportunities to expand service to create new commuter connections or improve options for the market already served. Although long-term revenue must be identified to maintain existing levels of service, addressing the revenue issue should also consider promising future lines of service. The financial evaluation later in the report demonstrates that Clean Air Express has been successful at maintaining a high farebox recovery ratio, which lowers the risk of adding new services.

2. Travel Market Analysis

A travel market analysis provides context for understanding the current service performance by quantifying the travel between the communities the Clean Air Express serves and estimating how much those travelers are using the service. The travel market for the Clean Air Express includes all the people who are currently making trips to and from the communities served at the times the service operates, and potentially at other times or in other directions, if service could be expanded.

This chapter begins with an overview of the commuting characteristics to the region's employment concentrations in Southern Santa Barbara County and how Clean Air Express currently serves that population of commuters. Next, it reviews the demographics of the communities served (age, income, population growth) and the relationship to the service's rider characteristics. Following that is an overview of the travel connections and communities not currently served by Clean Air Express, and finally a summary of the potential market opportunities both within the current scope of services and new potential service options to consider. This chapter presents the demographic and employment-based considerations for travel markets, but does not weigh operational considerations for serving the market (for example, bus availability, farebox ratio, etc.), which is incorporated in the service concepts chapter.



Overview of the Service Area

The Clean Air Express serves four communities in Santa Barbara County. The service is a peak-hour, peak-direction only service operating on weekdays designed for residents of North Santa Barbara County who commute to work in South Santa Barbara County. The morning pickup locations are a single stop each in the communities of Santa Maria, Lompoc, and Buellton and Solvang. These four communities are considered the 'home locations' for the purposes of the market analysis, and Goleta, UCSB, and Santa Barbara are the 'work locations'. Most customers live in or relatively near to the home locations; Lompoc, Santa Maria, and the Santa Ynez Valley region include unincorporated areas, which the supporting data summarizes at the County level. Some customers also likely drive to Santa Maria from Nipomo and other cities in San Luis Obispo County. Maps throughout this chapter show data at the Census tract level.

Where are People Traveling for Work, and How?

The Clean Air Express home locations are a region of over 200,000 people including the unincorporated areas near the home cities, and the service connects to an estimated 68,000 jobs in Goleta and Santa Barbara. Table 1 shows that roughly 5,700 residents of the home locations are estimated to have their primary job in either Goleta or Santa Barbara, according to U.S. Census data (these statistics include the University of California at Santa Barbara [UCSB])¹. While Goleta and Santa Barbara are most likely to employ workers commuting from other communities (66-83% of workers live elsewhere, even if it's the neighboring city), on average for the County, about 68% of people live and work in the same community. In other words, a relatively small proportion of Lompoc and Santa Maria residents are commuting to Goleta or Santa Barbara.

¹ U.S. Census Bureau. (2019). LEHD Origin-Destination Employment Statistics (2002-2015) [computer file]. Washington, DC: U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program [distributor], accessed on 8/7/19 at <https://onthemap.ces.census.gov>. LODS 7.3 [version]

Table 1 Number of People Living in Home Service Area and Working in Goleta or Santa Barbara

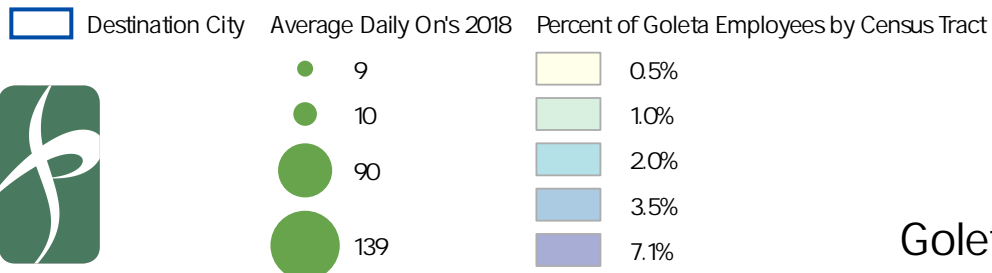
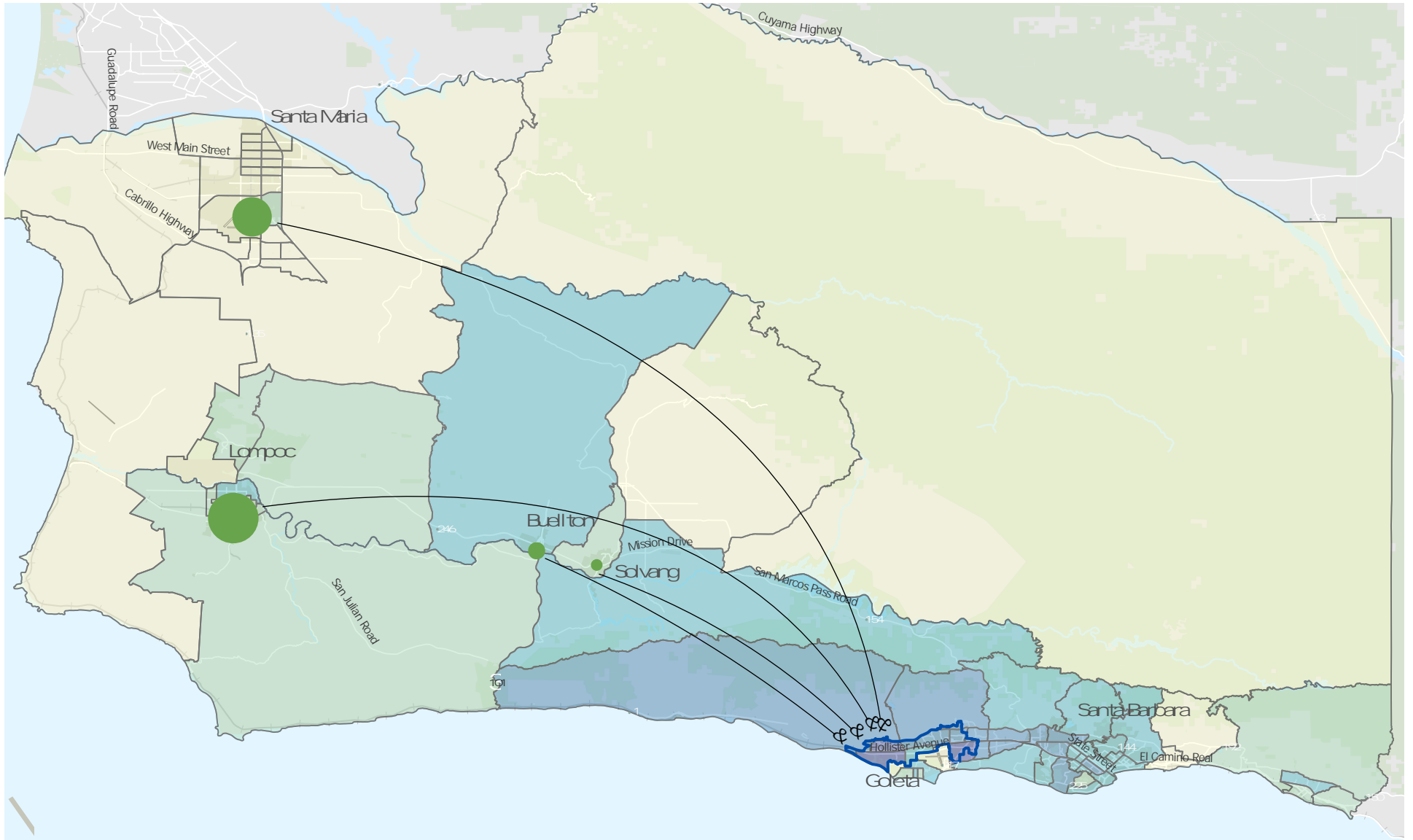
Work Location:	Goleta	Santa Barbara	Total		
Jobs	18,900	47,900	66,800		
Employed here and Living Elsewhere	15,700	31,500	47,200		
Percent Employed here and Living Elsewhere	83%	66%			

Living in Clean Air Express-Served Communities	Working in Goleta	Working in Santa Barbara	Total	Estimated CAE Riders	Est. Capture
Lompoc	1,200	1,500	2,700	215	8%
Santa Maria	710	1,450	2,150	120	6%
Solvang	140	280	420	10	2%
Buellton	180	210	390	20	5%
Total	2,230	3,440	5,670	365	

Source: LODES 2015, Primary Job only / Fehr & Peers

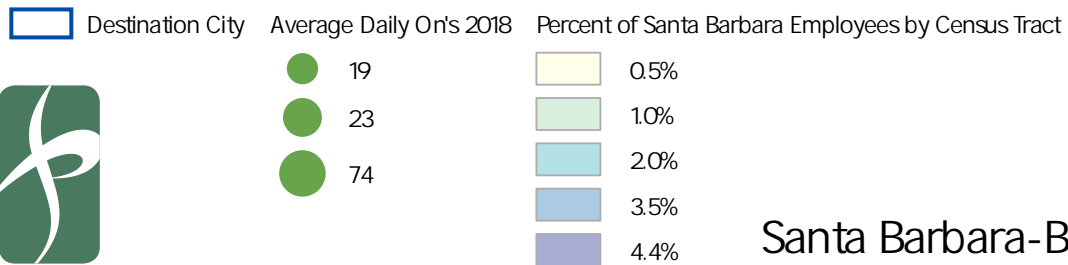
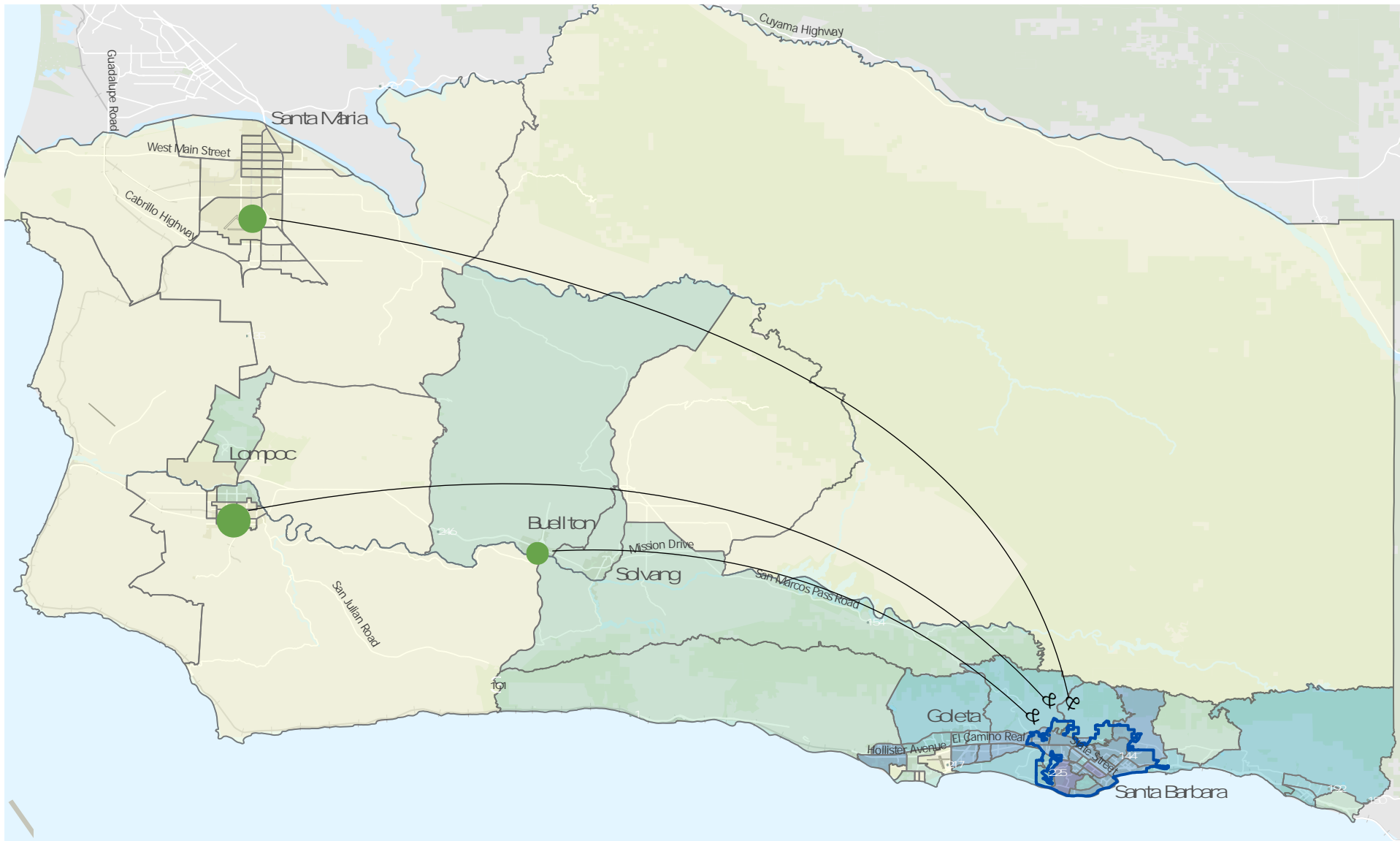
Based on the Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES) from 2015 and 2018 Clean Air Express ridership, shown above, the bus service 'market capture' of people commuting to Goleta and Santa Barbara ranges from an estimated 2% to 8%. The estimated transit market capture for this commuter population is relatively strong; for example, California's statewide average transit commute population, which predominantly reflects use of local transit rather than longer distance express services, was 5% of all commuters in 2017.

The following maps illustrate Clean Air Express morning boardings in relation to the major destinations: Goleta (Figure 1) Santa Barbara (Figure 2). The Census tracts are shaded according to the percentage of Goleta or Santa Barbara employees who live in those tracts. Most employees live in tracts close to either community. Note that the tract containing Buellton is relatively large, but likely most of the residents working in Goleta or Santa Barbara live closer to the Clean Air Express stop than on the outskirts.



Colors indicate percentage of people working in Goleta (including primary jobs only), who live in Santa Barbara County, by Census Tract. LE-D Origin-Destination Employment Statistics (LODES) 2015

Figure 1
Goleta-Bound Customer Origins and Home Locations



Colors indicate percentage of people working in Santa Barbara (including primary jobs only), who live in Santa Barbara County, by Census Tract. LEHD Origin-Destination Employment Statistics (LODES) 2015

Figure 2
 Santa Barbara-Bound Customer Origins and Home Locations



How Clean Air Express Ridership Compares to Driving

Like most places, the majority of commuters in this travel market drive alone to work most of the time. Table 2 shows American Community Survey (ACS) Journey to Work travel mode data for the home locations. A relatively high proportion of Santa Maria and Lompoc residents carpool, but public transit use is 4% or less from each community.

Table 2 Commute Mode of Clean Air Express Communities

Commute Mode	Home Locations			
	Santa Maria	Lompoc	Buellton	Solvang
Drive Alone	70%	73%	88%	82%
Carpool	25%	18%	8%	7%
Public Transit	2%	4%	1%	1%
Walk	2%	3%	3%	11%
Bike	1%	1%	1%	0%
Other	1%	1%	0%	0%

Source: American Community Survey (ACS) 2016

In 2018, the Clean Air Express carried an average of 360 individuals a day from the home communities. That accounts for approximately 6% of the estimated 5,700 employees commuting from the home locations to Goleta or Santa Barbara. The ACS "Journey to Work" survey estimates Santa Barbara countywide transit use for commuting is 4%, and the statewide average is 5.2%.

We can also compare the number of Clean Air Express riders during the morning commute with the amount of traffic along the two highways between the home and work communities, US-101 and CA-154. Clean Air Express buses are traveling along these highways roughly between 5:45 and 7:15AM. To best compare to people driving to work, we include data up to 8:00AM because drivers can leave home later and arrive at work at the same time as the bus (particularly for workplaces that are later in the route).

Table 3 shows that about 3,000 vehicles are traveling towards Santa Barbara from the North County area along US-101 and CA-154 between 6:00 and 8:00AM. Vehicle counts vary, as data from the *Central Coast Origin Destination Survey (Fehr & Peers 2016)* and Caltrans show. Assuming most of these vehicles are single-occupant commuters, Clean Air Express riders could account for up to 10% of the total commuters in the corridor during the peak two-hour commute period. The period from 5:00AM to 9:00AM represents most of the typical commute hours, and the total volume during this period is roughly 6,000 vehicles, which is similar to the estimate of about 5,700 employees coming from the home communities to Goleta and Santa Barbara.

Table 3 Peak Period Passenger Vehicle Counts On US-101 and CA-154

Time	US-101 Southbound			CA-154 Westbound		
	Caltrans PeMS ¹	Fehr & Peers ATR Counts ²	Fehr & Peers ALPR Counts ³	Caltrans PeMS (N/A)	Fehr & Peers ATR Counts ²	Fehr & Peers ALPR Counts ³
5:00AM	684	493	491	-	149	139
6:00AM	1,001	1,144	927	-	350	258
7:00AM	999	1,367	1,114	-	471	519
8:00AM	808	966	927	-	412	520
9:00AM	696	711	673	-	320	396
Peak 6-8AM Total	2,000	2,510	2,041	-	821	777
Total (5-10AM)	4,188	4,680	4,131	-	1,702	1,831

Source:

¹ Caltrans Performance Monitoring System data from January 2019 <http://pems.dot.ca.gov/>

² Automated Traffic Recorder (ATR) counts collected in May 2015 for the Central Coast Origin-Destination Survey (Fehr & Peers 2016)

³ Automated License Plate Recognition Counts (ALPR) collected in 2015 for the same study

The Service Performance Evaluation chapter provides a more detailed assessment of the Clean Air Express ridership, performance, and comparable operations. The service successfully carries hundreds of individuals each day and represents a substantial share of the commute market during the peak commute period. However, thousands of North County residents make the same commute who are not riding the bus, suggesting there are opportunities to expand Clean Air Express market share and ridership.

Employers and Industries

Santa Barbara and Goleta together form a major regional employment center with tens of thousands of jobs. The Clean Air Express directly serves many of the major employers in the region, and some of the larger employers also represent a significant proportion of riders. Table 4 combines data from the California Employment Development Department and the Goleta Chamber of Commerce to illustrate some of the larger employers in the current service area. The table also shows the transit benefits provided by the employers based on information available to SBCAG.

The Clean Air Express periodically surveys riders on customer satisfaction and demographic or other information to understand who is riding and why. This survey was conducted in 2010, 2014, and 2018 and the data informed the analysis throughout this report. Many Clean Air Express riders voluntarily identified their workplace in the 2018 survey. The figures on the following pages illustrate the employers identified by Clean Air Express riders in the 2018 survey in proportion to the number of responses, and their location in relation to the service's bus stops. Figure 3 shows Goleta destinations, and Figure 4 shows Santa Barbara destinations. The bus stops are shown as black dots; the employers are shown as purple dots, with the size of the dot corresponding to the proportion of riders who identified that employer. UCSB and Raytheon are among the largest dots on the map.

The maps also show the job density in the area by Census block group (the smallest available data geography). Ridership corresponds very closely with job density (block groups with darker blue to violet coloring on the map). Although the job density per square mile is lower in Goleta, there are more jobs and therefore more riders and service there. In Downtown Santa Barbara, there is a greater density of jobs and likely a wider variety of employment types. Downtown Santa Barbara is easier to serve a large number of jobs with fewer stops because of the density and walkability from any transit stop.

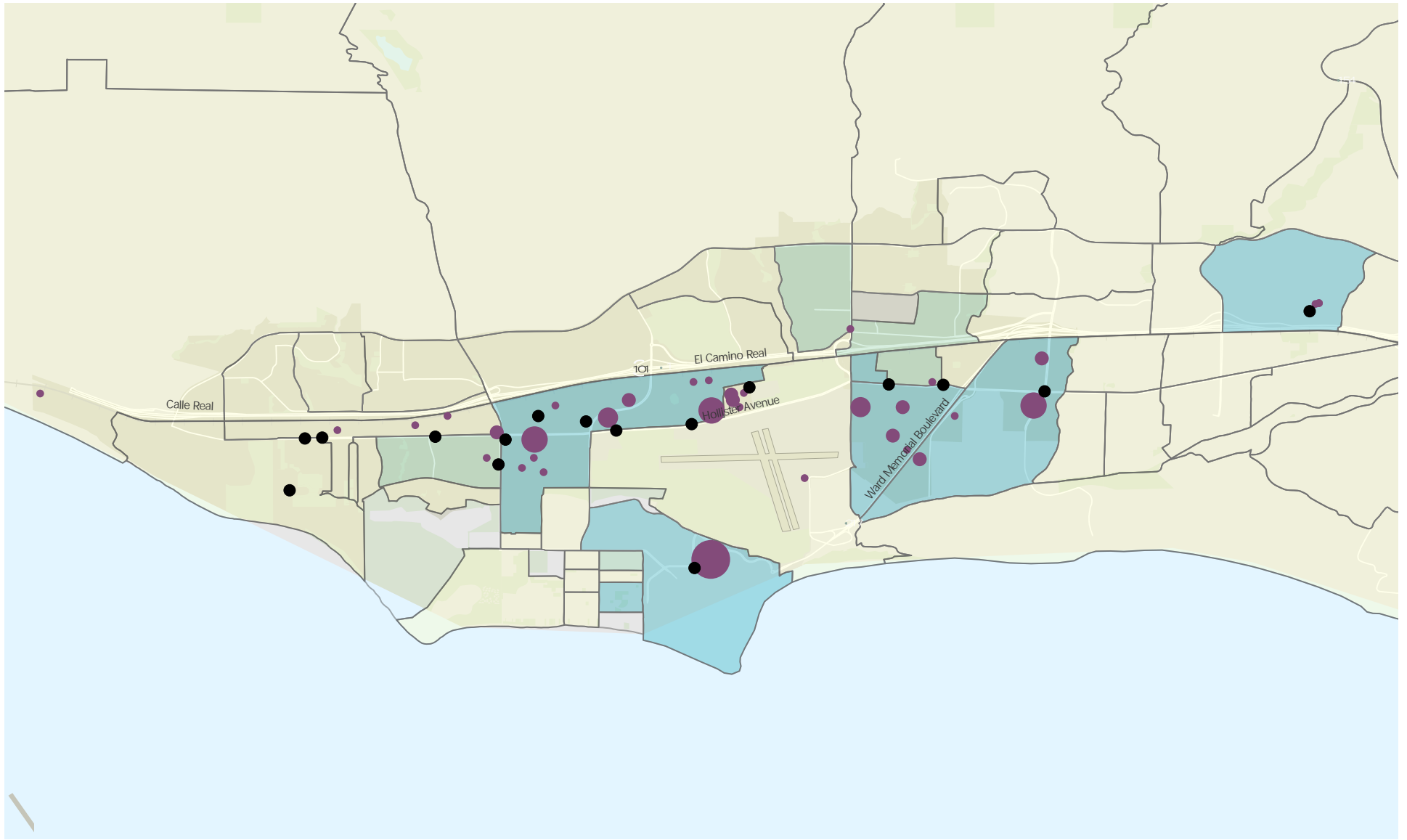
Table 4 Sample Large Employers in the Service Area

Company	Work Location	Employees	Industry	Provides Transit Benefit (if known)
Bacara Resort and Spa	Goleta	600	Traveler Accommodation	100% Transit subsidy
Citrix Online	Goleta	600	Software Publishers	
Deckers Brands	Goleta	470	Support Services	\$1 per sustainable trip or \$2/roundtrip. Gift certificates to Amazon.
Devereux Foundation	Goleta	500	Elementary and Secondary Schools	
Four Seasons	Santa Barbara	500	Hotels	
Goleta Union School District	Goleta	560	Elementary and Secondary Schools	
Jordano's	Goleta	560	Wholesalers	
Mission Linen Supply Inc	Santa Barbara	1,000	Linen Supply	
Pacific Diagnostics Lab	Goleta	500	Research and Development in Biotechnology	

Company	Work Location	Employees	Industry	Provides Transit Benefit (if known)
University of California, Santa Barbara	Goleta	6,270	Colleges and Universities	\$21/month; pretax deduction
Raytheon	Goleta	1,150	Industrial/Technology	50% transit subsidy pretax transit benefit
Sansum Clinic	Santa Barbara/Goleta	1,020	General Medical and Surgical Hospitals	50% transit subsidy
Santa Barbara City College	Santa Barbara	1,000	Junior Colleges	\$2 per day (round trip) of sustainable transportation used.
Santa Barbara Cottage Hospital	Santa Barbara	1,000	Hospitals	Parking cashout for employees who use alternative transportation at least 80% of their scheduled workdays per month. \$75 for full time employees, \$37.50 for part-time employees.
City of Santa Barbara	Santa Barbara	1,700	Government	75% subsidy for commuter bus passes
Santa Barbara County	Santa Barbara	3,000	Government	
Tecolote Research	Goleta	570	Research and Development	
Yardi Systems	Goleta	530	Software Publishers	50% transit subsidy for monthly passes only.

Sources:

<https://goletachamber.com/community/community-profile/major-employers/>
<https://www.labormarketinfo.edd.ca.gov/majorer/countymajorer.asp?CountyCode=000083>
 SBCAG



● CAE Bus Stops Riders per Employment Location, 2018 Survey Jobs per Square Mile by Block Group

- 1
- 2
- 4
- 8
- 16

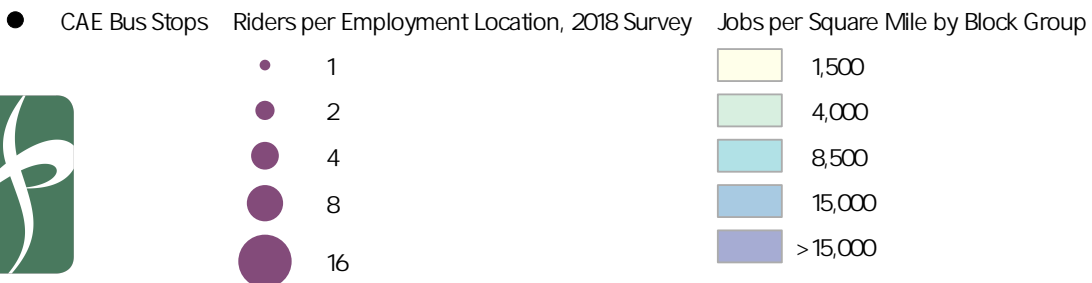
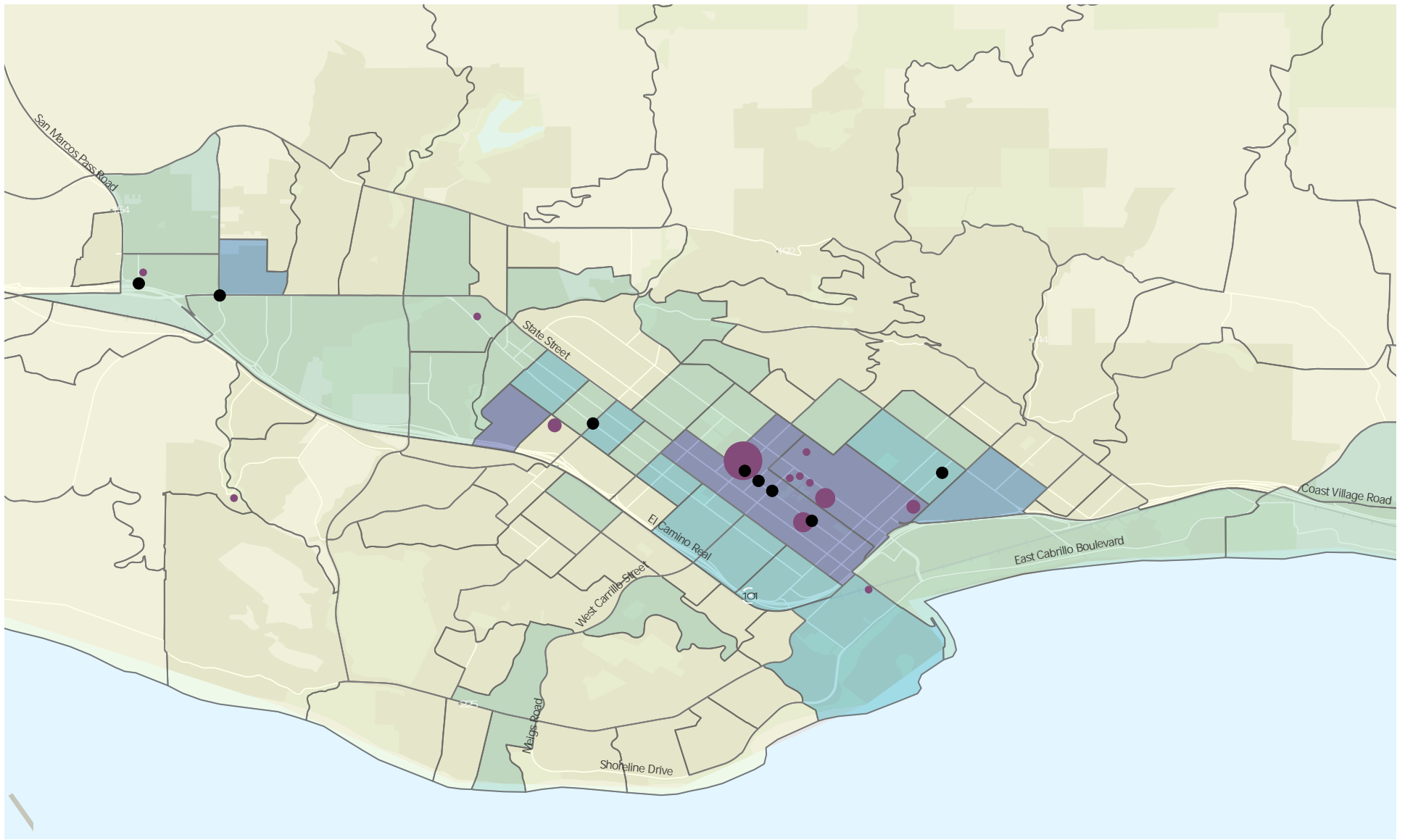
- 1,500
- 4,000
- 8,500
- 15,000
- > 15,000

LEHD Origin-Destination Employment Statistics (LODES)
2015 (includes all job types and primary jobs only)



Figure 3

Customer Destinations: Goleta



LEHD Origin-Destination Employment Statistics (LODES)
2015 (includes all job types and primary jobs only)

Figure 4

Customer Destinations: Santa Barbara



Reasons for Riding

In a 2017 survey of City and County of Santa Barbara employees, 8% of respondents said they take public transit, and 38% of those respondents ride the Clean Air Express, representing at least 47 individual riders. City and County employees who ride the Clean Air Express most commonly cited saving money and avoiding the stress of driving as their primary reason for riding; a smaller group also noted that employer subsidy programs were a main factor. To the extent that there may be more City or County employees living in the home communities who are not riding, this represents an area of potential ridership growth. The primary reasons for riding also suggest opportunities to market the convenience, cost-savings and comfort to commuters who currently drive alone. The Clean Air Express rider survey results from 2010-2018 support this as well. While the response rate for Clean Air Express rider surveys has typically been high (roughly 40-60% of riders depending on the year), the responses are not necessarily representative of all populations that use the service, but rather are suggestive of overarching trends among riders. In particular, where responses for certain trips are low, the survey could over- or under-represent customers who work at a particular employer.

Clean Air Express riders surveyed in 2018 were asked if their employer contributed towards the cost of their bus fare; 55 out of 124 respondents stated 'Yes'. In many cases, different respondents identified the same employer as either providing, or not providing, a transit benefit, which could suggest a lack of awareness of the benefit programs or differing eligibility for employees. Five employers stood out at the top of the list for providing transit subsidy to employees: UCSB, Raytheon, the City of Santa Barbara, the County of Santa Barbara, and Cottage Health. Many other employers also contribute to transit fares, as well. This group represents a potential conduit for increasing the market capture of commuters.

For non-riders that drive alone, 42% stated that their employers do not provide any commuter benefits, while 27% of them have their employers pay for part of the cost of transit or carpooling. For those that carpool or infrequently take transit, 50% of respondents stated that their employers pay for part of the cost of transit or carpooling and while 13% of them said their employers do not provide any commuter benefits. This implies that employer transit benefit influences mode choice for non-riders.

Regional Job Growth

Between 2009 and 2018, the U.S. Bureau of Labor Statistics estimates that employment in the Santa Maria-Santa Barbara metropolitan statistical area grew by about 15%. Localized data at the City or Census-Designated Place (CDP) level are available from LODES only for 2010 and 2015. A brief survey of data by community show that growth was not evenly distributed. Jobs in Goleta grew substantially, while jobs in the City of Santa Barbara job grew at the County average rate, and jobs declined at Vandenberg Air Force Base.

Table 5 Regional Job Growth 2010-2015

	2010 Jobs	2015 Jobs	Change
City of Santa Barbara	44,438	47,919	8%
Goleta	15,641	18,917	21%
Santa Maria	34,134	38,398	12%
Vandenberg AFB	2,329	1,452	-38%
Lompoc	7,299	7,994	10%
Countywide	150,619	164,429	9%

Source: LODES 2010 and 2015

More recent jobs data by city would better illustrate how employment availability in Goleta and Santa Barbara might relate to Clean Air Express ridership. Ridership most recently peaked around 2013, and declined until about 2018. Meanwhile, jobs grew around the County. Since jobs grew in Goleta and Santa Barbara in this period, the decline of ridership indicates that other factors besides employment are the underlying cause. Although other factors such as low gas prices are likely contributing to ridership decline, a commuter bus service should expect to gain or maintain ridership when the job market grows. Ridership grew in 2018 from the low in 2017, but has not returned to the 2013 level. Chapter 3, Service Performance Analysis, discusses ridership trends in detail.

Who Lives in the Service Area

North Santa Barbara County and parts of South San Luis Obispo County make up a total population of over 190,000 residents and more than 50,000 households. The population of Santa Barbara County grew an estimated 7% since 2010, with moderate growth in Santa Maria and Buellton and the slowest growth in the city of Lompoc. Table 6 shows the home and work community population estimates from the 2016 ACS, and the California Department of Finance estimates of population change from 2010 to 2018².

Table 6 Population and Households in the Clean Air Express Service Area

Population Summary ¹	Home Communities				Work Communities		Santa Barbara County
	Santa Maria Area	Lompoc Area	Buellton	Solvang	Goleta	Santa Barbara	
Residents	133,800	54,300	5,000	5,600	30,700	90,900	439,400
Households	38,300	17,200	1,900	2,400	11,000	35,500	143,100
Annual Percent Change in Population ²							
2010 TO 2018	9.0%	2.8%	9.6%	6.9%	10.0%	7.2%	7.0%

Source: [1] ACS 2016
[2] CA Dept. Finance, Table 2: E-4 Population Estimates for Cities, Counties, and State
Notes: Santa Maria Area includes Orcutt, an unincorporated community.
Lompoc Area includes Vandenburg Village and AFB.

The ACS estimates that about 19% of the home location residents live below the Federal poverty line, although the proportions are substantially higher in Santa Maria and Lompoc than Buellton and Solvang. Households without a car make up 7-8% of all households for Santa Maria and Lompoc, and only 3% of households in Buellton and Solvang. For typical *urban* transit, low-income households and those without cars are key demographics, but these qualities are somewhat less predictive for intercity commuter bus ridership. For example, of Clean Air Express riders responding to the 2018 survey, 71% had access to a car despite using the bus as their primary means of commuting. Riders surveyed in 2010 who volunteered their individual income (not directly comparable to household income measured in the Census) were most likely to range between \$25,000 and \$65,000, with 27% of riders earning more than \$65,000. Wages are likely to have risen since the 2010 rider survey; ACS data shows the median income for Santa Barbara County grew 13% between 2010 (\$60,000) and 2017 (\$68,000).

² ACS data provides population estimates for cities and census-designated places, which allow more detailed estimation for the home community areas that include unincorporated areas. At the time of the study, 2016 was the most recently-available data. CADF provides population change estimates through 2018, but do not provide detailed data for unincorporated communities like Orcutt

People between the working ages of 20 and 65 represent the core demographic for a commuter bus service. Table 7 shows the population by age range for the home communities. About 57% of the home communities' populations are working-age, although Buellton and Solvang have slightly older populations. Santa Maria and Guadalupe in particular have high proportions of people younger than 20, which suggests that in the future, there is a greater potential to gather new riders from Santa Maria and Lompoc, and potentially declining ridership from Buellton and Solvang. In 2018, Buellton and Solvang represented less than 10% of Clean Air Express ridership, and there has been no meaningful change in this proportion since 2013.

Table 7 Clean Air Express Home Communities Population by Age Range

Age Ranges	Santa Maria	Lompoc	Buellton	Solvang
People Younger than 20 years	35,756	12,710	1,220	1,122
People between 20 and 65	57,832	26,382	2,917	3,015
People Older than 65 years	10,261	4,586	884	1,416
Share People Younger than 20 years	34%	29%	24%	20%
Share People between 20 and 65	56%	60%	58%	54%
Share People Older than 65 years	10%	11%	18%	26%

Source: ACS 2016

Most riders are between 21 and 60, according to past rider surveys. As Figure 5 shows, the largest group are riders aged 51 to 60, suggesting that a substantial share of current riders are closer to retirement age than early in their career and could eventually lead to declining ridership. Considering the relatively young home communities, there is great potential to improve market share, especially among the under-40 population of commuters.

Clean Air Express data show that average daily ridership in 2018 is down substantially from both the all-time high in 2008 and a similar peak in 2012. If the County population has grown approximately 1% per year since 2010, but transit ridership is declining, then Clean Air Express is serving a decreasing proportion of the population. However, considering the age range of the service's riders in comparison with the service area demographics, Clean Air Express is not yet capturing what appears to be a growing population of young people.

Figure 5 Age Range of Clean Air Express Riders, from Rider Surveys

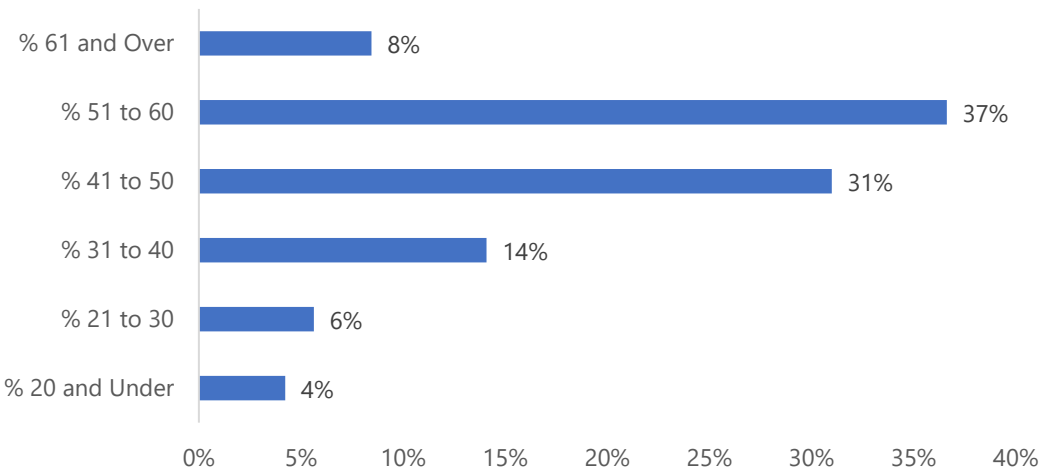
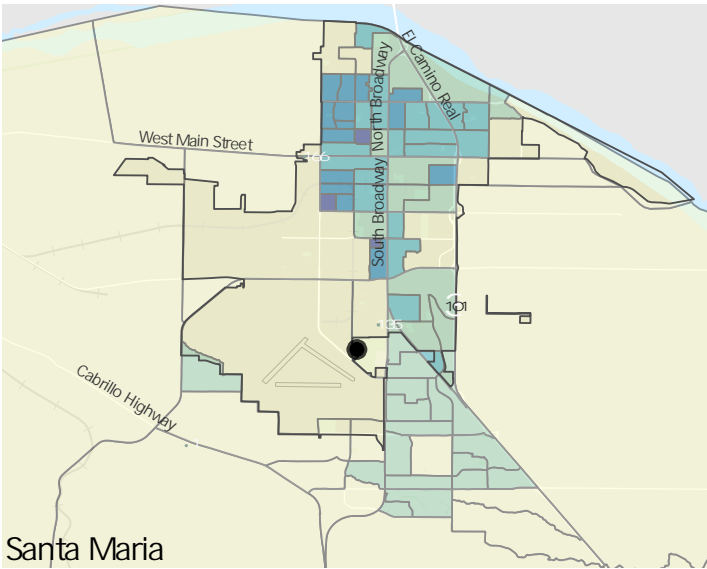
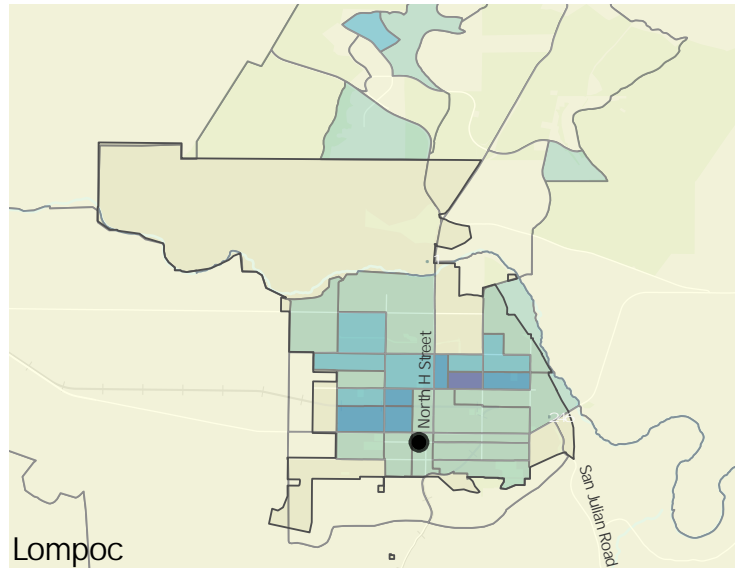


Figure 6 maps the working-age population density for the communities in the Clean Air Express service area. Being relatively small and low-density communities, Buellton and Solvang are mostly shaded in the lowest category.

Notably, in Santa Maria most of the dense areas of working age people are relatively far north of the pick-up location. Those commuters are much more likely to be getting in their cars to get to the bus stop than commuters from Lompoc, some of whom live close enough to walk or bike to the stop. Although the current service design with a single park & ride pickup has worked for many years, it may be worth considering a trial to add limited on-street pickup stops in the core of Santa Maria to capture commuters who are uninterested in taking the bus once they've already gotten in their cars. Such a trial would slightly lengthen the overall run time of the bus but would not affect riders who continue to board at the Hagermann Field park & ride.



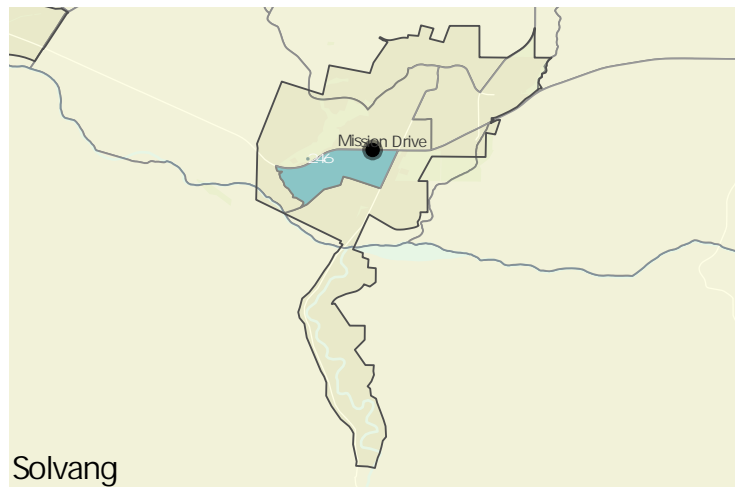
Santa Maria



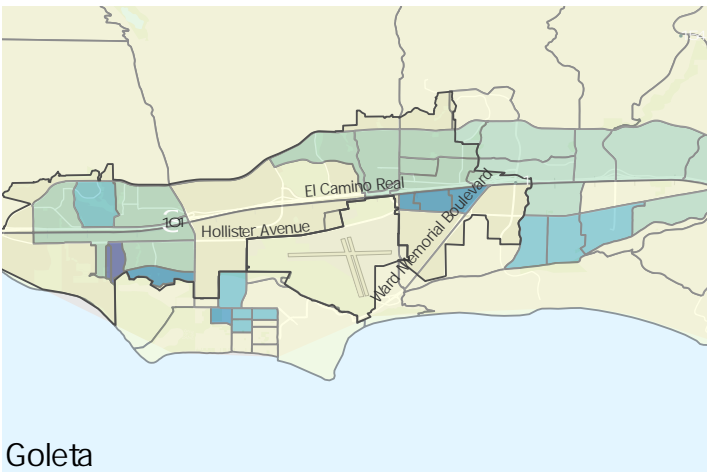
Lompoc



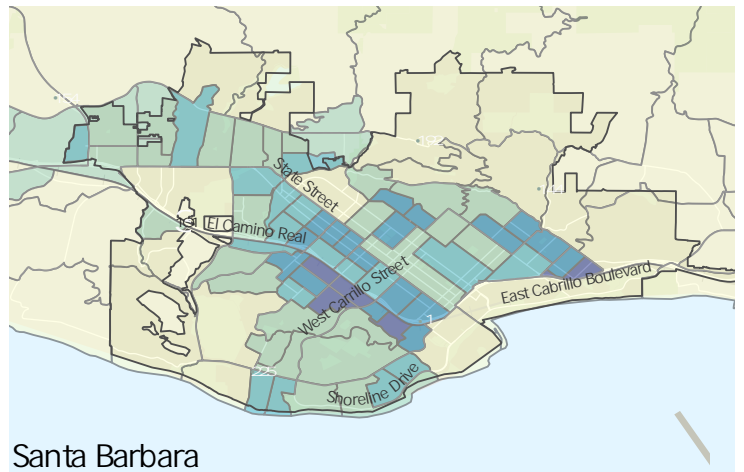
Buellton



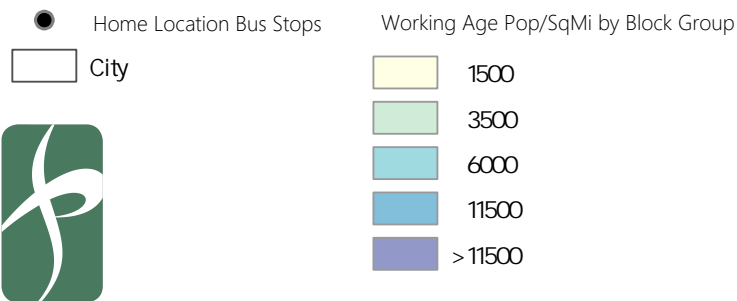
Solvang



Goleta



Santa Barbara



Includes people age 25 to 64
American Community Survey (ACS) 2016 5-year Estimates

Figure 6

Working Age Population Density

Areas and Connections Not Served by Clean Air Express

Up to this point, the travel market analysis has focused on the travel patterns and communities directly served by Clean Air Express – the North County cities commuting on weekdays to Goleta and Santa Barbara. This section briefly reviews the other travel markets in the region, some of which could represent productive future service expansions and others which would not likely be productive.

North County Transit Network

With six public transit agencies operating ten branded transit services in the County and two additional intercounty services operating regional transit service between adjacent counties, a range of transit options are available to residents of the region. However, transit services vary in availability and may not extend into the region’s most isolated areas. This summary includes a brief description of existing transit services available in the Santa Barbara County area to effectively identify gaps in the region’s transit coverage. Table 8 shows the various operators in the region, arranged by the origin and destination of service (intra-community services are in the center from upper-left to lower-right). The Clean Air Express service connections are shown in bold. Gaps, where no public transit service could be identified, are highlighted in blue.

Table 8 North County Transit Connections

Origins	Destinations ->								
	Buellton	Goleta	Guadalupe	Lompoc	Los Alamos	Orcutt	Santa Barbara	Santa Maria	Solvang
Buellton	SYVT	CAE		WCE	Breeze		CAE	Breeze	SYVT WCE Breeze
Goleta	CAE	MTD		CAE			MTD	CAE	CAE
Guadalupe			Guadalupe Shuttle					Guadalupe Flyer	
Lompoc	WCE	CAE		COLT		Breeze	CAE SB Shuttle	Breeze	WCE
Los Alamos	Breeze							Breeze	Breeze
Orcutt				Breeze		SMAT		SMAT Breeze	
Santa Barbara	CAE	MTD		CAE SB Shuttle			MTD	CAE Greyhound	
Santa Maria	Breeze	CAE	Guadalupe Flyer	Breeze	Breeze	SMAT Breeze	CAE Greyhound	SMAT	Breeze WCE
Solvang	SYVT WCE Breeze	CAE		WCE	Breeze			Breeze	SYVT

 = existing transit service gap

Santa Barbara Metropolitan Transit District (MTD) provides the County's most robust local transit services. The Clean Air Express and the Coastal Express (operated in partnership with the Ventura County Transportation Commission) provide most of the region's long-distance commuter bus service, connecting to job centers in the Santa Barbara and Goleta areas. The Breeze provides service between Santa Maria, Lompoc, Vandenberg Air Force Base, and the Santa Ynez Valley, while the Wine County Express operates between Lompoc, Buellton, and Solvang. Paratransit and "Dial-A-Ride" services are available throughout the region for residents with mobility challenges.

Service Gaps

As shown in the transit service matrix, there are gaps in service between some communities. Generally, these are some of the smallest in the region. Although many of these communities are connected with each other by various transit services, the inter-city services provided by Clean Air Express and others typically stand apart from local service in terms of schedule times. People who live in neighboring communities must rely on other means to reach intercity routes that only pick up in the home communities.

Filling intercity service gaps in North County is not expected to be a productive service expansion for the Clean Air Express. Relative to the cities of Santa Barbara and Goleta, both population and employment densities are low in the home communities, with small pockets of employment density, primarily in Santa Maria. Making additional intercity connections would only be a feasible opportunity where a route stops in two communities on a single run. An example of this is one trip between Santa Maria and Santa Barbara, which has a second pick-up stop in Buellton. There is a pattern of at least one customer using this scheduled run in the morning and afternoon to commute from Santa Maria to Buellton.

Notably, there is only a single Clean Air Express trip departing for Goleta from Solvang, and no direct service from Solvang to Santa Barbara. According to the Census data presented earlier in the chapter, over 200 Solvang residents work in Santa Barbara; this is more than those who work in Goleta, and may represent a potentially under-served market. Under the current service design, a potential rider from Solvang to Santa Barbara would have to drive out-of-direction to catch the bus in Buellton.

Another market consideration is direct service to UCSB. Presently, only one Clean Air Express trip serves UCSB, (to/from Lompoc), in addition to several UCSB-administered vanpools that connect the University to North Santa Barbara County. Although the Clean Air Express trip to UCSB makes a limited number of other stops in Goleta, the ridership data (discussed in detail in the Service Performance Analysis chapter) suggest that the UCSB market could support that trip. There is no direct UCSB-bound service from Santa Maria or the Santa Ynez Valley, although a connection allows Santa Maria riders to transfer to the Lompoc-UCSB bus on Hollister Ave. The potential for increased service to UCSB, which offers a modest commuter benefit for employees, can be considered either for additional trips from Lompoc or new service from Santa Maria. A study of common work schedules at UCSB and a more detailed employment-home location analysis is needed.

Reverse Commute Market

Another possible service would be 'reverse commute', where buses operate service aligned for commuters traveling from the Goleta and Santa Barbara area towards North County. Based employment density, the most likely candidate would be service towards Santa Maria. The Census data estimate that approximately 380 residents of Santa Barbara and 170 Goleta residents commute to primary jobs in Santa Maria. This

market is a small fraction of the 5,100 employees commuting in the existing service direction, but is comparable in number to the population of commuters from Solvang or Buellton to Goleta.

Other Potential Opportunities

Two other possible services to consider are weekday mid-day service and weekend service. A mid-day service consideration is driven primarily by operations, because the buses are generally parked out-of-service in the Goleta and Santa Barbara area between the morning and afternoon peak hours. At this point, no substantial travel market has been identified that could be served during the mid-day. In terms of employment, rider surveys and the City/County employee survey suggest that the vast majority of employees work a regular weekday schedule roughly between 7:30 or 8:00AM and 5:00PM.

Weekend service is likely to be a very different customer market than primarily commuters. The Clean Air Express piloted a limited Saturday service between Santa Barbara and the Santa Ynez Valley in 2016 and 2017, but the service was discontinued due to low demand. Further study would be required to identify potential weekend travel markets and would likely require a mix of trip purposes other than work, and possibly significantly different service hours than the weekday runs.

The non-rider survey also suggests a service gap in terms of the span of service along the current routes. At least 28% of drive-alone respondents within the target market (non-riders who are employed full-time with the same schedule and job location on most days) typically arrive at work from 8:30AM to 9:00AM. However, all Clean Air Express trips have arrived at their last stop by approximately 8:00AM. Likewise, 28% of drive-alone respondents leave their work between 5:30PM to 6:00PM. All trips begin their afternoon departures between 3:30PM and 5:00PM, meaning there is no round-trip service for roughly one-quarter of the target market that begins and ends work later than the current schedule supports. Not only is this a potentially significant number of potential riders for a later round trip, but adding later service could provide a back-up option for other interested riders who may not use Clean Air Express because they are worried about missing the bus if they are at work later than 5:00PM. Particularly in the morning, the ability for potential customers to drop children off at school or childcare between 6:45-7:15AM and still be able to use the Clean Air Express has been expressed repeatedly to SBCAG staff since the agency began administering the service. Currently the latest departures from Lompoc are at 6:40/6:45AM and from Santa Maria at 6:30/6:35AM, which prevents many potential customers from using the service who have young children.

Most respondents in the non-rider survey have never taken transit or considered it (81%). Concerns about flexibility for when they leave home and/or work constitute as their utmost reason for not using transit (25%). Other concerns include a need to use personal car for errands/activities (18%) and transit would take too much time (16%). Respondents who used to use transit, but do not anymore listed flexibility (25%) and need for personal vehicles as their priority concerns (25%). Based on these findings, further discussion will be needed to develop a plan to improve the flexibility and service time of the Clean Air Express.

Travel Markets Summary and Conclusions

The Clean Air Express serves a small, but well-defined market of employees commuting from North Santa Barbara County communities to Goleta and Santa Barbara. The Clean Air Express carries approximately 360 individuals on average, representing about 6% of the total commuter market, and even higher for the peak period during when the buses are actually running. Service is aligned to serve the largest populations of commuters, with most trips departing from Lompoc, where there are more commuters traveling to Goleta and Santa Barbara than from Santa Maria. However, Santa Maria has twice the population of Lompoc and the Clean Air Express service is capturing a smaller portion of southbound commuters there (about 6%, compared to 8% from Lompoc). Likewise, the service is carrying 4% or fewer of commuters from the Santa Ynez Valley communities.

These findings suggest that there is an opportunity to continue building ridership from Santa Maria and the Santa Ynez Valley cities. Furthermore, Santa Maria is a relatively young city with modest population growth, meaning there is potential to attract early-career professionals commuting south. Demographic analysis of Santa Maria suggests that marketing and testing limited local street pickups in the center of the city, where working age population density is high, might attract new riders who could simply walk a block or two to catch the bus.

Another market opportunity includes increased utilization from employers who provide transit benefits. The City and County governments have shown to be employers with relatively high transit commuting, and lessons can be learned from their benefits programs, administration, and marketing. There is also potential for gaining new riders from employers who provide transit benefits but have relatively few employees currently riding the Clean Air Express. This would require more SBCAG staff outreach and research, although staffing resources are not currently available for this.

Finally, the greatest potential for a service expansion appears to be in adding later departures to/from Lompoc and Santa Maria. Survey and employment data suggest that the Clean Air Express is missing a potentially significant population of workers who work a 9:00AM to 5:00PM schedule for whom the current schedule would get them to work too early and a return trip that leaves sooner than they are ready. Adding a later run would not only expand opportunities for people working a slightly later schedule, but also add some flexibility for current riders or people who might work late and choose not to take the bus because they are afraid of getting “stuck” if they miss the current last bus. A later run could be developed with limited stops based on targeted market research with specific employers. A trial could initially save resources by serving both downtown Santa Barbara and Goleta on a single route. This service could be supported by the addition of vehicles to the Clean Air Express fleet anticipated as part of an asset transfer from AVTA in FY19/20. Later chapters describe this in more detail.

The Clean Air Express is not likely to fill many other transit roles outside of its core market of southbound commuter service. There are some intercity transit gaps between smaller communities, and most of the larger communities do not have bi-directional transit service, but the population and jobs markets do not seem large enough to generate sufficient ridership. Beyond the importance of drawing enough regular passengers to justify a trip, operating round-trip service during the day would be a significant operational change for the Clean Air Express.

3. Outreach and Engagement

The Clean Air Express has succeeded for more than three decades in attracting a strong base of daily riders, a handful of whom have been using the service since it began in 1989. The service relies heavily on word-of-mouth to attract new customers, and primarily on driver-customer interaction to inform customers. A periodic rider survey helps understand who the riders are, the customer satisfaction on a number of service aspects, and any wants or needs identified by customers.

Following the Travel Markets Analysis, this chapter studies existing customers further and compares them with non-rider and bus operator (driver) perceptions. Customer data together with operating performance data demonstrates the perceived value of the service and can direct administrative attention where it is needed to maintain and increase customer satisfaction. These data should also be the foundation for marketing the service to attract new riders.

Figure 7 Average Years Riding Clean Air Express

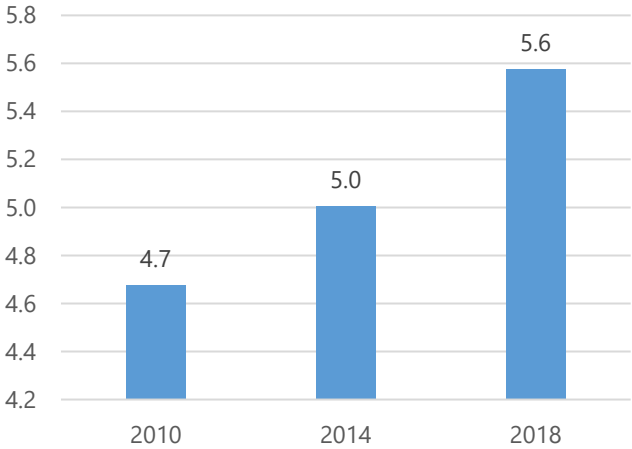
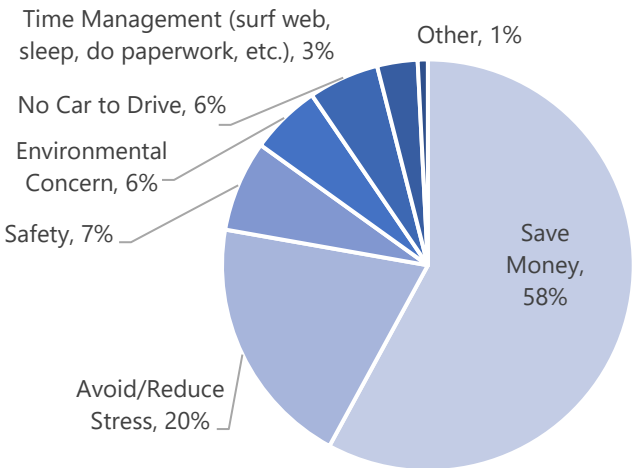


Figure 8 Reasons for Riding



Understanding Clean Air Express Customers

The Clean Air Express conducts periodic customer surveys, most recently in 2010, 2014, and 2018. These surveys have been consistent in format and content for the most part, allowing time-series evaluation of conditions like passenger comfort or perceived value of the service.

Clean Air Express riders are loyal to the service, demonstrated by Figure 7, showing average years with the service increasing since 2010. As discussed earlier, Clean Air Express riders are also aging with the service. Customer loyalty is a strong quality and selling point of the service.

Customers are attracted to the Clean Air Express primarily because of the value proposition the service offers, and secondarily because riding the bus is less stressful than driving. These motivators have not changed meaningfully from each of the three surveys from 2010 through 2018.

Figure 8 shows that affordability is an important selling point for the service, particularly because only about half of riders receive an employer subsidy for their pass, according to the rider surveys. As an example,

using the IRS mileage reimbursement rate of 58 cents per mile, commuting between Santa Maria and Goleta four days a week would cost a commuter driving alone \$1,188 per month, while a Clean Air Express unlimited monthly pass is currently \$150. Even after reducing this amount by perceived sunk vehicle costs of insurance and financing, traveling to work on the Clean Air Express can save a commuter thousands of dollars every year.

Non-Rider Surveys

SBCAG conducted an online survey as part of the SRTP in early 2019, intended for people who primarily do *not* use transit to get to work. Facebook promotions solicited survey responses, targeting Facebook users who live or work within the service area of the Clean Air Express. The survey was intentionally described as a “commuter survey” rather than relating to any bus service, to improve capture of non-riders who might have ignored a transit-themed survey. The survey was also available through a link on the Clean Air Express website and emailed out through SBCAG’s Traffic Solutions commuter program.

The survey received 230 responses from the Central Coast and Southern California. Respondents could voluntarily provide their home ZIP code, from which about 54% of all respondents were coming from home communities in the service area, as shown in Table 9. The majority of other respondents lived in other areas of Santa Barbara County, particularly near Santa Barbara and Goleta.

Within this group, about 60% could be categorized as the ‘target market’ for a service like Clean Air Express: they are employed full-time who live in or near the ‘home’ communities and work essentially the same schedule every day. More than half of this group drives alone, about 20% carpool and about 17% use transit (including, but not necessarily limited to, the Clean Air Express).

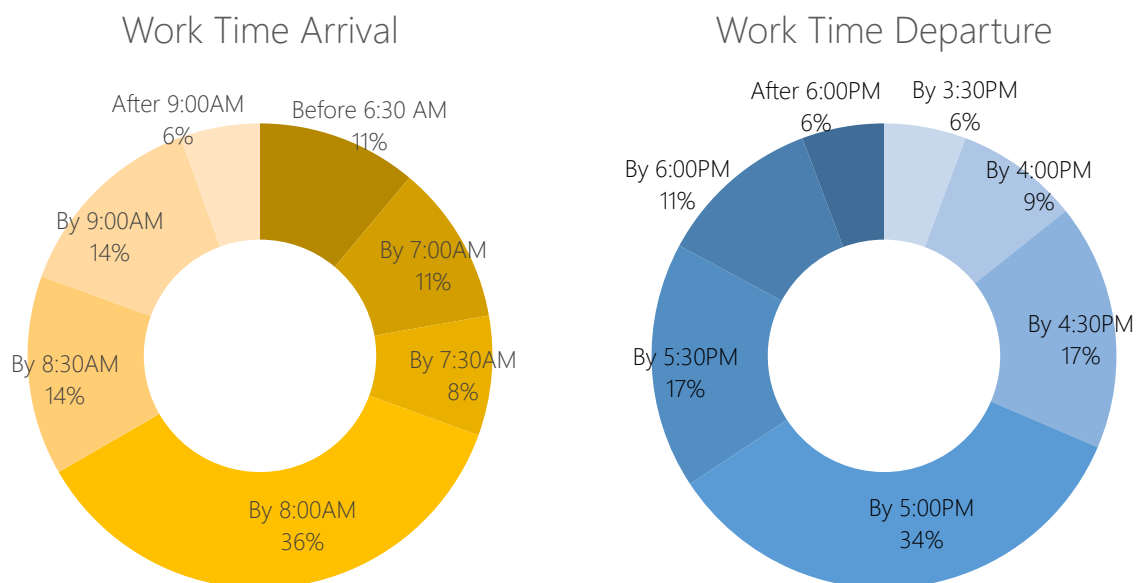
Table 9 Home ZIP of Non-Rider Survey Respondents

Zip Codes	City	Count	Living in ‘Home’ Area
93436	Lompoc	53	44%
93455	Santa Maria/Orcutt	24	20%
93427	Buellton	19	16%
93463	Solvang	6	5%
93458	Santa Maria	4	3%
93449	Pismo Beach	2	2%
93420	Arroyo Grande	2	2%
93454	Santa Maria	8	7%
93460	Santa Ynez / Los Olivos	1	1%
93440	Los Alamos	1	1%
93402	Los Osos	1	1%

Of the respondents who drive alone, Figure 9 shows that more than half might be able to use the current bus schedule to get to work, based on when they said they typically arrive at work. However, another 28% said they typically arrive by 8:30 or 9:00AM – later than the current bus schedules. Relatively few people arrive later than 9:00AM.

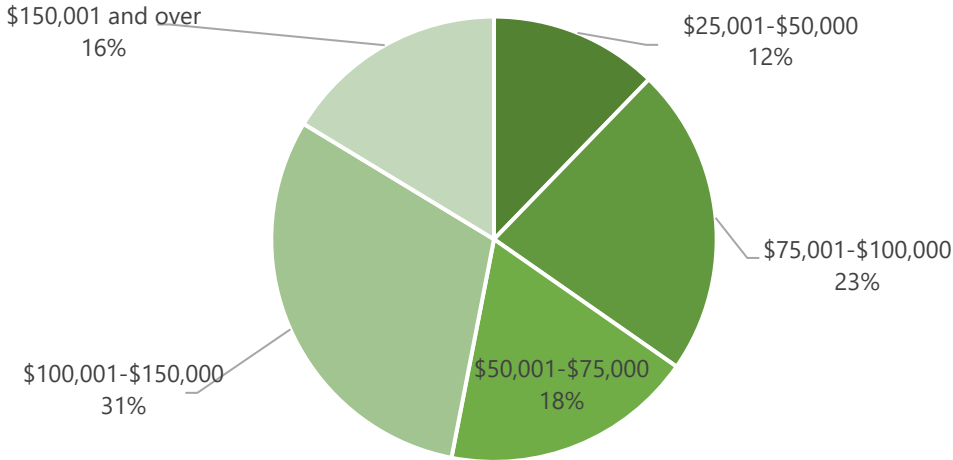
The same target market of currently driving commuters by and largely leave work by 5:00PM – within the current bus schedule – but again, 28% depart within the hour after the last Clean Air Express bus. As noted in Chapter 2 (Travel Markets), having a later departure would not only open up service to new riders, but might also support existing riders better who are sometimes at work late, and would do the same for non-riders who typically leave by 5:00PM but don't take the bus for fear of missing the last trip.

Figure 9 Solo Driver Work Arrival and Departure Times of "Target Market" Non-Riders



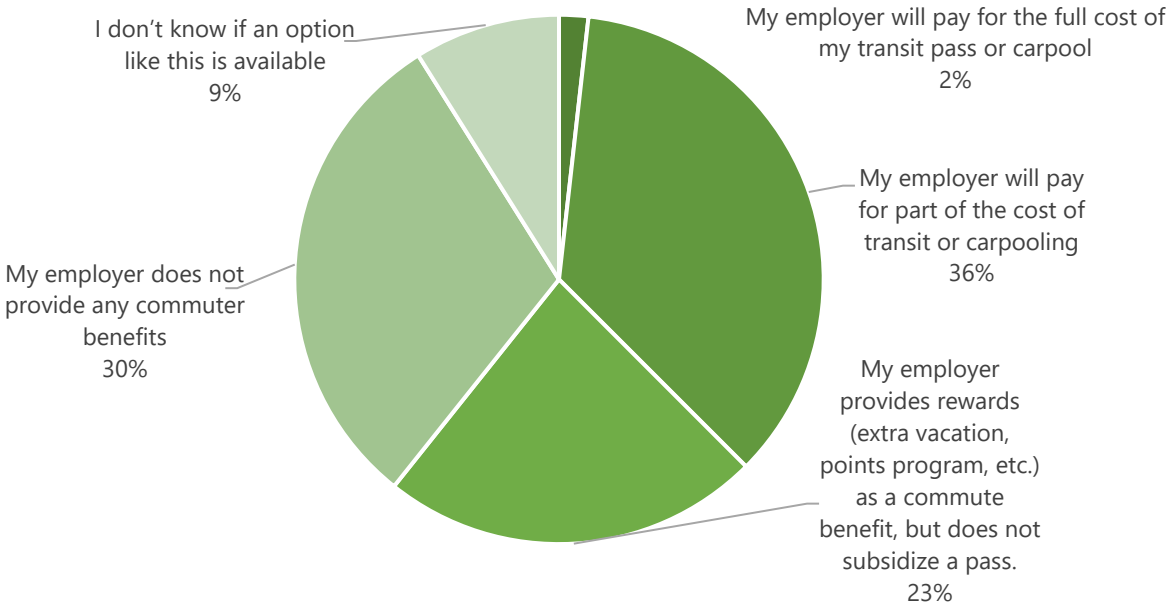
The value of the service is likely to be a strong selling point for the target market of non-riders, just as it is one of the main reasons current riders use the Clean Air Express. Figure 10 shows that for more than half of respondents fitting the target market, annual household income was less than \$75,000. The Clean Air Express last surveyed riders about individual (not household) annual income in 2010, so the data is not immediately comparable, but 70% of respondents at the time reported earning less than \$65,000.

Figure 10 Household Income of "Target Market" Non-Riders



Many people who fit the target market of non-riders also have some level of employer-provided transit benefit available to them. Figure 11 shows that over a third of respondents either do not receive commuter benefits, or don't know if any are available.

Figure 11 Employer Transit Benefits among "Target Market" Non-Riders



County and City Employee Survey

In early 2019, SBCAG worked with the City of Santa Barbara and the County to conduct a survey of County and City employees to gather better data on commute patterns and gauge interest in alternative commute programs. The results of this survey informed the design of the countywide non-rider survey. Many of the questions were similar: what is your usual work schedule, primary mode of commuting, how long have you been commuting that way, why do you choose to do that, have you tried using alternative modes?

City and County employees were largely similar to the general population of non-riders surveyed countywide. The vast majority drive alone, with about 8% using transit regularly. Most respondents have been using the same mode for many years.

Within the County and City survey, about 7% of respondents (102 employees) fall within the 'target market' category for a service like Clean Air Express: they live in or near the 'home' communities, work in Goleta/Santa Barbara, and have essentially the same schedule every day (either with a compressed work week, or a fixed 8-hour day). Of those, 44% of respondents reported primarily driving alone to work (45 individuals), while 27% reported primarily taking the bus (28 respondents)³.

Figure 12 shows that most non-riders who work for the City or the County arrive to work within the window of Clean Air Express morning service. However, 82% of employees arrive to work typically by 8:00AM, which is a much higher proportion than the response from the general countywide non-rider survey. In the evenings, a higher proportion of commuters leave work later than current Clean Air Express riders: 66% of Santa Barbara City and County employees depart work at or after 5:00PM.

³ Individuals who reported both driving alone and taking the bus as their primary modes of commuting were excluded from the analysis. This accounted for a removal of 4 responses.

Figure 12 Arrival and Departure Times of City and County Employee Survey Respondents

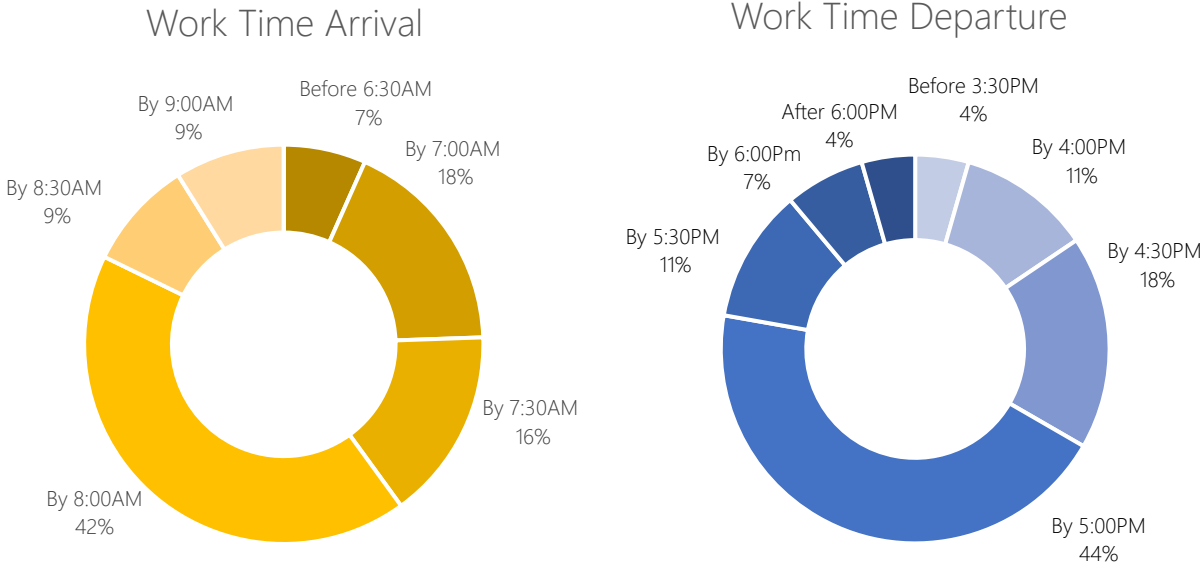
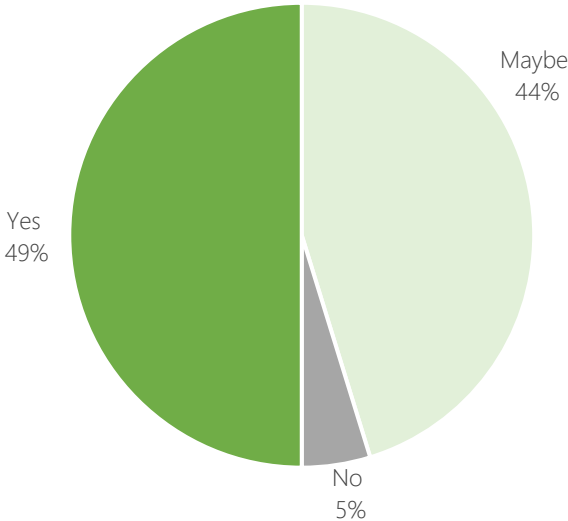


Figure 13 City/County Employee Willingness to Use 'Sustainable Transportation' if Provided Incentives



When asked if they had previously tried an alternative commute, but do not anymore, some respondents specifically cited the inflexible hours of the Clean Air Express—how the departure and arrival hours did not align with their schedules, and the limited number of arrival and departure times. There is appetite for alternative commutes, as Figure 13 shows: 95% of target market solo drivers are willing to consider sustainable transportation if their employer (City or County) offered suitable incentive programs and support.

Operator Engagement

The bus operators who drive Clean Air Express vehicles provided feedback and input for the SRTTP through interviews in the spring of 2019. Operator years of experience with the Clean Air Express is relatively high – some have been driving the service for only a few years, but many have been driving since the early 2000s and at least one operator has been with the service 27 years – nearly from the start. Most, if not all, of the operators hold a different job during the day, where they work between morning arrivals and afternoon departures. Most operators generally operate the same trip each day and have for years, although some of the longer-tenure operators have been on many of the routes over time.

Discussions with the operators were relatively free-flowing to allow the participants to speak freely about whatever came to mind. A discussion guide was developed to help prompt dialogue if needed or to keep interviewees on the subject at hand.

1. *Intro* – why are we doing this project; tell us about yourself (how long driving Clean Air Express, regular route, etc.)
2. *Operational perspective* – tell me about challenging spots on the route, service reliability issues, operation concerns, parking your bus during the day, signage
3. *Quality of service and passenger comfort* –What do you observe/hear from passengers about the quality of service delivery, comfort on the bus, complaints etc.
4. *Passenger turnover and ridership trends* – from your perspective, what’s happened to ridership over the past few years? Are you seeing fewer riders, and if so, are people riding less often or a few people simply not riding at all? Tell me about the types of riders you’re seeing more or less of these days
5. *New customers* – what happens when new customers come on board – do you see new or occasional riders try the service out? Are they sticking around?
6. *Changes you’d want to make to the service* – your own suggestions, things you’ve heard passengers request, additional stops to make or stops to remove, amenities on the bus or at the parking lots, etc.

Generally, the operators had positive feedback for many of these subjects, some customer feedback that they hear frequently, and some suggestions of their own throughout.

Operations

Operators had relatively few comments on the operation of the service itself. There are few challenges with routing or concerns about turns or on-time performance. Operators suggested a few changes to stops served on particular trips that might improve connections or on-bus time for passengers without disrupting service availability.

- In the afternoons, serve State at La Cumbre, Calle Real, and the County Campus using Route 106 rather than Route 104. By shifting these stops served from Route 104 to 106,
 - People boarding from the County Campus would get on the bus slightly later than 5:00PM
 - Those riders would get home likely around the same time; Route 104 and 106 arrive in Lompoc at 6:30PM and 6:20PM, respectively

- This would be much less time on board the bus for people from the County Campus who are currently boarding at 5:00PM on Route 104; by shifting them to the end of Route 106, they would spend about 20 minutes less on board the bus
- It might help to improve on-time performance for Route 104 without substantially affecting Route 106
- In the afternoons, Route 203 could pick up at the State at La Cumbre and Calle Real stops, which are currently only served by Route 202 at 4:25PM. This would add a post-4:30PM trip at those stops without significantly disrupting Route 203

The Santa Barbara trips require some daytime layover parking near the end of the route in Santa Barbara. Although the current options are generally working for the operators, a better permanent solution is desired.

Quality of Service and Passenger Comfort

Consistent with feedback from current customers, the operators stated the most common complaint they receive is about the quality of WiFi service provided on board. To avoid additional costs the system has a limit of 15 simultaneous connections, while the demand for WiFi can easily exceed this number.

Otherwise, the buses are generally clean and in good condition with few passenger complaints, according to the operators.

One operator noted that printed schedules for customers have not been regularly available on the buses for some time. Having printed information available on board would be helpful in welcoming and orienting new customers.

Passenger Turnover and Ridership

The operators perceive that ridership is heavily influenced by gas prices (ridership decreases as gas prices decrease), and also affected substantially by shift changes and job availability around the Goleta office parks. Some operators noted that many regulars have retired over the years, and there are still a few riders who have been using the service since the service began. At least one operator commented that it's possible a few riders have switched to carpooling. Generally these findings are supported by the Travel Markets analysis; carpooling is a relatively high percentage of commuting in this region, and ridership changes do appear to coincide somewhat with gas prices.

Regarding new riders and rider retention, operators had few comments. Most riders are regular customers and there are some occasional riders, or 'transients' passing through the region.

Other Suggested Changes to the Service

In addition to the operational changes suggested above, operators consistently spoke of the requests from passengers to add a later return trip from Goleta and Santa Barbara. This is consistent with data from rider surveys since 2010 and supported by the travel markets analysis.

Planning for Future Public Engagement

Public outreach is an important strategy for attracting and retaining customers. The Clean Air Express has occasionally surveyed its own riders over the last decade, and has only once in recent history conducted a comprehensive countywide survey of non-riders. These surveys generate key data for understanding how the service is performing, what could be improved, and how these things have changed over time.

A strong internet and social media presence has also become a key strategy for many agencies, service providers and businesses. People across all age groups now rely on searchable information online and through their phones. The Clean Air Express has a basic webpage and a minimal Facebook presence, but is not currently searchable through Google Transit or any other app that uses the General Transit Feed Specification (GTFS). Publishing a GTFS feed is effectively an industry standard today. In most navigation apps, transit trip results appear by default even when searching for driving directions – but only if a GTFS feed for the service exists. For many people, finding transit directions through navigation apps reduces the barrier to trying transit. For people searching Clean Air Express online, figuring out routes, pickup locations and schedules requires more digging than necessary.

Social media has emerged as a way to stay in contact with customers, receive feedback, and potentially reach out to new customers. Agencies often share information about service changes, special events, promotions, and customer 'testimonial' type stories, which are then shared by supportive and appreciative customers to their social media connections. It is this network of connections that helps increase exposure about an agency's service and what interesting things they are doing. Providing regular, fresh content is important for building a following and engaging new social media connections, but this need not be daily – even a few times a month would be beneficial.

Finally, traditional marketing through print ads, mailers, direct outreach to employers, and in-person presentations remain highly valuable tools. Some particularly effective activities include having a Clean Air Express representative present at local job fairs or employer events, to greet people, answer questions, and offer promotions to entice new riders. Having promotional passes ready to hand to someone willing to try the service for the first time reduces the cost barrier for that potential customer and costs Clean Air Express nothing, assuming there are empty seats on the bus. If possible, design promotional passes to be collected by the drivers and tallied separately in fare data. This turns the promotion into a data point to measure its effectiveness – how long does it take from distributing the pass to someone using it, and what route did they ride? Studying data like this will improve the approach for future promotions.

Staffing for Marketing as a Ridership Growth Strategy

With very limited staffing since SBCAG began managing the Clean Air Express in 2001, targeted and ongoing marketing campaigns have generally not been possible. Limited staff resources have focused on operations, contract management, and funding issues. However, structured advertising and proactive marketing efforts will become increasingly important to maintain and build ridership in the future, as the current Clean Air Express customer base approaches retirement. Particularly in light of declining ridership as both jobs and population have grown in the service area, considerable staff time should be allocated to employer outreach and marketing efforts. Doing so would require a dedicated full-time equivalent staff person.

4. Service Performance Evaluation

This chapter details the operations of the Clean Air Express in terms of service provided, ridership, capacity, and service productivity. This section paints a picture of how the Clean Air Express is successful in serving its customers and where there is room to build ridership or potentially reconsider the service being provided.

In general, Clean Air Express has provided consistent and high-quality service on the same series of routes since 2003, when SBCAG procured new buses and expanded service, with high ratings from customers on driver safety and professionalism and on-time performance. The last significant addition to service was the Solvang/Buellton trip in 2011, when the MTD Valley Express service was terminated. Despite that, ridership has dipped in recent years, in some cases significantly, after a post-recession peak around 2012-2013. With the aid of tables, graphs, and charts, this chapter explores how the changes in ridership differ among origin and destination pairs, and concludes with an examination of rider survey responses that could explain some of the 'internal' factors (within Clean Air Express' control) for why some customers may have stopped using the service.

Clean Air Express Service and Schedules

Table 10 Clean Air Express Trips

Home Community	Destination	Round Trips
Lompoc	Goleta/UCSB	5
	Santa Barbara	2
Santa Maria	Goleta	3
	Santa Barbara	2
Buellton	Santa Barbara	1*
Solvang/Buellton	Goleta	1
* Originates in Santa Maria		
<i>Total</i>		<i>13</i>

The Clean Air Express operates thirteen weekday round-trips, seven originating from Lompoc, five from Santa Maria, and one from Solvang. The majority of trips serve business parks along Hollister Avenue in the City of Goleta. One trip, from Lompoc, serves UCSB directly. Four trips serve downtown Santa Barbara: two from Lompoc, and two from Santa Maria. One trip from Santa Maria to Santa Barbara includes an additional pick-up (and afternoon drop-off) in Buellton. Eleven of the thirteen trips serve a single park and ride location, while one trip from Santa Maria and the single departure from Solvang also serve the Buellton park and ride facility on Avenue of Flags. According to rider surveys, about 75% of Clean Air Express riders drive alone and park in the lot to catch the bus, and about 10% of riders live close enough to walk to the stop. Most of the remaining riders are dropped off by a family member or friend at the stop, or bike to it.

For historical context, the service has periodically been expanded since 2004, when there were only five trips from Lompoc and three from Santa Maria. Following the procurement and delivery of seven new coaches in 2003, a sixth Lompoc trip and fourth Santa Maria trip began operation in 2004. In 2005, the fifth Santa Maria trip began and in 2008 in response to demand, including frequent standees, a seventh trip from Lompoc began. The most recent addition to the service, the Buellton-Solvang round trip, began operating in 2011, after the MTD Valley Express service was terminated. A pilot service providing a single Saturday round trip operated in 2016 and 2017, but was terminated due to low ridership.

Schedules, Routes and Revenue Hours

Each run is identified by a route number, which is used only internally for scheduling, reporting, and are used in this report as well, but are not customer-facing. For Clean Air Express administration, a “route” and a round-trip are effectively synonymous – Route 101 is a single round-trip from Lompoc to Goleta, Route 201 is a single round-trip from Santa Maria to Goleta, and so on. However, passengers are unaware of these distinctions and ride the departure in either direction that best suits them. Table 11 shows the services grouped by origin-destination, in order of departure for the AM trips.

Table 11 Clean Air Express Morning Departures

Route	Origin	AM Departure	Destination	Last Destination Stop	Revenue Service Hours
101	Lompoc	5:30 AM	Goleta	6:40 AM	1:10
102	Lompoc	6:00 AM	Goleta	7:23 AM	1:23
107	Lompoc	6:20 AM	Goleta	7:26 AM	1:06
103	Lompoc	6:25 AM	Goleta-UCSB	7:38 AM	1:13
104	Lompoc	6:40 AM	Goleta	8:00 AM	1:20
201	Santa Maria	5:15 AM	Goleta	6:28 AM	1:13
202	Santa Maria	6:00 AM	Goleta	7:40 AM	1:40
205	Santa Maria	6:30 AM	Goleta	8:06 AM	1:36
301	Svang/Buellton	6:15 AM	Goleta	7:26 AM	1:11
105	Lompoc	6:00 AM	Santa Barbara	7:08 AM	1:08
106	Lompoc	6:45 AM	Santa Barbara	7:51 AM	1:06
203	Santa Maria/Buellton*	5:40 AM*	Santa Barbara	7:15 AM	1:35
204	Santa Maria	6:35 AM	Santa Barbara	8:00 AM	1:25

**Run 203 makes an additional pick-up stop in Buellton at 6:15AM*

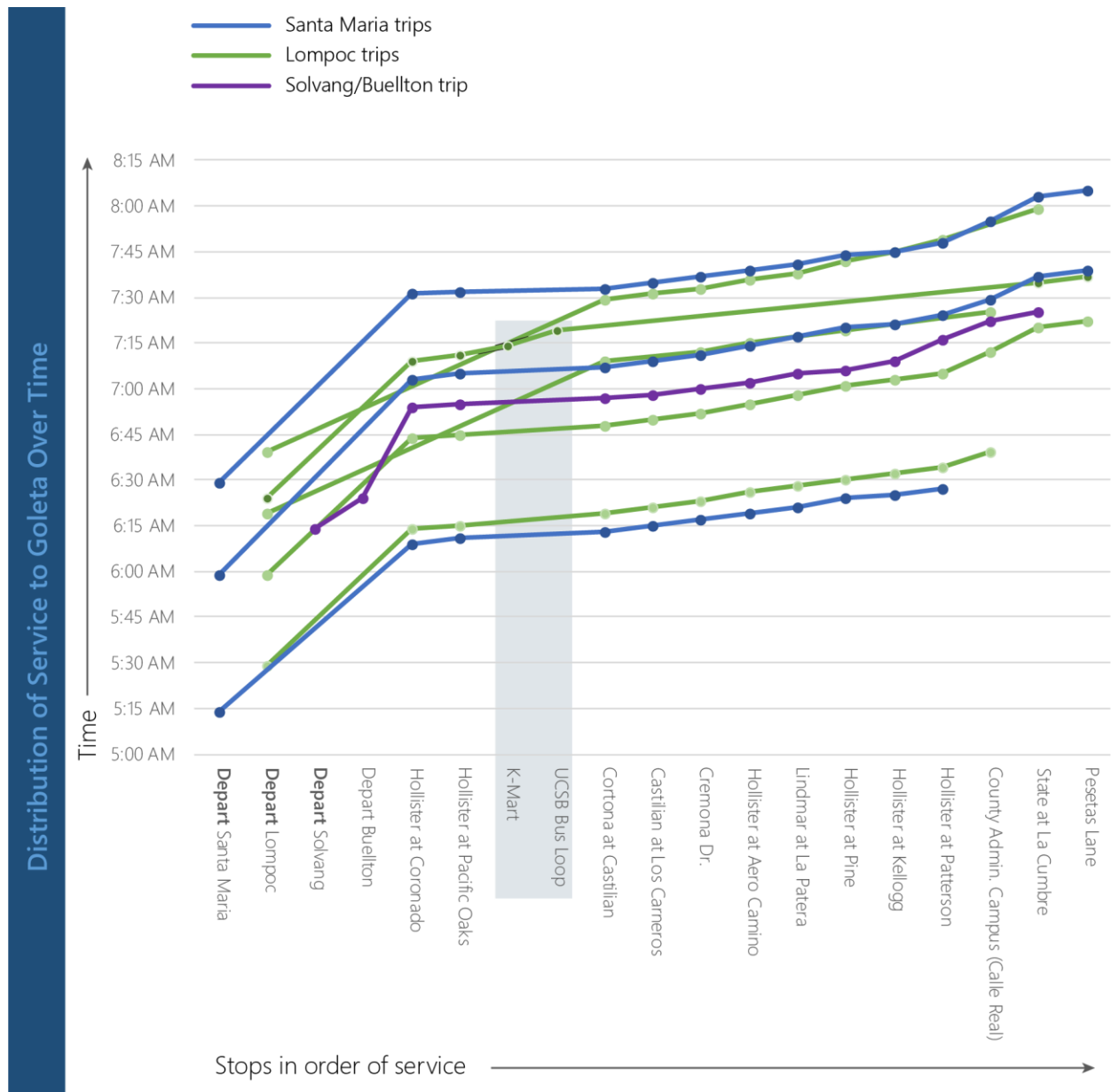
As shown in the table above, the total travel time for each run varies slightly depending on the stops served. The travel time variance is generally because certain trips skip stops, especially route 107⁴. The Santa Barbara trips serve a much smaller geography with a consistent set of stops, therefore able to travel further from the home communities, but complete their run in less time overall than the Goleta routes.

⁴ This route primarily skips stops due to California Air Resources Board requirements as part of its original implementation.

Time Distribution of Service

Another way to visualize the service is using a stringline graph, shown by Figure 14. The graph shows each route from its starting location and time near the top, and progress downwards through the stops and across in time. The graph helps visualize the variation in travel time and arrival times at the destinations for Goleta-bound routes (including the UCSB trip. The dots indicate a stop served on a trip, and if a trip skips stops (such as route 107), no dot is shown on the line.

Figure 14 Distribution of Morning Trips to Goleta



The stringline graph above demonstrates how the arrival times in Goleta vary by which community a rider is traveling from – green lines represent Lompoc trips, blue represent Santa Maria trips, and the purple line is the Solvang and Buellton run. Generally, a Lompoc and a Santa Maria run arrive in Goleta at similar times; a pair arrives around 6:15AM, another around 7:15AM, and a final pair around 7:30AM-7:45AM. Some additional trips from Lompoc give riders more choices for arrivals at work, with a trip arriving between 6:45AM-7:00AM, and the UCSB-serving trip at 7:20AM. Note that the UCSB trip from Lompoc arrives at Hollister/Pacific Oaks only a few minutes after the Santa Maria bus. This makes a connection to UCSB possible for Santa Maria riders, and is the only place and time in the Clean Air Express network where the service has been designed so that riders can transfer from one Clean Air Express trip to another.

Service to Santa Barbara is more limited than to Goleta, with arrivals from Lompoc and Santa Maria roughly corresponding within a few minutes of one another. Direct service from Solvang is not provided, although interested riders could drive to Buellton and park there.

Table 12 shows the afternoon departure schedule. Returning trips in the afternoon generally follow the opposite service pattern of the morning, and due to traffic congestion travel times are slightly longer than their morning counterparts. Only relevant for internal operations, Route 203 provides an additional pick-up in Buellton in the morning, but Route 204 serves Buellton on the afternoon trip.

Table 12 Clean Air Express Afternoon Departures

Route	Origin	Destination	PM First Departure	PM Arrival at Home Community	Revenue Service Hours
101	Goleta	Lompoc	3:39 PM	5:09 PM	1:30
107	Goleta	Lompoc	4:10 PM	5:30 PM	1:20
102	Goleta	Lompoc	4:15 PM	5:45 PM	1:30
103	Goleta-UCSB	Lompoc	4:40 PM	5:45 PM	1:05
104	Goleta	Lompoc	4:53 PM	6:30 PM	1:37
201	Goleta	Santa Maria	3:26 PM	4:55 PM	1:29
202	Goleta	Santa Maria	4:25 PM	6:07 PM	1:42
205	Goleta	Santa Maria	5:05 PM	6:30 PM	1:25
301	Goleta	Solvang/Buellton	4:34 PM	5:48 PM	1:14
105	Santa Barbara	Lompoc	4:30 PM	5:50 PM	1:20
106	Santa Barbara	Lompoc	5:00 PM	6:20 PM	1:20
203	Santa Barbara	Santa Maria	4:35 PM	6:15 PM	1:40
204	Santa Barbara	Santa Maria/Buellton*	5:08 PM	6:45 PM*	1:37

*Run 204 makes an additional drop-off stop in Buellton at 6:05PM.

Daytime Layover

During the day between the morning arrivals and the afternoon departures, drivers park the buses for layover near the terminus of their run. Many Clean Air Express bus drivers work at unrelated jobs during the day. Buses are typically parked wherever space is available that is most convenient to the driver, while some are stored at the County administrative complex near Calle Real. Goleta buses are typically stored on side streets along the Hollister corridor. Two Santa Barbara buses are able to park in downtown Santa Barbara at designated bus-only street parking. Securing dedicated daytime parking has been a priority for SBCAG since taking over the service in 2001. Although storing public transit buses on public streets is unusual and sometimes cumbersome for bus drivers, security has not been a recurring issue using this daytime storage strategy.

Maintenance and Overnight Layover

Under the current operating contract, heavy vehicle maintenance occurs at the contractor's facility in Pismo Beach, which is well outside of the service area. This requires a substantial amount of deadhead, which is the responsibility of the operator but adds to fuel costs and wear and tear on the vehicles. Periodic inspections and other light maintenance is currently conducted at a facility in Goleta leased by the contractor. The absence of a dedicated maintenance and operations facility in the Goleta-Santa Barbara area severely limits operational effectiveness and increases costs for the service.

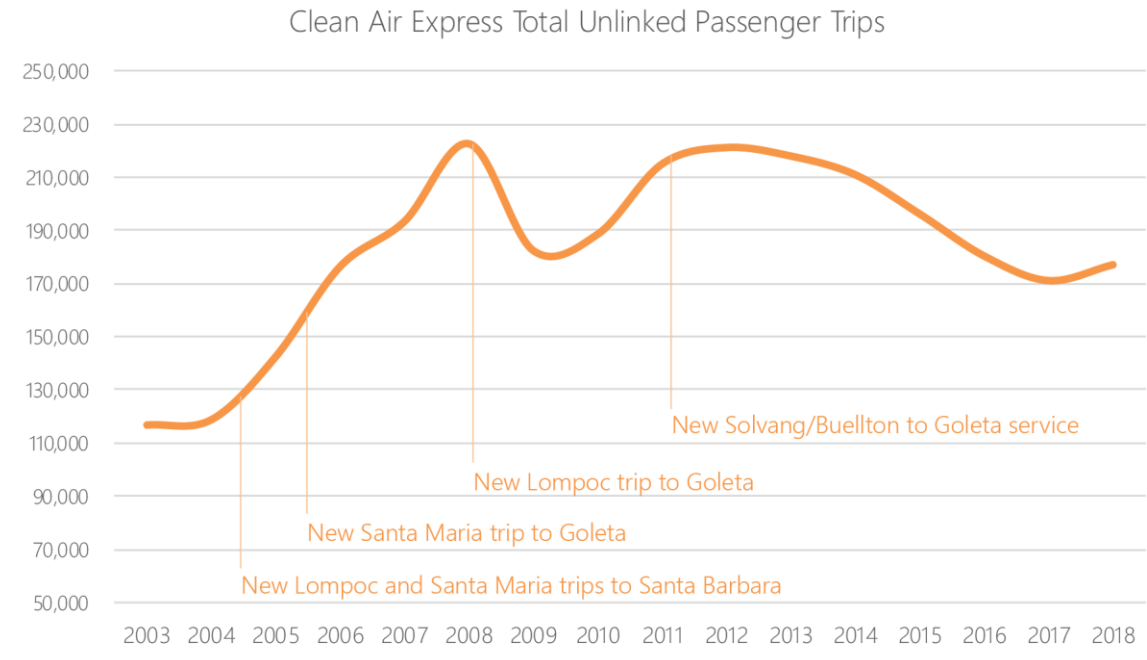
Secure overnight and weekend vehicle storage is also a high-priority, in particular in Santa Maria. The Santa Maria buses are currently stored overnight and on the weekends at Santa Barbara County's Foster Rd. property, fully open to the public over a mile south of the Santa Maria park and ride lot. Although the parking location is relatively close, the lack of security or even lighting is a significant concern. SBCAG has identified a potential site at the south end of Waller Park in Santa Maria which could be improved with a surface lot and fencing at a minimum, and has had preliminary discussions with the County about development of this site for use as a park and ride lot and secure bus storage facility.

Ridership

The Clean Air Express total annual ridership, known technically as ‘unlinked passenger trips’, was approximately 177,000 in 2018. Historical annual ridership is available back to 2003, when eight of the current thirteen routes were operating, and passenger trips totaled about 117,000 for the year. The current slate of thirteen routes had its first full year of operation in 2012 (Route 301 from Buellton and Solvang began partway through calendar year 2011). Service provided has increased 63% in total since 2003, and ridership has increased 90% in the same period, outpacing the addition of new trips because several runs in 2003 were under-utilized; ridership on those runs grew as new trips were added.

Total annual ridership has fluctuated from a high of approximately 223,000 (in 2008) to a recent low of 171,000 (in 2017). This is a decline of 23%, but total ridership in 2018 was up substantially over 2017 – illustrating ridership volatility that is typical of most transit service. Figure 15 shows the fluctuation in total ridership since 2003⁵, which indicates both increasing supply of service (especially with the addition of several Lompoc and Santa Maria trips between 2004 and 2009), and fluctuating demand around the Great Recession and recent years. Also note, despite adding an entirely new route and service area in 2011-2012, total ridership has not regained the all-time peak observed in 2008. This is despite a consistently growing economy since 2013, and increasing jobs and decreasing unemployment in Santa Barbara County.

Figure 15 Clean Air Express Total Annual Ridership since 2003



As of June 2019, average daily ridership suggests that the service is on track for a 2019 annual total ridership similar to or slightly higher than 2018.

⁵ Annual totals for years 2010, 2012, and 2013 are partially estimated where some months data were not available; the estimates use average monthly totals from around the same period.

Detailed Ridership Performance

Annual ridership totals are useful, but oversimplify the story of ridership change over time. Ridership can be influenced by outside factors such as the economy and gas prices, and also by operational factors such as changes in service availability or fares. For example, often when a new trip is added to the schedule, some passengers shift from a trip they are already riding to the new service if it fits their needs better, meaning that total ridership increases less than the amount of passengers on the new trip. In other cases, fare increases might discourage some price-sensitive riders – the following chapter on fares and financial planning explores this further. The last fare increase on the Clean Air Express was implemented in January 2009, which could contribute to the decline seen above, but also coincides with the Great Recession.

Figure 16 Car Access of Rider Survey Respondents

Gas Prices and Ridership

The price of gas can affect transit ridership, especially considering about 70% of Clean Air Express customers in 2018 had access to a car most of the time. The proportion of riders with access to a car declined in the 2018 customer survey compared to prior years. These factors suggest that the price of fuel is a stronger factor for determining Clean Air Express ridership, although determining true correlation would require more extensive statistical analysis. Figure 17 shows the average monthly ridership for the Clean Air Express superimposed over fuel prices in Santa Barbara from 2009-present. The average of each line is at the center of the chart.

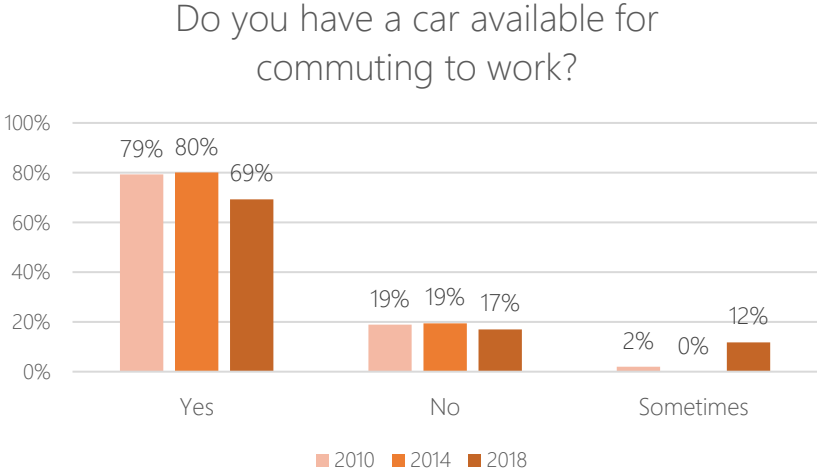
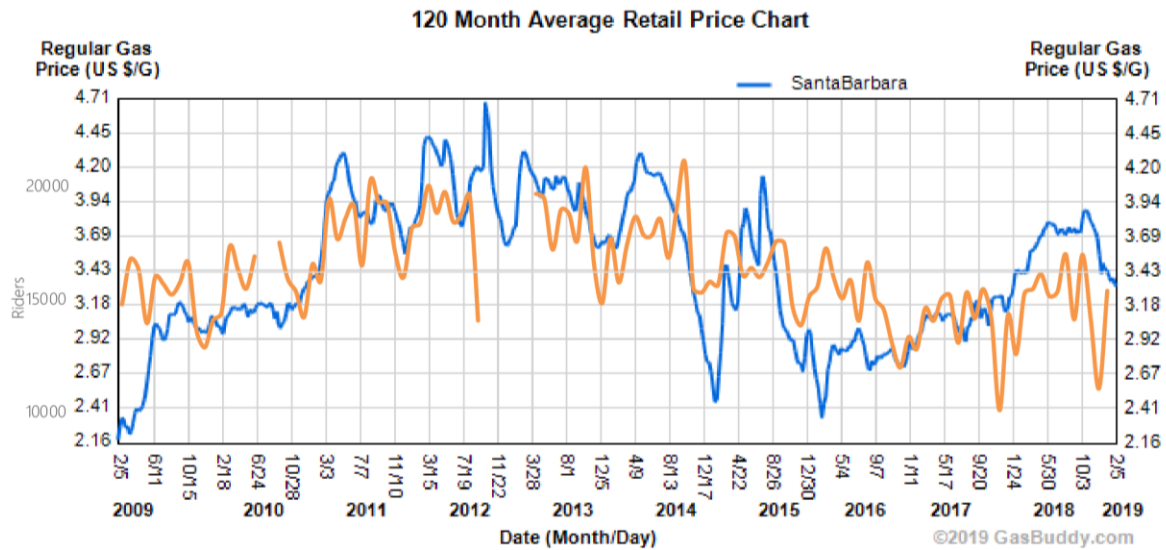


Figure 17 Clean Air Express Monthly Ridership Total Compared with Gas Prices, 2009-2019



The average of the ridership data (orange line) is plotted roughly over the average gas price (blue line). Ridership data is missing for some months in 2010, 2012 and early 2013 (shown as gaps above). Note there are regular seasonal lulls in Clean Air Express ridership in November and December.

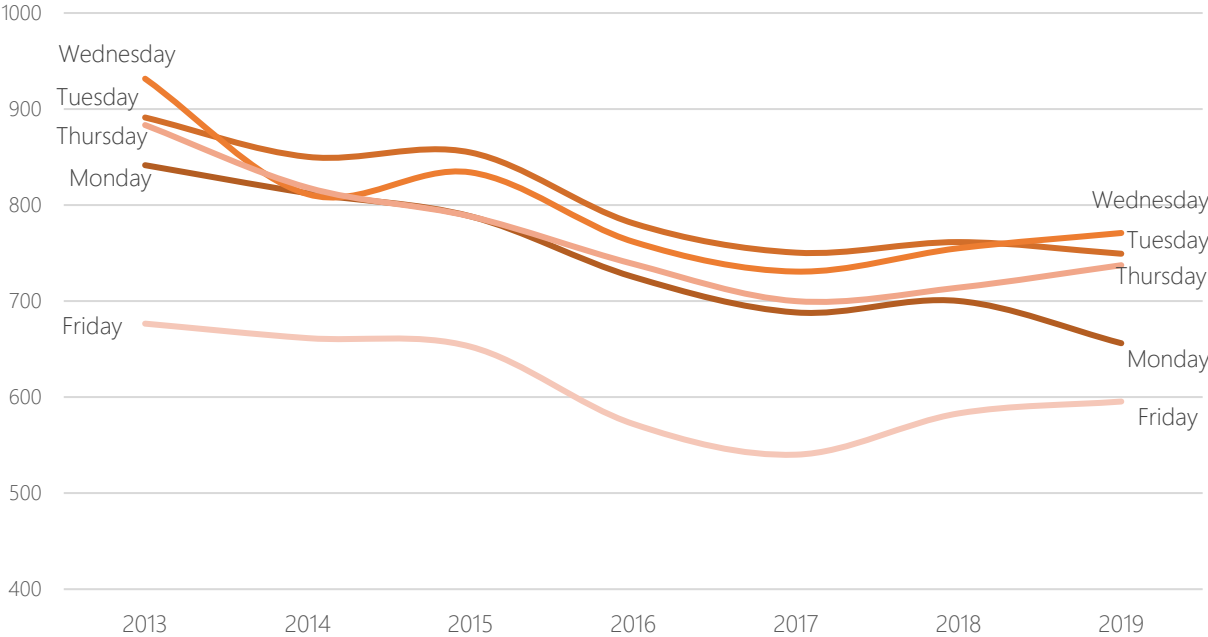
How is Ridership Decline Distributed on Clean Air Express?

Declining ridership could be some combination of individuals not riding at all, individuals riding only one direction each day when they used to ride both ways, or many individuals riding fewer days a week (for example, driving to work on Fridays instead of taking the bus). In the case of Clean Air Express, the fluctuation in average daily riders on any given route typically represents relatively few *individual* riders, assuming most customers ride both in the morning and the afternoon. For example, a decrease of 20 average daily passenger trips on Route 104 is most likely about ten individual riders who no longer ride at all.

The majority of customers are most likely riding both ways, most days of the week. Certainly, some riders take Clean Air Express one direction and have another means of making their trip – carpool, for example – in the other direction. However, rider survey responses over the past eight years and ridership data clearly indicate that most riders take the Clean Air Express both directions daily, with roughly 40% opting to drive their car instead a few times a month.

Figure 18 shows that ridership tends to be lighter on Fridays, likely reflecting both the rider responses that many drive to work up to once a week, and potentially also passengers working 4/10 or 9/80 work schedules. However, since 2013, Monday-Thursday average daily ridership has declined at a greater rate than Friday ridership, another indicator that some customers have stopped riding altogether.

Figure 18 Average Daily Ridership by Day of Week, 2013-2019 (All Routes)



Ridership Change by Origin and Destination Community

In 2013, after a strong ridership recovery from the beginning of the recession, another decline in ridership began that continued through 2017. Proportionally, the decline was relatively even from the home communities – about a 30% decrease in average daily riders from each community, although in terms of magnitude, 30% of riders from Lompoc constitutes a substantial amount of the total ridership. Figure 19 shows the trends for the home communities of Lompoc, Santa Maria, and Solvang-Buellton.

Economic conditions influence Goleta Clean Air Express ridership more than Santa Barbara service. SBCAG staff has learned from working with Goleta-based employers that winning and losing contracts can translate into significant ridership increases or decreases. As an example, a defense contractor that completes a contract and which results in the layoff of a dozen employees commuting on the Clean Air Express could translate immediately into an annual ridership loss of almost 6,000 trips, or about 3% of annual ridership.

However, in terms of destinations, the difference was somewhat more pronounced for the Santa Barbara routes, with a decrease of 37% of the average daily ridership, compared with a decline of 28% for Goleta. As Figure 20 shows, the decrease in riders was more gradual for Santa Barbara, and didn't appear to begin for Goleta routes until about 2015. Both communities regained riders in 2018, with Goleta up 21% from the prior year, and Santa Barbara up 25%. Based on the first six months of 2019 data, Goleta ridership continues to recover, but the average daily ridership to Santa Barbara is lower than 2018.

Figure 19 Average Daily Ridership by Home Community, 2013-2019

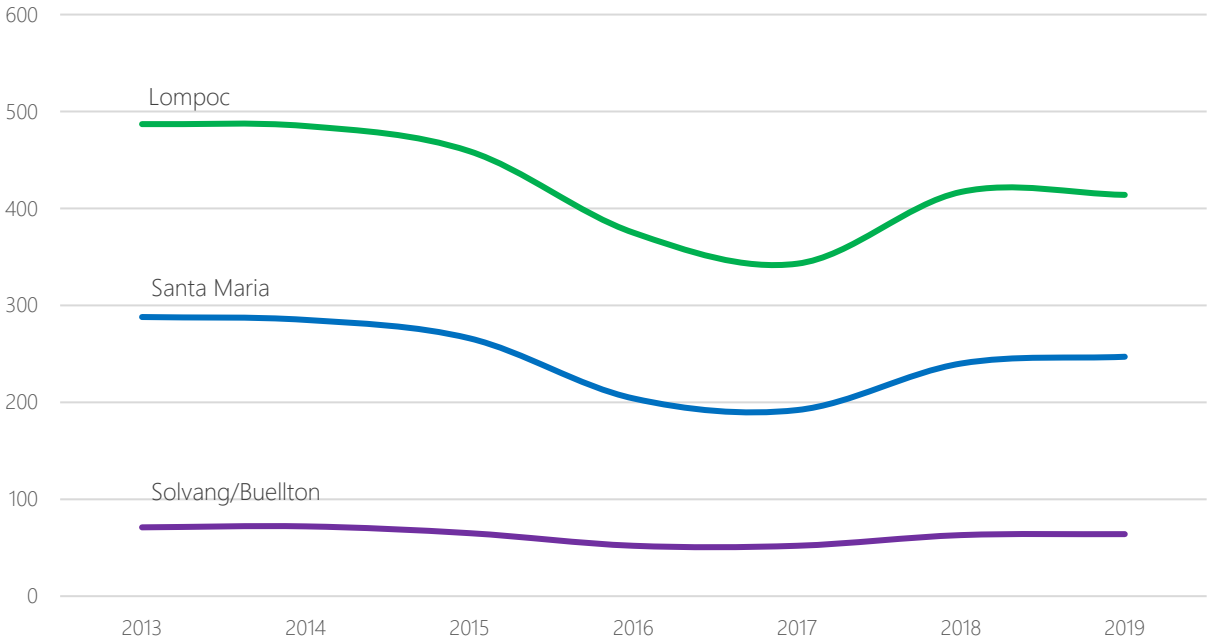
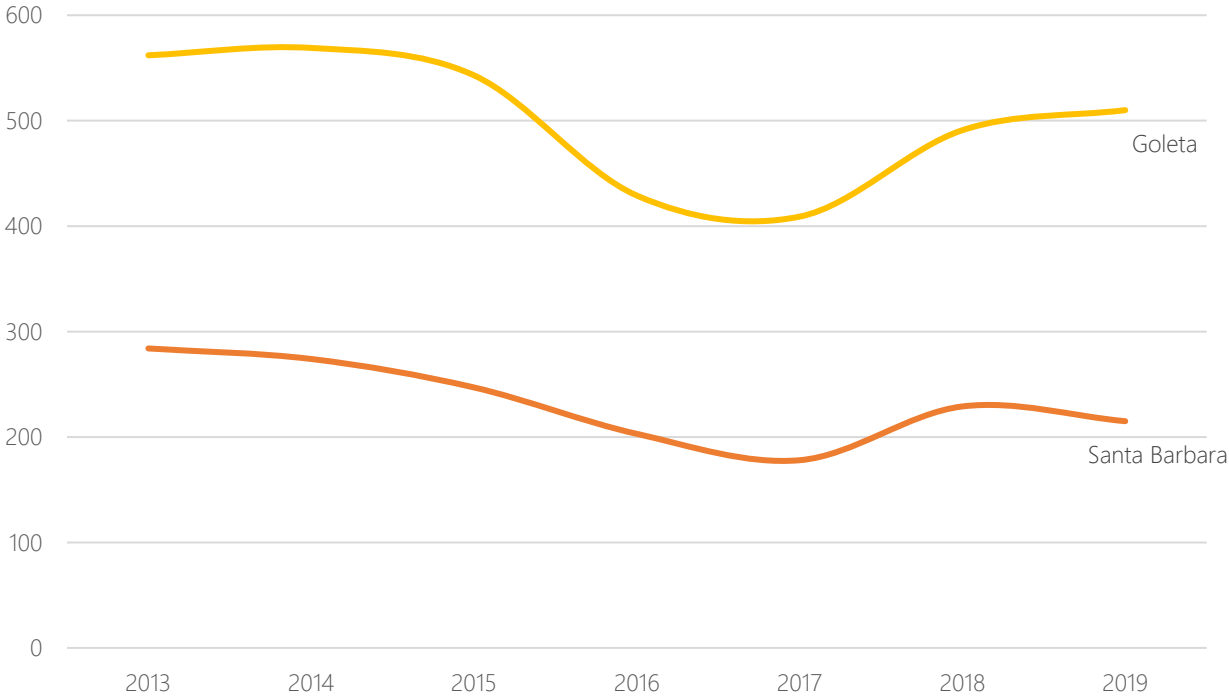


Figure 20 Average Daily Ridership by Work Community, 2013-2019

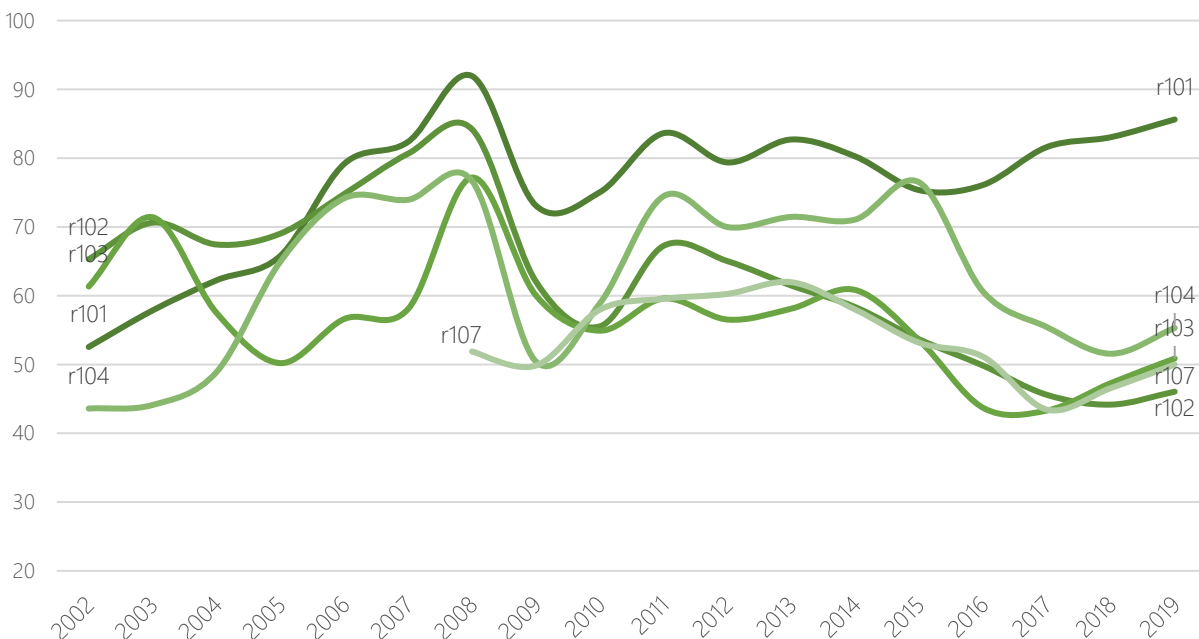


Lompoc to Goleta: Routes 101, 102, 103, 104 and 107

Lompoc and Goleta are connected by the greatest number of trips in the Clean Air Express system and also some of the strongest route performance. Route 107 was the most recent service addition in mid-2008, coinciding with a major economic downturn and an increase in fares. This coincidence makes it somewhat more difficult to understand the effects of adding another trip to the schedule; typically, we might expect at least a few riders to shift to the new trip from an existing one, but the economic downturn was likely the major cause for decline in ridership on all routes.

Figure 21 shows the average daily ridership (AM and PM total) from 2002 through 2018. Each route tends to fluctuate significantly year to year. Route 103 is the trip, which turns off Hollister Avenue to serve UCSB.

Figure 21 Lompoc to Goleta Average Daily Boardings, by Route



Although Route 101 has fluctuated as all routes did, its performance has typically been the strongest and most consistent, hovering around 38-40 riders per trip since 2006. This is the earliest trip provided to Goleta, arriving between 6:15 and 6:40AM.

Route 102 experienced a peak period around 2006-2008, but has declined consistently since 2011, and so shows the greatest difference between its peak average daily ridership and its lowest point, in 2018.

Ridership on Route 103 dipped substantially in 2016 but has recovered somewhat. Between 2009 and 2014 this was one of the most consistently-used routes. Route 103 had brief peaks of 35 or more average daily one-way riders in 2003 and 2008, but its average daily one-way ridership since the recession is 26 passenger trips.

Route 104, which is the latest scheduled trip to and from Goleta (arriving just before 8:00AM), is also one of the most volatile in terms of average daily ridership over the time period. The route experienced several years of highs in 2006-2008, and again 2011-2016, but relatively sharp drops after each – about 20 average daily passenger trips or more.

Route 107 ridership peaked in 2013 and its average daily passenger count in 2018 was still lower than the average during its first year in operation (2008). This trip operates limited-stop service in Goleta, arriving between 7:10 and 7:30AM.

The following two charts show the change in ridership patterns between the AM (Figure 22) and PM (Figure 23) runs between Lompoc and Goleta. Route 101 is significantly (and consistently) more busy in the afternoons than the other four trips which leave later in the afternoon. In the past, the AM ridership was somewhat more distributed across the five trips, but in the past two years route 101 has become substantially busier than any of the other trips.

Figure 22 Lompoc to Goleta Average AM Ridership by Year

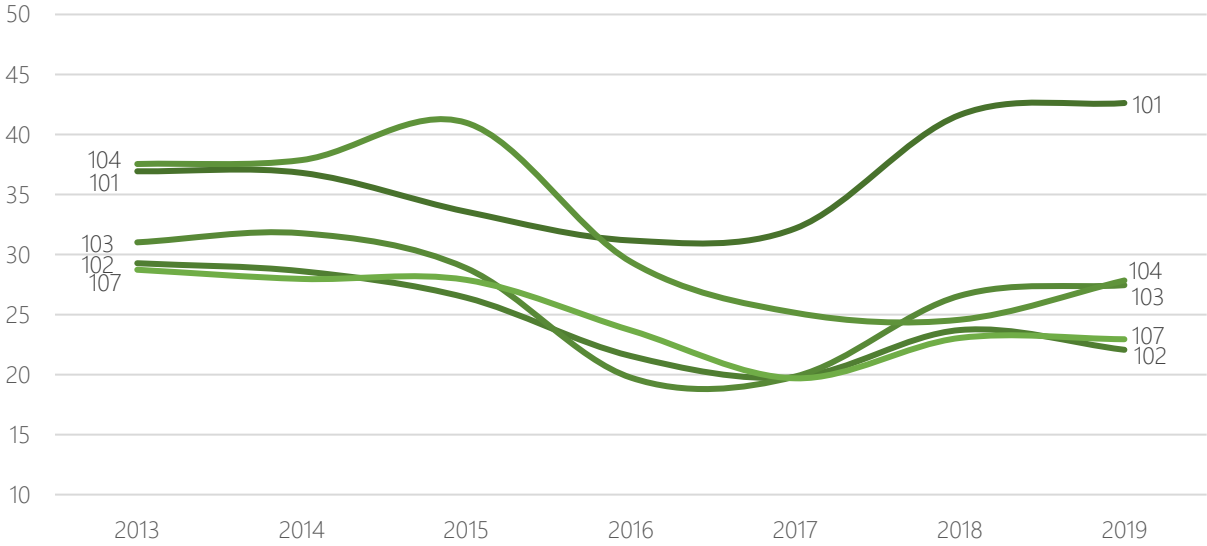
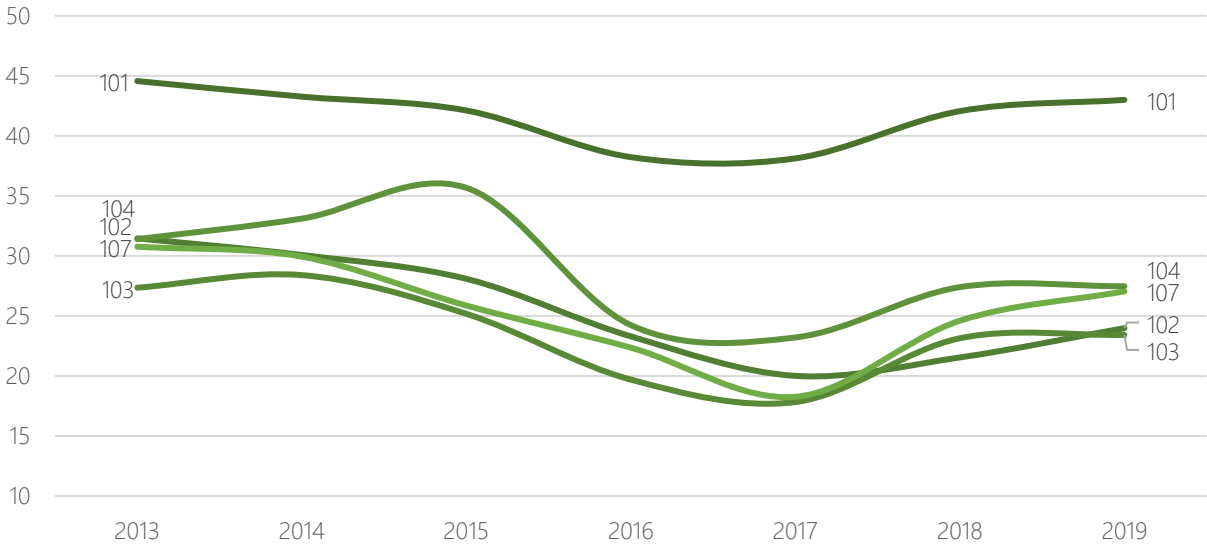


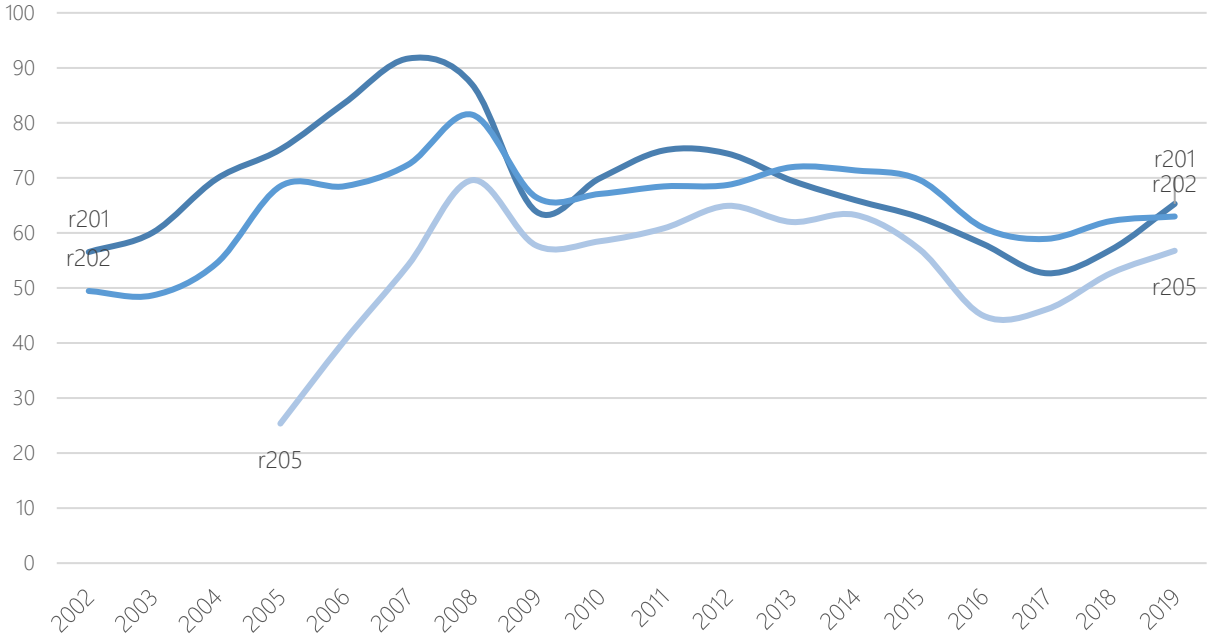
Figure 23 Lompoc to Goleta Average PM Ridership by Year



Santa Maria to Goleta: Routes 201, 202 and 205

Three runs have served Santa Maria and Goleta since 2005, with strong growth on all three routes leading up to the recession. Although there is a small leveling-off on route 202 as route 205 came online, all three continued to grow until the peak.

Figure 24 Santa Maria to Goleta Average Daily Boardings, by Route



Ridership on the Santa Maria to Goleta routes in total has averaged between 72 one-way riders at the lowest in 2017, to 102 one-way riders at the recent peak in 2014. There were an estimated 119 daily one-way riders at the all-time peak in 2008. The recent recovery of riders in 2018 appears to be continuing based on the first six months of 2019 data (not shown).

The Santa Maria to Goleta routes are relatively even in terms of ridership in the morning. However, as the next two graphs show, route 205 is much less-utilized in the afternoons than routes 201 and 202. Route 205 is the latest departure from Goleta, beginning its route at 5:05PM and arriving in Santa Maria at 6:30PM. Figure 25 show the average AM ridership from 2013-2019, and Figure 26 shows the average PM ridership.

Figure 25 Santa Maria to Goleta Average AM Ridership

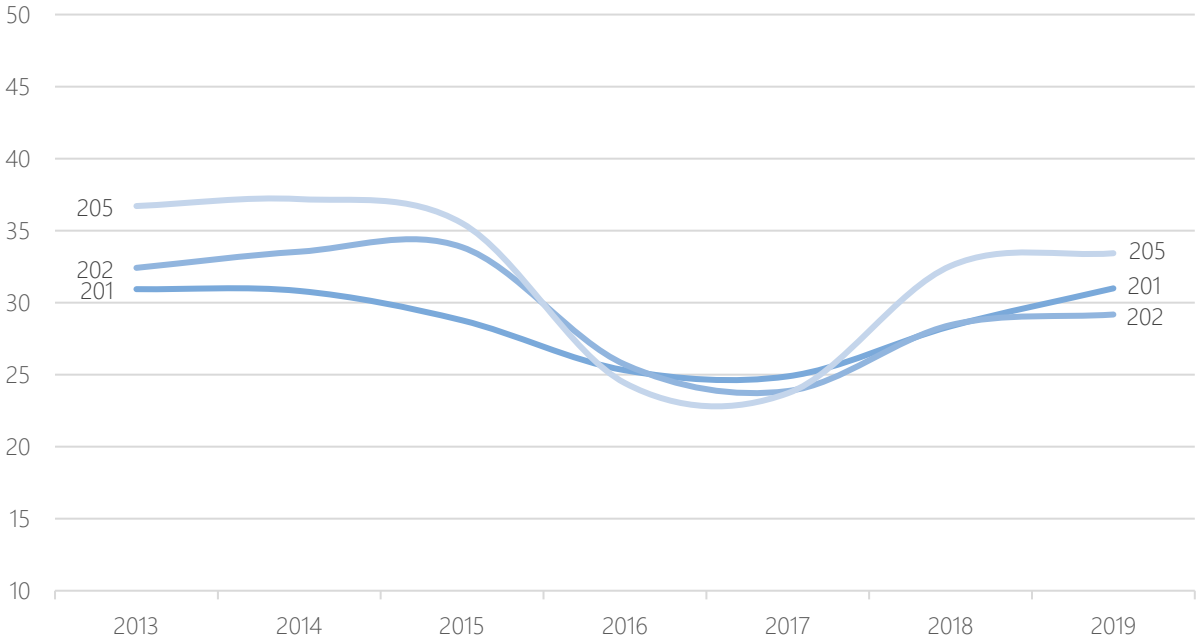
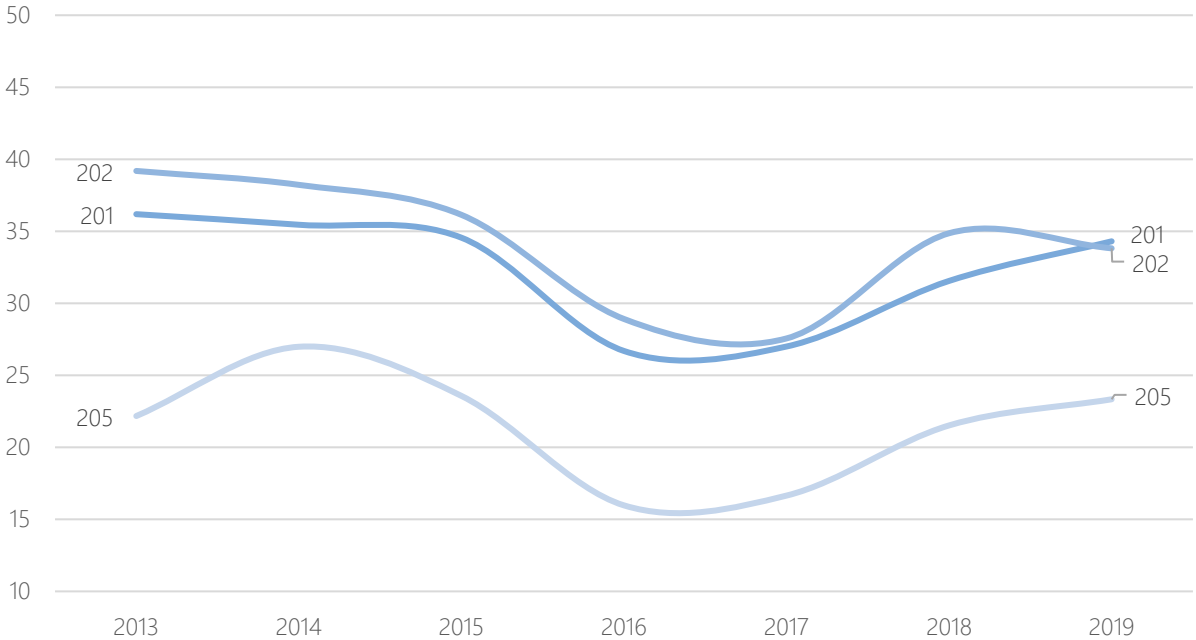


Figure 26 Santa Maria to Goleta Average PM Ridership

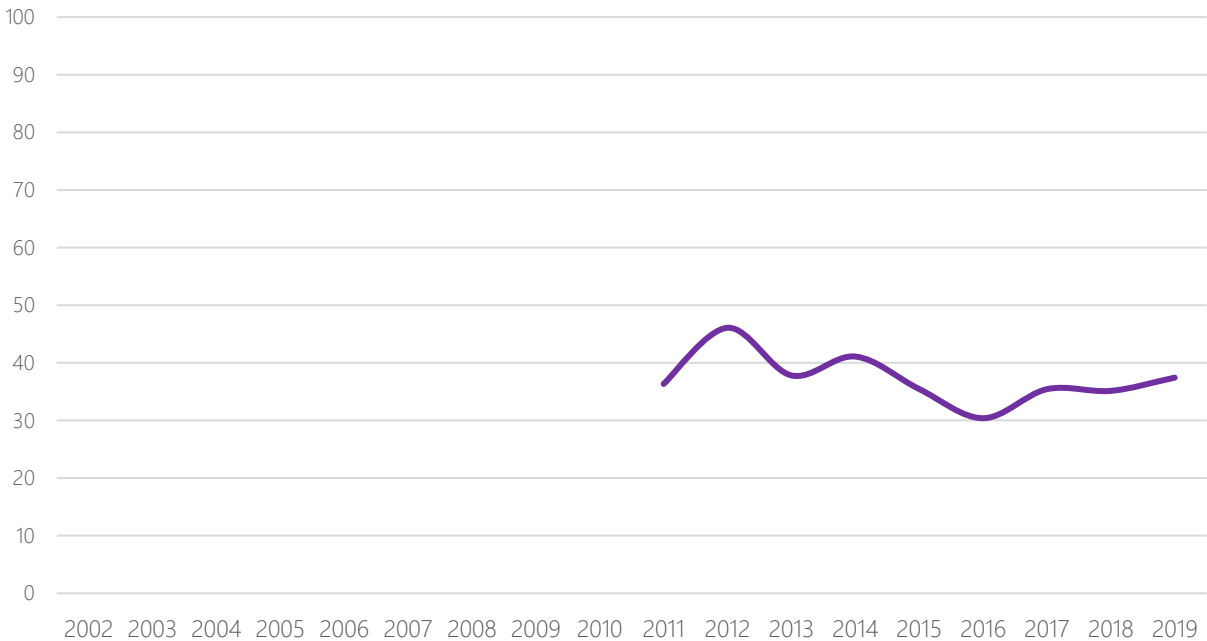


Buellton and Solvang to Goleta: Route 301

Service from the Santa Ynez Valley communities of Buellton and Solvang began as the reestablishment of one round-trip in 2011 to replace the termination of three Valley Express trips operated by MTD. Ridership growth between 2011 and 2012 was promising, but the service did not buck the trend of gradual decrease in ridership most other routes experienced in recent years. Ridership has remained relatively stable at 35 trips per day in 2015, 2017, and 2018. Although this route is the least-utilized of all Clean Air Express routes, it has been more consistent in its history and represents the only transit option for residents of the Santa Ynez Valley who commute to Goleta.

Route 301 has been the most consistent in terms of average ridership between its AM and PM roundtrip, although this is most likely attributable to the fact that there is only a single round-trip available; relatively few riders will take a bus in one direction and a different means in the other.

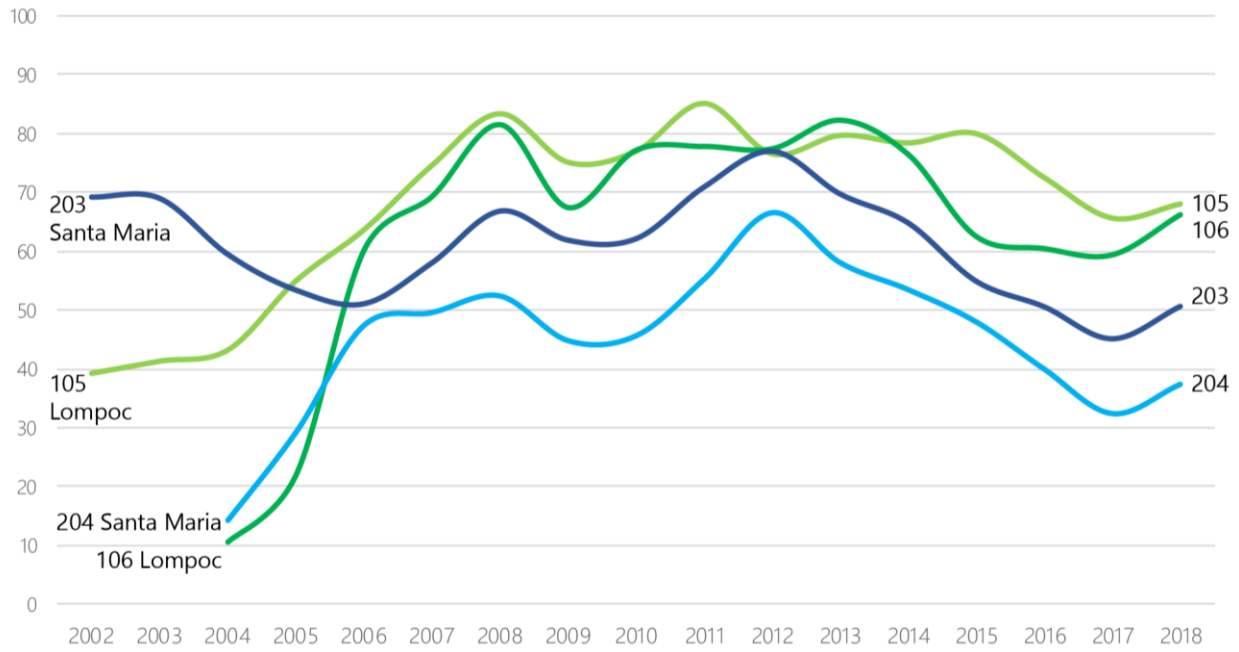
Figure 27 Solvang/Buellton Average Daily Boardings



Lompoc and Santa Maria to Santa Barbara: Routes 105, 106, 203 and 204

Both Lompoc and Santa Maria have two round trips to downtown Santa Barbara – 105 and 106 from Lompoc; 203 and 204 from Santa Maria. Route 203 also picks up in Buellton on its way to Santa Barbara, and Route 204 serves the return trip from Santa Barbara to Buellton and then Santa Maria. Figure 28 shows the average daily boardings of these routes; note that both Route 204 and 106 began in late 2004.

Figure 28 Lompoc and Santa Maria Average Daily Boardings to Santa Barbara, by Route



Route 105 ridership grew steadily through 2008 and has weathered the post-recession years generally better than most routes, ending 2018 right on the average of 68 daily boardings.

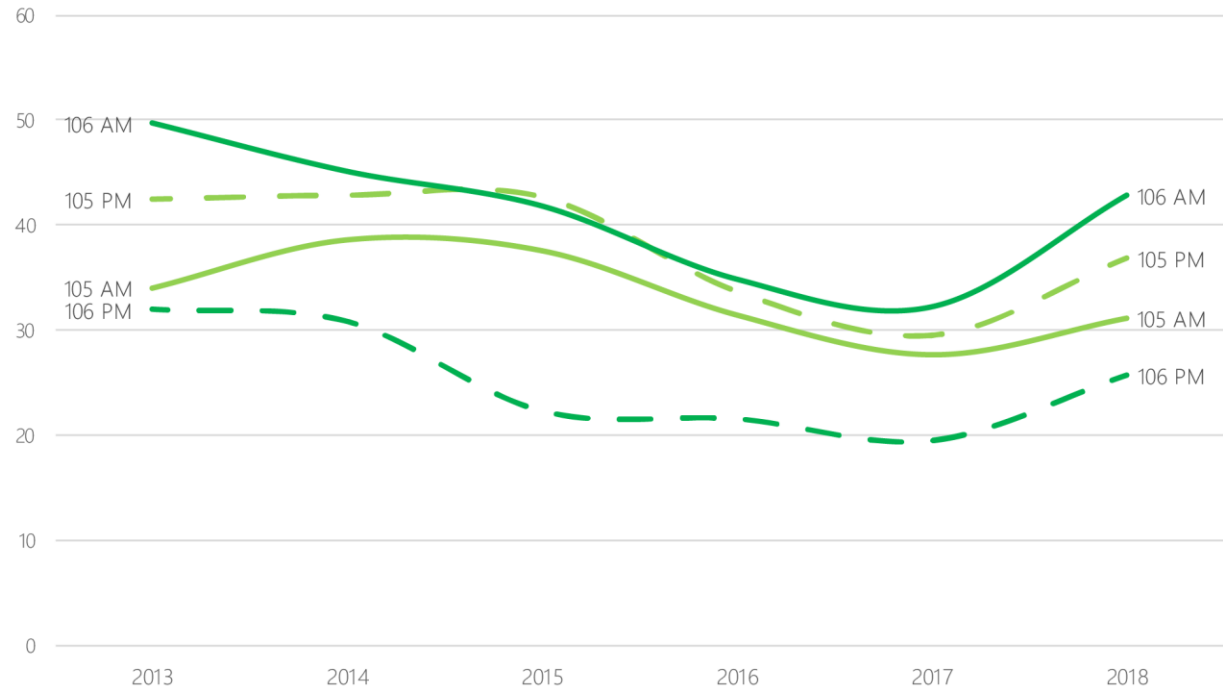
Route 106 is carrying a similar number of average daily passengers, following a lull in 2015 through 2017.

Routes 203 and 204 have followed similar patterns in ridership since about 2008, with a steady decline between 2012 and 2017. These two routes make up a disproportionate amount of the ridership decline on Santa Barbara routes.

The total ridership for routes to Santa Barbara generally corresponds with the share of Clean Air Express service provided compared with the amount of service provided to serve Goleta. There are four Santa Barbara routes compared to nine Goleta routes, and the total ridership for Santa Barbara routes is about 46% of the total Goleta ridership. However, the data suggest that Santa Barbara ridership is slightly more volatile year over year, despite potentially greater economic effects anticipated for employers in Goleta. Why Santa Barbara ridership might fluctuate more is unclear from the data available.

Routes 105 and 106 have a substantial difference in the ridership pattern between the AM and PM trips, as shown in Figure 29. More people appear to ride the later AM trip (route 106, arriving in Santa Barbara just before 8:00AM), and far fewer ride the corresponding return trip at 5:00PM. Instead, ridership on Route 105, which leaves Santa Barbara at 4:30PM is higher.

Figure 29 Lompoc to Santa Barbara Average AM and PM Riders, by Route



Like the pattern observed from the Santa Maria to Goleta routes, this suggests lower demand for a post-5:00PM return trip. This is notably opposed to the non-rider survey results presented in the travel markets analysis, which suggested that there may be substantial demand for later return trips. Despite this pattern in the data, it represents only about 10-20 people for either Lompoc or Santa Maria.

Vehicle Capacity

The Clean Air Express has had ridership peaks, most recently in 2011-2012, in which some trips experienced standee conditions. The service has three vehicle types, with 47, 55, and 57 seat configurations. In 2018 and 2019, buses were carrying an average of 19 to 43 riders, with spikes on certain days and certain trips reaching as many as 55 riders. Based on raw ridership data from 2013 through 2019, the most consistently busy run in the morning was Route 106, and the most consistently busy in the afternoon was Route 101. Route 106 is one of only two runs from Lompoc to Santa Barbara and is the later departure, arriving shortly before 8:00AM and beginning its return trip at 5:00PM.

The current vehicles in service can accommodate a limited number of standees, although this is not an ideal circumstance because these passengers would be standing for the entire highway trip, lasting 45-60 minutes. If customers are regularly standing, it's likely that some riders will eventually stop using the service. According to the Clean Air Express operators, at the peak of ridership prior to the Great Recession, there were occasions when customers had to be turned away because the buses were full and the maximum number of standees had been allowed to board.

Balancing vehicle capacity is challenging for transit operators, especially for limited services like the Clean Air Express. Operating near passenger capacity is good for the service in terms of productivity and performance metrics as well as farebox recovery. With only a few trips each morning between the origin and destination, riders will likely select exactly the trip that gets them to work on time and would not be willing or able to shift departure times as a bus fills up. Likewise, if a trip is approaching capacity, it is difficult to know if the service is just meeting demand or if there is unserved demand for an additional vehicle around the same time.

Overall Ridership Takeaways

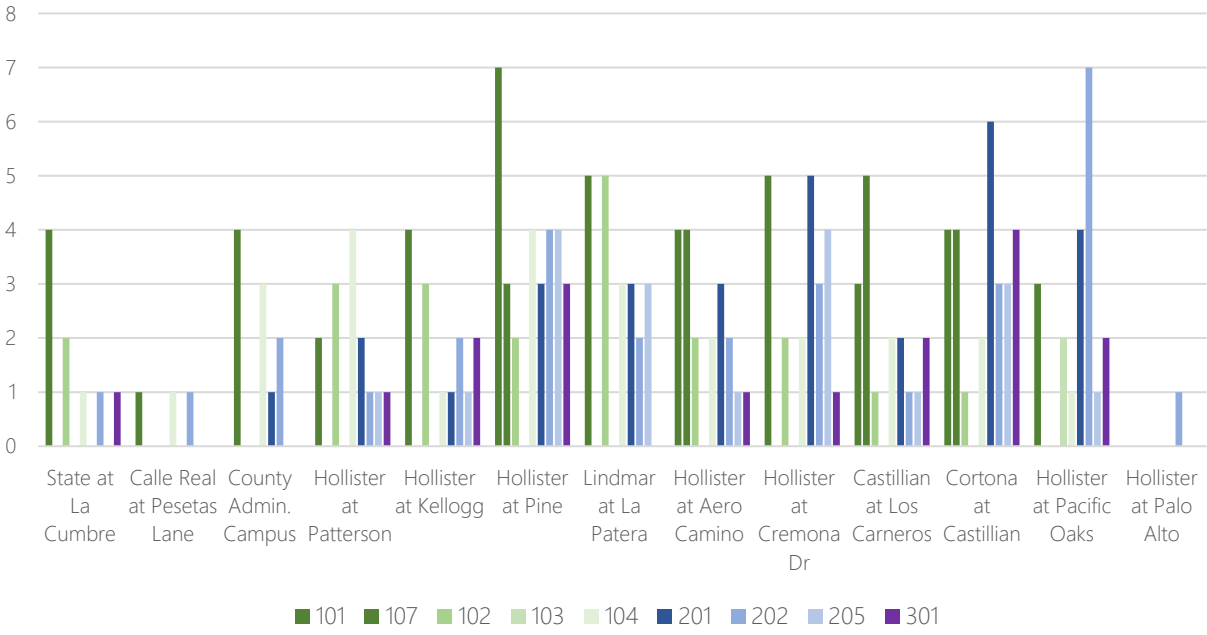
Generally ridership on any transit service fluctuates periodically based on many factors like changing gas prices, the economy and job availability, the service quality and on-time performance, traffic, and more. However, there is a distinct pattern of ridership decline from 2013 through about 2017 during a time when the economy and new job opportunities were growing in the region. Despite somewhat lower gas prices through that period, the improving job market would be expected to help maintain or increase overall ridership on a commuter-based service. In particular, the Clean Air Express total ridership dipped lower in 2017 than it had during the peak of the Great Recession. The Clean Air Express should strive to build a ridership base that is as resilient to these factors as possible, and set a target of average capacity that maximizes farebox revenue while maintaining some seat availability for daily ridership fluctuation.

Ridership appears to be on the rise again from 2018 through 2019, but has a lot of ground to regain. There are many unfilled seats on many Clean Air Express routes. Throughout the SRTP, there are opportunities and strategies identified to help fill those seats over time, in particular for the Santa Ynez Valley and Santa Maria routes. Those include both customer-facing and employer-facing strategies.

Destination Ridership

The Clean Air Express does not count passengers as they exit the vehicle in the mornings, but the destination ridership can be assumed to be very similar to afternoon boardings. Stop-level boardings from 2017 departing Goleta are shown in Figure 30. Note that some stops are not served on Routes 102, 103, and 107. Also, the County campus is not served on Routes 101 or 205.

Figure 30 Goleta Afternoon Boardings by Stop and Route (2017 data)

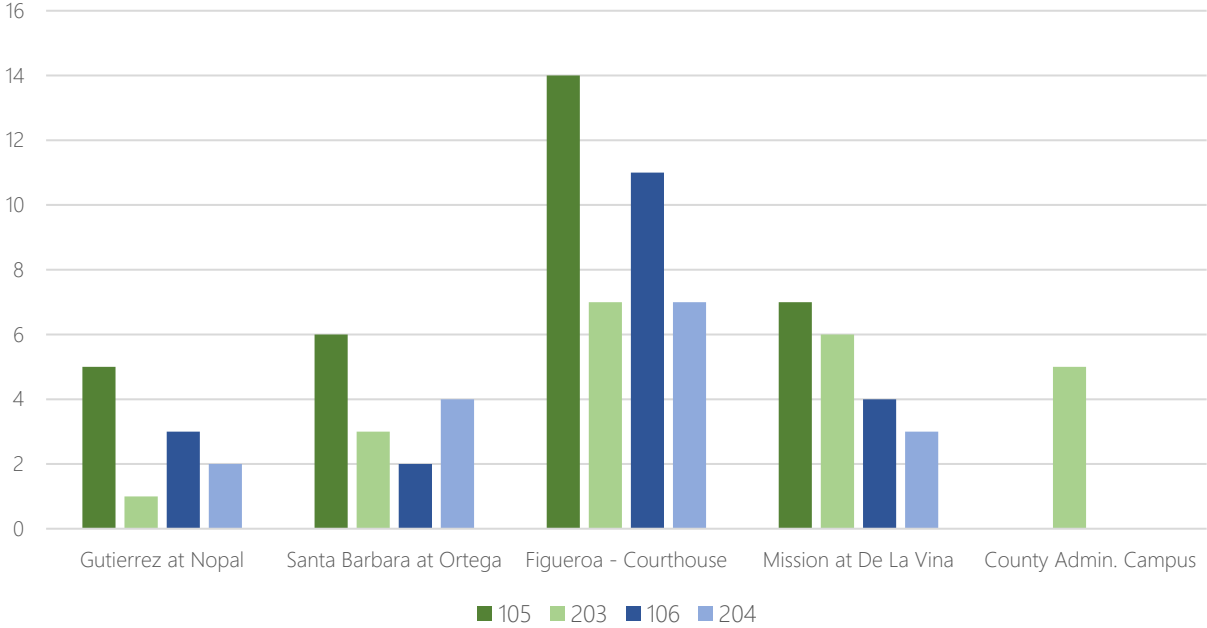


Although a few stops are relatively under-utilized, such as Calle Real at Pesetas Lane and Hollister at Palo Alto, there is likely little time saved by removing these stops from service.

Excluded from the chart is the stop at UCSB, which is directly served only by Route 103 (which also skips most of the stops above). Several comments in the rider surveys, particularly in 2018, comment on the need for direct service between Santa Maria and UCSB, and currently 8-10 passengers commute to UCSB from Santa Maria on the Clean Air Express by transferring between buses as designed.

Figure 31 shows stop-level boardings from 2017 for the Santa Barbara routes. Only Route 203 serves the County campus as part of the Santa Barbara routing. Santa Barbara is much more dense than Goleta and a larger employment market can be served effectively with fewer stops, as the graph shows.

Figure 31 Santa Barbara Afternoon Boardings by Stop and Route



Service Productivity

Assessing service productivity for the Clean Air Express is closely tied to individual trip ridership. Long distance commuter bus services such as the Clean Air Express are more similar to the airline industry than they are to local transit services, which feature stops every few blocks, bidirectional, all day service, and boardings and alightings at each stop.

Table 13 includes some key service productivity metrics for performance comparison. The table uses round trip designations, which is used internally for operations and planning purposes, but not apparent to customers. Customers frequently use different AM and PM trips (i.e., 104AM, 102PM).

The table shows total revenue miles and hours for each round-trip; this represents the time each vehicle is in service. The next column shows average riders per trip, summarizing the data discussed earlier in this chapter. The table shows that average fares per rider per trip range from \$3.18 on route 202AM to \$5.23 on route 103PM. Finally, the average fare revenue per trip is an estimate of farebox recovery. These variances are a function of the proportion of riders paying using monthly passes versus cash or 10-ride passes. Chapter 5 details the proportion of fare receipts by pass types.

The systemwide average fare per unlinked passenger trip from actual FY17/18 data was \$4.94; using the assumptions in results in an average fare of \$4.80. The difference would be in both ridership changes from 2017-2018 to the 2018-2019 data in the table below, and in the actual total receipts of monthly passes compared to the frequency of use. Some riders may purchase monthly passes but actually ride relatively infrequently, which is not reflected in this estimate.

Table 13 Service Productivity by Trip, 12-Month Average July 2018-June 2019

Route	Origin	Destination	Revenue Miles	Revenue Hours	Average Riders Per Trip	Average Fare Per Rider ¹	Average Fare Revenue Per Trip ¹
101 AM	Lompoc	Goleta	101.7	2.59	42	\$4.06	\$173.98
	PM				42	\$4.38	\$188.22
102 AM	Lompoc	Goleta	104.1	2.63	21	\$4.12	\$90.63
	PM				22	\$4.15	\$94.13
103 AM	Lompoc	UCSB	99.8	2.33	26	\$4.10	\$111.23
	PM				21	\$4.05	\$88.75
104 AM	Lompoc	Goleta	100.6	2.87	25	\$4.28	\$110.23
	PM				27	\$4.35	\$118.77
107 AM	Lompoc	Goleta	99.8	2.41	22	\$3.97	\$89.61
	PM				25	\$4.17	\$107.18
105 AM	Lompoc	Santa Barbara	105.5	2.73	33	\$4.61	\$156.13
	PM				38	\$4.57	\$171.70
106 AM	Lompoc	Santa Barbara	110.2	2.63	38	\$4.46	\$168.60
	PM				24	\$4.22	\$101.20
201 AM	Santa Maria	Goleta	134.0	2.94	29	\$3.99	\$117.34
	PM				32	\$3.95	\$125.92
202 AM	Santa Maria	Goleta	138.0	3.23	28	\$3.75	\$106.29
	PM				35	\$3.86	\$133.69
205 AM	Santa Maria	Goleta	137.0	3.11	33	\$3.98	\$130.78
	PM				22	\$3.89	\$84.81
203 AM	Santa Maria ²	Santa Barbara	148.0	3.23	26	\$4.23	\$109.48
	PM				25	\$4.12	\$103.29
204 AM	Santa Maria	Santa Barbara ²	144.9	3.08	19	\$4.34	\$84.64
	PM				20	\$4.50	\$90.26
301 AM	Buellton/ Solvang	Goleta	87.8	2.50	19	\$4.36	\$84.39
	PM				17	\$4.30	\$72.36

Notes:

1] The average fares are weighted by the annual average proportions of pass-holders and cash fare customers for each trip. Chapter 5 provides detail on these proportions.

2] Route 203AM and 204PM include boardings from or to Buellton, respectively

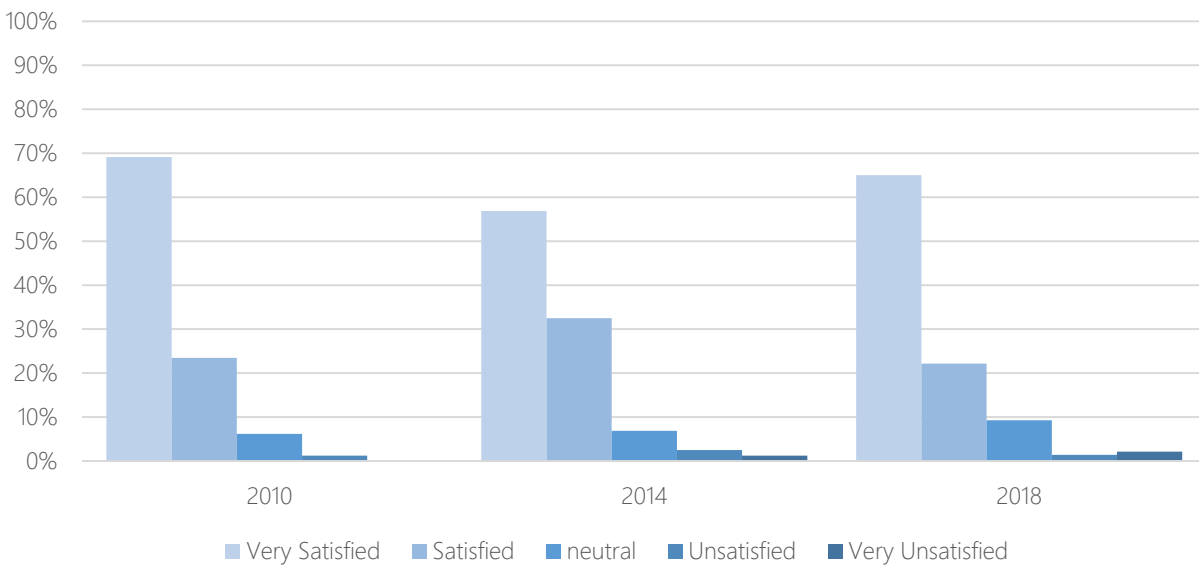
On-Board Service Quality

Quality of service delivery is critical to attracting and retaining customers. The Clean Air Express generally received high marks from customers in surveys conducted in 2010, 2014, and 2018. The surveys have consistently asked certain questions regarding service reliability, on-board experience, drivers, and quality of amenities. Each set of metrics is shown with results from 2010, 2014, and 2018, to demonstrate how the customer ratings have changed or remained consistent in the last eight years. Generally, ratings of service quality and safety have remained consistently high, on-time performance and customer service have improved, and the Wifi amenity has declined.

Reliability and On-Time Performance

The Clean Air Express has a vehicle location system used for dispatching, but the service is not public-facing (for “real-time bus arrivals”), and the software does not appear to have the ability to document and export vehicle location for performance reports. Therefore, schedule reliability can only be evaluated based on the contract operator reports and passenger surveys. Figure 32 shows survey results from 2010, 2014 and 2018.

Figure 32 Rider Satisfaction with On-Time Performance, 2010-2018



Generally, the majority of customers responding to the rider survey (estimated to be about 50% of all riders in 2018) are satisfied or very satisfied with on-time performance. Overall satisfaction has decreased slightly since 2010, but remains very high. In the open-response comments regarding schedule reliability, a few comments were raised regarding late buses, particularly in the evenings. As shown near the beginning of this chapter, the evening return trips are already generally scheduled for longer travel times than their morning counterparts.

Quality of On-Board Experience

Passenger experience is made up of many factors; the condition of the vehicles, driver interactions, passenger perception of safety, quality of amenities, and more. The following graphs show the changes in conditions based on the rider surveys. For the Clean Air Express, one of the strongest service factors is the quality of the bus operators in terms of safety and customer service.

Figure 33 Rider Satisfaction with Bus Comfort, 2010-2018

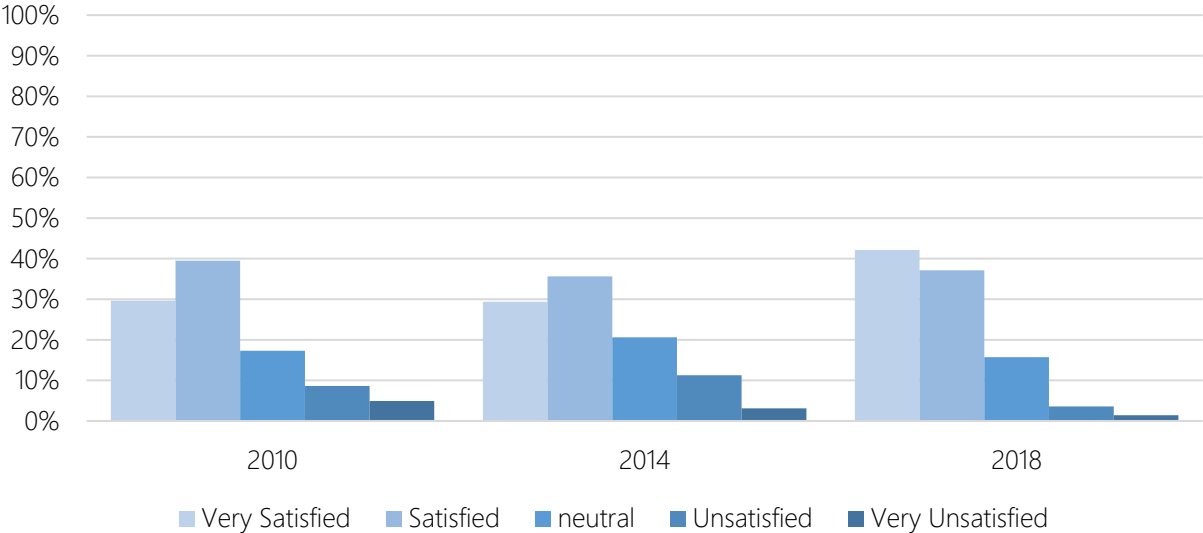
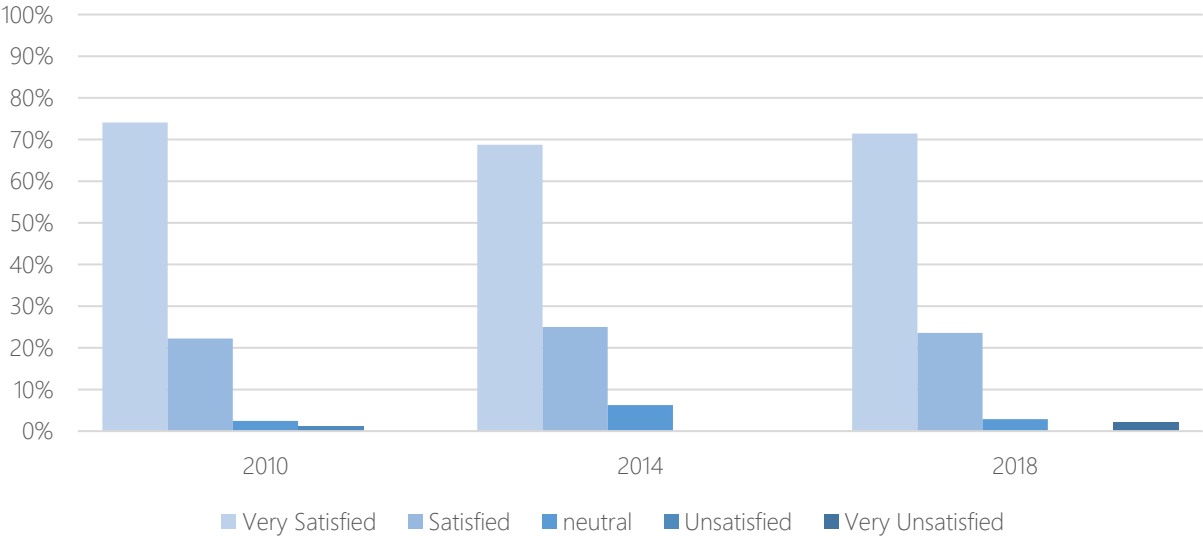


Figure 33 shows comfort on the bus ratings improved in 2018. In 2014, part of the lower satisfaction was due to crowded buses, based on survey open-ended responses. This is a key concern given the decline in average daily riders beginning around that time and continuing through 2017. Crowding on certain trips may have influenced some customers to stop riding entirely – although likely in combination with other factors.

A theme from some respondents in 2018 was that the quality of the seats is poor or inconsistent. This may be related to older vehicles in the fleet, which are due for replacement in 2019.

Figure 34 Rider Satisfaction with Driver Safety, 2010-2018



Passengers have consistently given high ratings for driver safety, shown in Figure 34. Although there have been contract operations changes during this period, many of the individual bus operators have remained with the service for years or even decades.

Figure 35 Rider Satisfaction with Customer Service, 2010-2018

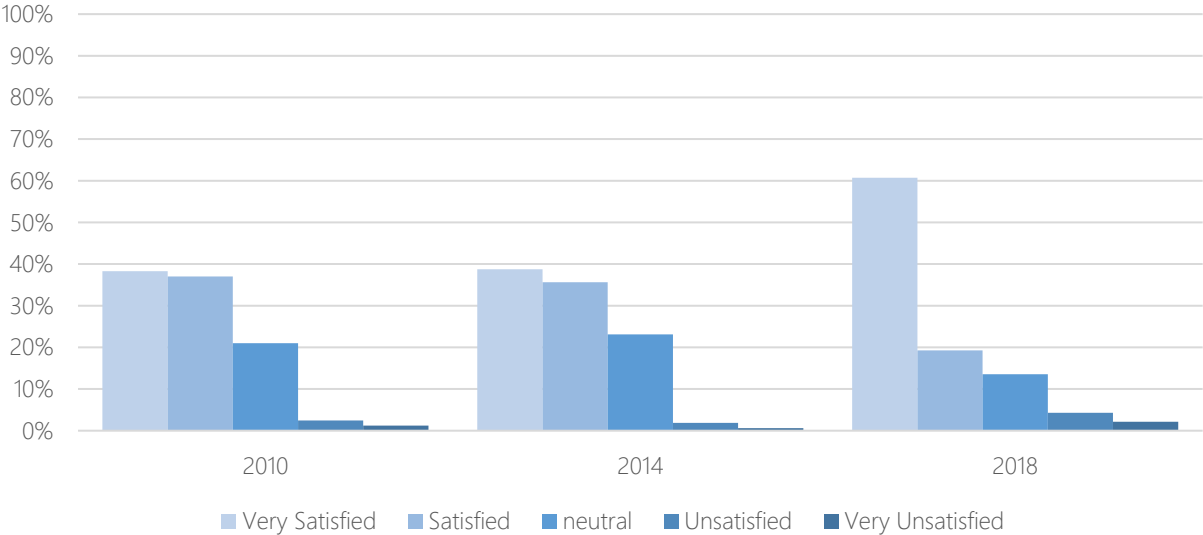
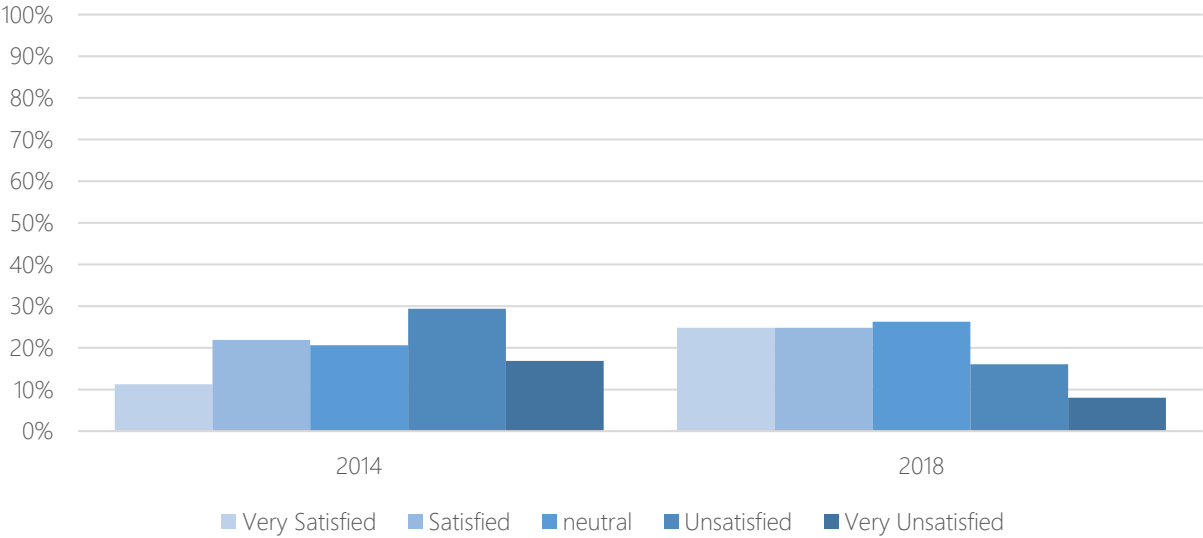


Figure 35 shows that customer service ratings have improved substantially in 2018 compared to prior years. As noted, SBCAG assumed management of the service in January 2018 and a new operations contract began the same month. As presented, the rider survey does not define “customer service,” so it is unclear if respondents are rating the bus drivers, administrative staff (such as for buying passes or dispatching), phone or email customer support, or all three. Considering the declining ridership trend beginning around 2014, this is another key metric to monitor in the future. Customer service can be a significant, but hard to quantify, factor in rider choice.

Figure 36 Rider Satisfaction with the WiFi Amenity, 2014 and 2018



WiFi reliability is perhaps the only area where Clean Air Express receives low marks and numerous comments from customers. Figure 36 shows the responses from 2014 and 2018. Although not likely a major factor for rider choice, consistently poor-quality amenities can influence customers’ desire to use the service, especially in conjunction with other issues.

Bus Stops and Service Access

The Clean Air Express network comprises 37 bus stops located throughout Goleta and Santa Barbara. Throughout the network, 17 stops are used for morning drop-offs only, while 21 stops are used for afternoon pick-ups only. Four stops are used for both drop-off in the morning and pick-up in the afternoon.

Each stop was evaluated using a qualitative evaluation checklist to evaluate the stop facilities and amenities and photographed. Criteria for evaluating the stops included amenities, such as benches and trash cans, surface types for waiting and embarking/disembarking, whether there was a shelter, etc.

All bus stops served by Clean Air Express share a few common qualities:

- All stops feature even, paved surfaces for boarding and alighting
- All stops near signalized intersections have at least partially marked crosswalks nearby
- Real-time bus arrival information is not available at any stop
- Although intentional, it is notable that only the afternoon pickup stops have Clean Air Express signage

This section provides an overview of the bus stop conditions. Particular attention is given to afternoon pick-up stops, as riders might spend more time at these stops than the morning drop-off stops, in order to wait for their bus to arrive.

Overall, most stops are shared with other services and have features beyond the basic necessities, including shelters and benches in some locations. Pedestrian access is generally complete to nearby buildings and street crossings, in particular for all stops along main roads. A few stops serving business parks in Goleta have partially discontinuous sidewalks or unmarked crossings at stop-controlled intersections.

Santa Barbara Bus Stops

Clean Air Express serves thirteen stops in Santa Barbara. Six stops are designated for morning drop-off, and the remaining seven are afternoon pick-up stops. Several stops are shared with Santa Barbara MTD bus stops. Every stop in Santa Barbara has at least one passenger amenity (such as a bench, shelter, trash can, and lighting). Twelve of the 15 stops have a bench and 14 of the 15 have a trash can. Accessibility around Clean Air Express stops in Santa Barbara is high. All 15 stops have complete sidewalks around the stop and across the street. All stops have a ramp at the nearest intersection with no slope leading to the bus stop. Nine stops lack lighting both at and around the stop, five of which are afternoon pick-up stops. Lacking lighting potentially contributes to fear or uneasiness, particularly for women, while waiting for the bus.

Ten of the 15 stops have marked crosswalks at the nearest (signalized) intersections; however, the remaining three are located at two-way stop-controlled intersections and do not have marked crosswalks, although in at least one example (Calle Real at Pesetas), there is nothing to cross to.

Goleta Bus Stops

Twenty-three of the 37 stops are located across Goleta. Eleven stops are designated for morning drop-off, and the remaining twelve are afternoon pick-up stops. Eight of the 23 stops are adjacent to land uses that would provide 'eyes on the street' when passengers are waiting, but a number of stops have no lighting for passenger visibility and security at night. All stops on Hollister Avenue, a key corridor in Goleta, have at least a bench at the bus stop and usually have a shelter, trashcan, or both. However, the following four Goleta stops have no amenities whatsoever:

- Cortona Drive / Castilian Drive (AM)
- Castilian Drive / Los Carneros Road (AM)
- Cremona Drive / Los Carneros Road (AM)
- Lindmar Drive / La Patera Lane (PM)

Goleta's pedestrian connectivity includes some gaps of partial sidewalks or crosswalks, although generally these are within the low-speed areas of business parks. There is partial sidewalk access on the same side of the stop at the following locations:

- Cortona Drive / Castilian Drive (AM)
- County Admin Campus (AM & PM)
- Hollister Avenue / Aero Camino (AM)

At six stops (of 23), the bus stops in the lane, blocking vehicular traffic and a bicycle lane. This presents possible delays to motorists and requires cautious interaction with cyclists (or requires an approaching cyclist to wait for the bus to depart the stop). Additionally, some stops with very few amenities and no shade, like Hollister / Aero Camino (PM) and Storke / Santa Felicia (PM), may feel very exposed to riders waiting for the bus.

Bus Stop Considerations for the Future

With most of the stops in the destination communities of Goleta and Santa Barbara shared with, and owned by others, the primary focus for Clean Air Express is to ensure that its identity and passenger information is clearly visible and distinguished from other operators serving that stop. Although it is intentional to only place Clean Air Express signage at pickup locations, bus stop signage can serve as an extremely low-cost method of advertising service information. Many agencies have a standard practice of placing "Drop-Off Only" signage at relevant stops, with just enough additional information to direct people passing by to a phone number and webpage for more details. Increasing exposure in the community reminds people to consider other travel options.

At the few locations where riders wait for afternoon pickups but there are no amenities provided, SBCAG can work with member agencies to target improvements such as benches, lighting and shelters. Although Clean Air Express operates no "nighttime" service, the last runs during the winter operate in the dark at many stops, particularly in the Goleta Corporate Park service area. Lighting at pickup stops helps people feel more safe and helps reduce pass-ups because the driver fails to see them in the dark.

Service Performance Considerations

Based on the travel market analysis, non-rider surveys, and comments from current riders, two potential scheduling/service expansions should be considered: an additional morning trip arriving in Goleta and Santa Barbara closer to 8:30AM, and an additional trip leaving Santa Barbara/Goleta, around 5:30PM. This is the most common request that operators hear from riders, and has also been seen in rider survey responses over the years. The travel market analysis suggests there is a significant proportion of existing, non-rider commuters who work these schedules, as well. This additional trip could be operated using buses that will become available as part of a near-term vehicle acquisition from AVTA, described further in a later chapter. However, as the Financial Analysis chapter will describe, there is not a separate revenue source identified to support these additional revenue hours and if they fail to attract high ridership could hasten significant financial concerns facing the Clean Air Express overall.

Attracting Riders to Existing Service

High quality passenger amenities and customer service are important for retaining riders who could drive, and attracting new ones who do drive. About 70% or more riders have access to a car, and this number was down in the 2018 survey from 80% - the same period in which ridership has declined. Potentially some riders who had the choice of driving have left the system. Customer service and Wi-Fi were two issues in past surveys where customers did not rate Clean Air Express highly. Corresponding with lower gas prices and an improving economy, these small factors can sometimes be the motivator to stay – or leave when they become small annoyances. Improving these issues and marketing the cost-savings and convenience may be key for regaining ridership levels, particularly on trips where average daily ridership has fallen below 50% of capacity.

Improving market capture and retention of customers from Santa Maria is a priority. These routes are less cost-efficient to operate by nature of being further from Goleta and Santa Barbara; however, longer drive time can also be a strong motivator for someone to leave the driving to a professional. Better marketing and a focus on very consistent high-quality customer experience from this area can help regain passengers. Historical data strongly suggests these routes can and should be more successful – little has changed in terms of job markets, and the traffic has certainly not improved in the Goleta and Santa Barbara area. This city in particular represents the risk of losing riders to ‘aging out’ – Santa Maria’s younger population is growing, but Clean Air Express ridership skews towards approaching retirement-age. A few strategies for attracting younger riders include:

- Substantially improving Clean Air Express’ online presence through the use of GTFS (searchable trip schedules on Google Maps and transit apps)
- A social media presence that not only markets the service but provides promotional incentive
- A regular presence at local job fairs or materials that employers provide to new hires about commuter alternatives.

A short-term push for additional riders from Solvang and Buellton is warranted, given that the ridership has been very consistent but below 50% of seated capacity for its history. This route is theoretically more cost-efficient to operate than any other due to its proximity to Goleta, so a few extra riders can go a long way towards improved value. However, the market is much smaller to draw from, and the close proximity to Goleta may make the bus vs. car choice less appealing. If ridership does not benefit from additional marketing or short-term incentives, the route may already be capturing all the potential demand.

Marketing to this community could involve some of the same strategies as above, plus opportunities to be present in the community itself at local fairs and festivals.

Improving Operations

Identify long-term parking and bus storage both in the home communities and in the Santa Barbara area. Pursue grant funding opportunities to build secure facilities to store buses overnight. The Santa Maria storage location is not adequate for the long-term and a potential alternative has been identified at Waller Park.

Additionally, pursue partnerships or funding to provide maintenance in the Goleta-Santa Barbara area. The middle of the day when vehicles are otherwise laying over is the best opportunity to perform regular maintenance and prepare vehicles for the afternoon trips. Currently, most maintenance must be done overnight and only vehicles that are out of service for significant reasons can be worked on during the day. Having a daytime alternative will maintain reliable service.

5. Financial Assessment

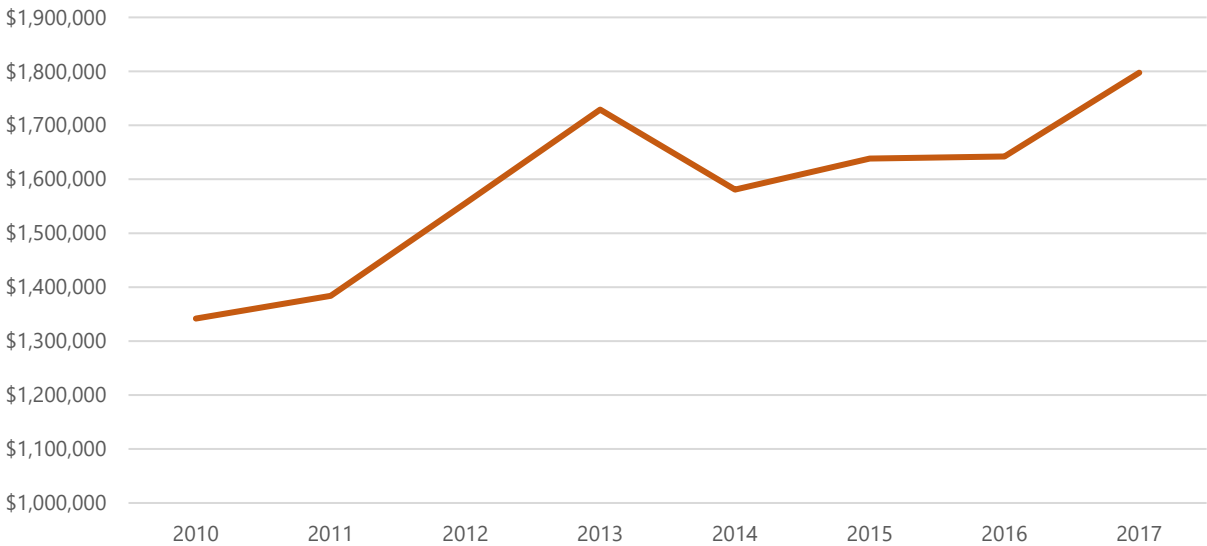
Existing Financial Overview

Operational Expenditures

As a contract service operation, the bulk of the annual operational expenditures for the Clean Air Express are for contract operations and fuel. SBCAG currently pays the contract operator a flat rate of \$134.85 per revenue vehicle hour (RVH) for the operation of the service and maintenance of the vehicles (excluding major work such as engine rebuilds).

Based on financial data covering fiscal years 2010 through 2018, operating expenses have increased approximately 34% from a budget of approximately \$1.34 million to almost \$1.8 million in 2018. Figure 37 shows the trend in expenses since 2010. Annual service hours have remained roughly the same over most of the period following the introduction of Route 301 (Solvang and Buellton service) in calendar year 2011. The direct cost of operating, the contract rate, was \$98.68 in 2009, and a decade later has grown almost 37% to \$134.85. Other expenses have grown or been introduced, including fees for storage and use of park and ride lots in Lompoc and Santa Maria, Lompoc administrative fees, and SBCAG’s administrative expenses. Park and ride and storage facilities in the Cities of Lompoc and Santa Maria represent annual costs of approximately \$39,100. The County does not impose a fee on SBCAG for use of the County’s Foster Road facility or Calle Real campus to store Clean Air Express vehicles. In total, these costs have risen substantially since 2009, but revenues from passenger fares (unchanged since 2009) and local funds have remained flat. More detail on the revenue-expense shortfall follows later in this chapter.

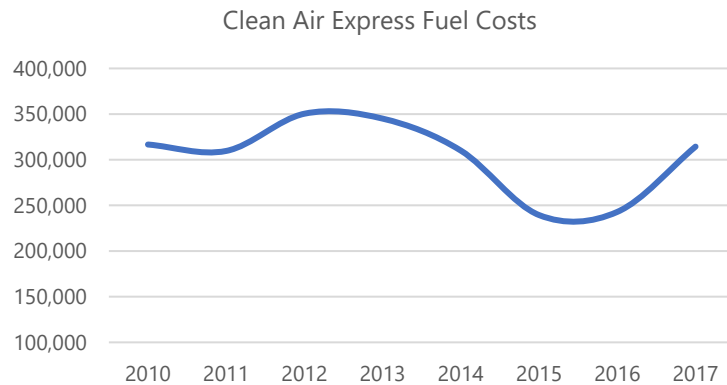
Figure 37 Clean Air Express Operating Expenses, 2010-2017



The cost of diesel fuel can vary widely. Since 2010, fuel costs averaged roughly \$303,000 per year with a peak in Fiscal Year 2012-2013 at \$350,400 (15% above average). Fiscal Year 2018-2019 expenses were just above the average, and the U.S. Energy Information Administration predicts the 2019-2020 price of diesel to decrease slightly from 2018 prices.

In fiscal year 2017, the Clean Air Express operated 387,730 revenue miles and 9,130 hours of revenue service, and an additional 47,070 non-revenue miles and 3,950 non-revenue hours. With fiscal year operational expenditures (excluding capital) of approximately \$1,797,500, operating costs total \$196.88 per revenue hour, and \$4.64 per revenue mile.

Figure 38 Clean Air Express Fuel Costs, 2010-2017



Capital Expenditures

As a park & ride-based commuter bus operation, the Clean Air Express' major capital expenditures have traditionally been limited to vehicle replacement. Clean Air Express operates no physical terminals or facilities directly. Three major vehicle capital acquisitions were made over the last eight years:

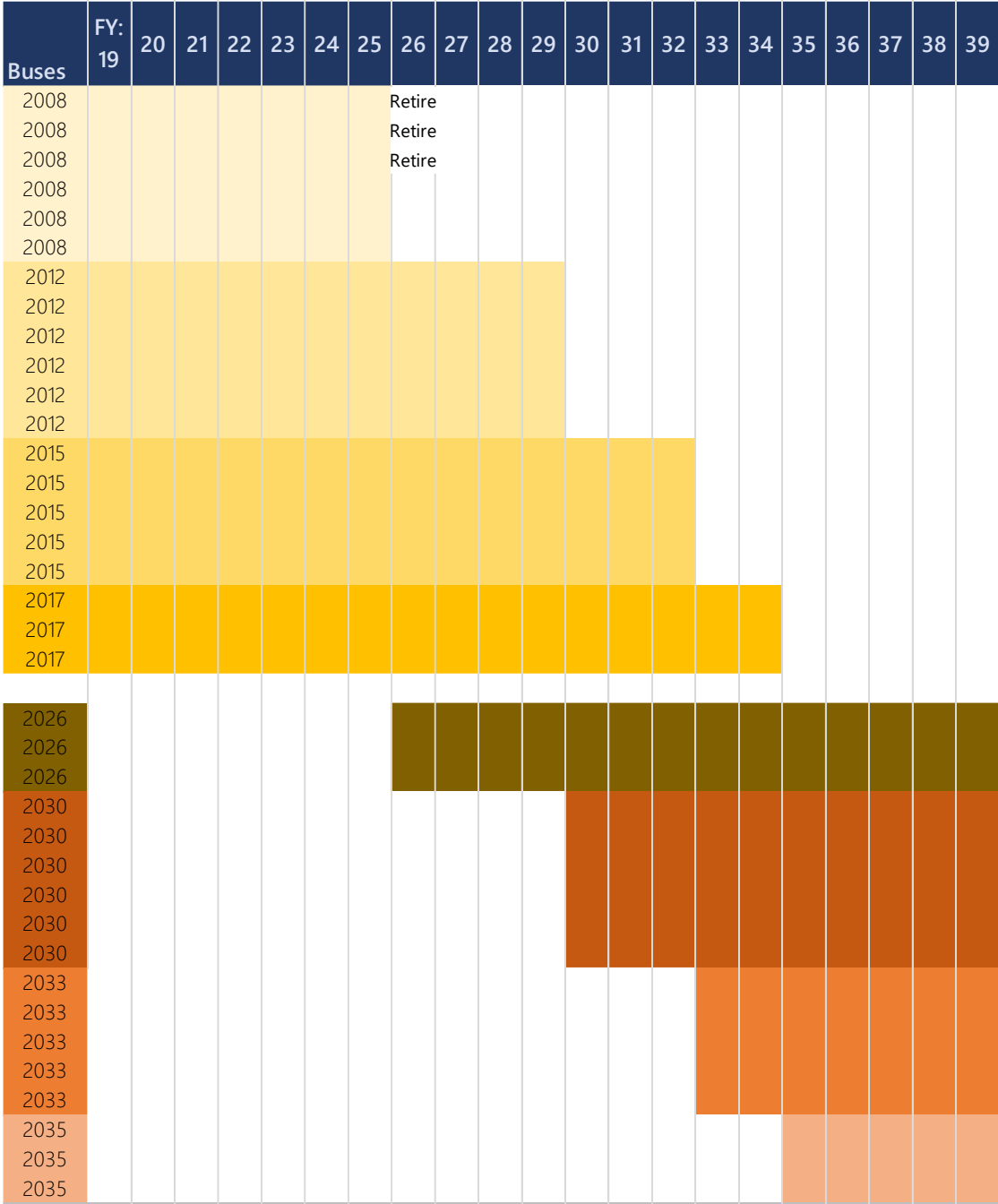
- Three replacement coaches purchased in Fiscal Year 2011-2012 to replace older coaches at a cost of approximately \$1,738,000
- Five surplus 2004 coaches purchased from Santa Barbara MTD in Fiscal Year 2015-2016 (\$70,650)
- Purchase of three new coaches in Fiscal Year 2017-2018 using Federal Transit Administration (5307) funds made available by the City of Santa Maria, with a \$356,800 Measure A match from the Clean Air Express budget

As of Fiscal Year 2018-2019, there are 13 coaches in regular service, with 4 spares and three buses out of service due to significant deferred maintenance. The average age of the fleet is currently about 12 years old, and the majority of the fleet is 15 years old with only a few new vehicles.

In Fiscal Year 2019/20, SBCAG will obtain 17 coaches from the Antelope Valley Transit Authority (AVTA) via a federal asset transfer. Combined with the three 2017 buses, the total fleet size will be 20 vehicles, lowering the average fleet age to 8 years, with no vehicles older than 12 years. Under current operating parameters, a minimum of seventeen buses are required for daily operations, which includes thirteen active vehicles and four spare vehicles, which are strategically prepositioned in Santa Maria, Lompoc, and Goleta. Although many agencies regularly run vehicles that are older than 12 years, this is generally a benchmark for a bus approaching the end of its useful life, when maintenance costs may escalate substantially.

Figure 39 illustrates the timeline for vehicle replacement based on the current fleet age and the anticipated AVTA vehicle transfer.

Figure 39 Clean Air Express Fleet Replacement Schedule



Long Term Bus Replacement Considerations

In the future, SBCAG must prepare for and incorporate electric or zero-emissions bus purchases into new bus procurement plans, which could come at a considerably higher per-unit cost. On December 14th, 2018, the California Air Resources Board (CARB) published notice of decision adopting new requirements for transit agencies to transition to zero-emissions bus (ZEB) fleets in the coming decade. Under this new regulation, known as the Innovative Clean Transit regulation, SBCAG is considered a “small transit agency”, for whom the following requirements must be considered:

- Beginning January 1, 2026, when purchasing *new* buses, 25% of the total number of buses must be zero-emissions (rounding up to the nearest integer, meaning that when purchasing four or fewer buses at least one must be zero-emissions)
- Beginning January 1, 2029, all new bus purchases must be zero-emissions buses
- These requirements do not apply to purchasing used buses

The regulation stipulates that a small agency’s Board of Directors must approve a rollout plan and submit to CARB by July 1st, 2023. The rollout plan requirements are detailed in the updated 13 CCR part 2023.1(d), which (as of May, 2019) is not officially published. Summarized, the plan requirements are:

1. A goal of full fleet transition to ZEB by 2040, avoiding early retirement of traditional buses
2. Identification of the ZEB technologies the agency plans to deploy (typically battery-electric, or hydrogen fuel cell)
3. A schedule and plan for construction of fueling or charging infrastructure
4. A schedule for bus purchase and lease options through the transition from conventional engines to ZEB
5. A schedule for engine conversions, if any
6. A plan for deploying ZEBs in disadvantaged communities based on CalEnviroScreen data
7. A training plan for operators and maintenance staff
8. Identification of ZEB funding sources

Fare Revenues

Current Fare Structure

The Clean Air Express currently offers an unlimited monthly pass for \$150.00, a single-ride cash fare for \$7.00, and a 10-ride pass for \$50.00 (\$5.00 per ride). Under this price structure, the monthly pass represents about a 50% discount compared to paying cash every day (assuming an average of 21 service days per month, with a rider making two trips daily). Passes are available for purchase via mail, or at two locations in the City of Lompoc, two in the City of Santa Maria, one in Buellton, and one in Santa Barbara.

Approximately 70% of Clean Air Express riders use monthly passes, 24% use 10-ride ticket books, and the remaining 6% pay cash. Route 105 has the highest share of cash riders at about 16% over the past 12 months. This route is more likely to carry occasional riders from Santa Barbara to Lompoc. Table 14 shows the breakdown by the three fare types (individual cash fare, 10-ride pass, and monthly pass) per trip. Average revenue per trip is closely linked with average ridership, but a high proportion of cash fares boosts the average revenue per trip.

Rider fares have generated an average of \$962,150 per year between Fiscal Year 2010 and 2018. Fare box recovery has ranged from 75% in Fiscal Year 2011-2012, to 49% in Fiscal Year 2017-2018. Over this period, farebox recovery has averaged 61%. Cash fares collected onboard are taken “off the top” by the contractor providing the service.

Table 14 Average Fare Types by Trip

Trip	Average Riders Per Trip	Average Fare Per Rider	Pct. Cash Fare	Pct. 10-Ride Pass	Pct. Monthly Pass	Average Fare Revenue Per Trip
101 AM	42	\$4.06	4%	21%	75%	\$173.98
101 PM	42	\$4.38	10%	31%	59%	\$188.22
102 AM	21	\$4.12	3%	24%	73%	\$90.63
102 PM	22	\$4.15	4%	25%	71%	\$94.13
103 AM	26	\$4.10	4%	20%	76%	\$111.23
103 PM	21	\$4.05	4%	16%	80%	\$88.75
104 AM	25	\$4.28	9%	27%	64%	\$110.23
104 PM	27	\$4.35	9%	30%	61%	\$118.77
107 AM	22	\$3.97	1%	17%	82%	\$89.61
107 PM	25	\$4.17	4%	27%	69%	\$107.18
105 AM	33	\$4.61	16%	31%	53%	\$156.13
105 PM	38	\$4.57	17%	28%	56%	\$171.70
106 AM	38	\$4.46	12%	33%	55%	\$168.60
106 PM	24	\$4.22	6%	24%	70%	\$101.20
201 AM	29	\$3.99	3%	16%	82%	\$117.34
201 PM	32	\$3.95	2%	14%	84%	\$125.92

Trip	Average Riders Per Trip	Average Fare Per Rider	Pct. Cash Fare	Pct. 10-Ride Pass	Pct. Monthly Pass	Average Fare Revenue Per Trip
202 AM	28	\$3.75	1%	5%	93%	\$106.29
202 PM	35	\$3.86	3%	10%	88%	\$133.69
205 AM	33	\$3.98	2%	17%	81%	\$130.78
205 PM	22	\$3.89	2%	10%	88%	\$84.81
203 AM	26	\$4.23	4%	33%	62%	\$109.48
203 PM	25	\$4.12	4%	28%	69%	\$103.29
204 AM	19	\$4.34	9%	26%	65%	\$84.64
204 PM	20	\$4.50	10%	37%	53%	\$90.26
301 AM	19	\$4.36	7%	34%	59%	\$84.39
301 PM	17	\$4.30	4%	35%	61%	\$72.36
<i>Est. Systemwide Average</i>	27	\$4.18	6%	24%	70%	\$115.91

Fare History and the Consumer Price Index

The Consumer Price Index (CPI) is a commonly-used measure of how the economy and the price consumers pay for goods has changed over time. The CPI provides one way to consider whether the price of the Clean Air Express for customers has tracked with economic changes over the last decade.

When SBCAG assumed the administration of Clean Air Express in 2001, a \$100.00 monthly pass was the only fare option. This was increased to \$130.00 in 2004, \$135.00 in 2006, \$140.00 in 2008, and \$150.00 in 2009. Since 2004, the fare has increased by 50% in total dollars. However, if fares were compared to the CPI since the last fare change in 2009, the 2019 monthly pass price should be approximately \$175⁶. This represents a 17% decline in value of the monthly pass compared to 2009. The 10-ride pass was introduced in 2003 at \$40.00, increased to \$45.00 in 2006, and \$50.00 in 2008. With growth in the consumer price index, the \$50.00 10-ride pass fare in 2009 is the equivalent of a \$58.66 fare in 2019. Finally, a \$6.00 single-ride cash fare was introduced in late 2004. It was increased to \$7.00 in 2009. With growth in the consumer price index since 2009, the single ride cash fare is the equivalent of an \$8.21 fare.

Fare Revenue to Expenses

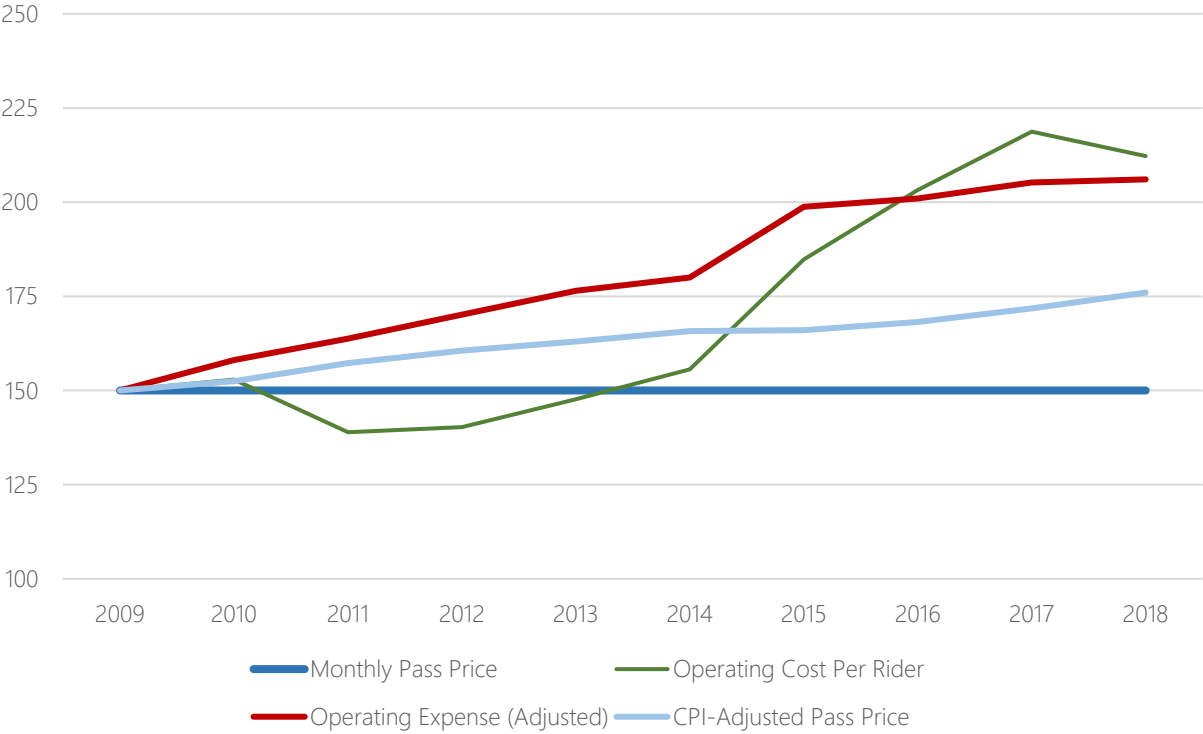
Although the CPI is only a rough estimate of the market change in the price of services, it indicates that the price of goods and services in general has increased while Clean Air Express fares have remained flat. Meanwhile, Clean Air Express total operating expenses have increased 34% just since 2011. Finally, ridership has declined since 2015, resulting in decreasing passenger revenues over the same period as expenses grew and the buying power of fares declined.

⁶ https://www.bls.gov/data/inflation_calculator.htm

Figure 40 illustrates the different pace of change between expense and passenger revenue in the past few years. All lines are indexed to the price of the monthly pass in 2009. Operating expenses have grown at a relatively steady rate over the past decade, while the price of the monthly pass – the largest source of program revenue, has remained flat. The operating cost per rider demonstrates how filling seats affects the need for subsidy to operate the service. In 2011 and 2012, ridership approached all-time high levels, which makes the \$150 per rider revenue go further for the service, even as expenses grow. However, ridership dropped beginning in 2014, meaning that more subsidy is required while operating expenses – the basic cost to operate regardless of how many people are riding – continued to grow.

This graph visualizes the financial issues facing Clean Air Express. First, a fare increase is needed to capture rising expenses. Second, there is a direct relationship between ridership and the need for operating subsidy, and action is needed to regain customers and improve farebox return. Later in the chapter, the discussion on non-fare revenues will show that California State Transit Assistance funds can modestly improve the financial stability of Clean Air Express.

Figure 40 Monthly Pass Price, CPI-Adjusted Pass Price, and Growth in Expenses



Financial Comparisons to Other Express Bus Systems

Comparing fares among commuter express bus services may not be apples-to-apples, but does provide a sense of the range other markets operate under. Table 15 shows a selection of express bus services in markets around California and the U.S., service-wide passenger trips (most agencies run both express and local service), fare structure, and their estimated farebox recovery ratio based on data reported to NTD.

For agencies operating express buses within California, fares vary widely, with several agencies providing a distance or zone-based fare structure (with monthly passes priced accordingly). Clean Air Express falls slightly above the average for monthly pass price and about the same as the average single-trip price. Clean Air Express' operating expenses of \$173.55 (including the contract rate and fuel) are above the average of \$138 per revenue hour across the evaluated services. Clean Air Express' average farebox recovery ratio since 2010 is among the highest at 60%, but has been declining since 2015 with a recovery ratio of approximately 50% in 2017.

Table 15 Other California Express Bus Statistics

Service	Commute Market	Unlinked Passenger Trips	Fares (year last raised)	Farebox Ratio	Op Expenses/ Rev Hour
CAE	Lompoc/Santa Maria -> Goleta/Santa Barbara	180,000	\$7 one-way \$50 ten-ride \$150 monthly (2008)	60%	\$173.55
AVTA	Antelope Valley -> Edwards Air Force Base, San Fernando Valley, Century City/West LA, Downtown LA, Mojave Air/Space Port	280,000	\$5-10.75 one-way \$45-99 ten-ride \$175-344 monthly (2015)	54%	\$146.77
El Dorado Transit	Sacramento	140,000	\$5 one-way \$180 monthly (year unknown)	50%	\$163.94
OCTA	Orange County -> Los Angeles	270,000	\$4-7 one-way \$120-210 monthly (2016)	11%	\$121.98
MST	Monterey County -> San Jose, Salinas	75,000	\$12 one-way \$105 monthly (year unknown)	29%	\$165.41
Santa Clarita	Santa Clarita -> Chatsworth, Westwood/Century City, North Hollywood, Downtown LA	460,000	\$3-4.50 one-way \$110-220 monthly (2014)	31%	\$120.47
SJRTD	Stockton -> San Jose, Sunnyvale, Dublin, Livermore, Sacramento	173,000	\$7 one-way \$158-216 monthly (2017)	39%	\$135.85
VCTC	Oxnard/Ventura -> Santa Barbara/Goleta	195,463	\$4 one-way \$36 ten-ride \$130 monthly (2020)	21%	\$134.47
Yuba-Sutter Transit	Sacramento	130,000	\$4 one-way \$128 monthly (year unknown)	59%	\$117.33

Sources: National Transit Database, published agency data, Fehr & Peers

Non-Fare Revenue Funding Current/Potential

The Clean Air Express has had a varied history of funding sources beyond the farebox. Throughout its service history, farebox recovery has been strong enough to cover a majority of operating expenses, but never all costs. Between 2002 and 2010, the shortfall in revenues was backed by local sales tax Measure D and Federal Congestion Mitigation Air Quality funding, (for which SBCAG lost eligibility in 2003). Since 2002, Clean Air Express has been solely funded through local sales tax revenue, receiving no dedicated State or Federal funding. This arrangement is exceptionally rare for any transit service, and research conducted as part of the development of this plan did not discover any other regional transit service in the nation that operates without any ongoing state or federal funding.

Local (Measure A)

The Santa Barbara County Measure A sales tax measure provides nearly all of the Clean Air Express non-fare revenue. Measure A was approved in 2008 and became effective in 2010, extending a 0.5% sales tax measure originally adopted in 1988 for an additional 30 years. Dedicated funding for the Clean Air Express was included in Measure A through the North County Interregional Transit Program, which provides about \$840,000 annually for the service. This funding support will decline to about \$720,000 annually when bond debt payments begin for the US 101 HOV project, which is currently projected to take effect in 2024.

In order to continue operating service in the near term, the Clean Air Express has drawn Measure A funds in advance of the annual amounts described above. In FY 16/17, an enterprise fund was created to administer the service, and \$1.5 million in future North County Interregional Transit Program funds were advanced to the Clean Air Express. While the funding advance stabilized the service, it reduces funding that will be available in later years and does not increase the amount of total Measure A funding allocated to the program.

Table 16 Measure A Revenue Advances and Expenses

	FY16/17	FY17/18	FY18/19	Total
Measure A Revenues	784,641.40	813,083.26	848,652.70	2,446,377.36
Advance	567,887.37	932,112.63	-	1,500,000.00
Fare Revenues	-	344,700.00	960,067.18	1,304,767.18
Other Non-Fare Revenues	89,126.12	9,894.75	301,482.77	400,503.64
Total Revenues	1,441,654.89	2,099,790.64	2,110,202.65	5,651,648.18
FY Deficit	451,569.01			451,569.01
Expenses	919,455.29	1,342,238.97	1,720,342.71	3,982,036.97
Total Expenses	1,371,024.30	1,342,238.97	1,720,342.71	4,433,605.98
Advance Balance	70,630.59	828,182.26	1,218,042.20	1,218,042.20

State of California

The 1971 California Transportation Development Act (TDA) establishes funding for local and regional transit and other transportation needs. The TDA established two funding sources, the State Transit Assistance Fund (STA), and the Local Transportation Fund (LTF).

STA funds can only be used for transportation planning and transit purposes, and are allocated by formula to regional planning agencies, with 50% allocated by population, and 50% allocated by transit operator fare revenue. The amount of funding available through STA varies each year based on the revenues the state receives through diesel fuel taxes. A recent amendment from Senate Bill 1 in 2017 increased the fuel tax rate and included provisions for future rate increases. Funding is also dependent on Santa Barbara County's population relative to the state population each year. Although this likely does not change dramatically year over year, it could be substantially different over the long run if major urban areas continue to grow at a faster rate. Finally, TDA STA funding fluctuates based on the proportion of transit fare revenue collected statewide and the amount of fare revenue collected in the County.

Clean Air Express has not, in the past, taken advantage of TDA STA funds, which in the 2002-2018 period would have amounted to an estimated \$25,000-\$50,000 annually, although between 2010-2017 some or all of Clean Air Express revenue was reported to the state by Santa Maria and Lompoc, respectively, during periods when these cities managed service operations (Lompoc returned \$87,241 of STA farebox revenue to the Clean Air Express service in June 2019). Prior to resuming management of the Clean Air Express in January 2018, SBCAG worked with the State Controller's Office to ensure SBCAG will be eligible for direct STA farebox-generated funding apportionment. As a result of the additional STA funding provided by SB1, the amount of TDA STA farebox revenue that will be generated and received by the Clean Air Express is projected to be approximately \$60,000 annually.

Beginning in FY 18/19, the County of Santa Barbara committed to contribute \$100,000 annually in state transit funding received by the County to support the Clean Air Express. This is a positive development for the service and will help bolster the long-term financial stability of the service.

Local Transportation Funds are derived from the statewide sales tax and allocated to each county based on the sales tax collected in that county. Counties apportion these funds based on the population within each jurisdiction. LTF funds may also be used for local roadway construction and maintenance if a County is less than 500,000 people.

Federal Transit Administration

The Federal Transit Administration (FTA) has several funding sources available with potential opportunity for the Clean Air Express. The FTA Circular 9030.1E and data published annually by the FTA online at transit.dot.gov provides the basis for the summary of programs below.

Section 5307

The Urbanized Area (UZA) Formula Funding Program (49 U.S.C. 5307) allocates funding to urbanized areas with populations of 50,000 or more. Urban areas with populations over 200,000 receive funding directly through a “designated recipient”, based on a combination of revenue miles/passenger miles, and population/population density. The designated recipient is often the MPO, a transit agency, or sometimes both. Smaller urbanized areas (less than 200,000 in population, but more than 50,000) receive funding through the Governor’s office. Funds can be used for planning, engineering, design and capital investments (such as bus replacement, maintenance, and rebuilding).

The Santa Barbara urbanized area is currently less than 200,000 and received \$5.6 million for Fiscal Year 2019 through the California Governor’s office⁷. This “small” urbanized area population category (50,000 – 200,000) is allocated funding by population and population density. Small urbanized areas are also eligible to receive additional funding under the Small Transit Intensive Cities (STIC) set-aside, described in greater detail in the following section. Currently, Santa Barbara MTD is the only recipient of 5307 funding in the Santa Barbara urbanized area and receives substantial STIC funding.

When the Santa Barbara urbanized area population exceeds 200,000, it will transition from the small urban 5307 formula to a medium urban 5307 formula, which is a significant change. Under the medium urbanized area (200,000-999,999 population) formula, funding is based on revenue miles operated, population, and population density, while the small urbanized area formula is based only on population and population density. Under current FTA funding formulas, following the 2020 census the Santa Barbara UZA will no longer be eligible for STIC funding.

Under the medium urban area formula, reporting the Clean Air Express vehicle revenue miles will increase the amount of FTA 5307 funds that the region is eligible for. These represent funds that otherwise will not be awarded to the region, and total over \$500,000 annually under the existing FTA formula using the estimating tool provided by the FTA.

There are a number of factors to consider before becoming a direct federal transit funding recipient:

1. In order to be eligible for funding either under the small or large urban area categories, the **Clean Air Express must begin reporting to the National Transit Database (NTD)**. A minimum of three years’ worth of voluntary reporting is required before an agency becomes eligible to receive funding. NTD reporting will require data collection and management at a level above what is currently being conducted. Clean Air Express would likely be considered a “reduced” reporter given that it operates fewer than 30 buses and no fixed-guideway service, which will lessen the data collection and reporting burden.

⁷ <https://www.transit.dot.gov/funding/apportionments/fiscal-year-2019-apportionment-tables-full-year>

2. In addition to reporting service metrics, financial, safety, assets and other data to NTD, the **Clean Air Express would need to prepare for FTA compliance** on many of these subjects as well as Federal drug and alcohol requirements for testing and administration and more. Every three years, FTA grantees undergo a “Triennial Review” which is a significant administrative burden. Smaller agencies are typically not completely exempt from any FTA requirements, although the scope of those requirements may be somewhat lessened, and SBCAG is already complying with some of these requirements (Drug & Alcohol policies, Title VI/Disadvantaged Business Enterprise policies, Transit Asset Management Plans, etc.) as a result of using federal funds to purchase vehicles in the past.
3. The FTA does not direct the sub-allocation of 5307 funding within a large urbanized area, although the award of funding is based on the service information provided by all reporting agencies. SBCAG would report all of its revenue service miles and hours towards the Santa Barbara UZA, per FTA and NTD guidance, increasing the allocation of funds for the region. However, the actual sub-allocation would need to be negotiated between SBCAG and MTD.

According to FTA Circular 9030.1E (Urbanized Area Formula Program: Program Guidance and Application Instructions)⁸, there is no requirement to have only a single designated recipient for each UZA.

“FTA encourages the designation of a single designated recipient for each UZA 200,000 or more in population, including such UZAs that span more than one state, in order to streamline the administration of the program and foster coordination. However, nothing precludes the designation of multiple designated recipients.”

The Circular also includes the following requirement: “Documentation of concurrence in the selection of the designated recipient by the providers of publicly owned public transportation service in the UZA, and an appropriately certified resolution of the metropolitan planning organization (MPO) concurring in the designation.” The current designated recipient and SBCAG would have to agree to a change and send a letter to the FTA documenting the agreement and detailing the new recipients and the allocation of 5307 funding to individual services..

Small Transit Intensive Cities Performance Data and Apportionments Funding

The Small Transit Intensive Cities (STIC) funding program is an allocation of 2% of the total Section 5307 funding program. Funding is apportioned to each state’s governor based on a funding formula associated with service performance categories. Although the federal transportation bill will need to be reauthorized before the current bill expires in 2020, it is unlikely STIC funding will be extended to urbanized areas greater than 200,000.

The Clean Air Express does operate service in the small UZAs that include Lompoc and Santa Maria, which are anticipated to remain under 200,000 in population after the coming Census. Funding for small UZAs, including STIC awards, are apportioned by the FTA to states. The state then allocates funds to direct recipients within the UZA. To pursue STIC funding, SBCAG would need to qualify and register with FTA as an eligible direct recipient (as with 5307 funding), in addition to formalizing an agreement with the State and the other transit operator(s) for sub-allocation of the STIC funds awarded to the UZA. Because the

⁸ https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FINAL_FTA_circular9030.1E.pdf

STIC award would be based on the combination of multiple operators' performance data, it is unclear how the funding would be allocated between agencies. Further discussion with the agencies (including FTA) would be required.

Section 5311

Section 5311 funding is for transit and inter-city bus service in rural areas with populations with less than 50,000 people. Although most of the Clean Air Express service connects urban centers, 5311 program funds can be used for rural-to-urban intercity bus services, for which the Solvang and Buellton route may qualify.

Section 5339 Bus and Bus Facilities

Section 5339 funds support the replacement of vehicles and construction of bus facilities for both 5307 and 5311 funding recipients. The program, known as Grants for Buses and Bus Facilities, is available to designated recipients through both formula allocations and competitive grants⁹. This funding source may be an opportunity for Clean Air Express to support future vehicle purchases, or accomplish the goal of a permanent and secure bus storage facility. The 5339 program distributions are relatively small compared to 5307 apportionments. The details of the program have changed over its relatively short history, particularly for discretionary funds and transfer of awards, so circumstances may differ in the next federal authorization.

Other Revenues

Advertising

Many transit operators sell advertising space onboard vehicles and at bus stops as a source of revenue. Clean Air Express does not currently have an advertising program due to limited staffing, although barter or promotional exchanges have been negotiated in the past. The potential value of selling advertising space is relatively limited given the size of the fleet and the characteristic of the operation, but to the extent staffing resources are available, an advertising program should be developed for the service.

Employer Partnerships

Identifying employer partnerships is a strategy to increase ridership and fare revenues by getting information and passes in the hands of employers who are well located by Clean Air Express destinations.

A variety of transit agencies have employer-focused pass programs, which seek to distribute passes to as many employees within an employer as possible. Often times, these pass programs provide discounts from the published fare cost, but require that the employer provide passes to most or all of their employees. Therefore, there is additional revenue from increasing the number of riders, because employees are more apt to ride when their passes are subsidized by their employers, but also from employees who have passes, but do not ride regularly (as opposed to occasional riders paying a cash fare).

⁹ <https://www.transit.dot.gov/sites/fta.dot.gov/files/5339%20Bus%20and%20Bus%20Facilities%20Fact%20Sheet.pdf>

The Financial Future of Clean Air Express

Although Clean Air Express has a strong farebox recovery ratio and stable funding from a local measure, the Clean Air Express faces a structural funding shortfall that does not cover both annual operating expenses and vehicle replacement needs. The service has not historically relied on other dedicated state or federal revenues. If the revenue shortfall remains unaddressed, rising operating expenses and the cost of fleet replacement will lead to a series of service reductions and ultimately the elimination of the service well before the end of Measure A in 2040.

The Measure A North County Interregional Transit Program provides about \$840,000 annually to support the service, but is currently in deficit due to advances to the program from future years. The funding shortfall will become more severe when bonding occurs to construct the 101 HOV lane, when annual Measure A Clean Air Express funding is projected to decline to approximately \$720,000 annually through 2040.

In the absence of additional revenue or a significant reduction in operating costs, service reductions will be determined by capital replacement needs. Based on the fleet replacement assumptions described earlier in this chapter and associated expenses, the current 13 round trips could be reduced to ten beginning in 2026, followed by a further reduction to seven trips in 2029, and the termination of the service completely in 2033. There are strategies that could preserve a limited level of service beyond 2033 on the most productive routes, but unless additional revenue can be secured and/or expenses can be reduced, current service levels are unsustainable.

The SRTP evaluates two significant alternatives to future revenues and expenses to avoid service cancellation. An alternative to reduce operating expense is to contract with Santa Barbara MTD, a public transit agency with a lower operating cost than the current contractor. Given MTD's lower cost structure, if MTD were to operate the service under contract with SBCAG, operating costs would be reduced significantly.

A possible solution to the revenue shortfall is the pursuit of federal transit funding. If the Clean Air Express became eligible for FTA 5307 funding within the next several years, those new revenues could put the service on stable footing through the end of Measure A by supporting both fleet replacement expenses and potentially providing some operating subsidy.

The following section explores the potential outcomes of these two major changes in future funding assumptions in the context of the existing "no change" baseline. The analysis also evaluates the effect of fare increases in 2020 and 2030, which are greatly needed based on discussion earlier in this chapter.

Financial Scenarios Analysis

The following section evaluates the potential outcomes of three alternative scenarios in comparison to the current “no change” baseline, to manage the budget deficit facing Clean Air Express. Each scenario assumes:

- Fleet replacement with coaches purchased from Antelope Valley Transit Authority (AVTA) in Fiscal Year 2020. This is a federal asset transfer with an estimated procurement price of \$900,000 for the Clean Air Express
- Scheduled vehicle replacement (FY24, 28, 31 and 33), based on expected end-of-useful life
- Revenue service hours remain the same (no service expansion)
- Existing (2018-2019) average daily ridership remains the same

The scenarios represent a range of possible outcomes based on estimates of revenues and expenses, without adjusting for inflation.

- Scenario 1 – Baseline – This scenario maintains existing service levels, ridership, fares, funding sources, and cost structure using a private operator
- Scenario 2 – Baseline Plus Fare Increases – This scenario maintains existing service levels, ridership, funding sources, and cost structure using a private operator, but incorporates fare increases in FY20 and FY30, based on the table below
- Scenario 3 – FTA Funding Scenario – This scenario assumes baseline operations, plus the fare increase assumptions in Scenario 2, and introduces estimated additional Federal Transit Agency funding via the Formula 5307 program for large urban areas
- Scenario 4 – Santa Barbara MTD Operated Scenario – This scenario maintains existing service levels and ridership, includes the fare increase assumptions of Scenario 2 and the FTA funding assumptions of Scenario 3, and switches operations to the Santa Barbara MTD, with an assumed \$125 per hour operating cost, based on three past funding agreements between SBCAG and MTD, where regional service (Valley Express, Clean Air Express, and Coastal Express Limited) was provided by MTD at the agency’s system rate. MTD has indicated to SBCAG that any regional transit service provided by MTD in the future under a similar funding agreement may not be provided at the agency’s system rate, but at a higher rate due in part to higher fuel use per revenue hour.

Table 17 summarizes the potential financial outcomes of each of these scenarios in FY40. Each scenario is then discussed in detail. The assumptions for estimating FTA funding availability are discussed later in this chapter.

Table 17 Projected 2040 Outcomes of Clean Air Express Financial Scenarios

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
	Existing Conditions Baseline	Assumes Baseline, plus Fare Increases in FY20 and FY30	Assumes Scenario 2, plus FTA 5307 beginning FY23	Assumes Scenario 3, plus MTD operations
Measure A	15,827,000	15,827,000	15,827,000	15,827,000
STA Revenue	1,290,000	1,290,000	1,290,000	1,290,000
FTA 5307	0	0	5,668,002	5,668,002
TDA - County	2,200,000	2,200,000	2,200,000	2,200,000
Fares	19,250,000	29,153,100	29,153,100	29,153,100
Total Revenue	38,567,000	48,470,100	54,138,100	54,138,100
Operating Rate	136	136	136	126
Operating Expense	36,279,540	36,279,540	38,829,540	30,430,540
Capital Expenses	13,900,000	13,900,000	13,900,000	13,900,000
2040 Outcome	-12,800,700	-2,897,600	220,400	8,619,400

Changes in revenue or expense assumptions are highlighted in green

Scenario 1 Existing Conditions Baseline

The baseline scenario assumes that Clean Air Express continues in its current condition, with a contract operator, similar fare recovery rate and passenger loads, and periodic purchases of new vehicles. This is effectively the current plan for the service.

Measure A is currently the primary funding source to fund Clean Air Express operating and capital costs. Under the baseline scenario, before 2030, the Clean Air Express will have exhausted all of the funding projected to be available under the North County Interregional Transit Program through 2040.

The projected outcome in 2040 is a deficit of nearly \$13 million. Expenses exceed forecast revenue by FY2028, when up to six 2012 buses are scheduled for replacement. Service would need to be reduced before FY28 in order to retain funding through the end of Measure A for the high-performing routes.

The baseline scenario represents a “no change in course” which puts the Clean Air Express on a path to termination within a decade, which would be an unfortunate fate for what is likely one of the most productive and cost effective transit services in the country. Considering the service has consistently filled seats throughout its 30-year history, successfully expanded service by over 50%, and has attracted riders who have remained loyal customers for more than two decades, this is not an acceptable outcome.

Reducing service also reduces options for customers, which makes a service less desirable. Although most riders likely take the same bus each day, having the option to take an earlier or later bus is important to

attract and retain customers. By reducing service to only one or two trips from Lompoc and Santa Maria, ridership on those normally high-performing trips would likely decline over time.

Scenario 2 Baseline Plus Fare Increases in FY20 and FY30

The Scenario 1 Baseline conditions were also evaluated assuming a fare increase in FY20 and another in FY30. The fare increase schedule is based on Table 18, showing a 20%-43% increase in fare media prices in 2020.

Table 18 Fare Increase Assumptions for Future Financial Scenarios (2-4)

	Monthly Pass	Rate of Increase	10-Ride	Rate of Increase	Cash	Rate of Increase	Cash Discount	10-Ride Discount
2009-2019	\$150		\$50		\$7		49%	30%
2020-2029	\$185	23%	\$60	20%	\$10	43%	54%	25%
2030-2039	\$225	22%	\$72	20%	\$12	20%	54%	25%

Assuming there is no significant, long-term decline in ridership as a result of the fare increases, this shifts the timeline for expenses outpacing Measure A revenue into the early 2030s. Even with a second fare increase projected in 2030, the vehicle replacement needs during this decade mount, as the buses transferred from AVTA in FY19/20 reach the end of their useful life.

The projected outcome in 2040 is a deficit of almost \$3 million. Expenses exceed forecast revenue by FY2031, when five 2015 buses are scheduled for replacement. Service would need to be reduced before FY31 in order to retain funding through the end of Measure A for the high-performing routes.

Scenario 3 FTA 5307 Funding, with Fare Increases in FY20 and FY30

This scenario assumes that SBCAG begins the process of becoming a Federal Transit Administration grantee starting in FY20 with the expectation of receiving funding starting in FY23. Funds begin in FY23 because it has traditionally taken a few years after a decennial census for FTA to implement program changes to UZAs and funding apportionments. Additionally, FTA regulations require SBCAG to have been reporting the Clean Air Express statistics to the National Transit Database for a minimum of three years before funding will be awarded. The following section describes in detail the FTA funding assumptions made for this scenario.

This scenario requires SBCAG to begin ramping up administrative time in the near-term to prepare for FTA compliance and begin reporting to NTD, as well as time to negotiate with FTA and the existing designated recipient, MTD, for a new apportionment of funds as described in the next section. This assumes an increase in SBCAG administrative staff expenses from \$50,000 per year to \$150,000 beginning in FY20.

This scenario makes the same assumptions as Scenario 2; operations would continue under a contractor at the current rate, fare increases are planned for FY20 and FY30, and revenue hours and ridership remain the same.

The projected outcome in 2040 is a reserve of approximately \$200,000. Under this scenario, existing service levels could operate through the end of Measure A.

Scenario 4 MTD Operates the Service, with FTA 5307 Funding and Fare Increases in FY20 and FY30

Under this scenario, MTD would operate the service and maintain the vehicles under contract with SBCAG. MTD has operated three different regional transit services under contract with SBCAG at the District's system rate, including one Clean Air Express trip from Lompoc to Santa Barbara from 2008-2010¹⁰. As part of this scenario, Clean Air Express fares are set for increases in FY20 and FY30 as shown in the table above and an MTD system rate of \$125/revenue hour was used for the financial analysis. If this scenario were to occur, the cost may be higher than MTD's system rate (see above), which would reduce the projected cost savings based on the \$125/revenue hour rate. MTD's system rate in FY 18/19 was \$115.13 per revenue hour.

If the FTA includes contracted bus service (Clean Air Express) in MTD's peak hour bus operations, MTD would be operating over 100 buses during peak hour. Under the current FTA funding regulations for urbanized areas over 200,000, agencies that operate over 100 buses during peak hour are not able to use FTA 5307 funding for operations. Following the reclassification of the Santa Barbara UZA after the 2020 Census, it is possible that limiting MTD FTA funding to capital expenses could result in a reduction of financial flexibility to such an extent that MTD may not be in a position to operate the Clean Air Express for SBCAG.

This scenario uses the same assumptions as Scenario 3 for FTA 5307 funding beginning in FY23.

The financial forecast for Clean Air Express improves significantly under these assumptions. The projected outcome in 2040 is a reserve of \$8.6 million. Existing service levels could continue through the end of Measure A, with enough funding in reserve by FY40 to begin replacement of vehicles purchased in the mid-2020s.

¹⁰ MTD operated the Valley Express bus service from 2005-2008 using FTA Congestion Mitigation and Air Quality (CMAQ) funds, and from 2008-2011 with Measure D/A funds approved by SBCAG. MTD was the policy board and administrator of the Valley Express while it was in operation.

FTA Funding Assumptions

The estimate of the amount of FTA 5307 funds the Clean Air Express will be eligible for relies on a few broad assumptions. FTA apportionments are based on annual funding levels authorized by Congress. Although funding authorizations have increased over time, the number of agencies drawing on this funding and the number of large urbanized areas has grown too.

Data from several existing UZAs in the 200,000-999,999 range in California provide an estimate for potential future authorization for a large Santa Barbara UZA). The Oxnard, Santa Clarita, and Visalia UZAs are relatively similar with two or three transit agencies operating in each, and population ranges between roughly 219,000 and 367,000. Comparing the three factors that affect a UZA's apportionment (population, population density, and vehicle revenue miles) with their FY19 section 5307 award, a conservative estimate was developed for the Santa Barbara UZA. The Santa Barbara estimate assumes a population of 200,000, which increases the population density to 3,759 people per square mile. We also added Clean Air Express' current annual revenue vehicle miles to MTD's 2018 NTD report. These assumptions estimate an approximately \$5,023,000 award of section 5307 funding to the Santa Barbara UZA¹¹.

The final step is to distribute the award between the two transit agencies. This step is discussed earlier in the chapter under the Federal Funding section, and represents the most critical question facing Clean Air Express. In the most basic sense, under the current large urban area formula, the Clean Air Express revenue miles represent an amount of unclaimed funding, because 50% of the allocation to a large UZA is based on reported revenue miles). If the Clean Air Express had no need for additional funds and continued not to report to NTD or pursue federal funds, those miles would not be counted towards the allocation and additional money would not be made available.

This analysis estimated the allocation the region would expect based on the current MTD reported miles (assumed to remain the same in the near future), and then the allocation the region might be eligible for if the Clean Air Express were reporting to NTD. The estimated increase in funding eligibility for the region is about \$333,000, which is assumed to be the Clean Air Express suballocation for the purpose of this analysis.

Because Clean Air Express operates fewer than 100 buses in peak service, it is eligible to use up to a certain amount for operating expenses defined based on the following: Operating expenses can be covered at a 50%/50% split for local match, and are also capped in large UZAs for small operators. The cap is calculated using a percent of the proportion of the small operator's vehicle revenue *hours*. In this case, the cap would allow Clean Air Express to use up to an estimated \$151,000 for operating expenses. Regardless, the funding would be a significant benefit to the operation; section 5307 funds can be drawn up to five years following the award, allowing agencies to time funds for periodic vehicle procurements, which would significantly improve Clean Air Express' financial health.

¹¹ MTD estimates FTA 5307 funding for a large Santa Barbara UZA to be \$3,770,888, which does not include the funding generated by the Clean Air Express service.

Financial Assessment Summary

The Clean Air Express has a proven track record of attracting riders for a strong farebox recovery, and has been fortunate to rely almost exclusively on a local funding measure to cover expenses after fares. However, this revenue stream has a finite lifespan that Clean Air Express will outpace with current service levels and fleet replacement needs, and increasing fares alone will not cover the deficit.

Based on the estimates in the financial scenarios, a combination of strategies will improve the long-term health of the service. Fare increases will keep the customer cost-sharing proportional to growing expenses over time. Federal section 5307 funding will introduce a significant long-term revenue stream to support capital expenses and some operating subsidy, in addition to Measure A and STA funds. Contracting operation of the service to MTD would decrease the cost of operation, allowing for the potential to expand service to meet market demand. Altogether, these strategies should put Clean Air Express on stable financial ground through the life of Measure A without any service cuts, and making revenue available by FY40 for anticipated vehicle replacements.

Moving forward with FTA funding will require additional research and staff training, as well as discussions with the FTA regional office and MTD. Qualifying for the FTA funding the Clean Air Express will be eligible for following the 2020 Census is the most promising option, but SBCAG must begin preparing for this scenario as soon as possible. Administering the service under an FTA funding scenario also assumes additional SBCAG staff resources, which could partly accomplish other goals in the SRTP such as improving the marketing of the service to attract more passengers, and therefore improve farebox recovery and stabilize or even decrease the annual need for subsidy.

6. Short Range Transit Plan Recommendations

This chapter recommends actions for the Clean Air Express for the next five years based on the data and evaluation presented in the previous chapters. As the most pressing issue is the long-term financial plan for the service, this is a foundational aspect of the SRTP. However, the service should not live in stasis while a new financial plan is developed. There are opportunities to strategically expand service to improve offerings for existing customers and attract new or past customers with later round-trips, improvements to online service information, and new marketing strategies to reach potential riders.

Financial Plan

1. Begin the process to increase fares as soon as possible. An increase in fares is easily justified based on the proportional increase in operating expense since 2009, while fares have remained flat for a decade
2. Pursue a contract operation arrangement with MTD and seek any other possible efficiencies such as long-term storage solutions and park and ride lots that are not fee-based
3. Immediately begin qualifying for FTA funding
 - a. Hire a full-time staff person with experience in FTA regulations to support the program
 - b. Begin discussions with other stakeholders: FTA regional office, MTD, and SBCAG board
 - c. Begin preparing data for NTD and begin submissions as soon as possible
 - d. Develop an agreement with MTD to send to FTA for UZA sub-allocation; identify SBCAG as a direct FTA recipient

Service Concepts

1. Pilot a service expansion from Lompoc to Goleta and Santa Barbara for a later morning arrival (around 8:30AM) and later afternoon departure (around 5:30PM)
 - a. Market this expansion through current riders as well as employers who are known through surveying to have later shifts; this may require an additional round of focused outreach to employers
2. Make an effort to increase ridership from the Santa Ynez Valley through targeted marketing and follow-up with new riders to keep them interested and on-board
3. Make a similar effort to improve ridership from Santa Maria and evaluate the potential success of an additional later round-trip similar to the proposed Lompoc trip

Capital Program

1. Develop a secure parking facility for buses at each site, particularly for Santa Maria
 - a. Explore grant funding opportunities either as a direct recipient or in partnership with others
 - b. If FTA funding becomes available beginning in FY23, this would present an opportunity to accomplish this goal
2. Continue to explore opportunities for asset transfer from other agencies as the California ZEB program ramps up, to reduce cost of fleet replacement in the next two decades

Attracting and Retaining Customers

1. Improve online presence of the Clean Air Express through GTFS and a modernized website
 - a. Developing a GTFS feed is a relatively low-effort investment that significantly improves online exposure of the service
 - b. Maintaining the feed is critical, but given how infrequently the Clean Air Express service changes, should not be a significant burden
2. Build relationships with employers who offer employee subsidy and develop opportunities to reach non-riders
 - a. Use the success of existing employer relationships to build new relationships and pass programs at other employers
 - b. Provide incentives for riders to attract new riders
3. Refresh the exterior of buses to use as marketing opportunity that simply and clearly identifies the website and searchable schedules online or through apps like the Transit App and Google Maps
4. Develop a smart phone application that will offer customers the ability to locate Clean Air Express buses in real time, provide service information, and contact information for submitting questions, comments, and complaints
5. Develop a strategic marketing campaign using multiple media avenues to raise awareness of the Clean Air Express service and increase ridership

Fares and Fare Media

1. Pursue an electronic fare option for customers
 - a. Market this option heavily, which might help attract new and younger riders
2. Long-term, transition all passes to electronic/smartphone-based as a means to improve customer purchase options and convenience, and also improve data collection efficiency

Staff Resources

1. Increase SBCAG staff resources allocated to Clean Air Express to at least one full-time equivalent in order to accomplish the near-term goals outlined above
 - a. While adding staff resources will increase expenses, a dedicated full-time administrator can devote time to preparing for federal funding, marketing the service, coordinating employer outreach, and other objectives that will improve revenues, enhance customer service, and manage expenses more productively