

DRAFT



MEMORANDUM

To: Anne Muzzini, County Connection
From: Richard Weiner
Date: July 17, 2015
Subject: Lamorinda Revised Service Alternatives

This memo updates the Lamorinda Service Alternatives Memo dated March 27, 2015 by summarizing public feedback received on the original service alternatives and providing initial thoughts of service refinements and recommendations.

PROJECT BACKGROUND

The Lamorinda Service Plan is aimed at improving transit ridership, service quality, and cost effectiveness by developing alternative service options in the Lamorinda area. While the focus of the plan is public transportation options, other alternatives have also been considered based on their ability to meet community transportation needs.

Based on initial conversations with local stakeholders and community members, key challenges identified included the following:

- Current transit service works for some, but is not a viable option for most residents within the Lamorinda area
- Vehicle access is limited due to parking constraints at both local BART stations (Lafayette, Orinda) and in downtown Lafayette

A more thorough report on existing conditions and stakeholder feedback can be found in the project's Existing Conditions Report.

ALTERNATIVES SCREENING

Preliminary Development

Three key transportation markets were identified to initiate the process of developing transit service alternatives that could address existing transportation challenges. These markets—areas in which there are unmet transportation needs—emerged through discussions with the Lamorinda Program Management Committee (LPMC), the LPMC Technical Advisory Committee (TAC), local transportation providers, and community members. Markets include commute trips, school trips, and mid-day trips. To address the needs of each market, several preliminary alternatives were developed. A full summary of initial concepts is provided in Figure 1.

Figure 1 Summary of Target Markets and Preliminary Service Alternatives

Target Market	Service Alternative
Commuter trips	Increased transit frequency. Increase the frequency of existing transit in the Lamorinda area (County Connection routes 6 and 25).
	BART feeder services. Provide first/last mile connections to and from BART stations. Could involve ridesharing, shuttles, or a hybrid approach.
	Zone-based services. Also known as “point deviation” service; operate service within a specific service area and specific stops, but deviate based on pre-scheduled trip requests. Serve BART and other major activity centers.
	Marketing efforts. To complement new services and improve usage of existing options, create strategic marketing efforts tailored to specific transportation markets.
	On-demand services. Taxis or peer-to-peer “transportation network company” services to serve immediate on-demand trips within the service area. Potential to serve first/last mile commuter trips. Develop strategies to attract drivers to the area.
School trips	Staggered start times. Orinda and Moraga schools have staggered start times, which allows school buses to serve multiple schools and can ease the effects of congestion. Explore feasibility of staggered starts in Lafayette.
	Additional resources for Lamorinda School Bus Program. Identify schools and routes with unmet demand for school bus service; find efficiencies between County Connection School Tripper routes and Lamorinda School Bus Program routes.
	On-demand services. Explore the feasibility of using private, child-friendly on-demand transportation services for school trips in the Lamorinda area.
Midday trips (senior mobility and community trips)	Service routes. Provide fixed-route transit service between clustered origins and destinations, such as between senior housing facilities and medical centers. Focus is on access rather than service speed or frequency.
	Mobility management. Coordinate existing services for an improved customer experience, and find opportunities for cost efficiencies.
	Flexible service that can deviate off route up to a certain distance to make pre-scheduled pick-ups/drop-offs.
	Non-transportation service options. Create programs that address senior trip needs by bringing services to their homes (e.g., medical care, meal delivery).
	Lunchtime circulators. Provide a lunchtime/midday circulator service in downtown Lafayette.
	On-demand services (transportation network companies). Develop strategies to attract purveyors of private, on-demand transportation that serve seniors.

Prioritization

The consultant team conducted a screening process in January 2015 to prioritize preliminary alternatives based on their potential to meet project goals. The feasibility of each alternative was assessed based on existing services, conditions, and constraints in the Lamorinda area. The resulting set of alternatives was then discussed in greater detail with LPMC TAC staff. Based on this process, a list of prioritized alternatives emerged that warrant additional analysis (Figure 2).

Figure 2 Prioritized Lamorinda Transportation Alternatives

Prioritized Alternatives
<ul style="list-style-type: none"> ▪ BART feeder services ▪ Flexible transit services ▪ School bus program enhancement

Each of the prioritized alternatives has one or more service approaches. The description and goals of each of these alternatives are provided in the Alternatives Description section; first, an overview of general findings from the second round of public feedback is provided. Each individual service description includes further detail on public feedback received.

SUMMARY OF PUBLIC FEEDBACK

Between May 21 and June 12, 2015, several channels were used to gather public feedback on the draft service alternatives—a process used to refine the prioritized service alternatives is described in the next section. Figure 3 summarizes the surveying methods, dates, and responses received.

Figure 3 Alternatives Refinement Public Outreach Summary

Survey Method	Dates	Responses
Online survey of BART passengers, disseminated by handing out postcards at Lafayette and Orinda BART stations	Disseminated May 27 and 28 Survey open through June 12	500
Online survey of the general public disseminated through Nextdoor, the Lamorinda Weekly, and via flyers posted in the Lamorinda Spirit Van and several senior centers and housing facilities	May 25 - June 12	591
Online survey of parents of schoolchildren, disseminated through the Lafayette, Orinda, and Acalanes school districts' superintendants	May 21 - June 12	653
Textizen text-based survey advertised on County Connection buses	May 28 - June 12	39
Interviews with several individuals who work closely with Lamorinda's senior population	Early June	3

Like in the first round of outreach, the amount of responses received indicates a high level of engagement with transportation issues in Lamorinda; unlike the first round, we saw a high level of engagement through channels other than Nextdoor. As seen in Figure 4, school bus expansion, a taxi subsidy program for seniors and people with disabilities, and BART shuttles garner the most support from respondents.

It should be noted that while respondents were not asked directly about their interest in using on-demand transit services—which can be considered a third version of the BART shuttle concept--many indicated support through free form comments and the vast majority (80.9%) support a model that prioritizes response time over service area (offered by many on-demand models).

Figure 4 Summary of Support for each Proposed Alternative

Alternative	% of Respondents Interested in Using the Service	Total Responses
BART Vanpools	32.3%	464
BART Shuttles - Moraga Way - Mt. Diablo Boulevard - On-demand model	56.0%	430
Taxi Scrip/Voucher program for seniors or people with disabilities	79.6%	103*
Taxi Scrip/Voucher program for the general public	42.2%	102*
School Bus Program Expansion	81.4% - 89.2%**	518
*This question was added to the survey on June 1, 2015 after many responses had been received **Respondents were asked about each expansion proposal separately		

One final overarching point is the relatively common suggestion by respondents to many of the surveys that bicycle and pedestrian safety improvements are needed, particularly to encourage and facilitate more walking and biking to school. Many people stressed these options as complements to existing and proposed transit service alternatives.

The following section describes the service alternatives in detail, including detailed feedback received in the second round of public outreach. A summary of the alternatives and initial refinements to them follows in a final section.

ALTERNATIVES DESCRIPTIONS

This section highlights the three prioritized alternatives and describes several operational options within each alternative. In addition to those listed here, two sub-alternatives were eliminated from consideration based on feedback from the consultant team and the LPMC TAC. A more detailed description of those eliminated can be found in Appendix A. Public feedback on each alternative is provided throughout.

BART Feeder Services

Given existing BART access constraints (mainly associated with parking capacity), this section describes three services that are designed to provide greater options to and from BART. The proposed options have varying service delivery models, but all are focused on peak commute hours (morning and evening commutes). Two of the three options are geared toward the Moraga Way corridor between Orinda and Moraga for the following reasons:

- Orinda BART has fewer direct access/connections to the adjacent street network as compared to Lafayette BART, meaning it is more reliant on vehicular options to access the station

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- Orinda BART serves Lamorinda residents heading westbound, placing it in the path of travel of the dominant commute trip pattern (toward Oakland/San Francisco) from the Lamorinda area
- Channeling more trips (in buses or high-occupancy vehicles) down Moraga Way will help reduce pass-through congestion in downtown Lafayette heading towards the BART system

One of the options is specific to Mount Diablo Boulevard in Lafayette for the following reasons:

- Given the Downtown Lafayette Priority Development Area (PDA), the largest magnitude of residential growth is likely along Mount Diablo Boulevard in Lafayette
- Downtown Lafayette has the largest concentration of commercial activity, meaning that peak-hour services could also serve as last-mile connections for those traveling from BART to their workplaces

Overview of Feedback

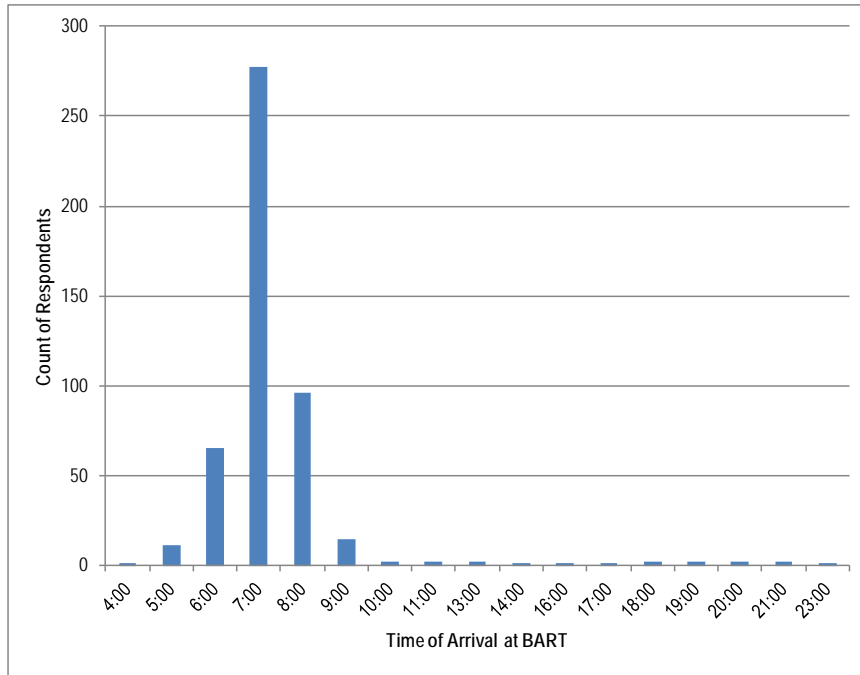
Before being asked to opine on specific BART feeder service alternatives, respondents to the BART rider survey were asked for information about their typical use of BART.

- 82% of current BART passengers drive alone and park at BART and half of them remembered a time within the last 30 days when they were unable to find parking within the BART lot.
- People that live closest to the BART stations (in Lafayette and Orinda) are more likely to report not being able to find parking within the BART lots in the last 30 days than are people who live farther away (in Moraga or outside Lamorinda), suggesting that residents living farther away plan ahead and arrive earlier at BART, knowing the parking constraints.
- The vast majority of respondents arrive at BART within the 7 a.m. hour. Most people return to the BART station within the 5 p.m. and 6 p.m. hours. See Figure 5 and Figure 6.

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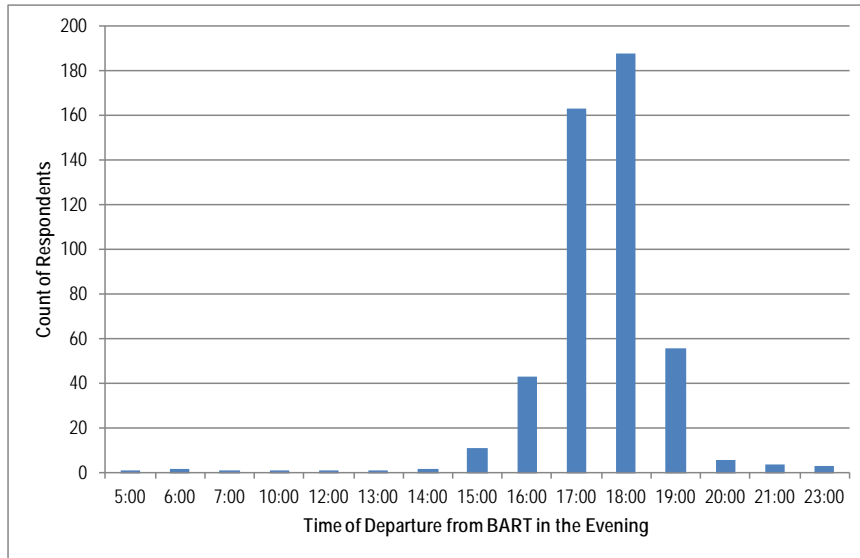
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Figure 5 Hour of arrival at BART stations



Source: Survey of BART passengers (N=483)

Figure 6 Hour of departure from BART stations



Source: Survey of BART passengers (N=483)

- According to results from the Textizen survey advertised to County Connection riders, by and large most respondents use County Connection to access BART and live outside of Lamorinda. These individuals' most commonly cited reason for riding the bus to BART was that they do not drive or have access to a vehicle (60% of respondents)—notably, not because of BART parking congestion (only 17% of respondents). This suggests that most current County Connection riders are dependent on its service.

Vanpool to BART

Market Focus: Commuters (Moraga to/from Orinda)

Overview

In this option, individual commuters would become vanpool drivers and passengers through a monthly subscription paid by the individual. The vanpool(s) would initially operate between park-and-ride facilities in Moraga and the Orinda BART station. In the interim, the Moraga Center parking lot could be used as a park-and-ride location.¹ Over time, if subscribers' home locations were sufficiently clustered (within about 5 minutes' drive from one another), subscribers could be picked up at home rather than in any future park-and-ride facilities in Moraga. To assist participants in getting started, various vanpool resources are available through 511 or 511 Contra Costa.

Operational Characteristics

Vans would be rented on a month-to-month basis directly to individual rideshare drivers (each van would also have a backup driver). The number of vans required could change each month and would be determined by the monthly requests. Insurance, maintenance, 24-hour roadside assistance, customer service, web assistance, marketing assistance, towing, and loaner vehicles would be included through the lease.

A group credit card would be established to enable monthly costs to be shared among subscribers. Because vehicles are rented on a month-to-month basis, vehicle sizes could be changed each month to accommodate changing demand. Eight-, nine-, and ten-passenger vans are available through various vanpool vendors.

Estimated monthly costs for this service include the cost to rent the van(s) and the costs to park at BART (see Figure 7). Current BART parking fees are approximately \$3 per day.

Figure 7 Summary of Costs

Estimated Monthly Costs	
Monthly van rental (incl. insurance) per van ²	\$620
Monthly fuel costs per van ³	\$63
Monthly BART parking fees per van ⁴	\$65
Monthly total per van (includes operations, maintenance, and vehicle rental)	\$748
Monthly ridership per van ⁵	433

¹ This location has been identified as a potential park and ride facility. However, no formal discussions with property owners have been discussed at this time. This is however, an existing casual carpool pick-up location. Other potential park-and-ride locations are described throughout this report.

² Assumes a 10 passenger van. Limited to 500 miles per month.

³ Assumes gas mileage of 10 miles per gallon and \$3 per gallon fuel price. Monthly mileage based on one morning trip from Moraga park-and-ride to Orinda BART (4.8 miles) and one evening trip from Orinda BART to Moraga park-and-ride (4.8 miles).

⁴ As of January 2015, BART parking costs \$3/day. This cost assumes 21.67 service days per month. However, it is possible that vanpools could negotiate a reduced parking rate with BART. This has not been negotiated with BART at this time.

⁵ Assumes full vans (10 passengers)

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Morning Trip(s)

Subscribers would commit to a morning pick-up time and travel together to the Orinda BART station, where they would have guaranteed parking for their rideshare vehicle (this arrangement does not exist today and would need to be coordinated with BART, but there is expressed interest in exploring this partnership). The van(s) would remain parked at BART during the day until the return trip in the evening.

Evening Trip(s)

Participants must also agree to an evening departure time linked to a particular scheduled BART train. The driver (or backup driver) would leave from BART and bring passengers back to the park-and-ride. Overnight, the vans would remain at the park-and-ride.

Capital Requirements

There would be no vehicle capital costs in this alternative as vans would be rented from a vanpool provider paid by individual users. The only potential capital costs incurred by a public entity would be associated with park-and-ride locations that might need to be constructed, enhanced (signage, striping), or expanded. It is possible that existing underutilized parking could be used as a park-and-ride facility, but this may require establishing a lease or other shared use agreement with the property owner; any associated fees could be bundled into the participants' subscription fees or paid by a public entity.

Other Policies

Potential vanpool priority parking could be established at BART.

Administration

Typically, vanpool programs are marketed and incentivized through employers. Since there is no program sponsor for this option, it could be jointly marketed by County Connection, BART, and other Lamorinda communities, but administered entirely by the vanpool provider. Alternatively, BART, County Connection, 511 Contra Costa, or another public organization could subsidize the cost of the program for participants through parking facility leases or the subsidies for van leases.

Summary

Figure 8 Summary of Vanpool to BART Benefits and Drawbacks

Benefits	Drawbacks
<ul style="list-style-type: none">▪ Rideshare operation handled primarily by individuals; public entity does not have to be involved on a day-to-day basis▪ BART and/or other public entities may be able to subsidize the service to reduce costs to participants▪ Concept is simple; easy to communicate the operations to potential rideshare subscribers▪ Designed specifically for commuters to points west of Lamorinda (Oakland and San Francisco)	<ul style="list-style-type: none">▪ Subscribers must commit to both morning and evening departure times▪ Some subscribers must commit to be drivers▪ Vehicle rental agreement holders (the driver and/or backup driver) may have to front all or part of the cost of the vehicle rental▪ Requires a high number of subscribers to enable participants to be picked up from their homes▪ Limited cost savings to users (but guaranteed access to BART)

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Public Feedback

Among all respondents to the public survey, about one-third would be willing to carpool or vanpool to BART to gain access to preferential, free parking at BART. Less than a quarter of respondents to the BART survey—individuals we were sure were riding BART—communicated support for this alternative. Their interest, however, differs depending on where they live. In particular, residents of Moraga—who are located farthest from BART stations—are most likely to support this option (see Figure 9).⁶ The main benefit cited is guaranteed parking, however, respondents also view being tied to another person’s schedule as a significant deterrent to this strategy.

Figure 9 If there were preferential, free carpool or vanpool parking at the BART station (with guaranteed availability), would you be willing to carpool/vanpool with at least four other people to use this service?

Residence	Yes	No	Unsure	Total
Lafayette	29.6%	40.8%	29.6%	100%
Moraga	40.9%	31.5%	27.6%	100%
Orinda	28.5%	41.7%	29.8%	100%
<i>Overall</i>	<i>32.3%</i>	<i>38.6%</i>	<i>29.1%</i>	<i>100%</i>

Source: General public survey response

Moraga/Orinda BART Shuttle⁷

Market Focus: Commuters (Moraga to/from Orinda)

Overview

As an alternative to a privately-organized vanpool, a public shuttle could be established to help improve access to the BART station and serve satellite park-and-ride lots in Orinda and Moraga. The primary selling point of such a service would be higher service frequency (proposed at 20 minutes during peak hour) and limited-stop service between park-and-ride lots and BART. A shuttle would travel along Moraga Way and could be scheduled to supplement existing Route 6 service on a regular schedule. In addition, the shuttle would provide an opportunity for a route extension to currently underserved areas of both cities. This includes the Larch neighborhood in Moraga and areas north of the Orinda BART station not currently served by transit during peak periods. Conceptual routing of this plan is shown in Figure 11.

A major component of this alternative is the provision of parking as a way to access the shuttle for those who are outside of walking or biking distance. Proposed park-and-ride lots as part of this alternative include some public, private, and religious institutions’ parking facilities. At this stage, all proposed parking facilities are conceptual and no property owners have been contacted. A

⁶ A similar trend was observed among respondents to the BART-specific survey.

⁷ A variation on this alternative would be to simply increase frequencies on Route 6 from the existing 40 minutes in the peak period.

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shared-use or lease agreement would be the most likely arrangement to access to these facilities for parking purposes.

Operational Characteristics

Figure 10 provides an overview of the proposed BART shuttle operating characteristics focused on peak-hour commuters. The shuttle would only operate in the morning and evening peak commute periods. On segments that overlap with Route 6 service, frequencies would be approximately 20 minutes. On separate segments (such as Camino Pablo in both Orinda and Moraga), the shuttle would operate every 40 minutes. Twenty minute frequencies enable riders to use transit without relying on a schedule; anything longer usually requires advanced planning.

Figure 10 Moraga/Orinda BART Shuttle Operational Characteristics

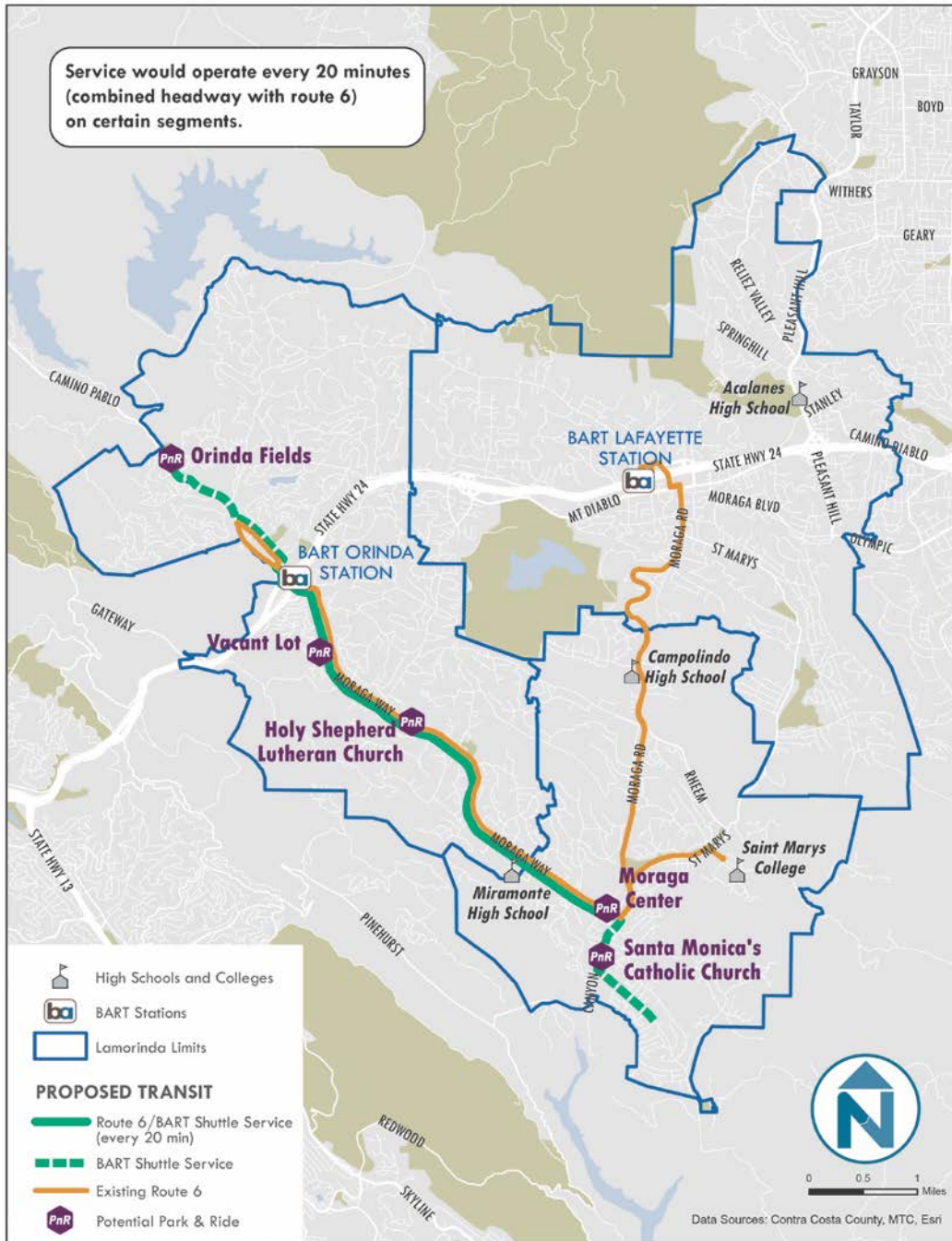
Morning Service	Evening Service	Service Frequency	Potential Park-and-ride Locations	Additional Stops
6:00 a.m.-9:30 a.m.	4:00 p.m.-7:30 p.m.	40 minutes (20 minutes when paired with Route 6)	<ul style="list-style-type: none"> ▪ Santa Monica's Catholic Church ▪ Moraga Center ▪ Holy Shepherd Lutheran Church ▪ Orinda Fields 	<ul style="list-style-type: none"> ▪ Camino Pablo (Moraga Larch Neighborhood) ▪ Camino Pablo (Orinda) ▪ Canyon Road

Figure 11 illustrates the proposed Moraga/Orinda BART shuttle routes alongside existing transit service.

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Figure 11 Moraga/Orinda Shuttle Service to BART



These estimates presume a weekday-only service operating 255 weekdays per year. Given the service characteristics, it is estimated that 2 vehicles, each operating 7 revenue hours per day, would be required (14 hours for 2 vehicles). Figure 12 provides a high-level estimate of annual operating costs based on current County Connection costs. Such a service could be operated either by County Connection or a third-party vendor.

Figure 12 also presents a cost comparison between running a new BART shuttle and increasing the Route 6 headway to 20 minutes (from 40 minutes currently). These calculations assume 3 additional vehicles would be needed (doubling currently need), each in service for 7 peak revenue hours (or 21 hours for 3 vehicles). If route-end dwell time could be reduced from 15 to 5 minutes, only 2 additional vehicles would be needed, reducing the cost to \$229,500.

Figure 12 Moraga/Orinda BART Shuttle Estimated Resource Needs vs. Increased Route 6 Frequency

Alternative	Additional Peak Vehicles	Revenue Hours (Daily/Annual)	Estimated Cost (at \$75/hour)
Addition of Moraga-Orinda BART Shuttle	2	14 / 3,570	\$267,750
Increased Route 6 frequency (20 min. peak period headway, 15 min. dwell time)	3	21 / 5,355	\$401,625

Given the cost similarity between running a BART-specific shuttle service along Moraga Way and increasing existing Route 6 frequency (along its entire route), key questions include:

- Would a BART-specific service offer special branding and marketing opportunities that would increase the appeal of transit to choice riders?
- Is a 5-minute dwell time at the end of each route feasible for existing Route 6 operations?
- Would it be easier to implement increased frequencies on an existing route or new duplicative service along a portion of an existing route?
- How many stops should be offered for a BART-specific shuttle option?

Capital Requirements

In addition to operational costs, several capital improvements are necessary to support the new BART shuttle alternative, including the purchase of vehicles if they are not already available. As noted in Figure 12, two additional vehicles would be required to operate this service (likely transit-style buses, approximately \$415,000 - \$495,000 per vehicle).⁸ Vehicles may also be leased or included as part of a service agreement with a third-party provider. Vehicles may be branded or marketed in a unique way to reflect the BART-access nature of the service.

Some parcels envisioned as park-and-ride locations are not currently approved as such; some may need site enhancements (e.g. paved parking stalls or safe areas suitable for deploying a wheelchair ramp) or minor improvements like signage. Some locations may also require a lease agreement or payment for ongoing use as a park-and-ride facility.

⁸ Based on transit vehicle costs 30'-40', 2013/2014 vehicle costs by type. American Public Transit Association.

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Figure 13 lists each of the proposed park-and-ride facilities and potential site improvements that may be necessary to facilitate usage by a transit vehicle.

Figure 13 Potential Capital Needs

	Site Enhancement	Lease Agreement	Site Construction
Orinda Fields	X		
Vacant Lot (Approx 175 Moraga Way)	X		X
Moraga Center	X	X	
Santa Monica's Catholic Church	X	X	
Holy Shepherd Lutheran	X	X	

Other Policies

At this stage, there is no pre-defined entity that would operate this service. However, presuming that the service is offered by County Connection, it would hold similar fare rules and accept County Connection fare products.

Given that current Monthly Reserved Passes for parking at the Orinda and Lafayette BART stations are \$105.00 each, a potential marketing campaign could be developed to offer preliminary one-time County Connection Monthly Pass discounts for those who hold Monthly Reserved Passes as a way to encourage mode shift. Free park-and-ride parking is also presumed; riders would simply pay for shuttle access to BART.

Administration

The service could be managed either by County Connection or as a collaborative effort between Moraga and Orinda. If managed by a combination of cities, it is most likely that one city would take on administrative functions and the other community would contribute financially on a regular basis. In terms of operations, potential options include County Connection operating the service or contracting a third-party provider to operate service. In either scenario, vehicles could have the option to be uniquely branded and customized to meet specific service needs.

An additional option that has yet to be tested is the potential of a private company managing and operating the service. In the past few years, several transit-focused start-up companies have emerged that focus on subscription-based shuttle services. While these services currently do not operate in Contra Costa County, they have expressed an interest in doing so in the future if the market would support their services.

Summary

Figure 14 provides an overview of the Moraga/Orinda BART Shuttle alternative including key benefits and drawbacks as compared to the other alternatives.

Figure 14 Summary of Moraga/Orinda BART Shuttle Benefits and Drawbacks

Benefits	Drawbacks
<ul style="list-style-type: none"> Passengers pay only for their fare; no vehicle rental, 	<ul style="list-style-type: none"> Limited service area (presuming that many would

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<p>fuel, insurance, or maintenance costs to split</p> <ul style="list-style-type: none"> ▪ Highest level of flexibility for passengers; morning and evening trip times could be flexible due to shuttle frequency ▪ Supplements less frequent County Connection Route 6 service ▪ Expands transit service options to BART system 	<p>still drive to access transit)</p> <ul style="list-style-type: none"> ▪ Service is geared to residents of Moraga and Orinda, though Lafayette may benefit from reduced traffic congestion ▪ Requires additional operational and capital funding ▪ Park-and-ride are conceptual and require further investigation
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Public Feedback

Among the general public, 56% of respondents (N=430) said they would use a shuttle from a park-and-ride lot or location closer to home and 39% of surveyed BART riders (N=475) would be willing to do so. This suggests that, while people most familiar with a BART-based commute are less likely to be open to this option, the BART shuttle concept gains more support from both BART riders and the general public than the vanpool option. Further, the shuttle option gains greater support among people who reside in Moraga—which would be served directly by this alternative—and among people younger than 55. Frequency and proximity to home are the two most influential factors in respondents’ willingness to use the shuttle option.

Open-ended comments:

- “Truly hope there will be a frequent shuttle up & down Moraga Way & Camino Pablo to/from BART during commute hrs (630-9am; 3-7pm). Marketing campaign and incentive.”
- “I think the money spent on a dedicated BART shuttle on Moraga Way could be better served by spending the money on increased frequency of bus route 6 or splitting it into 2 sub routes in the morning (Orinda BART to SMC and Lafayette BART to Campo H.S.)”
- “The idea of a shuttle to BART is a good one - I understand the costs would only be worth it if enough riders used the services, but I often drive because there isn’t parking and I would use it several days a week.”
- “Bus /shuttle service will be a hard sell in Lamorinda. Make some kind of incentive. BART discounts? Tax credits?”
- “I think small, dedicated BART shuttles along Moraga Way with limited stops (ala Muni express buses) every 10 minutes during morning commutes would be fantastic. The #6 County Connection bus in particular runs so infrequently that it must contribute to the very low ridership I have observed the few times I have needed to take it.”
- “The idea of the shuttle along Moraga Way seems redundant given the County Connection bus that runs that route. How about adding more buses to that existing route, during peak hours.”
- “I think that implementing a Moraga Way BART shuttle service during rush hours (to supplement the overly long 40 min(!) headway for Line 6) is long overdue and would go a long way toward reducing rush hour congestion on Moraga Way. Parking (such as at the Safeway area on Moraga Way/Camino Pablo) is plentiful in many strategic areas. Really, the Line 6 headway is too long to be useful as a rush hour alternative to driving one's car to BART.”
- “I would love the scheduled shuttle program from off-site parking and bus stops which will also help reduce traffic on Moraga Way. The once an hour service we currently have is probably why the bus is not a suitable option for many BART passengers.”

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- “Using/renting spaces during work hours for vans to pick up passengers for BART would be a sure benefit...Reduce the shuttle amounts necessary to decrease the BART parking lot and Moraga way traffic by increasing the Orinda BART daily parking amounts. This would be a service to those parking at BART to have more available parking, and would encourage more to use the off BART parking/shuttle parking systems, a win/win. Community parking/shuttle should be without cost to the users, they are the people that are helping the community. As a property owner in Orinda, I would support this tax increase. Why? decrease traffic, increases the use of BART, encourages shuttle users, and increases property values of the community.”

Among County Connection riders (respondents to the Textizen survey), 51% of respondents indicate their biggest complaint is that the bus does not run frequent enough (N=). Forty-six percent feel that it does not run early or late enough. Interestingly, only 3% complain that stops are not close to their trip origin.⁹ Frequency—and potentially hours of service—are operational elements that could be addressed through the implementation of a BART shuttle.

Lafayette Shuttle¹⁰

Market Focus: Commuters (Lafayette)

Overview

Based on conversations with City of Lafayette staff, the concept of a downtown Lafayette shuttle has been discussed in various forums. Typically, the purpose of a local circulator shuttle is to benefit and support the community’s economic development goals or area parking constraints. Shuttles also can provide additional access to regional transit providers such as BART. For this reason, a Lafayette shuttle is included as part of the BART Feeder Service alternatives.

A proposed shuttle service would serve the majority of downtown Lafayette, which is also largely encompassed by a “Transit Neighborhood” Priority Development Area. As such, the district is slated to nearly double in population over the next 25 years. A shuttle service during the peak commute periods could ensure last-mile connections to these new residents to/from BART and also ensure workers access to jobs within the same district. Given that most of the growth around downtown Lafayette will be within walking distance of Mount Diablo Boulevard, walking and bicycling are assumed to be the primary modes of access to this service.

Currently, the proposed corridor is also served by County Connection, which has low ridership levels. However, this may be a false reflection of the transit potential of the corridor given that Route 25 operates every hour during peak periods--not nearly frequent enough to provide schedule flexibility to and from BART. A shuttle that operates every 15-20 minutes has the potential to significantly increase demand.

Operational Characteristics

Similar to the Moraga/Orinda shuttle, a Lafayette shuttle would operate during the peak period on weekdays only. A proposed alignment would operate between the Pleasant Hill Road and the

⁹ As indicated by responses to the Textizen survey

¹⁰ A variation on this alternative would be to simply increase frequencies on Route 6 from the existing 40 minutes in the peak period.

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Lafayette BART Station with stops along Mount Diablo Boulevard. The route could also potentially provide park-and-ride service to a future facility near the route’s terminus.

Figure 15 Lafayette BART Shuttle Operational Characteristics

Morning Service	Evening Service	Service Frequency
6:00 a.m.-9:30 a.m.	4:00 p.m.-7:30 p.m.	20 minutes (presuming 5.2 mile round-trip alignment)

Figure 16 illustrates the proposed Lafayette shuttle, which would run adjacent to County Connection Route 25 along Mount Diablo Boulevard.

Figure 16 Proposed Lafayette Shuttle Service to BART

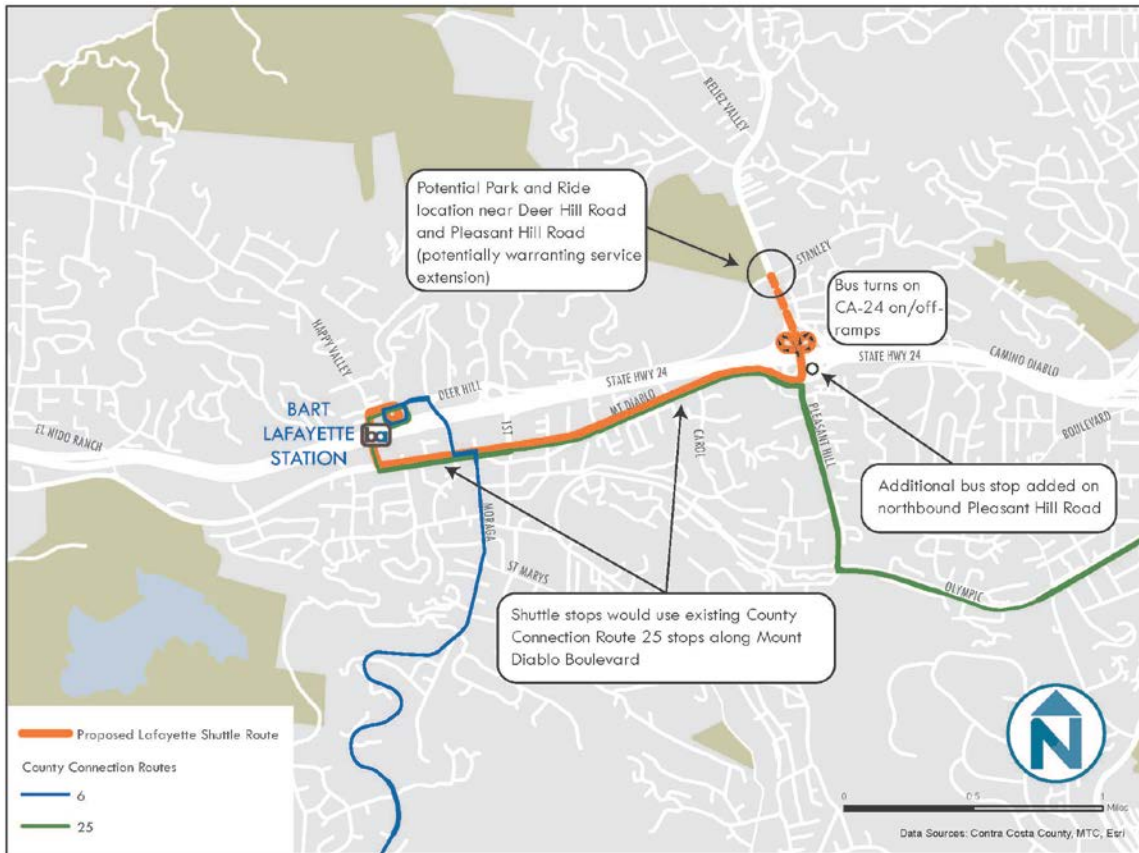


Figure 17 Lafayette BART Shuttle Estimated Resource Needs

Peak Vehicles	Revenue Hours (Daily/Annual)	Estimated Cost (at \$75/hour)
2	14 / 3570	\$267,750

Capital Requirements

In contrast to the Moraga/Orinda shuttle, the Lafayette shuttle would cater to the downtown area and would be accessed primarily by walking and biking. In the interim, it is not anticipated that a shuttle would serve any dedicated park-and-ride lots, instead focusing on connecting those who

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live within walking or bicycling distance of the service corridor. In the future, a potential park-and-ride lot could be considered near the route's terminus to increase its catchment area.

Near-term capital requirements would be in the form of signage or bus stop infrastructure along the route. Existing infrastructure along County Connection Route 25, such as stops and signage, could be used for both services.

Other Policies

The Lafayette shuttle would have policies similar to those of the Moraga/Orinda shuttle.

Administration

The Lafayette shuttle would have administration similar to that of the Moraga/Orinda shuttle.

Summary

Figure 18 provides an overview of the Lafayette shuttle alternative, including key benefits and drawbacks as compared to the other alternatives.

Figure 18 Summary of Lafayette BART Shuttle Benefits and Drawbacks

Benefits	Drawbacks
<ul style="list-style-type: none">▪ Supports increased development along Mount Diablo Boulevard and existing businesses/employers▪ Enables additional transit options for those living along Mount Diablo Boulevard (and near intersection with Pleasant Hill Road)▪ Supplements less frequent County Connection service (Route 25)	<ul style="list-style-type: none">▪ Limited service area along Mount Diablo Boulevard▪ Currently, only proposed to operate during peak commute hours (give focus of study)▪ Shuttle access is still contingent on safe pedestrian access and connections across Mount Diablo Boulevard

In addition to the sub-alternatives presented here, a fourth “Hybrid” model was also considered in which members of the public and hired drivers operate shared vans between Orinda BART and Moraga. This alternative was de-prioritized due to its complexity and limited feasibility. A full description can be found in Appendix A.

Public Feedback

Feedback on this specific shuttle service was not requested directly. However, respondents' comments that frequency is the most influential factor in deterring the propensity to use transit suggests that a variation of this alternative that increases the frequencies—and midday availability—on Route 25 could attract lunchtime ridership.

One open-ended response—from a Lafayette resident over age 65—indicated a strong preference for a midday shuttle. A few others relate to this option as well.

- “I feel strongly about offering shuttle service along Mt. Diablo, especially during the lunch times. I would like to see jitney buses used to service within communities such as Campolindo, Happy Valley, Burton Valley, Reliez Valley, Condit. It would provide more access to these neighborhoods and decrease the demand on the arterial roads.”
- “A Mt. Diablo Blvd. focus for senior who live in new apartments would be helpful.”

- “I believe a free shuttle that is also an electric vehicle similar to what Walnut Creek is doing is the best way to go. I think it is particularly important to get the students from the College up and down to BART as well as in and out of our shopping.”

Flexible Transit Services

Lamorinda’s low residential density and hilly topography are challenges for traditional fixed-route transit, but offer an opportunity for flexible public transportation services. Many areas of Lamorinda remain at an access disadvantage due to narrow, hilly, or dead-end streets. Further, many locations throughout Lamorinda do not have sidewalks. Nonetheless, there are still many feasible bus stop locations along hilly residential streets (including existing School Tripper stops). Two flexible transit service models were explored in the Lamorinda service area, including a zone-based and a deviated fixed-route service.

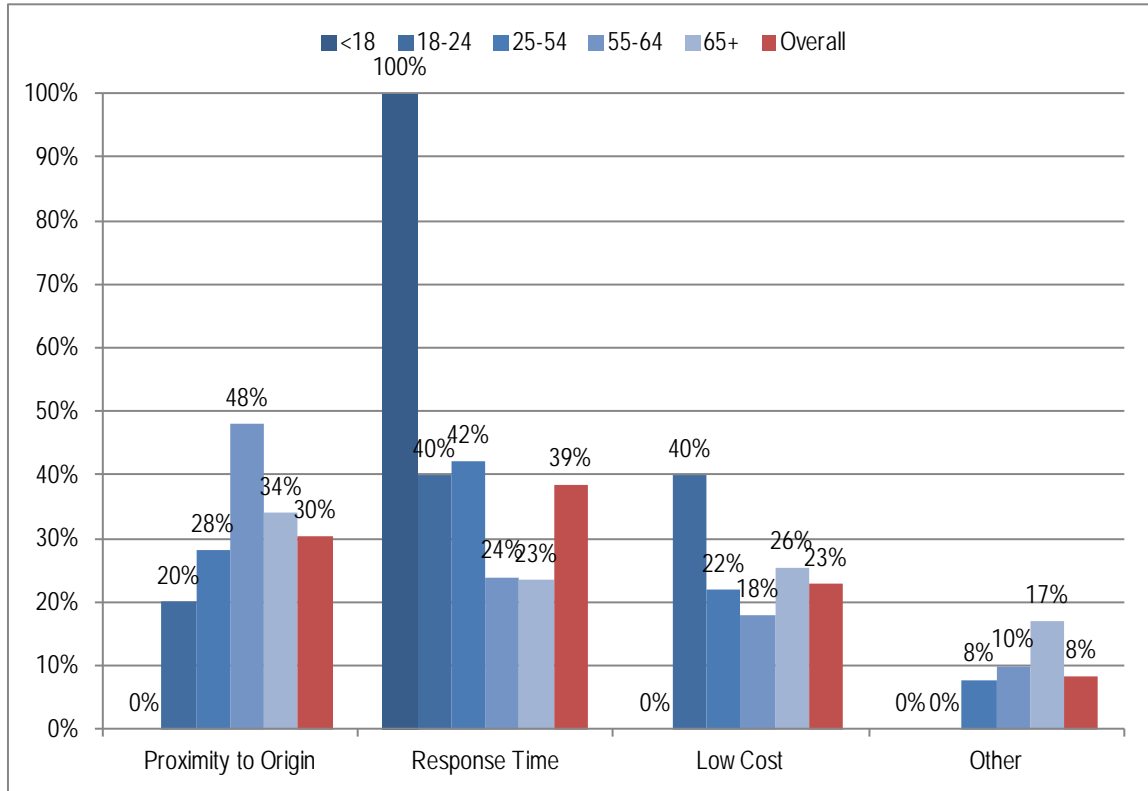
Public Feedback

Feedback on the on-demand shuttle/flexible transit concept was solicited generally; zone-based services and deviated fixed-routes were not differentiated directly in survey questions. Therefore, general feedback this concept is provided here. Responses regarding the taxi subsidy program alternative are described in that section, below.

The main appeal of flexible services among respondents is as a support for seniors. For commuters, flex service as described (in one-page briefs included in the survey, see Appendix C) could add up to \$10 per day to trip costs—on top of BART fare for many people. And for families, it would be double or triple that. However, that this service offers the fastest pick-up times of the alternatives (5-15 minutes) makes it attractive; more than 80% of respondents believe a zone-based service should offer faster response at the expense of service area size. This preference is consistent across age groups.

Younger respondents (younger than age 55) tended to prioritize response time as the main benefit of zone-based services, whereas individuals over age 55 prioritize its door-to-door nature. Figure 19 illustrates this trend.

Figure 19 Assuming a flexible shuttle service was offered, what would make you most inclined to use such a service?



Source: General Public Survey (N=418)

Despite the benefits of a zone-based on-demand service, open-ended responses to the survey indicate limited support for such an alternative, especially in light of the opportunities presented by other alternatives.

- “I would use this when my elderly parents visit so they wouldn't have to drive.”
- “Forget it at \$5 per trip. The BART ride is already way too expensive.”
- “I'm not convinced that privatized, door-to-door solutions are top of my list. They play a part, to be sure, but given the number of people (seniors, schoolchildren, regular commuters) who would be served by a more routinized public service, this feels like an expansion of existing taxi and car services, and I'm not sure it holds that much appeal for me.”
- “To use this type of service we would need to be picked up early and make very few stops on the way to BART. We don't want to lengthen our commute time. Also, \$5 per trip is \$10 per couple, each way, and an extra \$20 per trip doesn't work for us. We drive just 3 miles to BART, carpooling together.”
- “Will consider the shuttle, if it is call on demand.”

Further, among current transit riders, only one respondent indicated transit's lack of proximity to one's home as their main complaint, whereas low frequency and limited early/late service were the biggest complaints. Zone-based services go a long way to solving the proximity/door-to-door need, but this aspect of the service does not appear to be the biggest pain point for existing transit riders or for members of the general public under age 55.

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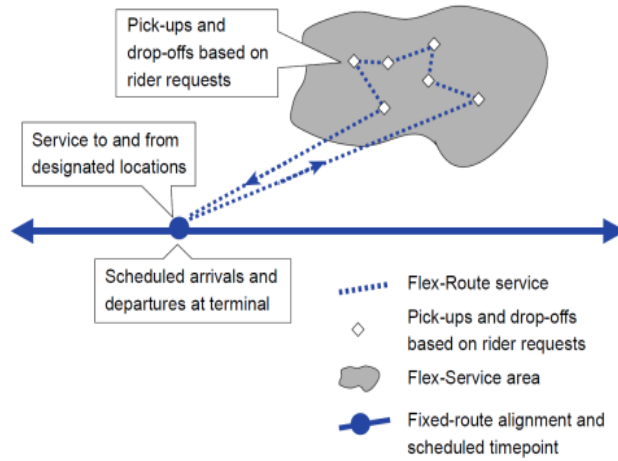
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Zone Services

Market Focus: Commuters, Senior Mobility

Overview

Zone-based transit services (point-deviation services) are suited for areas like Lamorinda, with low-density land uses, a circuitous street network, and several major activity centers (e.g. shopping and BART). Zone-based services do not follow a specific corridor, but do have one-to-two regular time-points to enable transfers to other transit services or to serve frequently visited locations.



Conceptual Diagram of Zone services

A zone service in each city (Lafayette, Moraga, and Orinda) could improve general access to public transportation. Zone services are not intended to be fast or direct, but could be a suitable fit given that each city has one or more major activity centers. If focusing specifically on zone services, each city could operate service independently, each with a designated time-check point, to provide connections to local or regional transit providers.

Operational Characteristics

Zone services in the Lamorinda context could have many different variations depending on the desired level of service. On one end of the spectrum, each city could operate a zone service for a full service day. Alternatively, each city could provide service for a limited span to cover midday trips with a focus on seniors and for those who would not otherwise be able to access BART due to parking constraints. However, it is presumed that each proposed zone would operate one vehicle at most and would have a designated time-point each hour within the service span.

Figure 20 Zone Services Characteristics

Service Span	Service Frequency	Potential Service Zones and Time-points ¹¹
Varies, but could complement BART shuttle service	Pick-ups by request only, estimated hourly frequency at one-two time-points	<ul style="list-style-type: none"> ▪ Orinda (BART station) ▪ Moraga (Moraga Center – timed transfer with Route 6) ▪ Lafayette (BART station)

Given the variability of potential service levels and areas, it is challenging to provide an accurate estimate of operating cost. However, Figure 21 provides an estimate based on the assumption that costs would be on par with current County Connection LINK (paratransit) costs per hour (\$45/hour). These estimates envision weekday-only service.

¹¹ Please note these service zones are conceptual and may likely change over time based on travel patterns and demand

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Figure 21 Zone Services Estimated Resource Needs per Vehicle (Weekday Only)

Proposed Service Span	Revenue Hours (Daily/Annual) per Vehicle	Estimated Annual Cost (at \$45/hour) per Vehicle
6 a.m. – 8 p.m. (14 hours)	14 / 3,570	\$160,650
9:30 a.m. – 4 p.m. (6.5 hours)	6.5 / 1,586	\$71,370
10 a.m. – 2 p.m. (4 hours)	4 / 1,020	\$45,900

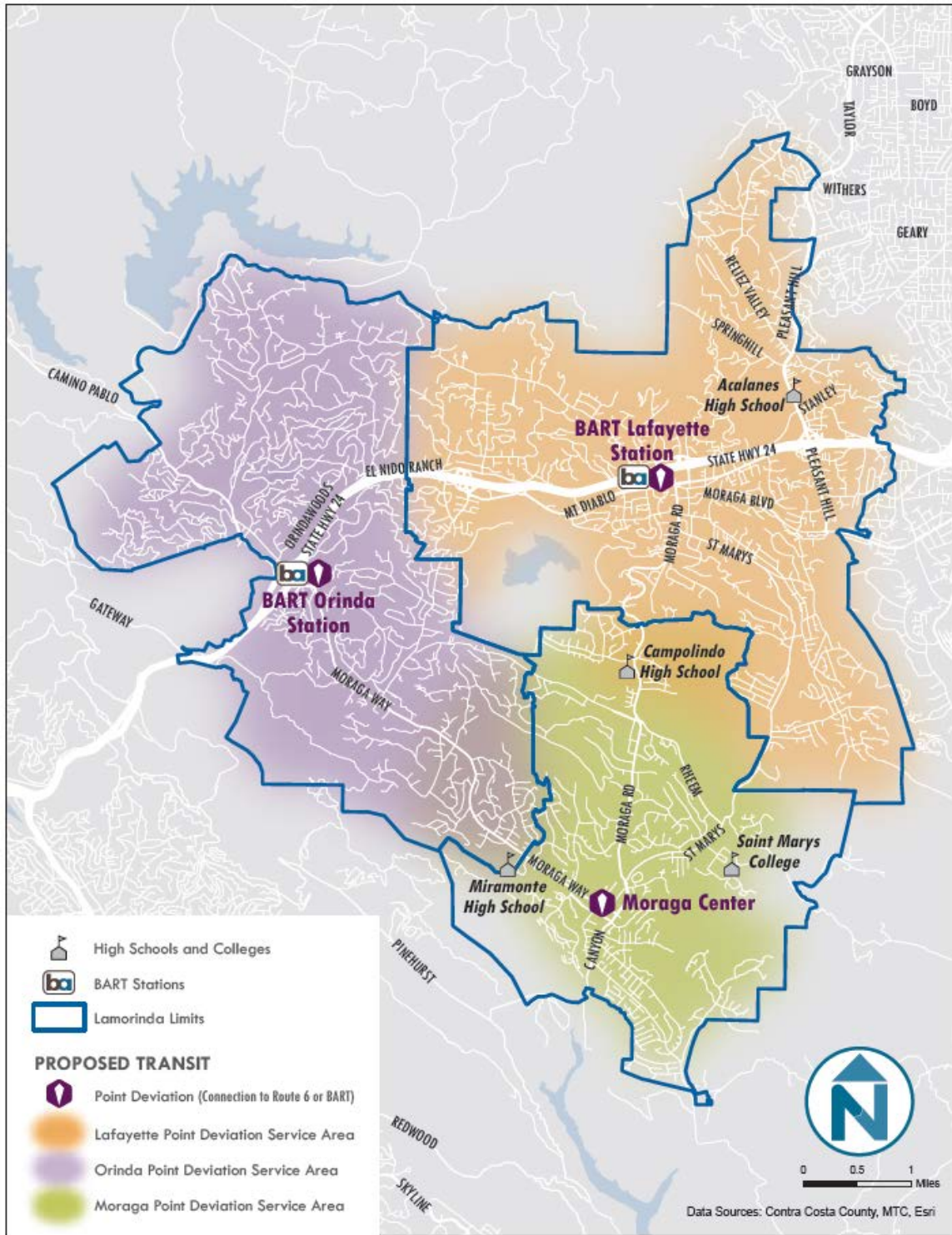
Capital Requirements

Given that zone services operate with smaller vehicles and do not necessarily use formal bus stops, this alternative requires few on-the-ground capital needs. However, this proposal would require additional vehicles and bus stop improvements at regular time-point locations. Each zone would require at minimum one vehicle (potentially more depending on service expectations and demand). A smaller “cutaway” vehicle could be used for each of these services and could be purchased outright or as part of a third-party service agreement. Estimated costs for such a vehicle range from \$65,000-\$85,000. The number of vehicles is dependent upon the number and size of service zones.

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Figure 22 Proposed Zone Services



Other Policies

If the service is open to the general public, a fare is warranted given its higher level of customization than fixed-route service. While a specific fare is not suggested at this time, it should be structured to incentivize use of the fixed-route system for those who are able. Thus, any fare for a zone service should be higher than the existing \$2 fixed-route fare. The fare could be subsidized by the community to aid access for seniors, those with disabilities, or others.

Administration

Given the level of scheduling and administrative overhead necessary for this type of service, it would likely be more cost effective for County Connection to administer the service and utilize existing scheduling/dispatching capabilities and for the LINK paratransit service. Existing transportation service providers could also be capable of operating a similar type of service in the future.

Summary

Figure 23 provides an overview of the zone services alternative, including key benefits and drawbacks as compared to the other alternatives.

Figure 23 Summary of Zone Services Benefits and Drawbacks

Benefits	Drawbacks
<ul style="list-style-type: none"> ▪ Provides basic level of access to the transit system across a wide service area ▪ Effectively serves as a community general public Dial-a-Ride (with specific time-points) ▪ Increases transit access to BART and other community services 	<ul style="list-style-type: none"> ▪ Service quality (speed) is limited based on the wide service area and deviations ▪ Unlikely to be a productive (passengers per hour) service

Public Feedback

Respondents were not asked about this option explicitly; relevant feedback is summarized in the general Flexible Transit Services section, above.

Deviated Fixed-Route Services

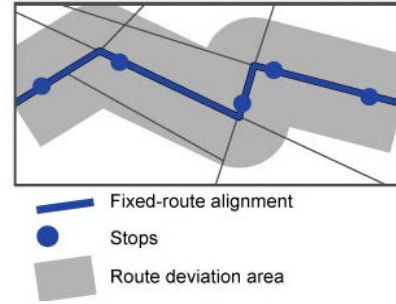
Market Focus: Commuters, Senior Mobility

Overview

Deviated fixed-route service is very similar to zone service in that it does not follow a specific route for every trip. Where it differs is that it has designated stops along a route and will deviate off the route within a certain distance for each trip.

The advantage of a deviated fixed-route service is that it can be more productive in terms of passengers per hour than zone service. This is possible so long as there are two strong destinations “anchoring” both ends of the route.

In Lamorinda, there is potential for this type of service between the Orinda and Lafayette BART stations, primarily for residents living north of Highway 24. Such a service would follow a general path (along Orindawoods Drive, El Nido Ranch Road, and Mt. Diablo Boulevard) with the opportunity to deviate up to a mile off the route to make pick-ups and drop-offs. Figure 26 illustrates the general alignment and service area of the proposed service.



Conceptual Diagram of Deviated Fixed Route Service

Operational Characteristics

Deviated fixed-route services are scheduled in a similar fashion to fixed-route services. However, “slack time” is built into the schedule to allow for deviations to pick up passengers off the route. Given the potentially large area (up to one mile off the route) that would be within the service area, an hour to travel between the two BART stations is proposed. Two vehicles (traveling in opposite directions) may be needed to operate the service on this schedule. Each vehicle would cover either the north or south side of Highway 24 on its journey to the BART station.

Figure 24 Deviated Fixed-Route Characteristics

Service Span	Service Frequency	Primary Service Corridors
Varies, but could complement BART shuttle service	Estimated hourly service on the main route. Deviation pick-ups may vary.	<ul style="list-style-type: none"> ▪ Orindawoods Drive ▪ El Nido Ranch Road ▪ Mt Diablo Boulevard

Potential operational cost estimates are provided in Figure 25. These estimates presume weekday-only service at \$45/hour.

Figure 25 Deviated Fixed-Route Estimated Resource Needs (Weekday Only)

Proposed Service Span	Vehicle Needs (Hourly Service)	Revenue Hours (Daily/Annual)	Estimated Cost (at \$45/hour)
6 a.m. – 8 p.m. (14 revenue hours)	2	28 / 7,140	\$321,300
9:30 a.m. – 4 p.m. (6.5 revenue hours)	2	13 / 3,315	\$149,175

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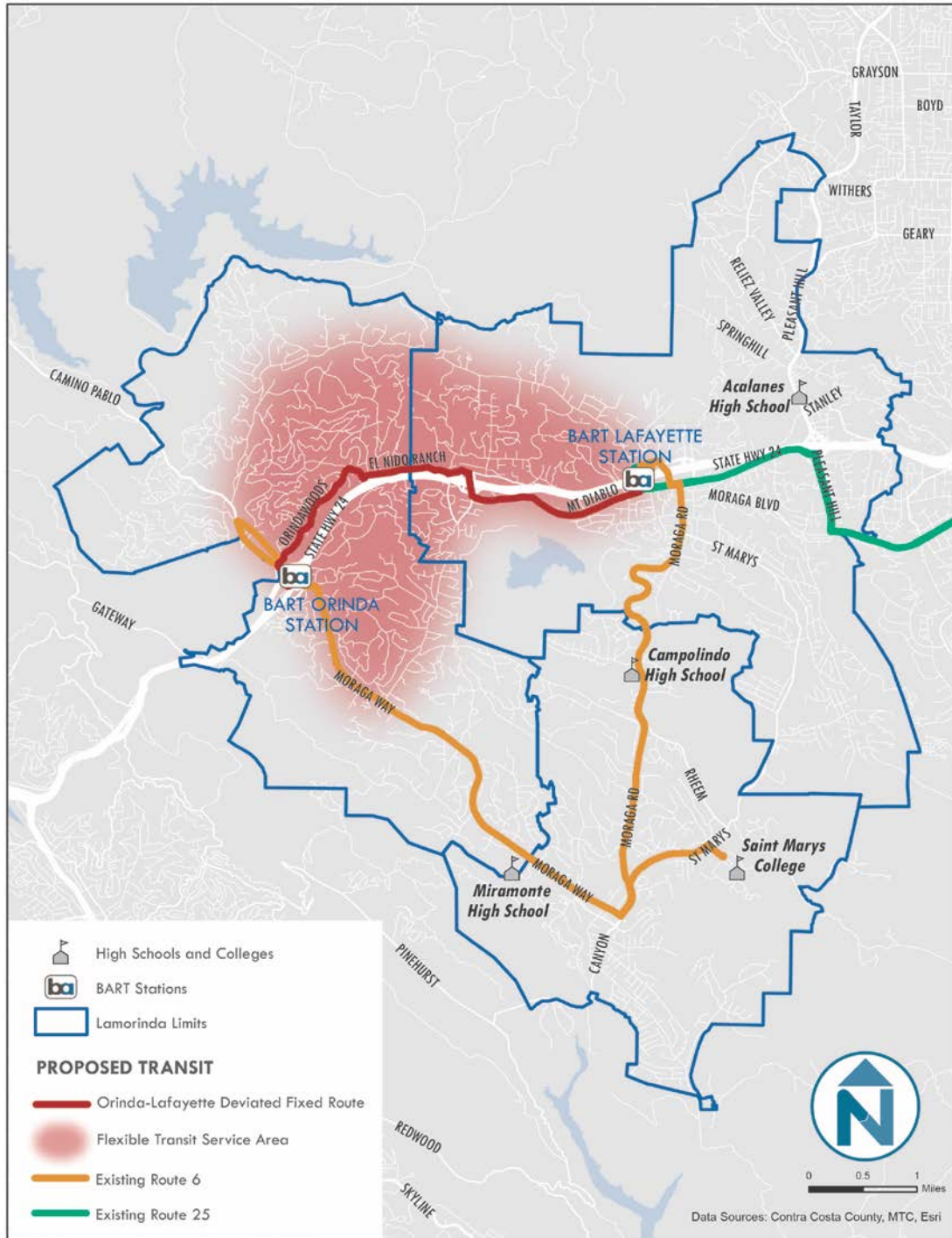
10 a.m. – 2 p.m. (4 revenue hours)	2	8 / 2,040	\$91,800
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Capital Requirements

Deviated fixed-route services could also operate with smaller vehicles and would not necessarily use formal bus stops for deviations. However, bus stop improvements would be required where there are regular stops along the alignment. Each of the proposed service span scenarios described above would require the addition of two vehicles to operate this service. Per vehicle costs would range from \$65,000-\$85,000 based on the vehicle type.

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Figure 26 Proposed Deviated Fixed-Route Services



Other Policies

Deviated service would have fare policies similar to the zone service alternative.

Administration

Deviated service would have administrative options similar to the zone service alternatives.

Summary

Figure 27 provides an overview of the deviated fixed-route alternative, including key benefits and drawbacks as compared to the other alternatives.

Figure 27 Summary of Deviated Fixed-Route Services Benefits and Drawbacks

Benefits	Drawbacks
<ul style="list-style-type: none"> ▪ Opportunity to provide transit service to residents north of CA-24 ▪ Likely to be more productive than zone services ▪ Increases transit access to BART and other community services 	<ul style="list-style-type: none"> ▪ Service quality (speed) is limited based on deviations ▪ Unlikely to be a productive (passengers per hour) service, but more so than zone service alternatives

Public Feedback

Respondents were not asked about this option explicitly; relevant feedback is summarized in the general Flexible Transit Services section, above.

Taxi Scrip/Voucher Program

Overview

Given the existing supply of taxis and some ride-sourcing providers in the Lamorinda area, a rider subsidy program may be a strategy to provide on-demand transportation access without substantial operational costs, using subsidies as a way to minimize costs of new services and to encourage private on-demand transportation providers to enter the market.

Taxi voucher (“scrip”) or reimbursement programs provide free or discounted taxi rides to select groups of riders, typically seniors and people with disabilities. Guaranteed ride home programs, which support employees’ use of public transit by covering the costs of taxi rides for unexpected or emergency trip needs, provide a similar service to the general public; some of these programs subsidize trips taken with transportation network companies—like Lyft and Uber—as well as with traditional taxis. Contra Costa County’s Guaranteed Ride Home program will reimburse participants for rides taken with traditional taxis, transportation network companies, rental cars, and car share vehicles.¹²

In addition to guaranteed ride home, several local taxi voucher examples are available, including the City of Richmond’s Subsidized Taxi Voucher Program for residents with disabilities and people over age 55; the Cities of Fremont, Union City, and Newark’s Tri-City Taxi Voucher Program for residents with disabilities and people over the age of 70; and the City of Berkeley’s

¹² <http://511.contracosta.org/guaranteed-ride-home/>

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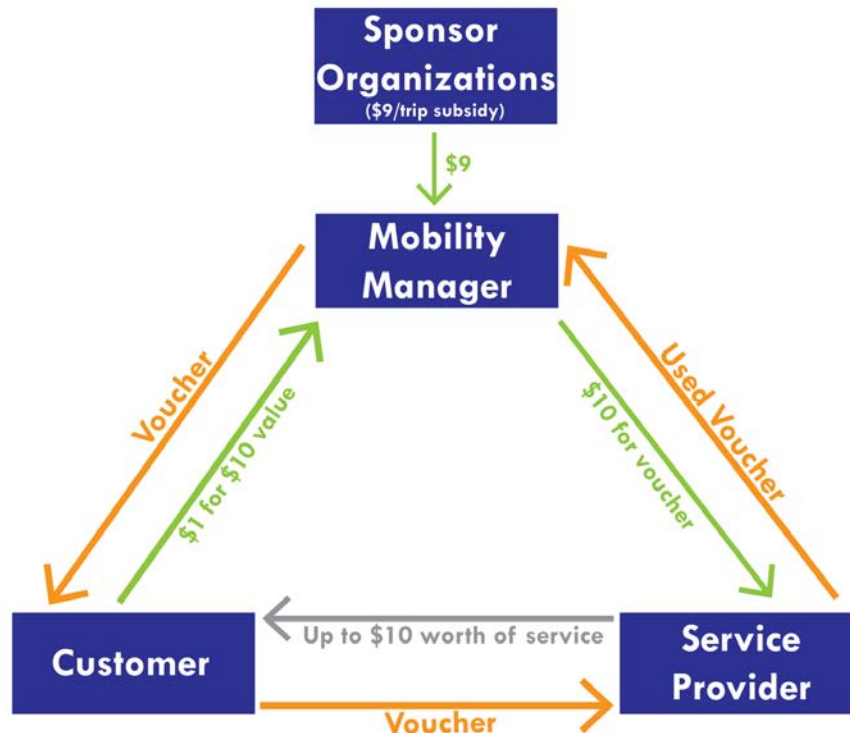
Subsidized Taxi Program for residents with disabilities and people over age 80 (or over 70 with income restrictions).

Operational Characteristics

Operation of a taxi voucher program can involve one sponsoring organization or multiple sponsoring organizations working through a mobility manager. In its simplest model, eligible riders purchase discounted vouchers from a single sponsor (e.g. County Connection), use vouchers to pay for a taxi trip, and providers turn in vouchers to the sponsor for reimbursement. This process is illustrated in Figure 28; dollar amounts are for illustration only.

To begin service in Lamorinda, an administrative entity—responsible for screening applicants, distributing taxi vouchers, verifying provider requests for reimbursement, and maintaining partnerships with providers—would need to be identified. Part of this work involves ensuring there is an available supply of rides at any given time.

Figure 28 Taxi Voucher Operational Model Example



Source: NelsonNygaard

Reimbursement models are more common for guaranteed ride home programs, but less so for subsidized taxi programs for seniors and people with disabilities. In a reimbursement program, participants are pre-screened for eligibility. When a participant takes a qualifying trip, they choose their provider and pay as any member of the public would. They obtain a receipt, which is submitted to the mobility manager or sponsoring organization for reimbursement. This model is less common in programs targeted to seniors and people with disabilities due to the potential difficulty these individuals would have in making a full-cost trip payment up front.

Capital Requirements

There are no capital requirements for this program.

Other Policies

Policies regarding eligibility and voucher use limits need to be developed. In addition, a process for establishing eligibility needs to be established. Eligibility is often tied to age (e.g. age 70 or older), level of disability (e.g. certified eligible for ADA paratransit), income (e.g. as a percentage of area median income), or ability to obtain a driver’s license. Taxi subsidies vary from 50% to full-cost in some cases. In some guaranteed ride home programs, subsidy funds are provided in partnership by participating employers and a public sponsoring agency.

Administration

Administration would be handled by the mobility manager or the sponsoring agency. Administration involves screening applicants, selling vouchers, verifying requests for reimbursement, establishing relationships with providers, and promoting the program.

Summary

Figure 29 Summary of Taxi Voucher Program Characteristics

General Characteristics	
Primary Market	Potential users who live outside of existing transit service area or those who frequently require on-demand and/or specialized transportation
Potential User Costs	Varies: Users pay a portion of trip costs by purchasing subsidized vouchers or being reimbursed for a portion of trip costs (flat rate subsidies and percentage-based discounts are both used)
Potential Operator	Public administration/private sector service provider; partnerships are required for a voucher/scrip model
Infrastructure Needs	Administrative structure/staff resources to screen and distribute taxi vouchers or approve reimbursement requests

Figure 30 Summary of Taxi Voucher Program Benefits and Drawbacks

Benefits	Drawbacks
<ul style="list-style-type: none"> ▪ New mobility option for seniors and people with disabilities ▪ Offers same-day transportation for people who otherwise have to schedule a day in advance ▪ Can offer lower cost per trip than ADA paratransit ▪ Opportunity to serve connecting trip to BART at discounted price for occasional need 	<ul style="list-style-type: none"> ▪ Requires administration costs ▪ Opportunity for fraud through re-sale of vouchers ▪ Due to cost constraints, could only serve occasional-need trips for the general public

Public Feedback

About two-thirds of respondents (N=103) support a taxi subsidy program for the area’s most vulnerable residents—seniors and people with disabilities—and 42% support such a program for the general public (N=102). Further, the level of support for each option varies significantly depending on the respondent’s place of residence and their age.

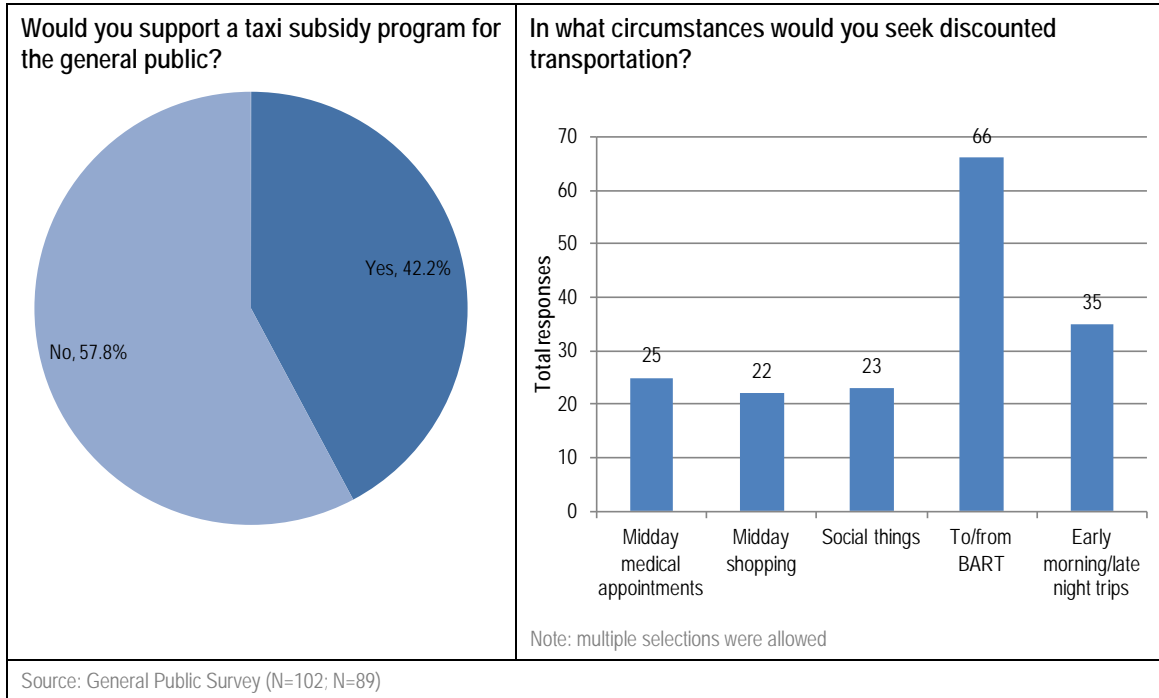
A specialized subsidy program (for a targeted audience) garnered the most support among residents of Lafayette—74% of Lafayette residents responded positively to this alternative whereas only 62% of Moraga residents and 50% of Orinda residents indicated so. A general public subsidy

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garners the most support among Moraga residents (54% of whom support it), a fact that is corroborated by the finding that almost 75% of respondents would use such a program to get to and from BART.¹³

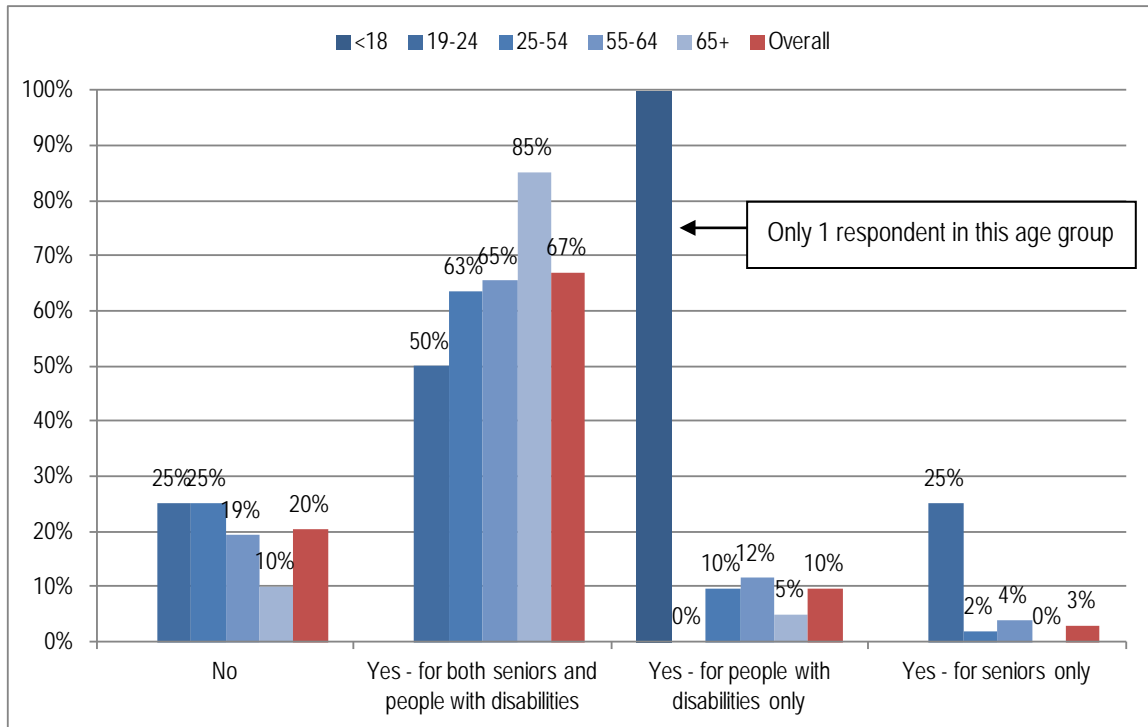
Figure 31 General Public Taxi Program Response Summary



Perhaps unsurprisingly, a subsidy program for seniors and people with disabilities garners the most support among respondents over age 65 (85% of whom support it); generally, the older the respondent, the more likely they are to support this type of program (Figure 32). Overall, two-thirds of respondents support a public subsidy for seniors and people with disabilities; only 20% do not support it. A subsidy program for the general public still is supported by 55% of the 65-and-older age group, however only 42% of respondents overall think it would be a good idea.

¹³ Note: respondents could choose multiple uses of the program

Figure 32 Would you support a taxi subsidy program for seniors or people with disabilities? (responses by age)



Source: General Public Survey (N=103)

About 71% of respondents think that a taxi subsidy program would help attract more private on-demand transportation providers to the area.

It should be noted that this alternative was not added to the survey until June 1—about half way through the survey effort. About a fifth of survey respondents answered questions related to the taxi subsidy program.

To supplement survey responses, a series of senior stakeholder interviews were also conducted. Interviewees included representatives of Beltair Senior Apartments, Monteverde Senior Apartments, Lafayette Senior Center, and the Lamorinda Spirit Van. From these interviews, it is clear that a subsidized taxi program has a strong level of support among the senior community—the most of any of the alternatives. This is due in part to seniors’ unique trip needs, which tend to be outside the service area of other proposed solutions, occur at non-commute times, and require door-to-door service.

Stakeholders further clarified the preference is for traditional taxis, rather than TNCs, as they believe TNCs have limited coverage in the area currently and that many seniors would have difficulty understanding how to hail and use such services.

Interviewees indicated the biggest challenge to establishing such a subsidy program will be identifying a continuous funding source so as to avoid writing grants every one to two years. About \$17 million of Measure J revenue (over 25 years, or about \$700,000 per year) is designated for transportation programs for seniors and people with disabilities in Southwest Contra Costa

County—some of which is used to fund Spirit Van operations.¹⁴ Currently, the Spirit Van denies some trip requests based on driver availability; with more funding, the Spirit Van may be able to serve more trip requests and on a same-day (rather than prescheduled) basis.

School Services

The two primary school transportation services in Lamorinda are provided by County Connection's School Tripper bus routes and the Lamorinda School Bus Program (LSBP)—a consortium of three communities (Lafayette, Moraga, and Orinda) and four school districts focused on providing transportation for students from kindergarten through 8th grade and some high schools.

Though the LSBP and School Tripper services provide transportation for approximately 1,500 students every year (about 1,200 with LSBP and an additional 300 on County Connection), many students do not or cannot utilize these services due to bus capacity issues or a lack of service to particular schools or neighborhoods. There are approximately 6,800 K-8 and over 5,000 high school students in Lamorinda. Thus, approximately 10-15% of area students use current school transportation services.¹⁵

Figure 33 shows an overview of the service currently provided by these two programs and the neighborhoods they serve. One notable difference is the neighborhood penetration provided by LBSP as opposed to County Connection's trunk line-type service. Some schools have no service from LBSP. As compared to the LSBP, County Connection School Trippers provide service to BART, which enables access for many students who come from outside the immediate service area.

Figure 34 illustrates each service's ridership. Ridership on each of County Connection's four School Tripper routes varies between about 20 and 250 students per day. This is in contrast to each route within the school bus system, which serve between 2 and 50 students daily. However, with 38 total routes, the program serves about four times as many students as County Connection's School Trippers.

Appendix B of this document highlights different schools in the study area and service provided by either LSBP or County Connection School Trippers.

Two additional transportation programs related to students include the Student Transit Ticket Program—which provides a limited number of free transit tickets to any student who applies—and the High School Carpool to School Program—which encourages students to carpool through incentives such as gas cards and gift cards. These two programs are administered by the Southwest Area Transportation Committee (SWAT), which is part of 511 Contra Costa.

To address existing gaps in school transportation in the Lamorinda area, this section considers two options for future school transportation programs and services:

- Expansion of the Lamorinda School Bus Program
- Increased coordination between the providers of existing programs and services

¹⁴ Measure J Sales Tax Expenditure Plan, <http://www.ccta.net/sources/detail/2/1>; June 2015 interview with Mary Bruns of the Lamorinda Spirit Van

¹⁵ Tyson, Cathy. *School Enrollments are Growing*. Lamorinda Weekly: January 14, 2015. <https://www.lamorindaweekly.com/archive/issue0823/print/SchoolEnrollmentsareGrowing.html>

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A third option of consolidating LSBP and County Connection School Tripper services was also considered, but de-prioritized due to limited feasibility and funding complications. This alternative is described in more detail in Appendix A.

Expansion of the Lamorinda School Bus Program

Market Focus: School Trips

Overview

Given that there is unmet demand for school bus service, a goal to reduce traffic congestion by reducing school trips, and capacity constraints on existing school bus routes, this alternative focuses on expanding LSBP services in Lamorinda. LSBP currently runs 21 buses through a contract with First Student. Fourteen of those buses serve multiple schools and about 20% of their 38 routes are subscribed to at least 70% capacity.

In addition to constrained existing capacity, LSBP administrators are concerned about the potential for growing student enrollment over the next decade coupled with existing traffic congestion, which already causes delay for buses. To address these concerns and needs, additional service to the following schools is considered in this alternative:¹⁶

- Orinda Intermediate School and Stanley Middle School (to address capacity issues)
- Lafayette Elementary, Del Rey Elementary, Miramonte High School, and Happy Valley Elementary (potential new service)
- Campolindo High School (expand existing limited service)

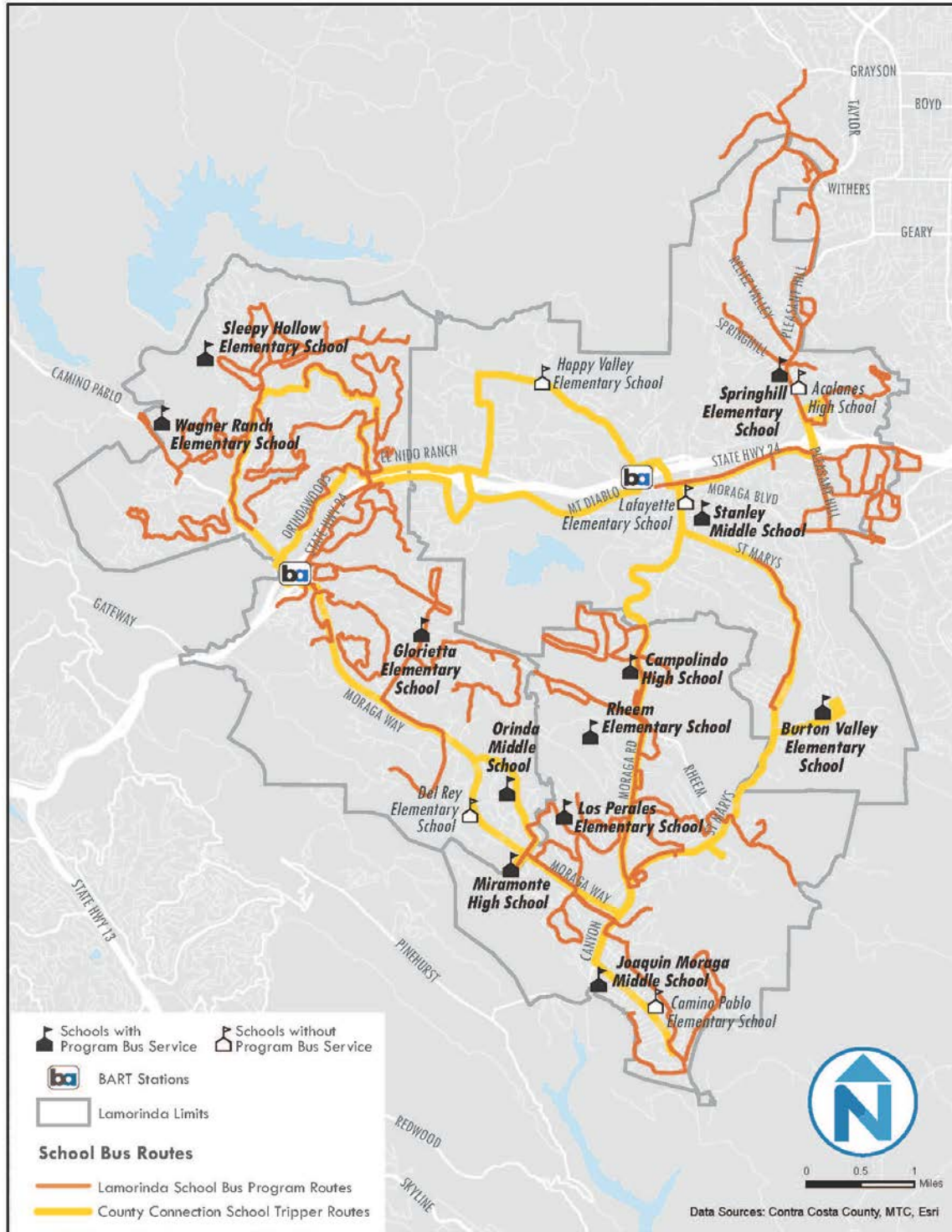
In addition, given requests from parents, there is interest in investigating other transportation options for after-school activities. Potentially, these trips could be served using the additional vehicles described in this alternative.

¹⁶ Specific schools for which additional service is needed were obtained from LSBP staff

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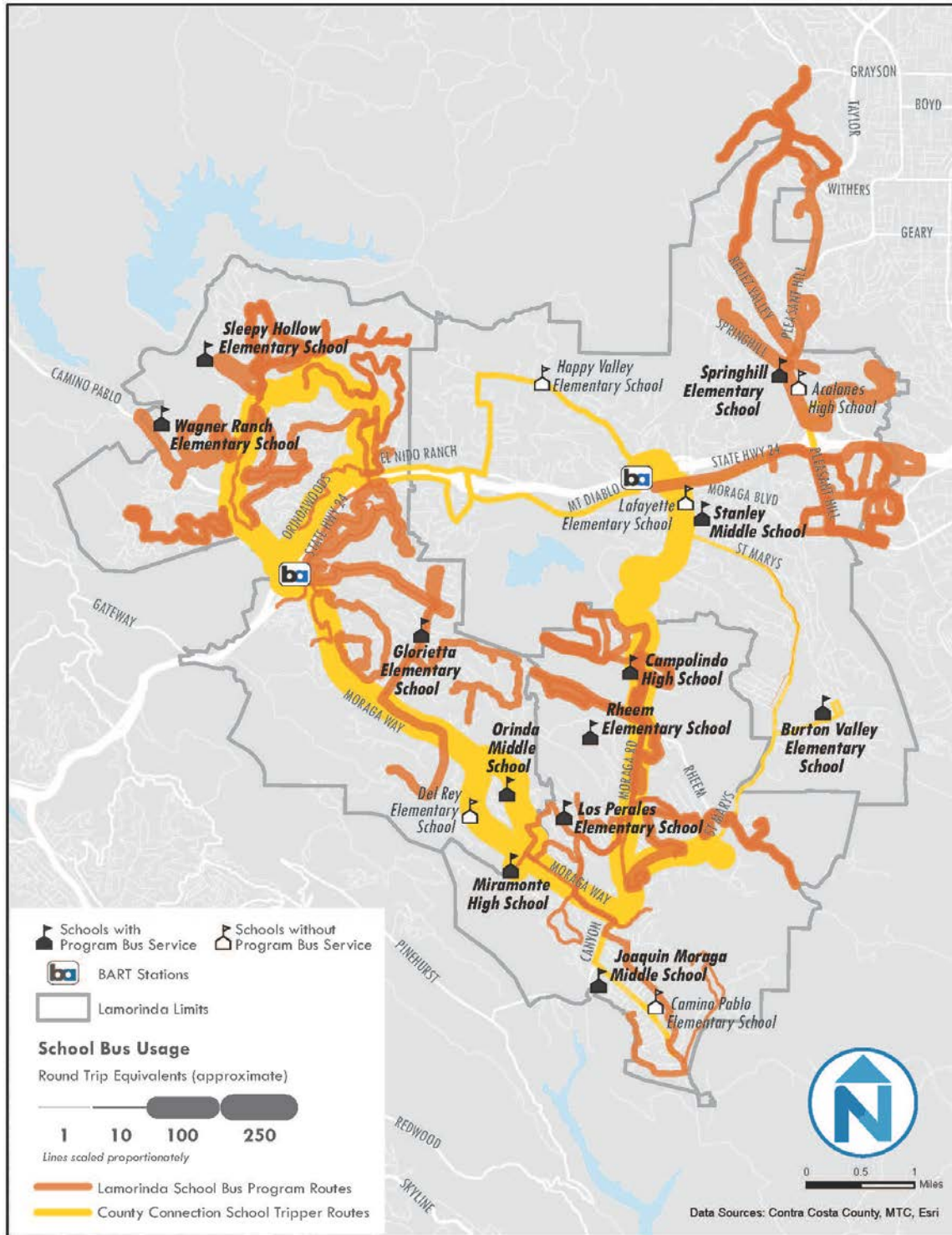
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Figure 33 School Service in Lamorinda (LSBP and County Connection)



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Figure 34 School Service Daily Ridership (round trip equivalents)¹⁷



¹⁷ For each School Tripper route, several one-way trips occur in both the morning and evening. This number reflects the sum of the time period (morning, evening) with the highest number of total boardings. This methodology was selected to most closely match the round trip equivalent that is used by the LSBP.

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Operational Characteristics

Six additional buses would need to be contracted to expand services as proposed above. The total cost of these services would be \$446,430 annually, which is approximately \$3.88 per trip if used at 75% capacity.¹⁸ This is in comparison to total costs of \$3.63 per trip for existing LSBP service provided in the fall of 2014. Note that current LSBP costs are inclusive of operations and costs of vehicles.

Figure 35 School Bus Service Expansion Operating Costs

	School Bus Service Expansion
Annual Operating Cost	\$446,430
Daily Ridership (Individual Students Served)	452+
Annual Operating Cost per Student Served	\$1,317 or less
Average Operating Cost per Trip	\$3.88

Figure 36 below provides a breakdown by school of the potential new ridership gains and estimated costs to provide expanded service. This expanded service has potential to absorb some or all School Tripper ridership along all four existing routes, but consolidation between the two programs is not considered here.

Figure 36 New School Bus Service Costs and Ridership Potential¹⁹

School / Area Served	City	New Ridership Potential (based on bus capacity)	Estimated Annual Operating Cost
Orinda Intermediate School	Orinda	71	6 new buses \$74,400 each \$446,400 total estimated annual operating cost
Stanley Middle School	Lafayette	66	
Del Rey Elementary	Orinda	71	
Happy Valley Elementary	Lafayette	71	
Lafayette Elementary	Lafayette	71	
Miramonte High School	Orinda	51	
Campolindo High School	Moraga	51	
After school programs	Lamorinda	TBD	
Total New Ridership and Cost of New Service		452+	\$446,430
Annual Cost per Student Served (new service)²⁰		\$1,317 or less	
Annual Cost per Student Served (existing service)²¹		\$1,306	

¹⁸ Assumes 180 school days per year and two trips per day; current service is used at 88% capacity

¹⁹ Data obtained from the Lamorinda School Bus Program's *Enrollment by Route – Round Trip Equivalents 2013/2014* report.

²⁰ Current service is at 88% capacity. This calculation assumes new service would operate at 75% capacity.

²¹ Calculation based on 1,196 round-trip equivalent riders, 21 buses, annual cost per bus of \$74,405

Capital Requirements

None.

Other Policies

Fares for school bus services would be expected to remain approximately the same (\$468 for an annual subscription and \$3 for each day pass). In addition, the existing program to subsidize or provide free school transportation for qualifying low-income families would remain. In the longer term, additional study may indicate an opportunity to increase ridership through increased subsidy, but that is not being considered at this time.

Administration

No changes to administration would be required.

Summary

Figure 37 provides an overview of the school transportation services options, including key benefits and drawbacks as compared to the other alternatives.

Figure 37 Summary of School Transportation Services Expansion Benefits and Drawbacks

Benefits	Drawbacks
<ul style="list-style-type: none"> ▪ Increased school bus ridership ▪ Potential to reduce school trip-related congestion ▪ Addresses increasing school-aged population in Lamorinda ▪ Easy to implement from an operations standpoint through existing service provider 	<ul style="list-style-type: none"> ▪ Additional cost for expanded service

Public Feedback

There is widespread consensus that school-related trips play a significant role in morning and afternoon traffic congestion in the Lamorinda area. More than 82% of general public respondents agree with this statement; and, the sentiment is consistent regardless of where one lives. Still, while only 18% of respondents disagree that school buses ease congestion, about a third are unsure of the program’s effectiveness.

A school-specific survey was disseminated to parents of children in the Lafayette, Orinda, and Acalanes Union school districts—areas in which new school bus routes have been proposed—to gauge support for new or expanded school bus service to particular schools in these areas. A total of 653 responses were received—the most of any of our individual survey efforts. Further, 8% of respondents do not have any children currently in school. This level of participation alone demonstrates the high level of local engagement with school-based transportation challenges.

About 10% of respondents’ children currently travel to school via the Lamorinda School Bus. A full 43% travel by means other than driving alone or being dropped off by a parent (see Figure 38). Of the students that currently are dropped off by a parent, about 66% attend schools where new or expanded school bus service has been proposed.

Figure 38 How does your child typically travel to school?

Mode of Transportation	Total Students	%
Vehicle (parent/guardian drops them off)	379	46%
Vehicle (student drives themselves)	93	11%
Carpool (student drives or gets a ride with other students)	91	11%
Lamorinda School Bus	85	10%
Walk	82	10%
Bike	43	5%
County Connection bus	33	4%
Other	16	2%

Source: Lamorinda School Survey (N=531)

Looking at responses overall—not just those from parents of schools where service would be affected—there is a significant amount of support for new service (Figure 39). In particular, expanding existing capacity to Orinda Intermediate and Stanley Middle Schools is popular. The option that received the least support is creating new service to Del Rey, Happy Valley, and Lafayette Elementary schools, however all alternatives received a very high level of support.

Figure 39 Overall Support for Proposed Alternatives

New Service	Yes	No	Responses
Increase capacity to Orinda Intermediate or Stanley Middle School	89.2%	10.8%	518
New service to Del Rey, Happy Valley, or Lafayette Elementary	81.4%	18.6%	511
Create new afternoon service from Campolindo and Miramonte High Schools	84.4%	15.6%	514
New afterschool service	83.8%	16.2%	517

Source: Lamorinda School Survey

Figure 40 illustrates parents' likelihood of sending their child on new Lamorinda School Bus routes if they were to be added or expanded. The chart summarizes responses from parents with children in each school where changes to the school bus program have been proposed.

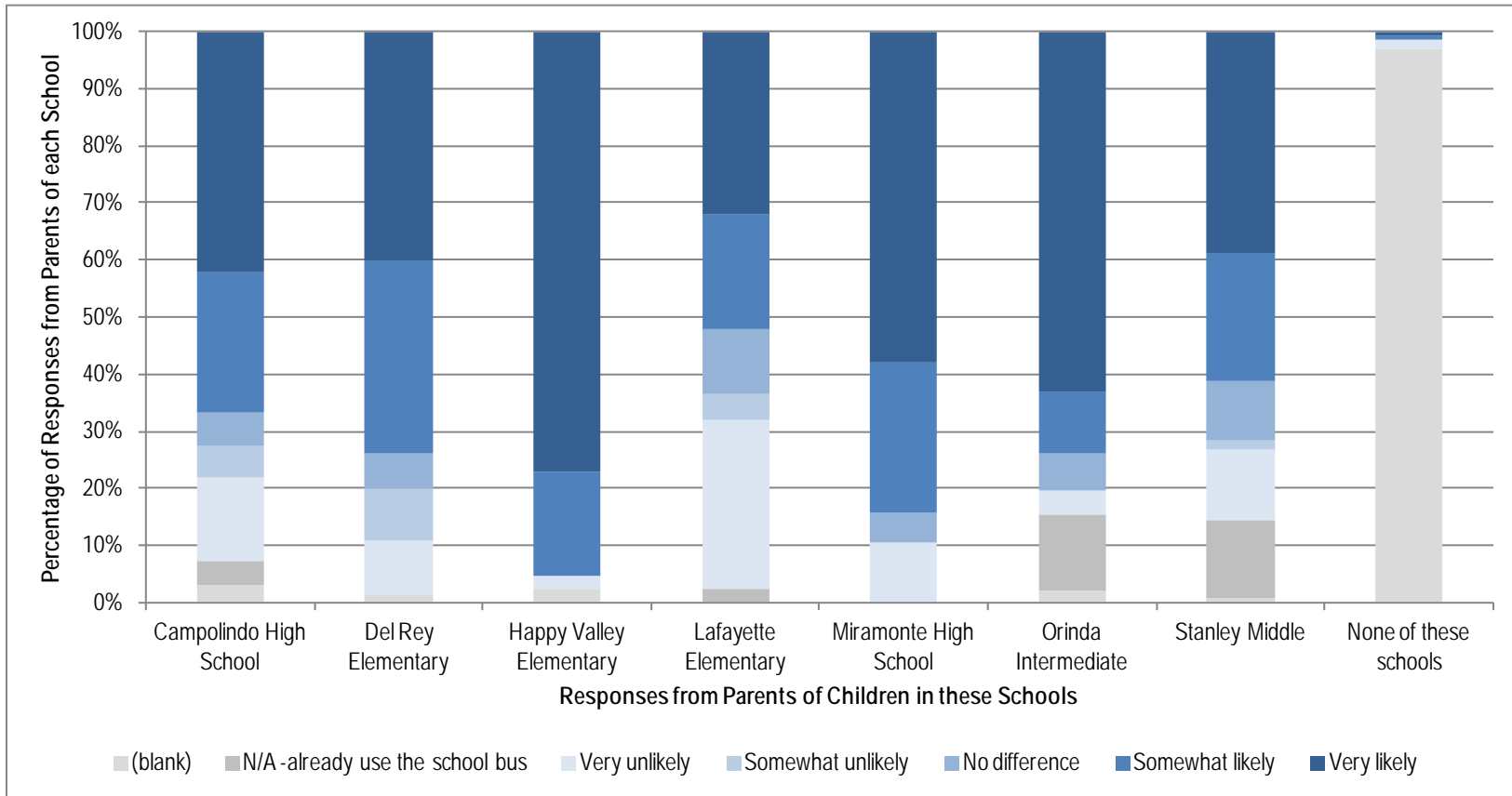
Parents of students at Happy Valley Elementary, Miramonte High School, and Orinda Intermediate Schools are most likely to take advantage of the proposed new service; more than 50% of parents at each school are very likely to use it (Figure 40). Two of these schools—Miramonte and Happy Valley—are not currently served by school buses; Orinda Intermediate has 10 existing routes, 2 of which are above 70% full and 6 of which were above 60% full in the 2014/15 school year. It is notable that, although beginning service to new schools received the least support among respondents overall, those routes are two of the most likely to be used by parents with children attending those schools.

About 75% of parents from Del Rey Elementary, which currently is not served, are either somewhat or very likely to start using the service, but about half of those are only “somewhat” likely. Interestingly, a little more than a third of parents of students at Lafayette Elementary say they are somewhat or very *unlikely* to use new bus service—primarily, these responses came from parents of children who currently walk or bike to school.

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Figure 40 If school bus service were expanded, how likely are you to start using it as a means of transportation for your child?



Source: Lamorinda School Survey (N=556)

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The following comments reflect respondents' overall sentiments to expansion of the school bus program. Key themes include bicycle and pedestrian improvements; help with afterschool transportation; pricing concerns; and suggestions to add new service to Acalanes High School.

Parents from Lafayette

- "I suggest you add a walking/biking school bus route. Pay a "driver" to walk a route picking up kids on the way to school. Just like a regular bus route but no bus."
- "We are lucky as my kids can walk to elementary and Stanley, however my greatest concern is the traffic around Acalanes, where my son will be attending next year. He would like to ride his bike, but I am nervous, not for his bike sense, but for the interchanges and ridiculous traffic surrounding the area that looks like it will be worse rather than better with new housing."
- "We have had too many close calls with drivers not paying attention to walkers and bikers so I support increased school buses to decrease the number of cars on the road. In addition, on days when both my husband and I are racing off to work for earlier than usual meetings, the school bus would be a welcome option. In addition, I really like the idea of the school bus being available in the afternoon to help with getting kids to and from after school activities in town."
- "From now on, both my children will be at Lafayette Elementary School. Even though we are close enough to walk, I do not want them walking alone. With two full-time working parents, a school bus would open the door for many solutions for our family."
- "My neighborhood has been well served by the Lamorinda School Bus service. We love the buses!"
- "Thank you for investigating and considering these increased services, which would be much appreciated by many in our community (including those without children that are simply impacted by school drop-off and pick-up traffic)."
- "I know there are many families at Happy Valley who would use this service, especially on the South side of Hwy. 24 where we are too far for the kids to safely walk or bike to school. This would save on traffic, carbon emissions, gas and time. We have all been wondering why this is not currently available."

Parents from Orinda

- "My daughter says she often doesn't get a seat on the bus and has to sit on the very edge of a seat or in the middle. I think this is crazy. Make sure there are enough seats on the bus for EVERY child."
- "We would like to see the Wed am bus to Miramonte arrive at a later time to align with the later start time on Wednesdays."
- "The price would be better lower as my child only rides a couple of times a week due to after school sports but I pay for round trip annual pass."

Parents from Moraga

- "If the school bus was free, and there was a campaign to promote taking the school bus to school, I suspect many students would start to take the bus. Walking/biking is also great, however many streets do not have sidewalks -- maybe there can be some simple modifications to the streets that are heavily used by kids to provide a side-walk-like experience to make the street a bit safer for walkers and bikers?"

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- “Some options for funding school bus programs would be: 1) requiring paid permits to pull into a drop off lot at the schools 2) put up no parking and NO STOPPING signs in a 3 block radius of the schools. Fund the buses with the ticket revenue from people who ignore those signs.”
- “We used to use County Connection for my daughter's ride to school, but discontinued due to the often late arrival for Campolino High School's first period. Also, it would be nice if there was a later bus scheduled for the late start on Wednesdays for the high school students. It would also be nice if there was an afternoon bus for the high schools after their sixth period around 2:20 pm as so many kids do not have a 7th period.”
- “Have a special pass for Wednesdays so kids who are normally late birds and can't take the bus on that schedule can take the bus for the very busy drop off/pick up of Wednesdays. Have a discounted 10-ride pass so that kids who might not be able to ride every day aren't as put off of riding of the cost of riding occasionally.”
- “I definitely support more buses. We need to get more families signed up and using the bus service. I suggest bringing the cost down to get more families using this great service.”

Increased School Transportation Program Coordination

Market Focus: School Trips

Overview

While core transportation service for schools is currently provided by County Connection and the Lamorinda School Bus Program, two other supportive programs—the Student Transit Ticket Program and the High School Carpool Program—offer additional options and incentives. These programs are administered by the Southwest Area Transportation (SWAT) program of 511 Contra Costa.

Very little explicit coordination occurs between the administrators of these programs. Formalizing a setting in which these programs could coordinate may open opportunities for additional cost efficiencies. Two potential coordination activities include:

- Coordinate marketing activities for all existing transportation services (School Tripper, Lamorinda School Bus, Student Transit Ticket Program, and the high school carpool program) so that students understand the unified nature of these options and their alternatives if school buses serve only some of their transportation needs
- Address capacity constraints by sharing knowledge about high-capacity high school bus/School Tripper routes so that these students can be targeted for participation in the carpool program

Operational Characteristics

A bi-annual meeting of staff representatives from the LSBP, County Connection, and SWAT would provide such a forum.

Capital Requirements

None.

Other Policies

None.

Administration

One of the agencies would take the lead in setting bi-annual meeting agendas, coordinating meeting locations and times, and facilitating group discussion outside of such meetings. Agencies could either rotate this responsibility or determine a lead agency.

Summary

Figure 41 provides an overview of the school transportation services options, including key benefits and drawbacks as compared to the other alternatives.

Figure 41 Summary of Increased School Transportation Program Coordination Benefits and Drawbacks

Benefits	Drawbacks
<ul style="list-style-type: none"> ▪ Increased awareness of program changes and offerings among program administrators and parents ▪ Coordination benefits—program changes can leverage other resources, outreach efforts, and strategically coordinate 	<ul style="list-style-type: none"> ▪ Requires in-person meetings ▪ Additional administrative burden to organize and attend quarterly or bi-annual meetings

Public Feedback

Respondents were not asked about this alternative explicitly. However, in free form comments, many respondents indicated an increased focus on bicycle and pedestrian safety improvements and programs to encourage more biking, walking, and carpooling to school. Many parents also suggested marketing and incentives programs, such as paying a “driver” to facilitate a walking school bus or bike pool program and more heavily marketing the school bus option.

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Recommended Revisions

Figure 42 Summary of Alternative Benefits and Drawbacks

Service Alternative	Benefits	Drawbacks	Public Feedback	Initial Recommendations
<p>Vanpool to BART</p>	<ul style="list-style-type: none"> ▪ Rideshare operation handled primarily by individuals; public entity does not have to be involved on a day-to-day basis ▪ BART and/or other public entities may be able to subsidize the service to reduce costs to participants ▪ Concept is simple; easy to communicate the operations to potential rideshare subscribers ▪ Designed specifically for commuters to points west of Lamorinda (Oakland and San Francisco) 	<ul style="list-style-type: none"> ▪ Subscribers must commit to both morning and evening departure times ▪ Some subscribers must commit to be drivers ▪ Vehicle rental agreement holders (the driver and/or backup driver) may have to front all or part of the cost of the vehicle rental ▪ Requires a high number of subscribers to enable participants to be picked up from their homes ▪ Limited cost savings to users (but guaranteed access to BART) 	<ul style="list-style-type: none"> ▪ Less than 25% of BART riders would use this option, but Moraga residents most likely ▪ Respondents report the most common reason they would support such an option is its link to guaranteed BART parking 	<ul style="list-style-type: none"> ▪ Given its relatively low level of support and other alternatives' ability to achieve similar outcomes, this alternative is not recommended at this time.

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Service Alternative	Benefits	Drawbacks	Public Feedback	Initial Recommendations
<p>Moraga/Orinda BART Shuttle</p>	<ul style="list-style-type: none"> ▪ Passengers pay only for their fare; no vehicle rental, fuel, insurance, or maintenance costs to split ▪ Highest level of flexibility for passengers; morning and evening trip times could be flexible due to shuttle frequency ▪ Supplements less frequent County Connection Route 6 service ▪ Expands transit service options to BART system 	<ul style="list-style-type: none"> ▪ Limited service area (presuming that many would still drive to access transit) ▪ Service is geared to residents of Moraga and Orinda, though Lafayette may benefit from reduced traffic congestion ▪ Requires additional operational and capital funding ▪ Park-and-ride are conceptual and require further investigation 	<ul style="list-style-type: none"> ▪ Supported by a majority of general public responses, 38% of surveyed BART riders ▪ Mostly looking for a more frequent option, potentially could be served by a new option or increased Route 6 frequency ▪ Lots of complaints about Route 6 headway (both for riders and non-riders) ▪ People think some kind of incentive/marketing campaign to get people using the shuttle will help ▪ Note: BART is very frequent in the 7 a.m. hour (every 5 minutes) and decreases to every 10-15 minutes closer to 9 a.m. 	<ul style="list-style-type: none"> ▪ This service option is recommended to continue into the Implementation Plan. ▪ Route 6's existing low frequency has decreased the public's confidence in using County Connection for timely connections; as such, it may be best to develop this as a standalone service through branding and service characteristics, rather than simply increasing the frequency of Route 6. ▪ BART frequency at the time most people use it suggests this feeder service would not have to be incredibly reliable at arriving at BART at a particular time; rather, shuttle frequency is the most important factor.
<p>Lafayette Shuttle</p>	<ul style="list-style-type: none"> ▪ Supports increased development along Mount Diablo Boulevard and existing businesses/employers ▪ Enables additional transit options for those living along Mount Diablo Boulevard (and near intersection with Pleasant Hill Road) ▪ Supplements less frequent County Connection service (Route 25) 	<ul style="list-style-type: none"> ▪ Limited service area along Mount Diablo Boulevard ▪ Currently, only proposed to operate during peak commute hours (give focus of study) ▪ Shuttle access is still contingent on safe pedestrian access and connections across Mount Diablo Boulevard 	<ul style="list-style-type: none"> ▪ Support for lunchtime shuttle along Mt. Diablo Blvd., but it does not solve an priority need for most respondents ▪ Desire to provide transportation for seniors along the corridor, but senior stakeholders indicate a taxi subsidy program would be more effective for their clientele 	<ul style="list-style-type: none"> ▪ This service alternative is recommended to continue into the Implementation Plan as a low priority.

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Service Alternative	Benefits	Drawbacks	Public Feedback	Initial Recommendations
Zone Service	<ul style="list-style-type: none"> ▪ Provides basic level of access to the transit system across a wide service area ▪ Effectively serves as a community general public Dial-a-Ride (with specific time-points) ▪ Increases transit access to BART and other community services 	<ul style="list-style-type: none"> ▪ Service quality (speed) is limited based on the wide service area and deviations ▪ Unlikely to be a productive (passengers per hour) service 	<ul style="list-style-type: none"> ▪ Overall, preference to prioritize service response time over service area, but this is more common among younger respondents ▪ Respondents over age 55 prioritize door-to-door nature of flex services over response time ▪ Worried about the costs of such a service (\$5 on top of BART fare); may be more relevant for an occasional need (seniors) than recurring commute trips ▪ Lack of proximity to home of existing County Connection services doesn't seem to be the most concerning issue (among current riders) 	<ul style="list-style-type: none"> ▪ Given preference for response time among commuters and senior stakeholders' preference for the taxi subsidy solution, zone service is not recommended at this time.
Deviated Fixed-Route	<ul style="list-style-type: none"> ▪ Opportunity to provide transit service to residents north of CA-24 ▪ Likely to be more productive than zone services ▪ Increases transit access to BART and other community services 	<ul style="list-style-type: none"> ▪ Service quality (speed) is limited based on deviations ▪ Unlikely to be a productive (passengers per hour) service, but more so than zone service alternatives 		<ul style="list-style-type: none"> ▪ Given preference for response time among commuters and senior stakeholders' preference for the taxi subsidy solution, zone service is not recommended at this time.

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Service Alternative	Benefits	Drawbacks	Public Feedback	Initial Recommendations
<p>Taxi Subsidy Program</p>	<ul style="list-style-type: none"> ▪ New mobility option for seniors and people with disabilities ▪ Offers same-day transportation for people who otherwise have to schedule a day in advance ▪ Can offer lower cost per trip than ADA paratransit ▪ Opportunity to serve connecting trip to BART at discounted price for occasional need 	<ul style="list-style-type: none"> ▪ Requires administration costs ▪ Opportunity for fraud through re-sale of vouchers ▪ Due to cost constraints, could only serve occasional-need trips for the general public 	<ul style="list-style-type: none"> ▪ About 2/3 of respondents support program for seniors and people with disabilities; only 42% for the general public ▪ Lafayette residents most likely to support specialized program, but at least 50% of residents in Orinda and Moraga also support ▪ The older the respondent, the more likely to support (85% of people over age 65 support it) ▪ General public subsidy program gets most support from Moraga residents (54% of whom support it)—75% of respondents would use this type of program to get to/from BART ▪ Respondents hold a belief that such a program could attract new private transportation providers to Lamorinda. ▪ Strong level of support from key stakeholders; recommend to prioritize taxis over TNCs for the service. ▪ There is concern about finding continuous funding source. ▪ The demand for a general public subsidy program from residents of Moraga highlights the effect of BART parking constraints on residents' desire for additional mobility options. 	<ul style="list-style-type: none"> ▪ This alternative is recommended to continue into the Implementation Plan. ▪ It is clear that there is public support for a taxi subsidy program to supplement trips currently provided by County Connection's LINK paratransit and Lamorinda Spirit Van services. Also, it supports the goals of this study in providing enhanced midday service to the community. ▪ Because this option would serve a similar market to some of the other alternatives—which also garner significant support—and due to the costliness of opening a subsidy program to the general public, it is recommended to treat a general public taxi subsidy program as a secondary priority to one focused on seniors and people with disabilities at this time.

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Service Alternative	Benefits	Drawbacks	Public Feedback	Initial Recommendations
<p>School Transportation Services Expansion</p>	<ul style="list-style-type: none"> ▪ Increased school bus ridership ▪ Potential to reduce school trip-related congestion ▪ Addresses increasing school-aged population in Lamorinda ▪ Easy to implement from an operations standpoint through existing service provider 	<ul style="list-style-type: none"> ▪ Additional cost for expanded service 	<ul style="list-style-type: none"> ▪ High level of engagement with school transportation topic ▪ Widespread belief that school transportation plays a role in local traffic congestion, but some (~30% of respondents) lack confidence in school bus program's effectiveness at solving the issue ▪ About 66% of students that are currently dropped off by parents attend schools where new service is proposed (high potential for mode shift) ▪ High level of support for all the expansion options, but most support won for increasing existing capacity to Orinda Intermediate and Stanley Middle School <ul style="list-style-type: none"> • Parents of Orinda Intermediate students also among the most likely to use new service • New service (to Happy Valley, Del Rey, and Lafayette Elementary) is least supported, but parents of students at Happy Valley would be overwhelmingly likely to use it • Parents of students at Lafayette are least likely to take advantage of the new option; most currently walk or bike to school 	<ul style="list-style-type: none"> ▪ It is recommended that this service option continue into the Implementation Plan ▪ Prioritize expansion of capacity to Orinda Intermediate and Stanley Middle and new service to Happy Valley Elementary ▪ Initial considerations may include: <ul style="list-style-type: none"> ○ Creating a ballot measure to fund the expansion ○ Decreasing the cost of the program by creating more bulk pass options ○ Charging for permits to access school drop-off/pick-up zones ○ Charging for high school parking ○ Incentivizing taking the bus through monthly drawings/prizes ○ Supplementing investment with developing better biking and walking facilities and programs²²

²² Recent research suggests that school districts can save money by improving bicycling and walking conditions to shift current bus users to those modes; such a shift opens up bus services to students that live farther from school than reasonable walking or bicycling distance. See UNC Center for Urban and Regional Studies, "Economic Benefits of Safe Routes to School." Available online at <https://curs.unc.edu/files/2013/05/SRTS-McDonald-FINAL-6.23.15.pdf>.

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Service Alternative	Benefits	Drawbacks	Public Feedback	Initial Recommendations
<p>Increased School Transportation Program Coordination</p>	<ul style="list-style-type: none"> ▪ Increased awareness of program changes and offerings among program administrators and parents ▪ Coordination benefits—program changes can leverage other resources, outreach efforts, and strategically coordinate 	<ul style="list-style-type: none"> ▪ Requires in-person meetings ▪ Additional administrative burden to organize and attend quarterly or bi-annual meetings 	<ul style="list-style-type: none"> ▪ In free form comments, many respondents indicated an increased focus on bicycle and pedestrian safety improvements and programs to encourage more biking, walking, and carpooling to school ▪ Incentives and marketing programs were suggested 	<ul style="list-style-type: none"> ▪ It is recommended that this service option continue into the Implementation Plan, given the potentially low costs of implementing coordination. Possible implementation steps include: <ul style="list-style-type: none"> ○ Coordinate/convene meetings between the Southwest Area Transportation Committee (SWAT), Lamorinda School District Superintendents, Countywide Bicycle and Pedestrian Plan Oversight Committee, 511 Contra Costa/Safe Routes to School, and Sustainable Lafayette Green Schools Committee to facilitate conversation around bike/ped issues at schools.
<p>Technology-based Transportation²³</p>	<ul style="list-style-type: none"> ▪ Offer supporting services that address the gaps unfilled by traditional transit ▪ New services range from providing on-demand, point-to-point options (also known as “transportation network companies” or “ridesourcing” apps) to private fixed-route services that rely on 15-passenger vans or buses 	<ul style="list-style-type: none"> ▪ Companies launching new businesses could choose not to respond in particular markets for factors outside the public entity’s control ▪ Using public funds for private operational support is unlikely, due both to the public sector’s need to tie funding to requirements for serving the public at large and private companies’ need for operational flexibility 	<ul style="list-style-type: none"> ▪ Almost 81% of respondents indicated that the primary focus of an on-demand type service should be faster response times with smaller service areas, rather than larger service areas at the expense of longer response times. ▪ Desire for the more frequent and convenient service that TNCs could provide, but caution that price makes the private solutions inaccessible for more than just occasional trips. 	<ul style="list-style-type: none"> ▪ It is recommended that this service concept continue to the Implementation Plan as a concept only; the Implementation Plan will further specify strategies for public options to incorporate elements of new private tech-enabled transportation models and policy implications.

²³ Note: to date, this topic has not been described as a standalone option. A full description of the challenges and opportunities are described in the following section.

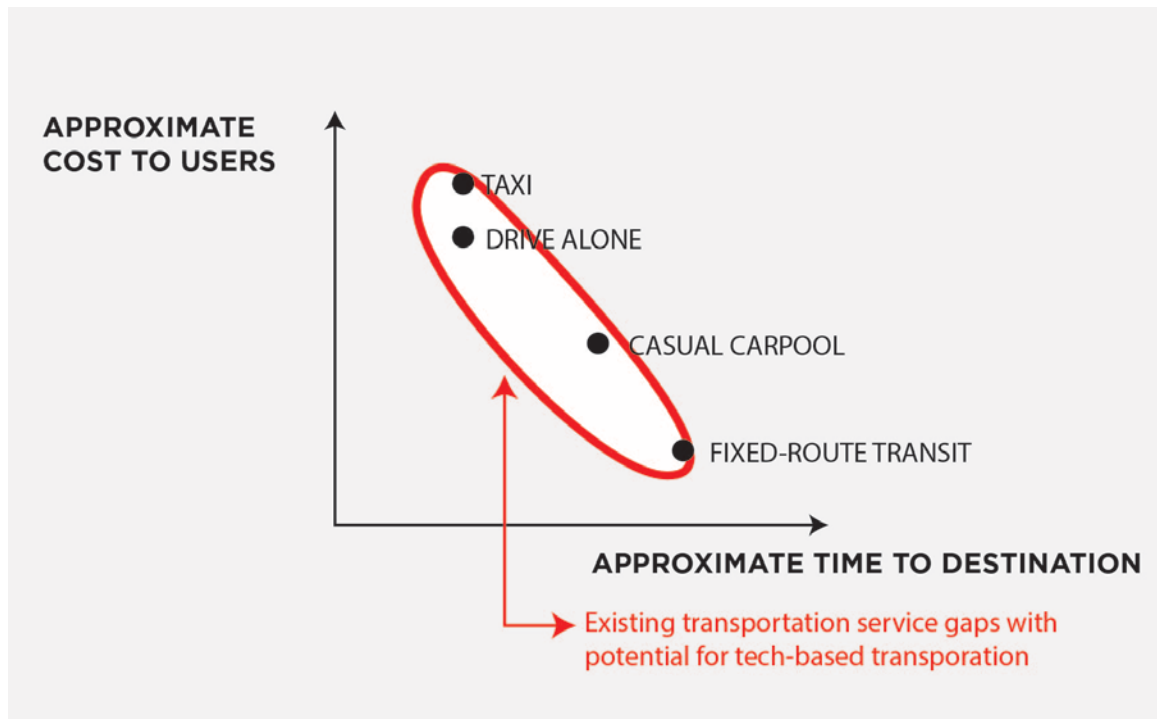
Concepts: Leveraging New (Technology-Based) Transportation

Given the rapid growth of new transportation options supported by mobile phone technology (tech-based transportation), this list of alternatives—with a specific charge to develop effective transit alternatives—would be incomplete without acknowledging new opportunities that might exist for Lamorinda. These new services range from providing on-demand, point-to-point options (also known as “transportation network companies” or “ridesourcing” apps) to private fixed-route services that rely on 15-passenger vans or buses. As a burgeoning industry, many of these companies are young and all of them come from a culture of experimentation, frequent change, and optimization.

Despite the dynamic nature of these companies and their services, many offer transportation options that could benefit the Lamorinda area. As previously mentioned, existing public transportation options only serve a portion of the spectrum of transportation needs—most notably, low-cost, commute type trips. These new private sector transportation options attempt to offer supporting services that address the gaps unfilled by traditional transit.

Figure 43 illustrates the spectrum of existing transportation options (with a focus on commuter trips) and their location on a scale of time and cost.²⁴ Transportation needs often span a long list of factors. But, simplified to time and money, current options are limited.

Figure 43 Existing Transportation Market Gaps in Lamorinda



²⁴ Throughout this section, “new” transportation options will reference service providers that, as of 2015, have not operated in the Lamorinda area for at least five years.

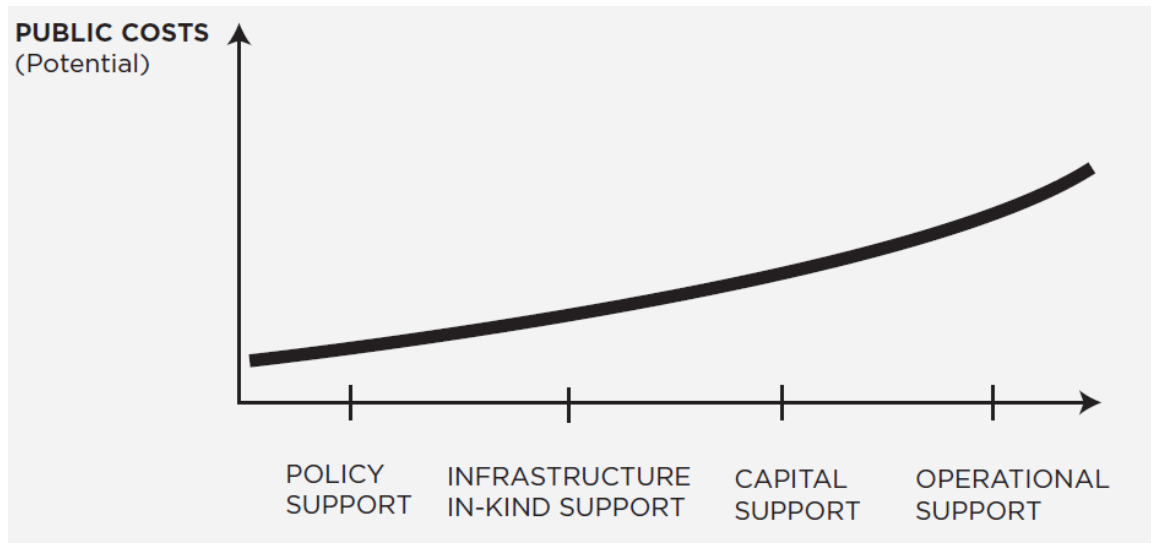
Given the existing gaps and the understanding that new private transportation options have potential to address a range not served on the time and cost scale, the question remains on how public sector entities can engage, guide, attract, and/or support these companies to fill important transportation needs in Lamorinda. Specifically, market opportunities exist for:

- Faster/more frequent fixed-route transit
- More convenient casual carpool
- Cheaper on-demand, point-to-point transportation

Encouraging/Supporting Tech-based Transportation Services in Lamorinda

Various arrangements are possible and each has potential benefits and drawbacks. It is impossible to predict actual results since there are few case studies of this in practice. Figure 44 describes potential public sector strategies to leverage tech-based transportation services and their associated costs. On the lower end of the cost scale, cities can offer policy support by specifying the “rules of the road” for these new companies; making policy statements that clarify the rules and are supportive of new options may encourage companies to proactively locate services in particular jurisdictions. Higher levels of support would be more costly, such as in-kind support like sharing bus stops and other existing facilities, capital support through vehicles or park-and-ride lots, or operational support by providing drivers or rider subsidies.

Figure 44 Potential Level of Public Investment to Support Tech-based Transportation



Challenges

While there are gaps in existing service offerings in Lamorinda that could be filled by new, smaller transportation services at costs lower for consumers or public entities, the primary challenge is to determine how to “meet in the middle.” Companies, the general public, and public entities who govern and/or operate existing transportation services in the area each have their own expectations for service availability and cost. Even if public entities agreed to encourage tech-based transportation (through financial means or otherwise), companies launching new businesses could choose not to respond in particular markets for factors outside the public entity’s control.

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A second key challenge in finding middle ground between tech-based transportation providers and public agencies is inherent differences in risk-taking and levels of commitment. As a result, using public funds for operational support is unlikely, due both to the public sector’s need to tie funding to requirements for serving the public at large and private companies’ need for operational flexibility.

Figure 45 provides comparisons in terms of the offerings and desires of technology-based transportation providers, public agencies, and the riding public.

Figure 45 Offerings and Desires of Tech-based Providers, Public Agencies, and the Public

	Tech-based Transportation Providers	Public Agencies	Traveling Public
Offers	<ul style="list-style-type: none"> • Transportation services that can quickly change, adapt, or grow to meet market demands • Private funding to experiment and refine potential solutions • Willingness to take risks on new service types 	<ul style="list-style-type: none"> • Support mechanisms (policy, in-kind, capital, operational) • Ability to coordinate among other transportation providers 	<ul style="list-style-type: none"> • Financial support (fares) • Supply (drivers) and demand (riders) • Marketing support (word of mouth)
Desires	<ul style="list-style-type: none"> • Flexible regulatory environment to experiment/innovate • Access to potential markets • Access to flexible funding options 	<ul style="list-style-type: none"> • Stable (long-term) and legal service options • Equitable and accessible service options • Options that support community goals or general public good 	<ul style="list-style-type: none"> • Cost-effective and convenient service • Equitable and accessible service options • Options that support community goals or general public good

Recommendation: Capital and In-Kind Support

Given the challenges discussed above, public sector support for tech-enabled transportation options through the sharing of capital or in-kind facilities (park-and-ride lots, bus stop sharing, bus staging areas) likely is the best strategy to satisfy both the public sector’s need to keep costs low and private companies’ desire for flexible operations. These strategies keep public and private entities at arm’s length while still fostering partnerships.

As the new transportation companies mature and establish a more permanent operating model, public-sector rider subsidies could be offered to increase access to public transportation options in Lamorinda, but it is not recommended at this time. Prior to such an arrangement, policies specifying details such as driver, vehicle, insurance, and pricing requirements may have to be established that take both public safety and private sector constraints into account.

Public Feedback

Almost 81% of respondents indicated that the primary focus of an on-demand type service should be faster response times with smaller service areas, rather than larger service areas at the expense of longer response times. This preference indicates a desire for transportation network company-type service in Lamorinda, which has been developed to serve requests very quickly and to communicate to passengers exact expected wait time.

While private providers such as Lyft and Uber were not covered directly in the survey, several participants made comments related to their service models. The comments corroborate the desire for the more frequent and convenient service that TNCs could provide, but caution that price makes the private solutions inaccessible for more than just occasional trips.

- “If there were vans or on-demand transportation or shuttles from satellite parking areas to BART, etc. could there be a Clipper Card type of payment, so that those of us without Smart phones to pay for Lyft-type services could have it deducted? Having \$1.55 or \$2.50 exactly is not always convenient.”
- “I currently use Route 6 for morning and evening commute from Moraga to Orinda BART. Commute times seem to work well, but on the odd day when traveling outside of commute hours, bus service is extremely limited. It would be nice to have a more flexible option (even if slightly more expensive), like on-demand option.”
- “I would like to see jitney buses used to service within communities such as Campolindo, Happy Valley, Burton Valley, Reliez Valley, Condit. It would provide more access to these neighborhoods and decrease the demand on the arterial roads.”
- “I love that you are doing this! An on demand service is the best option...sort of like a county/district run Uber shuttle line where people can schedule a week at a time...”
- “Like the idea of uber type on demand service”
- “Use Uber/Lift model”
- “The on demand one is least attractive. Reasonably regular service from a park and ride would be great. School traffic creates a real mess, in particular on Moraga Way (Miramonte, etc) and on Moraga Rd in Lafayette.”

SUMMARY OF ALTERNATIVES AND INITIAL PRIORITIZATION

Figure 46 Summary of Alternatives

Alternatives	Service Approach	Market Focus	Initial Priority*
BART Feeder Services	Vanpool to BART	Commuters	--
	Moraga/Orinda BART Shuttle	Commuters	1
	Downtown Lafayette BART Shuttle	Commuters	2
Flexible Transit Services	Zone Service	Commuters, Senior Mobility	3
	Deviated Fixed Route Service	Commuters, Senior Mobility	3
	Taxi Subsidy Program	Senior Mobility, Commuters	1
	Technology-based Transportation Solutions	Commuters, Senior Mobility, School Trips	2
School Services	Expansion of School Bus Program	School Trips	1
	Increased School Transportation Program Coordination	School Trips	1

* 1 = next year; 2 = next 2-3 years; 3 = reconsider at a later date

FUNDING SCENARIOS

This section outlines funding scenarios to describe potential resources that are available to fund transportation alternatives. A more comprehensive financial plan that will more closely match costs with expenses will be developed upon refinement of the alternatives.

Each of the alternatives would be considered an expansion of existing service, with the exception of the 100% user-driven vanpool program and increased school transportation program coordination. Two funding scenarios are described: a constrained funding scenario (no new funds) and an expanded funding scenario (new outside funds).

Constrained Funding

The constrained funding scenario only considers existing resources. As mentioned, only two of the service alternatives could be implemented without significant increases in resources or the elimination or modification of existing service. Service alternatives that could be implemented under a constrained funding scenario include the vanpool program and increased transportation program coordination. However, even these services would require nominal staff-time funding (to help administer a program) and potential capital costs (to enhance or construct park-and-ride facilities).

LAMORINDA SERVICE ALTERNATIVES

Lamorinda Program Management Committee Technical Advisory Committee

Another strategy to implement various service alternatives under a constrained funding scenario is to modify existing public transit services and redeploy those resources elsewhere. Given the limited number of local services, it is challenging to identify existing Lamorinda transit services (County Connection services) that could be modified to fund new services. It is unlikely that Route 6 could be modified or eliminated given its current productivity (17.6 boardings/hour),²⁵ service to St. Mary’s College, and growing ridership. However, two current Lamorinda services that could be considered for replacement or elimination include:

- Route 25 (9.0 boardings per revenue hour)
- School Trippers (Routes 603, 606, 625, 626), under an assumption that services could be replaced by the Lamorinda School Bus Program or another service

Figure 47 provides a summary of resources for each of these services on an average weekday. Combined, both services equal approximately 31 platform hours (revenue hours plus deadhead). To put things in perspective, current Route 6 service operates approximately 39 platform hours per day.

Figure 47 Potential Resources from Existing Transit Services

Funding Strategy	Average Weekday Platform Hours	Comments
Eliminating Route 25	11:16	Elimination of Route 25 could be offset by potential new services within Lafayette (shuttle)
Eliminating School Trippers (Routes 603, 606, 625, 626)	20:00	This service elimination is unlikely given the importance of School Tripper service, but is shown to reflect order of magnitude of services.
Total	31:16	-

Given their importance, it is unlikely that School Tripper services would be eliminated unless replaced by another service.

Expanded Funding

Given the uncertainty in federal transportation funding, it is unlikely new federal funds would be available for capital or operations investments in the short term. The following alternative funding sources could help fund transportation services in Lamorinda:

- **Measure J** (county sales tax revenues) – funds available for bus services, transportation for seniors and people with disabilities, commute alternatives, and safe transportation for children
- **Low Carbon Transit Operations Program (LCTOP funds)** – a new funding category based on cap and trade revenues that would be distributed through Caltrans
- **BART funding** – BART “C-Line” Access Study considered BART funding for shuttles focused on Contra Costa station access
- **Local funds** – funding provided directly by communities or users benefiting from services

²⁵ September 2014

- **Local school districts**

While no expanded funding sources are confirmed, these sources are the most likely candidates for funding expanded transit service as presented in this memo.

Specific to school trips, it has been noted by the LPMC TAC that the LSBP may be in the best position to obtain or leverage expanded funding opportunities, potentially through Measure J or other grant opportunities.²⁶ This expanded funding would be required for LSBP to expand upon its existing service.

Unless resources become available through elimination or modification of existing service, nearly all service alternatives will require an expansion of funding to be viable.

PERFORMANCE METRICS

With any new service, well-defined performance metrics will be required to evaluate the success of new options. Tracking these metrics can provide an understanding of how the service is performing relative to peers and enable the agency to make changes to support the original intent of the program.

This section outlines high-level performance measurement factors based on each target market. As part of our current scope of work, we do not anticipate calculating the results for each of these performance metrics for each alternative. However, we present them as a way to consider the potential for each alternative service approach to meet its goal. Target levels of each metric would need to be defined at a later time.

Commuter Trips

The following performance measures could be used to evaluate alternatives focused on commuter trips.

- **Number of BART parking trips reduced:** What is the effect of the alternative on reducing vehicle trips to a BART station that requires on-site or nearby parking?
- **Expanded capacity to BART system:** How much additional passenger access capacity does this alternative provide to the BART system (as a way to compare resources given to existing parking supply)?
- **Number of transit trips:** How many transit trips (runs) are provided to the BART station each day (e.g., how many opportunities does one have to access BART on the bus)? This is not to be confused with transit passenger trips.
- **Number of non-on-site parking spaces:** In the case of satellite park-and-ride facilities, how many additional parking spaces are added to the BART parking supply at a specific station?

²⁶ Current school bus funding comes from the following sources (estimated): \$1 million from CCTA (Measure J), \$575,000 revenues from student subscription fees, \$67,000 from the Southwest Area Transportation Committee's (SWAT) Commute Alternatives Program, \$32,000 from the Moraga School District

Midday Trips (seniors, shoppers, community trips)

- **Number of households within ¼ mile of transit service:** As compared to existing service, how many new households does the alternative place within ¼ mile of transit service?
- **Cost per passenger and cost per revenue hour:** How cost-effective is the service? These metrics are standard across the transit industry, but have particular relevance for flexible services that are likely to have lower productivity.

School Trips

- **Total seat capacity:** How many total non-driving seats are provided to each school?
- **Number of schools served:** What is the total number of schools served through non-single occupancy vehicle alternatives?
- **Total and percentage of annual student ridership:** What is the total number of students utilizing the alternative? What percentage of the total student population is utilizing the alternative?

NEXT STEPS

This memo outlines the prioritized transit service alternatives for the Lamorinda Service Plan, summarizes public feedback received, and makes initial recommendations for refinements to those alternatives. Before completing the Service Plan, we want to ensure that the LPMC and has an opportunity to provide feedback. As such, anticipated next steps include:

Figure 48 Lamorinda Service Plan – Next Steps

	Task	Description	Timeline
1	Review Updated Alternatives Memo with LPMC TAC	Share public feedback and recommended alternatives revisions with TAC members	July 22
2	Review Updated Alternatives Memo with full LPMC	Share public feedback and recommended alternatives revisions with LPMC	August 3
3	Develop Implementation Plan	Based on LPMC and TAC feedback on initial recommended alternatives revisions, develop Implementation Plan	August
4	Develop Draft and Final Report	Finalize recommendations and complete Draft Report followed by Final Report and Executive Summary	September