



MARIN COUNTY TRANSIT DISTRICT

NOVATO TRANSIT NEEDS ASSESSMENT

AUGUST, 2011



Executive Summary

The Novato Transit Needs Assessment identifies opportunities for improved transit service within Novato through an extensive outreach and data collection effort. This effort focused on developing financially feasible recommendations over a five year period to improve fixed route and dial-a-ride transit options in Novato. Specific activities completed to develop study recommendations include:

- Demand analysis featuring demographic and employment forecasts.
- Performance evaluation of those services currently operating in the service area (Marin Transit, Golden Gate Transit, Novato Dial-A-Ride).
- Peer review comparing Marin Transit’s performance to similar systems.
- Ride check of 100 percent of Marin Transit trips operating in the study area to gauge ridership trends and on-time performance.
- Survey of fixed-route (Marin Transit and Golden Gate Transit) customers.
- Web-based survey of Novato Dial-A-Ride customers.
- Survey of the community at-large using three separate methodologies.
- Public outreach via stakeholder workshops, a public meeting, and participation in the *Let’s Move Novato!* event.

Existing Conditions

Incorporated in 1960, Novato is located in northern Marin County and is part of the North Bay region in the San Francisco Bay Area. Novato is 30 miles north of San Francisco and 10 miles north of San Rafael. The city covers an area of approximately 28 square miles and is home to 51,904 residents, making it the largest city in Marin County in terms of size and the second largest in terms of population.

Based on the Marin County Travel Demand Model and 2009 regional estimates, Novato is projected to add approximately 1,200 residents between 2009 and 2035. This is a growth rate of two percent over this 26 year period or approximately 0.08% annually, with southern and central portions of Novato growing the most. In 2009, Novato businesses accounted for approximately 21 percent of the total employment in Marin County and are expected to take on a greater share of the County’s employment by 2035.

Analyzing countywide results from the Marin County Travel Demand Model, Novato residents have a greater share of single-occupant vehicle trips (for commuting to work/school as well as for discretionary trips) than the rest of Marin County and generally ride public transit and walk less. In terms of ride-dependent populations, nearly one-quarter of residents are under 18 and approximately 17 percent are seniors. This concentration can be a strong market for transit service within Novato.

Students are a significant market for transit services in Novato. Novato High School, San Marin High School, and San Jose Middle Schools are easily accessed via fixed route transit services. With the closing of Hill Middle School in the fall, middle school students in Novato will be divided between San Jose Middle School and Sinaloa Middle School.

Aside from Route 71, all local Marin Transit routes that serve Novato operate below the Agency’s productivity goal of 20 passengers per vehicle service hour. When compared with the other routes within the Marin Transit system, Routes 49, 51, and 52 are three of the four lowest performing in the local system.

The Novato Dial-A-Ride functions more efficiently and effectively since the transition from the EZ Rider service in August 2009, with improved ridership and farebox recovery while successfully managing costs.

Outreach

The outreach effort solicited input from over 1100 participants through a variety of survey techniques. A summary of these events is shown in Exhibit ES.1 and includes:

- Fixed-Route Customer Survey
- Dial-A-Ride Customer Survey
- Community Survey
- Public Outreach

Based on the public outreach efforts, staff identified several barriers to transit use and corresponding service and capital improvements to support overall mobility and access to transit in Novato. These improvements include:

- **Bus Stop Improvements.** In terms of capital improvements, many Novato residents indicated a desire for bus stop enhancements including shelters, better route information, safety upgrades, and improved visibility. Some participants also noted that Novato’s lack of sidewalks creates barriers to accessing public transit.
- **Service Enhancements.** Participants shared a general consensus on service enhancements. In each meeting, participants asked that Route 51 operate more frequently as well as earlier in the day. For the Dial-A-Ride service, participants stated that closing the midday service gap as well as expanding service hours will enhance their mobility.
- **Marketing.** Several marketing issues and recommendations were discussed during the meeting. Many respondents were not aware that Marin Transit and Golden Gate Transit are separate operating entities. Participants requested easy to understand passenger information and a one-stop center for transit information.

Service Recommendations

The service recommendations are the product of comprehensive public outreach, operational assessments including ride checks and service evaluations, consultation with Marin Transit, Golden Gate Transit and City of Novato staff, and demographic analysis. In developing this service plan, the project team sought to identify service gaps and opportunities for improved service. The service plan is designed to be optimally responsive to the needs of the community with practical recommendations for sustainable services based on existing Marin Transit resources in Novato.

Exhibit ES.1 Outreach and Survey Summary

Name	Target Audience	Method	Date of Completion	Response Size
Customer Survey	Riders	Onboard Survey	October 26-29, 2010	413
Dial-A-Ride Survey	Riders	Mail	November, 2010	61
Community Survey	Non-Riders	Intercept	February 19, 2011	201
		Online Survey	February 18-March 17, 2011	239
Focus Group #1	Seniors	Roundtable	March 1, 2011	8
Focus Group #2	Low-Income / Limited English #1	Roundtable	March 3, 2011	13
Focus Group #3	Students-San Marin High School	Roundtable	March 15, 2011	3
Focus Group #4	Low-Income / Limited English #2	Roundtable	March 16, 2011	2
Focus Group #5	Hamilton Residents	Roundtable	March 16, 2011	3
Presentation	New Beginnings Center	Presentation	March 16, 2011	35
Community Meeting #1a	Elected Officials and Policymakers, Riders, Non-Riders	Meeting	March 15, 2011	5
Community Meeting #1b	Elected Officials and Policymakers, Riders, Non-Riders	Meeting	March 16, 2011	7
Community Meeting #2	Elected Officials and Policymakers, Riders, Non-Riders	Meeting	May 14, 2011	40
Stakeholder Outreach	Stakeholders*	Phone / email	May & June 2011	10
DRAFT recommendations feedback	Novato Residents - Riders, Non-Riders (participants from earlier surveys)	Online Survey	May 30, 2011	68
			Total:	1,108

*Groups that provided input include: Novato Bike and Pedestrian Advisory Committee, Novato Blue Ribbon Coalition, Novato Unified School District, Novato Chamber of Commerce, College of Marin-Indian Valley Campus, Hamilton Homeowners Association, Marin Grassroots

The improvements target needs in the next five years and are presented in two successive phases, each building upon the last. Each phase represents a “blueprint” for improving and enhancing Marin Transit’s performance and service delivery in Novato. These scenarios include administrative, operational, capital, and marketing recommendations.

Phase 1 Recommendations

The following recommendations are identified for implementation in the next 1-2 years:

- **Improve Reliability of Existing Transit Services** – Enforce a “no-early departure” policy and adjust schedule to account for running time delays
- **Consolidate Local Fixed Route Services (Create New Route 51 from existing Routes 51 and 52)** – Simplify local route structure and create a one-seat ride which connects San Marin to Alameda del Prado
- **Increase Peak Hour Frequency on Local Fixed Route Service (New Route 51)** – Increase peak hour frequencies on new local route 51 from 60 minutes to 30 minutes
- **Increase Span of Service on Local Service (New Route 51)** – Increase span on service on new local route to start service at 6:00 a.m. and operate until 9:30 p.m., expanding the existing span by 2.5 hours
- **Adjust Route 49 Alignment** – Extend route 49 from existing terminus at Ignacio interchange to Redwood and Grant via S. Novato Boulevard and reroute portions in Hamilton to service Bowling Circle and Bowling Drive
- **Introduce Weekend Shuttle Program (Routes 49 and new 51)** – Operate shuttle vehicle on fixed route services in Novato on the weekends. Improvement would include service to San Marin and Ignacio, currently not served on the weekends
- **Close Midday Service Gap for Novato Dial-A-Ride** – operate service during 11 a.m. and 3 p.m.
- **Phase 1 Bus Stop Improvements: Signage and Amenities** – upgrade stop signage and amenities at the high boarding locations
- **Create a Single Ride Guide Specific to Novato Transit Services** – create a Novato-specific ride guide which highlights all transit options available within the community
- **Create Novato-Specific Marketing Campaign** – increase awareness of existing services and proposed changes to service through a focused marketing effort
- **Create Marintransit.org Mobile Device-Compatible Website** – create website for the Agency which is compatible with mobility devices

Phase 2 Recommendations

The following recommendations are identified for implementation in the next 3-5 years:

- **Expand Novato Dial-A-Ride Service Hours** – Operate Novato Dial-A-Ride service from 6:00 a.m. to 8:00 p.m., increasing the current span by 3.5 hour a day.
- **Implement Community Circulator Transit System** – Discontinue operation of routes 49, 51, and 52 and replace with a system of local, shuttle circulators which would operate

on 30-60 minute headways and greatly expand the coverage of transit service within Novato.

- **Support Improved Bicycle and Pedestrian Infrastructure** – Continue to improve and expand bicycle and pedestrian infrastructure to enhance the access to and the safety at bus stops
- **Phase 2 Bus Stop Improvements: Major Transfer Stop Enhancements** – Improve major stops and transfer locations in Novato to increase operational efficiency and improve the safety for passengers

Capital and Funding Plan

Service cost estimates were developed based on Marin Transit’s existing contractor rates and escalation schedules and are consistent with other Bay Area transit operators that purchase transportation services. For this purposes of this report, we selected a possible start date of Fiscal Year 2012/13. For all years beyond this fiscal year, we assumed a three percent increase in inflation for capital costs. Exhibit ES.2 shows cost estimates of each recommendation by phase.

Funding for the recommendations can be obtained through a variety of sources, depending on the nature of the desired improvement. As state and local budget issues have placed some funding sources in jeopardy, transit agencies have developed innovative approaches to secure funding maintain service. Traditional funding sources include the following:

- Transportation Development Act (TDA) and State Transit Assistance (STA) funds.
- Federal Transit Administration (FTA) Section 5307 Operating and Section 5309 Capital funds.
- Marin County Measure A half-cent sales tax funds.
- Prop 1B Public Transportation Modernization, Improvement, and Service Enhancement Account Program (PTMISEA) bond funding, specifically for capital projects.

Pending reauthorization of the Federal transportation law, some new sources of funding for the programs in this Plan include:

- FTA Sections 5316 and 5317
- Sonoma Marin Rail Transit (SMART)
- Homeowners Associations.
- Employers
- Transportation Demand Management (TDM) Program Participants
- College of Marin (Indian Valley Campus).
- Development Agreements

Exhibit ES.2 Recommendations Cost Summary Table

Timeline	Recommendation	Estimated Cost		Type of Improvement	Responsible Entity	Potential Funding Source
		Operating (Annual)	Capital (One-Time)			
Phase 1 Improvements (Within 2 Years)	Improve Reliability of Existing Transit Services	\$500	\$0	Administrative	Marin Transit	N/A
	Enforce a "no early departure" policy	\$500		Administrative		
	Adjust schedules to account for running time delays	Varies		Service		
	Consolidate Local Fixed Route Services (Combine Routes 51 and 52)	(\$973,788)		Service	Marin Transit	Section 5316, Measure A, Section 5307
	Increase Peak Hour Frequency on Local Fixed Route Service (New Route 51)	\$350,921		Service	Marin Transit	
	Increase Span of Service on Local Service (New Route 51)	\$233,947		Service	Marin Transit	
	Adjust Route 49 Alignment	\$219,326		Service	Marin Transit	Section 5316, Measure A, Section 5307
	Introduce Weekend Shuttle Program (Routes 49 and new 51)	\$241,500		Service	Marin Transit	Section 5316, Measure A, Section 5307
	Close Midday Service Gap for Novato Dial-A-Ride	\$59,109		Service	Marin Transit	5316, 5317
	Phase 1 Bus Stop Improvements: Signage and Amenities		\$33,397	Capital	City of Novato and Marin Transit	Development agreements, 5309
	Create a Single Ride Guide Specific to Novato Transit Services		\$5,000	Marketing	Marin Transit	Measure A
	Create Novato-Specific Marketing Campaign		\$40,000	Marketing	Marin Transit	Measure A
	Create Marintransit.org Mobile Device-Compatible Website		Varies	Marketing	Marin Transit	Measure A
Phase 1 subtotal	net	\$131,515	\$78,397			
Phase 2 Improvements (within 5 years)	Extend Novato Dial-A-Ride Service Hours		\$51,720	Service	Marin Transit	5316, 5317
	Implement Community Circulator Transit System	total	\$4,213,224	Service	Marin Transit	Section 5316, Measure A, Section 5307
		net	\$187,644			
	Support Improved Bicycle and Pedestrian Infrastructure		\$395,948	Capital	City of Novato and Marin Transit	Development agreements, general fund
Phase 2 Bus Stop Improvements: Major Transfer Stop Enhancements	\$12,000	\$4,802,500	Capital	Marin Transit	5309, PTMISEA, STIP, Measure A	
Phase 2 subtotal	net	\$251,364	\$5,198,448			

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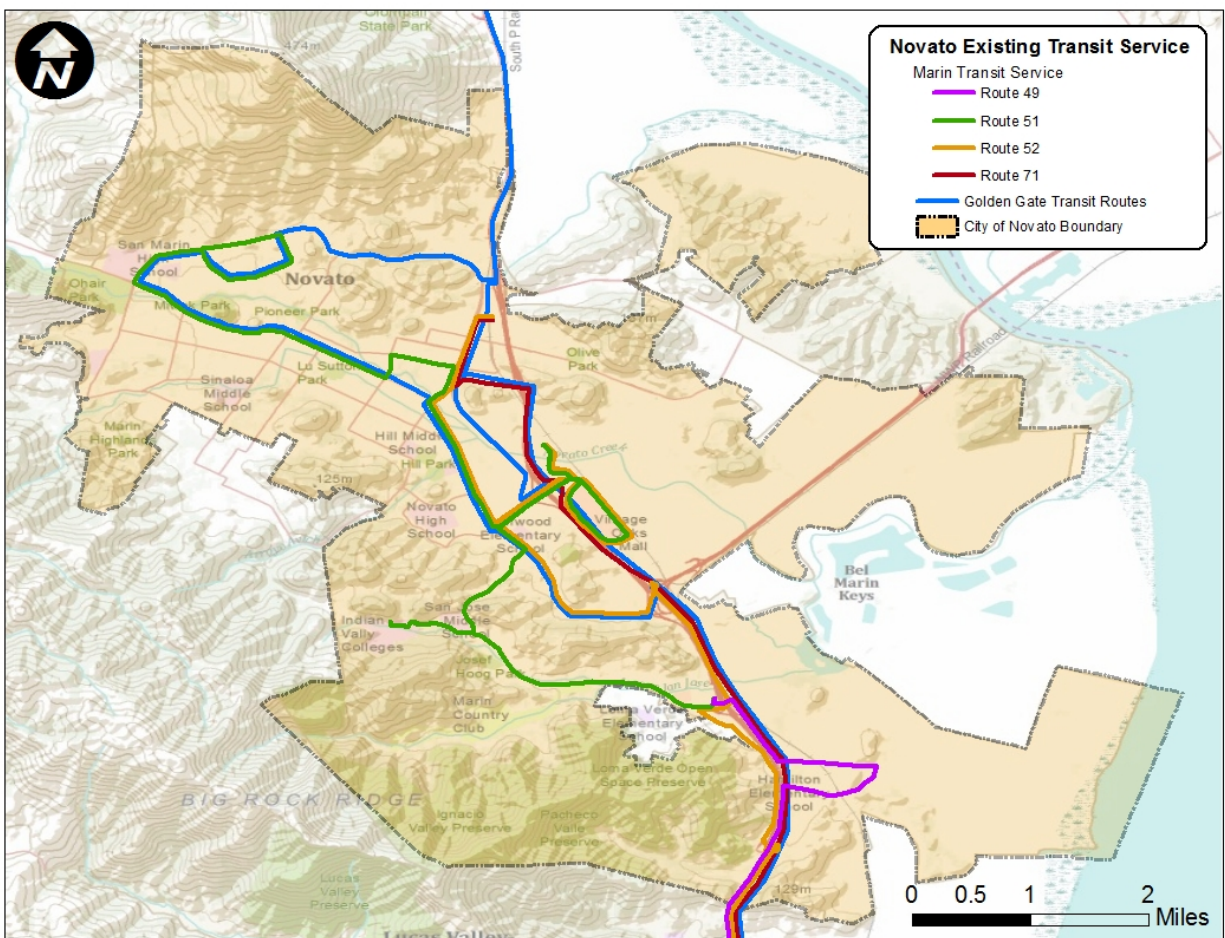
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1. EXISTING
CONDITIONS

CHAPTER 1 – EXISTING CONDITIONS

Incorporated in 1960, Novato is located in northern Marin County and is part of the North Bay region in the San Francisco Bay Area. Novato is 10 miles north of San Rafael and 30 miles north of San Francisco. The city covers an area of approximately 28 square miles and is home to 51,904 residents, making it the largest city in Marin County in terms of size and the second largest in terms of population. Though Novato is considered a “bedroom” community, it boasts some of the largest employers in Marin County. Key employment sectors include biotech and biomedical research, entertainment and media, financial services, healthcare, and retail. Significant employers include Fireman’s Fund Insurance, Novato Unified School District, BioMarin Pharmaceuticals, and Novato Community Hospital. Novato has comparable levels of transit service to other cities and communities within Marin County. Only San Rafael has a greater array of transportation services.

Exhibit 1.1 Transit Services in Novato



Marin Transit contracted with Moore & Associates to develop a Novato Transit Needs Assessment. The purpose of this project is to identify and quantify the mobility needs of the

Novato community and craft a menu of practical, cost-effective solutions that will enhance community mobility and increase transit service productivity. This effort included the following activities:

- Demand analysis featuring demographic and employment forecasts.
- Performance evaluation of those services currently operating in the service area (Marin Transit, Golden Gate Transit, Novato Dial-A-Ride).
- Peer review comparing Marin Transit’s performance to similar systems.
- Ride check of 100 percent of Marin Transit trips operating in the study area to gauge ridership trends and on-time performance.
- Survey of fixed-route (Marin Transit and Golden Gate Transit) customers.
- Web-based survey of Novato Dial-A-Ride customers.
- Survey of the community at-large using three separate methodologies.
- Public outreach via stakeholder workshops, a public meeting, and participation in the *Let’s Move Novato!* event.

This chapter represents a discussion of existing conditions within the study area and is a synthesis of findings identified through the following activities:

- Demand Analysis
- Service Evaluation
- Peer Review
- Ride Check

Complete chapters detailing each of the topics listed above can be found in the appendix to this report.

Demand Analysis

Based on the Marin County Travel Demand Model, Novato is projected to add approximately 1,200 residents between 2009 and 2035. This is a growth rate of two percent over the 26 year period or approximately 0.08% annually, with southern and central portions of Novato growing the most. In contrast, Marin County is projected to grow by more than seven percent over the same time period or 0.3 % annually. Novato will account for a smaller share of the county’s population in 2035 than in 2009.

From analyzing results from the Marin County Travel Demand Model, Novato residents have a greater share of single-occupant vehicle trips (for commuting to work/school as well as for discretionary trips) than the rest of Marin County and generally ride public transit and walk less. This reflects Novato’s low density development patterns, geographic distance from employment centers and limited, curvilinear road network (that is harder to serve via transit).

In terms of ride-dependent populations, nearly one-quarter of residents are under 18 and approximately 17 percent are seniors. This concentration can be a strong market for transit

service within Novato. These populations historically utilize transit services more than the general population. The Marin County Commission on Aging projects the senior population will continue to grow rapidly throughout Marin County as a whole.

Students are a significant market for transit services in Novato. Novato High School, San Marin High School, and San Jose Middle Schools are easily accessed via fixed route transit services. With the closing of Hill Middle School in the fall, middle school students in Novato will be divided between San Jose Middle School and Sinaloa Middle School. Marin Transit should work with Novato Unified School District to monitor student travel needs based on ridership patterns and align its services to best address these needs under federal requirements for school-related services. Marin Transit should also consider class schedules at the Indian Valley Campus of the College of Marin.

Novato has a higher unemployment rate and lower per capita income than Marin County as a whole. Both Novato and the county have lower unemployment and higher incomes than the rest of California. The central and southeastern portions of Novato (Ignacio and Hamilton) have the largest concentration of lower-income households. A higher percentage of Novato residents spent 30 percent or more of their annual income on mortgage or rent payments compared to either Marin County or the state. As Novato residents are spending a larger share of their incomes on housing, transit use is an attractive option for reducing transportation-related costs (particularly as gas prices increase).

In 2009, Novato accounted for approximately 21 percent of the total employment in Marin County which is projected to increase and account for 29 percent of total employment by 2035. This growth in employment has several important implications for providing transit services including demands for more express services, more single-seat transit options, better connections with the regional transportation and transit network, and improved mobility within Novato.

Based on a review of origin and destination data, the majority of intra-county trips occur between San Rafael and Novato or within Novato. The heavy intra-county travel in Marin County is expected to continue through 2035, with only San Francisco emerging as a top 10 destination outside Marin County. Given the significant level of travel (both current and projected) within the city of Novato, as well as between Novato and other Marin County communities, Marin Transit should focus on intracounty service while tailoring the level of service on transit lines operating within Novato to link residents with employment centers.

Service Evaluation

The service evaluation is a comprehensive analysis of Marin Transit's day-to-day operations that provides a snapshot of existing conditions. This analysis of system performance identifies operational successes and areas for improvement.

In 1964 Marin County residents voted to create the Marin County Transit District (Marin Transit). Within Novato, Marin Transit contracts with Golden Gate Transit to operate its fixed-route services and Whistlestop Wheels to operate the Novato Dial-A-Ride service. Golden Gate Transit also operates several regional routes in Novato that function as commuter and long-haul services linking Novato with Sonoma and San Francisco counties.

Operational data for both Marin Transit and Golden Gate Transit was obtained for operations in Novato. These routes include Marin Transit Routes 49, 51, 52, and 71 and Golden Gate Transit Routes 54, 56, 58, 70, 80, 101 and the Novato Dial-A-Ride program. The data covers fiscal years 2007/08 through 2009/10. Data compiled from field observations supplemented quantitative data to provide insight into day-to-day operations.

Overall ridership on GGT regional bus service declined over the two fiscal years while Marin Transit local ridership increased on all its big bus routes except Route 49. The District should consider implementing additional marketing campaigns and strategic service enhancements to maintain this trend in local transit use. Marin Transit's farebox recovery ratio for fixed-route service rose from 23 to 26 percent.

Aside from Route 71, all local Marin Transit routes that serve Novato operate below the agency's productivity goal of 20 Passengers/per vehicle service hour. When compared with the other routes in the Marin Transit system, the routes 49, 51, and 52 are three of the four lowest performing in the local system.

The Novato Dial-A-Ride functions more efficiently and effectively since the transition from the EZ Rider service in August 2009, with improved ridership and farebox recovery while successfully managing costs.

Golden Gate Transit's farebox recovery ratio was also above the 20 percent, though a weak economy reduced demand for commuter trips and service cuts resulted in declining ridership. Many respondents indicated in the Customer Survey the desire for more commuter bus service.

Peer Review

The consultant conducted a peer review to compare Marin Transit's performance for service within Novato with similar transit operators utilizing a quantitative methodology for assessing how efficiently and effectively a public transit agency provides service compared to peer transit providers. *Effectiveness* is defined as the extent that a service is achieving its intended goals, while *efficiency* is the amount of resources required to achieve the reported outcome.

The analysis examines the level of service each peer agency provides relative to the size of its service area and the number of persons residing therein. The peers include the Cities of Arcadia, Chula Vista, Petaluma, Roseville; and the Santa Cruz Metropolitan Transit District's service within the city of Watsonville. All peer data reflect actual FY 2008/2009 performance.

Compared to these peer agencies, Marin Transit is less cost-effective as measured by Operating Cost per vehicle service hour and Operating Cost per service mile, but has the second-lowest Operating Cost per Passenger. This indicates that while it may be more expensive for Marin Transit to put service on the road, it serves more riders for every dollar spent. Marin Transit's Passengers per service hour and Passengers per service mile indicators were also well above the peer average, indicating the services are performing well. Marin Transit is collecting the second-highest fare per passenger (\$1.11) in the peer group.

Ride Check

The consultant conducted a 100-percent ride check of all Marin Transit routes between September 20 and October 28, 2010. For the Novato Transit Needs Assessment, the team focused solely on those routes serving Novato: Routes 49, 51, 52, and 71. By analyzing ride check data, a snapshot is formed of current system activity and service delivery performance. The ride check was conducted under actual operating conditions and counted a total of 225 trips in Novato spread across all day-parts.

The ride check analysis revealed several key findings:

- **On-time performance is an issue for each Marin Transit route serving Novato.** In most cases, late departures caused the greatest decline in on-time performance yet early departures were also prevalent. The project team recommends Marin Transit enforce a “no early departure” policy.
- **In terms of boarding and alighting activity, Route 71 is the most productive of the Marin Transit routes.** Route 71 connects to several major transit centers (San Rafael, Marin City, and Novato).
- **Routes serving Novato (49, 51, and 52) are among the least productive routes in the Marin Transit network.** Alternative forms of service delivery should be explored for Novato that optimize agency resources and better serve existing and future demand for transit service.

2

2. OUTREACH AND NEEDS ASSESSMENT

CHAPTER 2 – OUTREACH AND NEEDS ASSESSMENT

This chapter is a synthesis of findings identified through the following survey and outreach activities conducted within Novato during the planning process. A summary of these events is shown in Exhibit 3.1 and includes:

- Fixed-Route Customer Survey
- Dial-A-Ride Customer Survey
- Community Survey
- Public Outreach

Complete chapters detailing each of the outreach activities can be found in the appendix to this report. This chapter summarizes those findings most critical to the needs of Novato residents.

Fixed-Route Customer Survey

The consultant conducted fixed-route customer surveys onboard Marin Transit and Golden Gate Transit buses traveling through Novato as well as at the downtown Redwood/Grant transfer point between October 26 and October 29, 2010. The survey had several objectives:

- Develop a demographic profile of transit riders through the study area,
- Codify current rider travel patterns,
- Assess customer satisfaction,
- Identify and prioritize potential service enhancements, and
- Identify marketing and outreach preferences.

In total 413 valid survey forms were collected, which represents a statistically-valid sample with a 95-percent confidence level and a +/- five-percent margin of error. Following collection of the surveys, the project team entered the results into the Statistical Package for the Social Sciences (SPSS) and ran frequencies and cross-tabulations.

Exhibit 3.1 Outreach and Survey Summary

Name	Target Audience	Method	Date of Completion	Response Size
Customer Survey	Riders	Onboard Survey	October 26-29, 2010	413
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Key findings from the fixed-route customer survey include:

- Only 61 percent of respondents are employed (full or part time), and approximately 15 percent are students.
- As many as 76 percent of respondents lack access to a personal vehicle, indicating there is an opportunity for Marin Transit to expand its service offerings to attract more choice riders.
- Approximately 65 percent of respondent households earn less than \$20,000, well below the Novato median household income of \$81,000.
- Work was the most frequently-cited trip purpose (47 percent), followed by Recreation/Social (17 percent) and School (10 percent).
- More than half of all respondents (53 percent) stated they use the bus five or more times per week, indicating customers in Novato use public transit as a viable commute option.
- More than 46 percent of respondents cited a lack of other travel options as their primary motivation for taking public transit, more than twice the number of respondents who used public transit because of convenience (27 percent).
- Approximately 65 percent of respondents indicated walking to and from the bus stop, while 19 percent indicated transferring from another bus service. This reinforces the importance of improving bicycle and pedestrian infrastructure along streets feeding into the transit route network.
- Very few (7 percent) riders use more than two buses to complete a given trip. The remainder is evenly split between using one or two buses.
- There is a direct relationship with length of patronage and frequency of use (i.e., those using the system for a long time ride often and first-time users ride much less often).
- Those using the service for work and school-related trips use the service more often than those using it for other purposes.
- The vast majority of riders (75 percent) use cash to pay their fare despite the savings associated with Clipper or non-cash media.
- Service span had the highest dissatisfaction rating (18 percent); followed by on-time performance (18 percent); and proximity of bus stop to home (17 percent).
- A quarter of respondents wanted more peak-hour service while a similar amount wanted more routes/extended service area. More weekend service (Saturday and Sunday) combined for over 34 percent of respondents with each day splitting nearly evenly.
- Most respondents (56 percent) indicated a willingness to pay higher fares for the desired service improvement (it is important to note this finding relates to riders on both Marin Transit and Golden Gate Transit, which has higher fares than Marin Transit).

[Dial-A-Ride Customer Survey](#)

The consultant conducted a survey of Novato Dial-A-Ride customers between November 1 and November 15, 2010. The survey had several objectives:

- Develop a demographic profile of Novato Dial-A-Ride customers,
- Codify current rider travel patterns,
- Assess customer satisfaction,
- Identify and prioritize potential service enhancements, and
- Identify marketing/public communications preferences.

The consultant utilized the Novato Dial-A-Ride customer database provided by Whistlestop Wheels to create the survey pool. The project team then mailed survey forms to each person on the list for a total of 213 potential respondents. We received 61 valid responses that translates to a 30-percent response rate. This response rate is significant enough to draw conclusions about the average Dial-A-Ride customer.

Key findings from the Dial-A-Ride customer survey include:

- While the Novato Dial-A-Ride is a general-public service, more than 80 percent of respondents are retired.
- As many as 83 percent of respondents do not have access to a personal vehicle, indicating the ridership base for the service is largely ride-dependent, consistent with general-public demand-response systems in general.
- More than 72 percent of respondent households earn less than \$34,000 annually.
- Recreation/social was the most frequently-cited trip purpose at just over 40 percent, work ranks as the least-common trip purpose (7.1 percent).
- Respondents were nearly evenly split between those riding less than once per month (37 percent) and those who use the service between two to four times per week (41 percent).
- Nearly 35 percent schedule trips one to two days in advance while nearly a quarter attempt to schedule their trip for the same day.
- Nearly 35 percent of respondents stated they would use a taxi to access their destinations if the Novato Dial-A-Ride was not available, while 30 percent stated they would use the Marin Access/Novato Health Express service. More than 15 percent indicated they would not make the trip, meaning the trip is discretionary or they do not have other options.
- Approximately 80 percent of respondents indicate they do not use the service to transfer to other services, while about 14 percent indicated they transfer to either Marin Transit or Golden Gate Transit.
- Only 7.7 percent of respondents fell into the adult fare category, meaning 92.3 percent of riders receive some form of discount fare.
- The service enhancement preferred by the majority of respondents (57.5 percent) is expanded service hours.
- As many as 82 percent of respondents indicated they would support a fare increase in the event the desired service enhancement was implemented.

Community Survey

The consultant conducted a general public survey in Novato using three separate techniques:

- Intercept survey,
- Online survey, and
- Focus groups.

For the intercept survey, staff went to several locations throughout Novato to conduct surveys in person. Between February 17 and February 20, 2011, a total of 201 responses were collected.

The second technique was an online version of the survey. A random-sampling methodology was utilized to generate a database of residential addresses throughout Novato. Bilingual postcards promoting the online survey were mailed to 2,000 households. Over the five-week period 260 residents took the survey, representing a 12-percent postcard response rate.

The third technique was collecting surveys from attendees of focus groups. The focus groups took place during the weeks of February 28 and March 14, 2011. The consultant collected 29 surveys via participants at the meetings and focus groups. In total, the team collected 490 valid responses.

The survey had several objectives:

- Assess overall community mobility preferences,
- Identify gaps in service and barriers to use, and
- Identify and prioritize potential transit service enhancements

Key findings from the community survey include:

- About 58 percent of respondents are employed and of those 58 percent, approximately 43 percent work in Novato.
- In contrast to the customer survey results, nearly 82 percent of respondents indicated they had access to a personal vehicle.
- More than 50 percent of those without access to a personal vehicle utilize Marin Transit or Golden Gate Transit for their mobility.
- The 94947 (western and central Novato) and 94949 (Hamilton/Ignacio) ZIP codes reported higher use of Golden Gate Transit than the general survey population.
- About 19 percent of respondents indicated difficulty in accessing work or employment opportunities, 30 percent of whom are already customers.
- About 58 percent of Novato residents had not used public transit within 90 days prior to taking the survey.
- The vast majority of those who use transit primarily use Golden Gate Transit (70 percent) followed by Marin Transit (15 percent). However, it is difficult to separate those who use Golden Gate Transit from those who use Marin Transit local service but assume it is Golden Gate Transit's responsibility.

- A significant number of respondents were dissatisfied with the convenience of the transit services as well as the trip duration. These are clear barriers to use and must be addressed to attract choice riders.
- Approximately one-quarter of respondents stated “nothing” would encourage them to start using transit or to use it more. This figure is typically 33-percent or higher in other communities. This indicates that the community has a significant number of potential “choice” riders who would be willing to use transit if certain enhancements were made.
- Providing better connections to destinations outside of Marin (i.e., improve commuter services) was the most popular service enhancement requested followed closely by expanded service area.
- Many respondents indicated the need for expanded and more frequent commuter service as well as rapid transit options in the Highway 101 corridor.

Public Outreach

The project team facilitated five focus groups, two community workshops, participated in the *Let's Move Novato!* event, and conducted a brief community survey regarding preferred service enhancements. The focus groups were held during the weeks of February 28 and March 14. The workshops were held during the week of March 14 and the *Let's Move Novato!* event was on Saturday, May 14, 2011.

The focus groups targeted seniors, low-income residents, residents with limited-English proficiency, youth, and residents of the Hamilton neighborhood. The focus groups addressed each attendee's perspective on public transit in Novato. These meetings yielded important feedback regarding service issues and potential enhancements to address shortcomings.

The project team also reached out to various stakeholder groups representing specific interests within the community. Meetings and discussions were held with the City of Novato's Bicycle and Pedestrian Advisory Committee, Novato Unified School District, the College of Marin Indian Valley Campus, the Blue Ribbon Coalition for Youth, the Hamilton Homeowners Association, and Marin Grassroots. Input on transit issues specific to these organizations were collected and included in the needs assessment.

Based on the public outreach efforts, staff identified several barriers to transit use and corresponding service and capital improvements to support overall mobility and access to transit in Novato. These improvements include:

- **Bus Stop Improvements.** In terms of capital improvements, many Novato residents indicated a desire for bus stop enhancements including shelters, better route information, safety upgrades, and improved visibility. Some participants also noted that Novato's lack of sidewalks creates barriers to accessing public transit.

- **Service Enhancements.** Participants shared a general consensus on service enhancements. In each meeting, participants asked that Route 51 operate more frequently as well as earlier in the day. For the Dial-A-Ride service, participants stated that closing the midday service gap as well as expanding service hours will enhance their mobility.
- **Marketing.** Several marketing issues and recommendations were discussed during the meeting. Many respondents were not aware that Marin Transit and Golden Gate Transit are separate operating entities. Participants requested easy to understand passenger information and a one-stop center for transit information.

3

3. SERVICE PLAN

CHAPTER 3 – SERVICE PLAN

The service recommendations are the product of comprehensive public outreach, operational assessments including ride checks and service evaluations, consultation with Marin Transit, Golden Gate Transit and City of Novato staff, and demographic analysis. In developing this service plan, the project team sought to identify service gaps and opportunities for improved service. The service plan is designed to be optimally responsive to the needs of the community with practical recommendations for sustainable services based on existing Marin Transit resources in Novato.

The improvements target needs in the next five years and are presented in two successive phases, each building upon the last. Exhibit 3.1 shows a summary of each recommendation by phase. Each phase represents a “blueprint” for improving and enhancing Marin Transit’s performance and service delivery in Novato. These scenarios include administrative, operational, capital, and marketing recommendations.

Exhibit 3.1 Recommendations Summary Table

Timeline	Recommendation	Type of Improvement	Responsible Entity
Phase 1 Improvements (Within 2 Years)	Improve Reliability of Existing Transit Services	Administrative	Marin Transit
	Enforce a "no early departure" policy	Administrative	
	Adjust schedules to account for running time delays	Service	
	Consolidate Local Fixed Route Services (Combine Routes 51 and 52)	Service	Marin Transit
	Increase Peak Hour Frequency on Local Fixed Route Service (New Route 51)	Service	Marin Transit
	Increase Span of Service on Local Service (New Route 51)	Service	Marin Transit
	Adjust Route 49 Alignment	Service	Marin Transit
	Introduce Weekend Shuttle Program (Routes 49 and New Route 51)	Service	Marin Transit
	Close Midday Service Gap for Novato Dial-A-Ride	Service	Marin Transit
	Phase 1 Bus Stop Improvements: Signage and Amenities	Capital	City of Novato and Marin Transit
	Create a Single Ride Guide Specific to Novato Transit Services	Marketing	Marin Transit
	Create Novato-Specific Marketing Campaign	Marketing	Marin Transit
Create Marintransit.org Mobile Device-Compatible Website	Marketing	Marin Transit	
Phase 2 Improvements (within 5 years)	Extend Novato Dial-A-Ride Service Hours	Service	Marin Transit
	Implement Community Circulator Transit System	Service	Marin Transit
	Support Improved Bicycle and Pedestrian Infrastructure	Capital	City of Novato and Marin Transit
	Phase 2 Bus Stop Improvements: Major Transfer Stop Enhancements	Capital	Marin Transit
Phase 2 Alternatives Considered but Not Recommended	Fixed-Route with Transfer	Service	Marin Transit
	Fixed-Route without Transfer	Service	Marin Transit

- **Phase 1 Improvements** are improvements that are feasible to implement in the next 1-2 years with minimal cost, or cost-neutral, implications. Consolidating and restructuring local service provides opportunities for increased frequencies, extended service hours, continued expansion of the Dial-A-Ride service hours, and extension of the fixed route service to provide a more direct link between Hamilton and the rest of Novato. Marketing recommendations include implementing a Novato-specific transit marketing campaign, developing a Novato transit ride guide, and creating a mobile device-compatible website. Capital improvements focus on enhancements to bus stop signage and amenities.
- **Phase 2 Improvements** incorporate the recommendations included in the phase 1 plus additional enhancements that may be feasible to implement over the next five years. In terms of transit operations, the first step is a comprehensive reassessment of how service is delivered based on the changing needs of Novato. To achieve this, the project team evaluated three separate approaches to the implementation of operational changes. In the first, Marin Transit eliminates all existing local fixed-route service in Novato and implements a Community Circulator concept that includes zone-based routes and timed transfers. Peak-hour frequency would increase to 30 minutes with off-peak and weekend frequencies at 30 to 60 minutes. The Novato Dial-A-Ride would continue to exist but qualifications to use the service would be tightened to include the senior and ADA community as well as those geographically not served by the circulator alignments.

A second operational scenario would be to implement more frequent service on the existing transit network. Peak-hour frequencies would increase to 15 or 20 minutes, with off-peak service at 30 minutes to 60 minutes.

A third operational scenario would be to implement a fixed-route service with limited stops within the city and increased direct service to the San Rafael Transit Center. This scenario features 30-minute headways during peak periods and 60-minute headways during off-peak periods. Each region of Novato would have its own direct route to the San Rafael Transit Center. The Novato Dial-A-Ride would provide local service within Novato.

Longer-term capital improvements focus on major bus transfer points, including Redwood and Grant in downtown Novato and the southern transfer locations along Highway 101 at Ignacio and Rowland. Initial planning work has already been completed in these areas.

The following describes recommendations included within each alternative along with their relative merits. Alignment or schedule changes are accompanied by exhibits that illustrate the proposed changes.

Phase 1 Improvements

In this scenario, the project team proposes several low-cost or cost-neutral operational, administrative, capital, and marketing enhancements:

Administrative Recommendations

1. Improve Reliability of Existing Transit Service

Schedule reliability is a function of early departures and late arrivals of vehicles based on the agency's published timetables. Early departures resulted in considerably reduced on-time performance for all Marin Transit routes serving Novato. While late departures were the primary factor impacting program on-time performance, early departures are entirely preventable and are generally more inconvenient for passengers.

To remedy early departures, the project team recommends Marin Transit work with its contractor to enforce a "no early departure" policy across all published time points. This will substantially improve on-time performance, service quality, and customer satisfaction. This recommendation will have negligible costs and is easily incorporated into routine driver training and staff meetings.

Although early departures are relatively easy to fix with few resources, late arrivals are the single largest cause of diminished on-time performance. Late arrivals were particularly acute during the evening peak day-part and during the middle part of the trip segment.

Since all routes experienced a significant number of late arrivals in the 2010 ride check analysis, the project team recommends that Marin Transit adjust the operating schedule in these sections by re-timing existing schedules, removing unproductive stops or trip segments, or adding several minutes of operating time to the runs. The late arrivals may be due to congestion rather than driver performance. Adjusting the schedules will give patrons a more realistic expectation of when the bus will arrive, thereby improving public perception of the service.

Given a ride check evaluation will be conducted again in 2011 and 2012, the project team recommends Marin Transit use those opportunities to monitor specific areas where service may be unreliable and note factors

that impact the driver's performance. Staff also recommends that Marin Transit work with its contractor to ensure on-time performance standards are achievable and consistent with similar agencies.

Service Recommendations

1. Consolidate Local Fixed Route Services (Combine Routes 51 and 52)

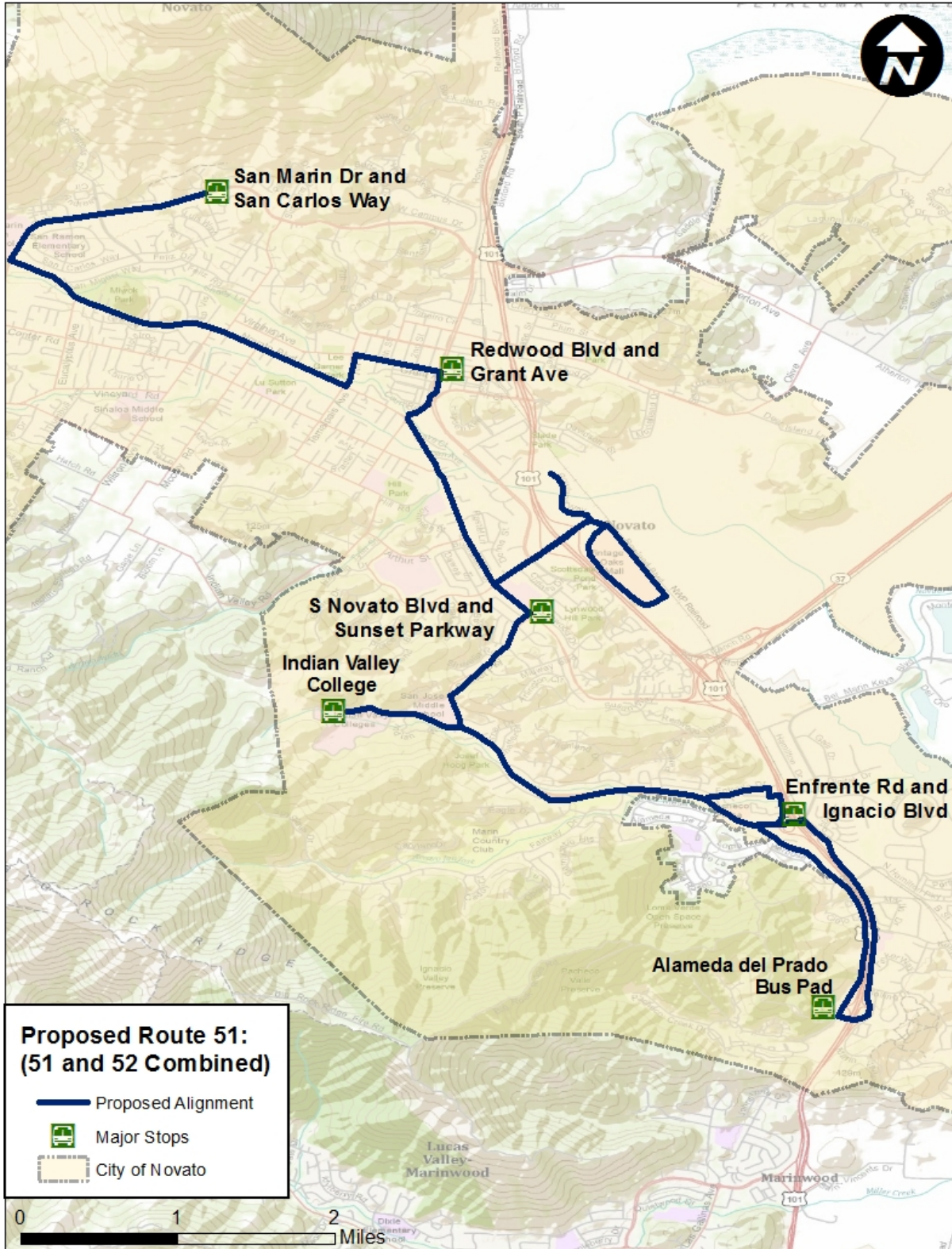
Routes 51 and 52 provide the majority of local service in Novato. Combining the two routes into a new Route 51 will provide a seamless connection between the northern, central, and southern portions of the City. This simplified route system will enable one seat bus service between San Marin, downtown Novato, Ignacio, and Alameda Del Prado.

Given Routes 51 and 52 serve much of the same area, Marin Transit will decrease operating costs by combing these routes while improving local service (see phase 1 service recommendations #2, #3, #4 and #5 below).

The proposed realigned Route 51 Northbound would serve the Alameda Del Prado corridor on the west side of Highway 101. It would then stop at Ignacio Boulevard and follow the current 51 route alignment to the Indian Valley Campus of the College of Marin, Vintage Oaks Shopping Center, and the Novato Community Hospital. Route 51 would then continue back to Novato Boulevard and head north to the downtown Redwood and Grant transfer point. Route 51 would then finish its northbound trip along its current alignment to serve the San Marin neighborhood. See Exhibit 3.6 for a proposed route map.

Ride check and farebox data reveal students make up a high percentage of the ridership on Routes 51 and 52 (40 percent and 30 percent of weekday ridership, respectively). Much of this ridership is concentrated among a few trips that serve the morning and afternoon school bell times while much of the day these vehicles carry few riders. This presents an opportunity for Marin Transit to explore use of different fleet sizes to target contrasting levels of demand. It will benefit Marin Transit to analyze ride check data to identify those routes and day parts where productivity is below 30 Passengers per vehicle service hour and could benefit from the use of smaller, shuttle-type vehicles.

Exhibit 3.6 Recommended Route 51 Realignment



2. **Increase Peak-Hour Frequency on Local Fixed Route Service (New Route 51)**

The Onboard Survey and Community Survey revealed many patrons use Marin Transit for commuting. This suggests that Marin Transit could attract additional riders (or attract existing riders to ride more frequently) if Route 51 had increased peak-hour frequency.

Route 51 operates on one-hour headways, which is inconvenient except those most dependent on the service. Increasing peak-hour frequency to 30 minutes between 6:00 a.m. and 9:00 a.m. and 3:00 p.m. to 6:00 p.m. would improve connections with other Marin Transit Local and Golden Gate Transit routes to reach employment centers outside of Novato.

3. **Increase Span of Service (New Route 51)**

Given the sizeable student ridership on Route 51, the project team recommends that Marin Transit adjust its service hours to meet early morning bell times at the Novato high schools and late night class schedules at Indian Valley College. Some schools in Novato have bell times as early as 7:10 a.m., making the current 6:53 a.m. northbound start time for the route inconvenient for some.

The project team recommends Marin Transit start northbound service around 6:00 a.m. and operate the last trip to Indian Valley College at 9:30 p.m. Adding service at these times should provide better opportunities for students to use transit.

4. **Adjust Route 49 Alignment**

The northbound Route 49 terminates at the Ignacio transfer point where riders must transfer to either Route 51 or 52 to reach the rest of Novato. The project team recommends extending Route 49 north to Downtown Novato, terminating at Redwood and Ranch. This new route alignment would travel the current 52 route along South Novato Boulevard with connections at the downtown Redwood and Grant transfer point. This location has the highest level of bus passenger activity in Novato.

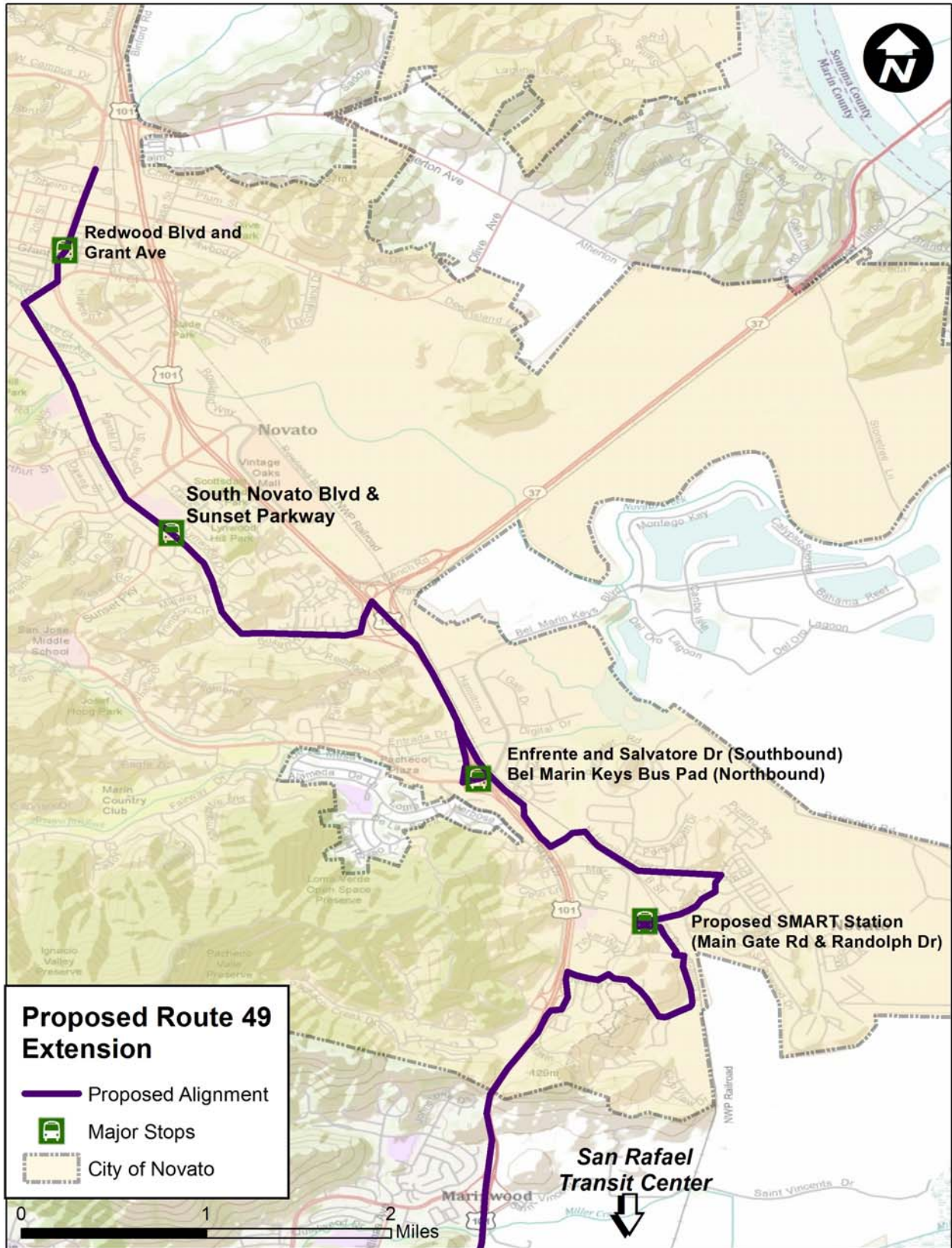
Within Hamilton, the Route 49 alignment is proposed to be modified to penetrate deeper into the neighborhood and serve many of the higher density, low-income neighborhoods. This realignment would include service along Bowling Circle with connections to Main Gate via Randolph Drive and Nave Drive via Bowling Drive.

Route 49's alignment south of Novato would be adjusted to more closely serve ridership demand and reduce travel time to the San Rafael Transit Center. Between the San Rafael Civic Center and San Rafael Transit Center, the consultant proposes that Route 49 would use Highway 101 and bypass local service east of Highway 101.

The extension of Route 49 to Redwood Boulevard and Grant Avenue provides the first seamless connection between the Hamilton neighborhood and downtown Novato. Elimination of local routing along Grand Avenue near the Dominican University in San Rafael streamlines the service and would reduce travel time by 10 minutes per trip. Route 49 service in this area overlaps with the Marin Transit Santa Venetia Shuttle (Route 233). Costs savings associated with trimming 10 minutes from Route 49 could be applied toward increasing frequency on Route 233 to every 30 minutes (from every 60 minutes).

Exhibit 3.7 shows the recommended new alignment.

Exhibit 3.7 Recommended Route 49 Realignment



5. **Introduce Weekend Shuttle Program (Routes 49 and New 51)**

Currently, there is no weekend service on Route 51 and the Route 52 weekend service terminates at Ignacio, leaving areas of San Marin and Alameda Del Prado without service. While full roll-out of the Community Circulator system in Novato is a suggested phase 2 recommendation, the project team recommends that Marin Transit introduce a shuttle service on the weekend in Novato as a pilot program in the near-term (next 1-3 years). The impetus for implementing this service as a weekend pilot program is in part to determine whether a shuttle-based service would realize cost savings over using larger buses and evaluate how riders respond to the service.

The current weekend service in Novato features Routes 49, 52, and 71 as well as Golden Gate Routes 70, 80, and 101 (Sunday service on 101 starting September 11, 2011). Based on typical rates for shuttle contractor service, replacing the existing local fixed-route service in Novato with a series of community circulator shuttles would result in a higher level of service at a lower cost per hour of service. Implementing the service on the weekend would also ensure smaller vehicles could be used as there would be no large loads associated with school trips that would require the use of larger buses with higher capacity. Weekend service with larger bus operations will continue on Routes 70, 71, 80, and 101. The proposed shuttle service would start at 7:30 a.m. and continue until 7:30 p.m., and continue hourly throughout the day.

6. **Close the Midday Service Gap for the Novato Dial-A-Ride**

According to the Marin County Commission on Aging, the senior population in Marin County is projected to grow faster than the overall population¹. This will increase demand for alternative means of transportation, particularly demand-response services such as the Novato Dial-A-Ride.

The Novato Dial-A-Ride currently has a four-hour service gap during the middle of the day (11:00 a.m. – 3:00 p.m.). This gap impacts the ability for Novato residents, particularly seniors and persons with disabilities, to make shopping trips, medical visits, or any other recreational/social activities during this time.

¹ Marin County Commission on Aging, *Live Long, Live Well: A Strategic Plan for Aging Services in Marin County: 2004-2014*

Given the public and customer support observed in the Community Survey and Dial-A-Ride Customer Survey, the project team recommends Marin Transit close the midday service gap during weekday service. The project team believes this would encourage more Novato residents to use the service and would significantly enhance the convenience of the service for existing customers.

Capital Recommendations

1. Phase 1 Bus Stop Improvements: Signage and Amenities

Besides the buses themselves, bus stops are the most visible aspect of a transit service in a community. Currently, bus stops in Novato – with the exception of the major transfer points – are unimproved and lack clear signage.

The project team recommends Marin Transit do an initial investment to upgrade bus stops to include (at a minimum) signage indicating the route number, stop ID, and destination. The minimum level of improvement should be at all bus stops regardless of boarding and alighting activity.

For the top 20 stops in passenger activity (shown in Exhibit 3.3), Marin Transit should implement bus benches, trash/recycling receptacles, route and destination signage as well as schedule information and bus shelters. In addition, any rider information displayed at these locations should be provided in both English and Spanish.

Taken collectively, these improvements should improve patrons' perceptions of the service (i.e., convenience, comfort, safety) as well as improve actual access to the system. In other words, more information will help patrons – especially those with limited experience with the service – navigate the transit system more easily.

Exhibit 3.3 Recommended Bus Stop Improvements

Stop Location	Boarding	Alighting	Passenger Activity	Recommended Improvement
Redwood Boulevard & Grant Avenue	347	266	613	Bike lockers
Enfrete Road & Salvatore Drive	249	144	393	Bike lockers; route information
US HWY 101 & Alameda del Prado Bus Pad	122	56	178	Bike lockers; route information
US HWY 101 & Bel Marin Keys Boulevard Bus Pad	75	96	171	Route information
S. Novato Boulevard & Arthur Street	65	89	154	Route signage; route information; bike racks
Redwood Boulevard & Olive Avenue	93	55	148	Route signage; route information; bike racks
S Novato Boulevard & Redwood Boulevard	75	69	144	Bus Shelter; bus bench; bike racks; route information
S Novato Boulevard & Sunset Parkway	42	64	106	Bus Shelter; bus bench; bike racks; route information
Rowland Boulevard & Vintage Oaks Entrance	40	53	93	Route information
US HWY 101 SB On Ramp & Rowland Boulevard	81	12	93	Route information
S Novato Boulevard & Diablo Avenue	40	50	90	Bike racks; route information
San Marin Drive & San Carlos Way (SMHS)	68	2	70	Bike lockers; route information
Hamilton Theater Parking Lot	30	31	61	Bus bench; route information
S Novato Boulevard & Rowland Boulevard	38	23	61	Bike racks; bus bench; route information
Nave Drive & Bolling Drive	31	27	58	Route information
Hamilton Parkway & Marin Airporter	46	10	56	Route information
Rowland Boulevard & Rowland Way	37	18	55	Route information
Vintage Way & Fresh Choice	38	8	46	Route information
US HWY 101 NB On Ramp & Rowland Boulevard	2	41	43	Route information
Nave Drive & New Hamilton Road	11	31	42	Bike racks; route information

Marketing Recommendations

1. Create a Single Ride Guide Specific to Novato Transit Services

Currently there is a master Transit Guide for Marin County showing all Marin Transit and Golden Gate Transit bus and ferry routes. Additionally, there is a ride guide specific to the Novato Dial-A-Ride service. The project team recommends Marin Transit create a ride guide that focuses on the transit services provided specifically in Novato. The project team thinks this would help patrons better navigate the system within Novato as well as improve awareness about how the existing services within Novato connect to areas outside the city. The ride guide should include route maps, a regional transit map similar to the one in the master Transit Guide, schedules, contact information, and fare schedules. The ride guide should also include information about how to use the Novato Dial-A-Ride.

2. Create Novato-Specific Marketing Campaign

One of the largest barriers to use of transit service in any community is a combination of lack of awareness of the service as well as a lack of clear understanding regarding the benefits transit provides with respect to cost savings, convenience, and the environment. This is particularly true in Novato, where a sizeable portion of the population relies upon their personal vehicles for the majority of their commute-related and discretionary trips.

The project team recommends that Marin Transit, in partnership with the City of Novato, implement a marketing plan starting in FY 2011/12. This marketing plan should be Novato-specific, and its scope would depend in large part on the scale and scope of planned service adjustments within the community. In the short-term as Marin Transit makes relatively minor tweaks to existing services, the marketing plan should focus on educating the community regarding the general benefits of using transit versus their personal vehicles. As service improves and the community circulator system is introduced on the weekends, marketing efforts should be more intensive and focus on educating the public on how to use the new system and how it will benefit them. In the longer-term, marketing efforts should be used to support the ultimate transition toward a full roll-out of the community circulator system across the entire service week. Some or all of the costs associated these marketing efforts could be recouped through increased ridership and fare revenue.

The Marketing Plan should include the following:

- Target Markets
 - Primary and secondary,
 - Demographic, and
 - Geographic.
- Situation Analysis
 - Strengths and weaknesses, and
 - Opportunities and threats.
- Mission and Objectives
- Advertising Plan
 - Print media,
 - Outdoor media,
 - Social media and
 - Direct mail.
- Public Communications
 - Community outreach,
 - Partnerships,
 - Feature articles and
 - Special event participation.
- Implementation Timeline
- Assessment Mechanism

3. Create MarinTransit.org Mobile Device-Compatible Website

Given the large number of cell phone users and the increasing popularity of “smart phones” and personal tablets, Marin Transit should consider creating a mobile device compatible version of its website. The mobile device compatible website would allow patrons to easily access trip planning services, schedules, and fare information.

Phase 2 Improvements

In this scenario, the project team recommends larger changes to the Marin Transit operations in Novato over the next three to five years. These recommendations build upon those included in the Phase 1 Improvements section above. We propose a service redelivery with community circulators and substantial upgrades to the key transfer locations in Novato.

The recommended complete overhaul of Marin Transit service in Novato is based on findings from the ride check and service evaluation indicating those routes serving Novato are among the least productive in the system (i.e., Routes 49, 51, and 52 are three of the four least-productive routes in the system). This is also the result of extensive public and stakeholder outreach that made it clear the current service structure is not meeting many of the community’s travel needs, with respect to either frequency or coverage. Instead of continuing to spend money on a service structure that has proven to be only marginally successful, we have evaluated a series of alternatives designed to make substantial improvements to program cost-effectiveness, ridership, and community mobility. The project team recommends these changes take place after the phase 1 improvements have been made. Based on current service contracts, and vehicle procurement needs, we estimate the earliest these changes could likely be rolled out would be approximately three years. The following describes each recommendation under this alternative.

Exhibit 3.8 Phase 3 Improvement Strengths and Weaknesses

Scenario	Strengths	Weaknesses
Community Circulator	Higher level of service for less cost	Less capacity than larger fixed-route vehicles
	Better serves existing and future travel demand	Need for multiple transfers
	High level of community support	No direct service to areas outside of Novato
	Able to serve areas otherwise inaccessible to 40' vehicles	
Fixed-Routes with Transfers	Riders already familiar with system	Misses significant existing and projected trip generators
	Would benefit commuters to/from Novato	Not likely to attract "choice" riders
	Ties in within existing services outside of Novato	
Fixed-Routes without Transfers	Faster direct service to San Rafael Transit Center	Misses significant existing and projected trip generators
	Would benefit commuters to/from Novato	Would rely on Novato Dial-A-Ride for local connections
	Slightly increased operating costs compared to status quo	

While this planning effort is focused on local bus service and separate from the Sonoma-Marin Area Rail Transit (SMART) effort, it is important not to lose sight of how this new

mode of transit will impact the mobility needs of Novato and determine how Marin Transit should coordinate its efforts to support this project. While still unclear, SMART will ultimately include at least one new station within Novato at Hamilton. Marin Transit should work with SMART to ensure local transit services are coordinated to effectively serve the SMART stations in Novato. The recommendation for introducing a community circulator system in Novato will be especially well-suited to serve the SMART stations in Novato, allowing riders easy access to/from the stations. In addition to Route 49, the Hamilton neighborhood is currently served by the Hamilton Shuttle, which is a local service funded through the Hamilton Homeowners Association. The community will benefit from enhanced coordination between SMART, Marin Transit, the City of Novato, and the Homeowners Association to limit service overlap, enhance service, and ensure a stable, secure funding stream is available.

Service Recommendations

1. Expand Novato Dial-A-Ride Service Hours

As a general public dial-a-ride service, the Novato Dial-A-Ride program should have hours reflecting the needs of the community it serves. Once the midday gap in service is filled, the project team recommends Marin Transit expand the service hours to 6:00 a.m. in the morning and to 8:00 p.m. in the evening.

This is the next logical step for the Novato Dial-A-Ride given the growth in ridership observed over the past fiscal year and the 57 percent of Dial-A-Ride customers who indicated later service as their preferred service enhancement.

2. Implement Community Circulator Transit System

The Community Circulator concept is a community-based shuttle that operates in zones. Each zonal route connects with another zonal route at specific locations to create timed transfers. This effectively creates a more efficient way for riders to move throughout their community and connect with routes serving other locations throughout the city.

The Community Circulator system in Novato would feature three routes that operate roughly within each ZIP code. Each route has bi-directional buses operating on 30-minute to 60-minute headways depending on the time of day and service day. Each route has designated transfer points that will allow easy movement throughout Novato.

Route A covers the ZIP codes of 94945 and 94947, the northern portion of Novato. This route is centered around the Redwood and Grant stop. Route A Westbound starts at the Olive Park parking lot, near Olive

Elementary School. The route heads eastbound on Olive Avenue and turns north onto Summers Avenue. Route A Westbound then travels west along Plum Street to Chase Street where it turns south. Once on Chase Street the route then turns westbound onto Olive Avenue. At Redwood Boulevard and Olive, Route A Westbound heads south to serve the Redwood/Grant transfer point. The route then heads southwest on Diablo Avenue and turns west onto Novato Boulevard. The route travels along Novato Boulevard until Wilson Avenue where the route turns south. The route then turns west onto Vineyard Road and stops at Sinaloa Middle School. Route A Westbound then continues on Vineyard Road to Sutro Avenue where it turns north. The route continues on Sutro Avenue until it turns into San Marin Drive. The route travels along San Marin Drive serving San Marin High School, San Andreas Drive, and San Carlos Way. Route A Eastbound follows the same streets in the reverse order.

Route B covers the 94947 and 94949 ZIP codes that form the central part of Novato. The clockwise Route B starts at Redwood and Grant and travels south to serve the Margaret Todd Senior Center. Route B then returns to Novato Boulevard and Diablo Avenue and heads south along Novato Boulevard to Novato Boulevard and Rowland Way. At Rowland Way, the bus turns west to serve the Novato Community Hospital and Vintage Oaks Shopping Center. The bus then travels on Rowland Boulevard where it turns south on South Novato Boulevard. The bus then enters the freeway and exists at Ignacio Boulevard. Route B then travels west on Ignacio Boulevard to the Indian Valley Campus of the College of Marin. The bus then egresses away from the campus on Ignacio Boulevard and travels north on Sunset Parkway. The bus then turns north on Novato Boulevard. Route B then returns to the Vintage Oaks Shopping Center and Novato Community Hospital via Rowland Way. Route B then heads west on Rowland Boulevard and turns north and travels along Novato Boulevard. At Tamalpais Avenue, the bus turns north and then east at Grant Avenue. The bus then returns to Redwood and Grant. The counterclockwise Route B follows the same streets in the reverse order.

Route C operates exclusively in the Hamilton neighborhood, the southern section of the city. The clockwise Route C starts at Enfrente Road and Ignacio Boulevard and travels east onto Bel Marin Keys Boulevard. The bus then turns west on Hamilton Drive circling back to Bel Marin Keys Boulevard. The bus then turns southeast on Gail Drive and then heads west on Digital Drive. From Digital Drive, Route C turns

south onto to Nave Drive from Bel Marin Keys Boulevard. The bus then turns northeast at Hamilton Parkway and again at Palm Drive, where it serves several senior housing units. Route B then turns northeast on South Palm Drive and then southeast on Hanger Avenue. The bus then turns southeast on Hangar Avenue until San Pablo Avenue. The bus then heads northwest on Hamilton Parkway and turns southwest on South Palm Drive and turns onto Palm Drive. The bus then follows Palm Drive, which turns into Main Gate Road, to Randolph Drive - the proposed location for the SMART station. The bus then heads south through Bolling Circle and then west along Bolling Drive. At Bolling Drive and Nave Drive, the bus heads south and across the freeway to the Alameda del Prado bus pad. The bus then heads north on Alameda del Prado until Ignacio Boulevard where it turns east. The bus then returns to Enfrente Road and Ignacio Boulevard. The counterclockwise Route C follows the same streets in the reverse order.

Based on feedback from the community as well as the physical layout of Novato, we feel a Community Circulator system will best meet the needs of transit users in Novato. For example, a large number of riders use the service to get to work. Under the Community Circulator concept, key transfer points such as Redwood Boulevard and Grant Avenue as well as Ignacio Boulevard and Enfrente Road would be served more frequently by the Community Circulator routes than by the existing service arrangement. The service would also feature smaller shuttle vehicles for the majority of weekday trips and all weekend trips. Full-size transit buses would be required to carry the large student loads during trips associated with school bell times.

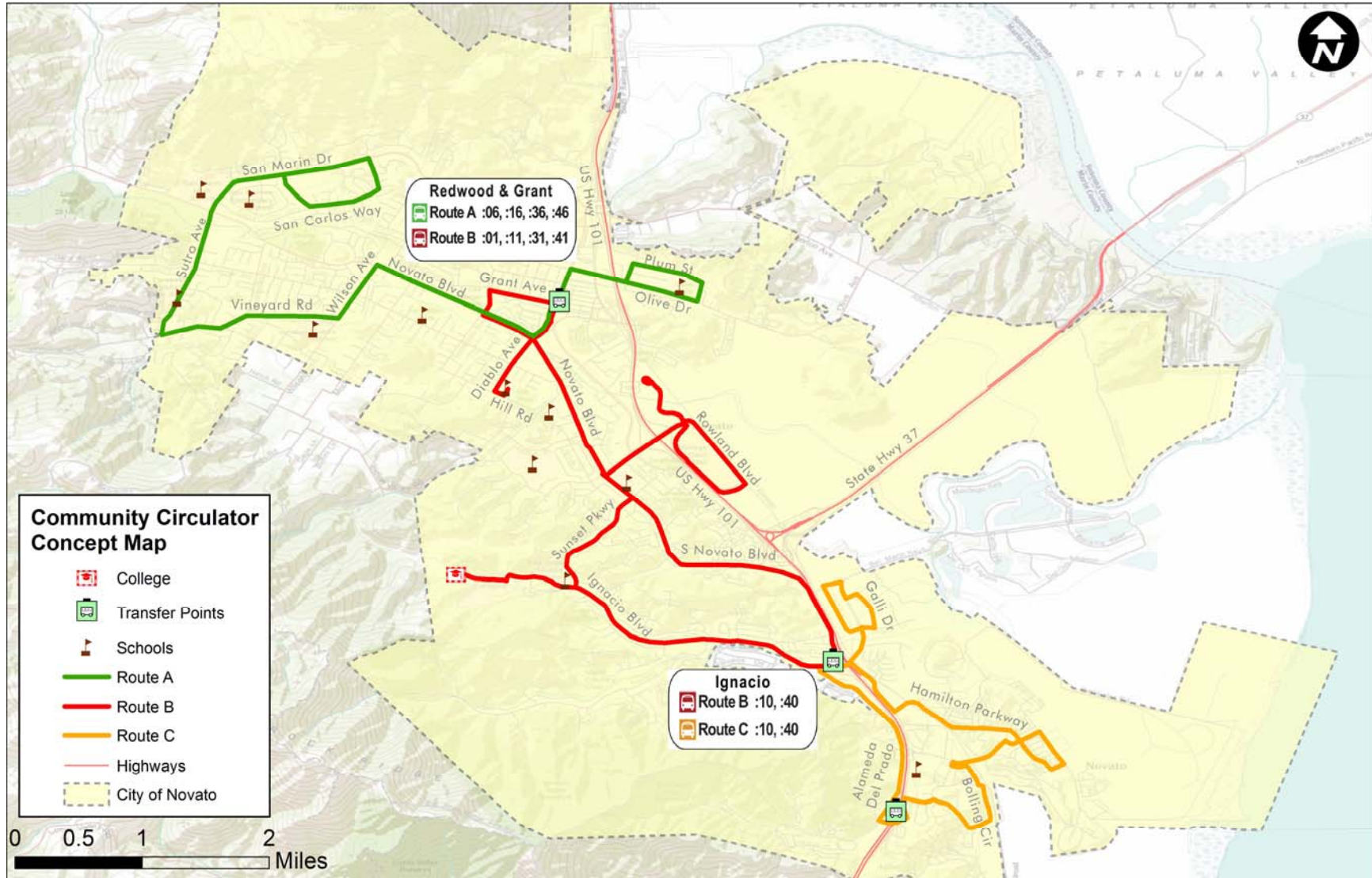
Additionally, future projects show Novato adding more jobs than residents. This translates to increased demand for travel to and within Novato. The Community Circulator option would serve the high job-growth areas within the city while also allow more frequent service between residential portions of the city and the employment centers.

Drawbacks to this scenario would be the initial unfamiliarity with the system that will require extensive marketing and public outreach. Additionally, the need to maintain on-time performance will be paramount for this scenario to work and there may be a future need for infrastructure improvements such as signal preemption to help maintain on-time performance during the peak-periods.

The project team recommends Marin Transit implement this service structure as a pilot program on the weekends in the near-term (i.e., next 1-2 years) to gauge its effectiveness and customer response as well as potentially reduce the cost of weekend service (see phase 1 service recommendation).

See Exhibit 3.9 for route.

Exhibit 3.9 Recommended Community Circulator Concept



An alternative service option that was evaluated and not recommended was an improved local service option based on the existing service delivery. Under this scenario, the existing transit network would remain in place. The key difference will be more frequent service on all routes. Peak-hour frequencies would range from 15- to 20-minutes with off-peak at 30-minutes. The advantage to this option is most transit users are already familiar with the system and thus would not require additional marketing or public outreach as with the Community Circulator option. Additionally, this network is already set-up to feed passengers into the Highway 101 corridor.

Drawbacks to this option are increased operating costs that may not translate directly to increased ridership. Additionally, the current transit services miss several key employment centers and do not capture the areas that are projected to add a substantial number of jobs by 2035.

Another alternative service options that was evaluated and not recommended was a service that minimizes transfers and increases direct connections to the County's regional hub in San Rafael. Under this scenario, each region of Novato would have a dedicated route that feeds into the Highway 101 corridor and connects to the San Rafael Transit Center. Frequencies would range between 30 minutes during the peak period and 60 minutes during the off-peak period.

The Northern Novato route would create a loop starting at Redwood Boulevard and Grant Avenue transfer point and traveling on San Marin Drive, Novato Boulevard, and then onto Highway 101 with direct service to the San Rafael Transit Center.

The Central Novato route would start at the Redwood Boulevard and Grant Avenue transfer point and head south stopping at the Vintage Oaks Shopping Center and Novato Community Hospital. The route would then serve the Indian Valley Campus of the College of Marin and enter Highway 101 from Ignacio Boulevard. From Highway 101, the Central Novato route would then terminate at the San Rafael Transit Center.

The Southern Novato would start at the Redwood Boulevard and Grant Avenue transfer point and enter Highway 101. The route would then exit at Ignacio Boulevard and serve the Hamilton neighborhood similar to the existing Route 49 alignment. The Southern Novato route would

then re-enter Highway 101 and terminate at the San Rafael Transfer Center.

All northbound alignments of the above mentioned routes will follow the same alignment but in reverse.

Intra-city service would be provided by the Novato Dial-A-Ride. Under this scenario, the Novato Dial-A-Ride would have more vehicles operating in Novato and have a longer service span.

The advantages of this system are quick and direct service with a high number of one-seat rides to the San Rafael Transit Center. Given the significant number of trips to areas outside of Novato, this scenario has the potential to attract commuters living in Novato who work in employment centers south of the city.

The drawback to this scenario is the lack of connectivity within the city of Novato. We suspect the Novato Dial-A-Ride may not be able to keep up with the projected employment growth in the city and the attendant increase in demand for travel. Additionally the Novato Dial-A-Ride has not had success in attracting non-senior riders, who will most likely be the customer base for intra-city commuting to work.

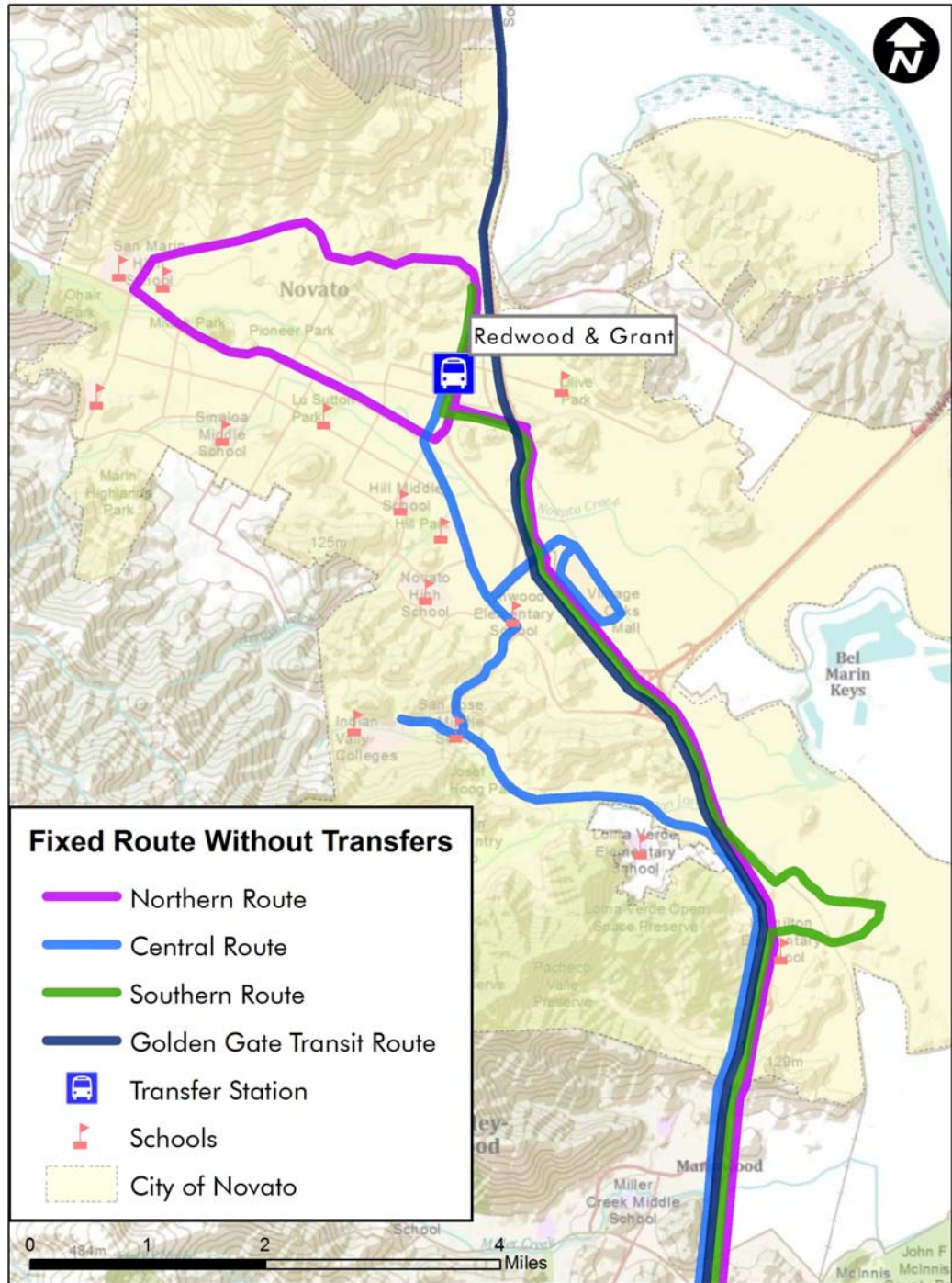
See Exhibit 3.10 for route map.

Capital Recommendations

1. Support Improved Bicycle and Pedestrian Infrastructure

One of the key physical barriers to the provision of public transit service in Novato is the irregular street pattern found throughout the city. Outside the core Downtown area, the roadway network was developed primarily to support automobile travel and lacks bicycle and pedestrian amenities that make walking and cycling a more attractive mode of transportation. This network structure also challenges the ability of buses to penetrate into neighborhoods and of pedestrians to access bus stops.

Exhibit 3.10 Proposed Fixed-Route without Transfers Alignments



Improvements to bicycle and pedestrian infrastructure will make bus stops more accessible. Our site visits, as well as feedback from public outreach efforts, indicate the lack of sidewalks throughout the city present not only a safety hazard but a barrier to accessing transit.

Marin Transit should work closely with the City of Novato to ensure streets with transit service and those leading to transit routes have ADA accessible sidewalks. For more isolated neighborhoods, the City should consider adding sidewalks along key routes.

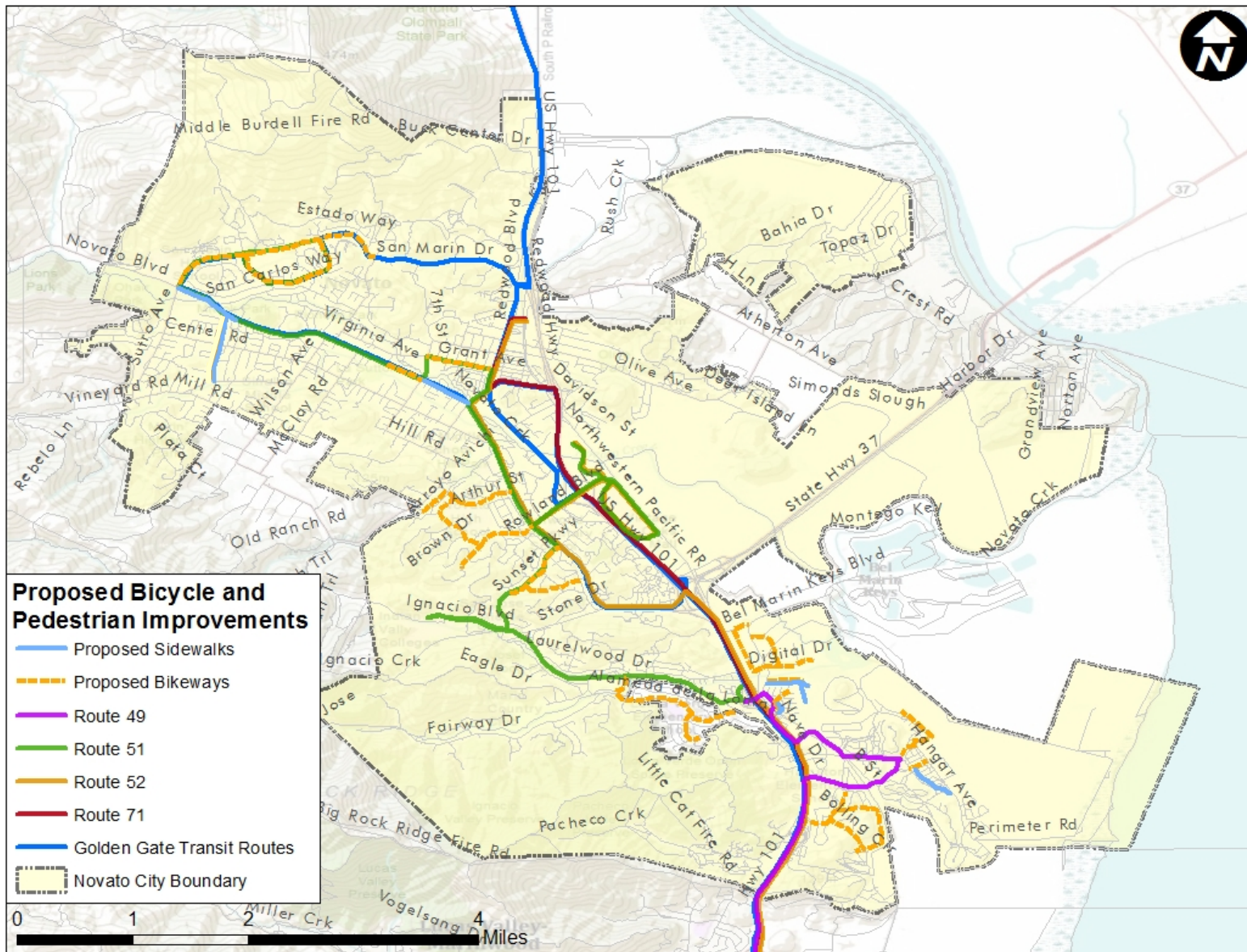
In terms of bicycle infrastructure, Novato already has fairly extensive bicycle paths along the main thoroughfares. Exhibit 3.4 shows the areas within Novato where it is recommended to add or expand bicycle and pedestrian infrastructure. Adding more bicycle lanes would allow more potential for riders to easily access transit services.

In addition to bicycle lanes, Marin Transit should work with the City to add bicycle racks or lockers at key bus stops (see Exhibit 3.3). The project team recommends the top boarding and alighting stops receive bike lockers, reflecting their cost and likely usage, while stops with less activity get bike racks. This allows more patrons the opportunity to securely “park” their bike and use the service.

Exhibit 3.4 Recommended Bicycle and Pedestrian Infrastructure Improvements

Location	Distance	Neighborhood	Type of Improvement
San Marin Drive and San Carlos Way	3.2 miles	San Marin	Bike Lane/Signage
Eucalyptus Avenue (between Vineyard Road & Novato Boulevard)	0.6 mile	San Marin	Signage
Novato Boulevard and Eucalyptus Avenue	1 mile	San Marin	Sidewalk
Novato Boulevard (between Grant Avenue & Diablo Avenue)	0.7 mile	Downtown	Sidewalk and Bike Lane/Signage
Grant Avenue (between Tamalpais Avenue & Redwood Boulevard)	0.4 mile	Downtown	Bike Lane/Signage
Bolling Drive & Bolling Circle (Loop)	1.5 miles	Hamilton	Bike Lane/Signage
San Pablo Court-Alconbury Way to Palm Drive	0.4 mile	Hamilton	Sidewalk
Palm Drive (between Hamilton Pkwy & Hangar Avenue)	0.2 mile	Hamilton	Bike Lane/Signage
Pizarro Avenue to Hangar Avenue	0.4 mile	Hamilton	Bike Lane/Signage
South Palm Drive (between Hamilton Pkwy & Hangar Avenue)	0.1 mile	Hamilton	Bike Lane/Signage
Roblar Drive	0.2 mile	Hamilton	Sidewalk and Bike Lane/Signage
Commercial Boulevard	0.3 mile	Hamilton	Bike Lane/Signage
Commercial Boulevard-Pamaron Way	0.5 mile	Hamilton	Sidewalk
Digital Drive	0.2 mile	Hamilton	Bike Lane/Signage
Galli Drive	0.4 mile	Hamilton	Bike Lane/Signage
Hamilton Drive	0.6 mile	Hamilton	Bike Lane/Signage
Palmer Drive	0.5 mile	Ignacio	Bike Lane/Signage
Connect Redwood Boulevard to Enfrente/Salvatore	0.3 mile	Ignacio	Bike Lane/Signage
Alameda de La Loma (between Ignacio Boulevard)	1.3 miles	Loma Verde (Unincorporated)	Bike Lane/Signage
Via Escondida	0.2 mile	Loma Verde (Unincorporated)	Bike Lane/Signage
Sunset Parkway between Ignacio Boulevard & Novato Boulevard	0.3 mile	Ignacio	Bike Lane/Signage
Midway Boulevard (between Sunset Parkway & Novato Boulevard)	0.4 mile	Ignacio	Bike Lane/Signage
Rowland Boulevard	0.6 mile	Marin Village	Bike Lane/Signage
Washington Street (between Rowland Boulevard & Arthur Street)	0.6 mile	Marin Village	Bike Lane/Signage
Arthur Steet-Indian Valley Road	0.8 mile	Marin Village	Bike Lane/Signage
	TOTAL 15.7 miles		

Exhibit 3.5 Recommended Bicycle and Pedestrian Infrastructure Improvements



2. Phase 2 Bus Stop Improvements: Major Transfer Stop Enhancements

The major transfer locations in Novato are Redwood Boulevard and Grant Avenue (Downtown) and Enfrente Road and Salvatore Drive (Ignacio). The Rowland Park and Ride lot is another location where local and regional services connect. Under current conditions, and with many of the proposed service alternatives, these locations are challenged operationally due to the volume of services and transfer activity that occurs at these locations.

Downtown, single lane approaches do not allow drivers the ability to bypass vehicles that may be loading or stopped for other reasons. Increased activity during peak periods will further challenge this arrangement, especially if local services are adjusted to meet regional services more consistently. A new configuration at this location would greatly improve the ability to operate efficient connection while maintain schedule reliability.

Bus stop conditions at Ignacio also impact operations and transfer activity. The ongoing South Novato Bus Stop Improvement project is currently working through the design work to allow regional and local services to achieve a more efficient connection. Marin Transit should continue this effort to address these shortcomings.

Safety conditions for waiting or transferring passengers at these locations was also identified in the outreach efforts and should be addressed during the implementation of improvements at these locations. Downtown, lighting improvements and landscape maintenance should be incorporated into any new design for the facility. At Ignacio and Rowland, high traffic volumes and speeds at the Highway 101 interchange create potentially dangerous conditions for bicyclist and pedestrians. Improvements should include infrastructure improvements to address these safety concerns.

Marin Transit and Golden Gate Transit are also in the process of adding GPS devices on all Marin Transit vehicles. The addition of GPS devices will allow Marin Transit to provide real-time bus arrival information to patrons. To take advantage of this, the project team recommends Marin Transit install real-time bus arrival displays at the major bus stops identified in the Ride Check Chapter.

The project team recommends a phased rollout with Redwood and Grant, Rowland Boulevard Bus Pad, and Ignacio Bus Pad/Enfrente Road

transfer centers as the first candidates for the installation of the real-time bus arrival displays.

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4. CAPITAL AND
FINANCIAL PLAN

CHAPTER 4 – CAPITAL AND FINANCIAL PLAN

In this chapter we present the estimated costs of the proposed recommendations as well as potential funding sources for each recommendation. Additionally, we identify the responsible stakeholder for each recommendation. Exhibit 4.1 presents a summary of the recommendations and their associated cost, type of improvement, responsible entity for implementation, and potential funding sources. Exhibit 4.2 includes a detailed estimate for each recommendation.

Service cost estimates presented in this section are based on Marin Transit's existing contractor rates and escalation schedules and are consistent with other Bay Area transit operators that purchase transportation services. For this purposes of this report, we selected a possible start date of Fiscal Year 2012/13. For all years beyond this fiscal year, we assumed a three percent increase in inflation for capital costs.

Exhibit 4.1 Cost Summary Table

Timeline	Recommendation	Estimated Cost		Type of Improvement	Responsible Entity	Potential Funding Source
		Operating (Annual)	Capital (One-Time)			
Phase 1 Improvements (Within 2 Years)	Improve Reliability of Existing Transit Services	\$500	\$0	Administrative	Marin Transit	N/A
	Enforce a "no early departure" policy	\$500		Administrative		
	Adjust schedules to account for running time delays	Varies		Service		
	Consolidate Local Fixed Route Services (Combine Routes 51 and 52)	(\$973,788)		Service	Marin Transit	Section 5316, Measure A, Section 5307
	Increase Peak Hour Frequency on Local Fixed Route Service (New Route 51)	\$350,921		Service	Marin Transit	
	Increase Span of Service on Local Service (New Route 51)	\$233,947		Service	Marin Transit	
	Adjust Route 49 Alignment	\$219,326		Service	Marin Transit	Section 5316, Measure A, Section 5307
	Introduce Weekend Shuttle Program (Routes 49 and new 51)	\$241,500		Service	Marin Transit	Section 5316, Measure A, Section 5307
	Close Midday Service Gap for Novato Dial-A-Ride	\$59,109		Service	Marin Transit	5316, 5317
	Phase 1 Bus Stop Improvements: Signage and Amenities		\$33,397	Capital	City of Novato and Marin Transit	Development agreements, 5309
	Create a Single Ride Guide Specific to Novato Transit Services		\$5,000	Marketing	Marin Transit	Measure A
	Create Novato-Specific Marketing Campaign		\$40,000	Marketing	Marin Transit	Measure A
	Create Marintransit.org Mobile Device-Compatible Website		Varies	Marketing	Marin Transit	Measure A
Phase 1 subtotal	net	\$131,515	\$78,397			
Phase 2 Improvements (within 5 years)	Extend Novato Dial-A-Ride Service Hours		\$51,720	Service	Marin Transit	5316, 5317
	Implement Community Circulator Transit System	total	\$4,213,224	Service	Marin Transit	Section 5316, Measure A, Section 5307
		net	\$187,644			
	Support Improved Bicycle and Pedestrian Infrastructure		\$395,948	Capital	City of Novato and Marin Transit	Development agreements, general fund
Phase 2 Bus Stop Improvements: Major Transfer Stop Enhancements	\$12,000	\$4,802,500	Capital	Marin Transit	5309, PTMISEA, STIP, Measure A	
Phase 2 subtotal	net	\$251,364	\$5,198,448			

Phase 1 Improvements

The phase 1 improvements are relatively low-cost or cost neutral enhancements to the provision of transit service within Novato. Service enhancements are achieved through consolidation of weekday services and shifting weekend service to a lower cost shuttle operation. These recommendations could be implemented within a two-year timeframe.

Improve Reliability of Existing Transit Service

For this recommendation, Marin Transit strictly enforces a “no early departure” policy and readjusts bus schedules to take into account late arrivals. Enforcement of a “no early departure” policy will cost about \$500 and consist mostly of an hour-long driver and road supervisor meeting on the importance of not departing from stops early.

Operating costs could potentially increase if additional revenue time is added to the schedules to account for late trips.

Local Service Improvements – Route 51

Route 51 enhancements include consolidation of local services, increased weekday peak hour frequencies, and increased weekday span of service.

We estimate the consolidation of Route 52 may yield a savings of approximately \$974,000 per year. This savings would allow for the combined cost of the following enhancements:

- Increasing span of service on Route 51
- Increasing peak-period frequency on Route 51

We recommend the service span for Route 51 be extended by two trips in each direction during the morning and by two trips in each direction during the late evening. This will add a total of eight revenue hours to the route. Based on the current rates to operate this service, it is estimated that this improvement would cost an estimated \$234,000 annually.

During the peak-periods, we recommend Marin Transit add six trips during the AM Peak period and six trips during the PM Peak period in both directions. This will result in 12 total new trips. Based on the current rates to operate this service, it is estimated that this improvement would cost an estimated \$350,000 annually.

Route 49 Enhancements

For Route 49 the project team recommends extending this route to downtown Novato and readjusting the alignment in Hamilton.

The extension of Route 49 to northern Novato would add approximately 3.5 service hours per day. Based on the current rates to operate this service, it is estimated that this improvement would cost an estimated \$205,000 annually.

We estimate the realignment in the Hamilton neighborhood would add approximately 15 minutes per service day. Based on the current rates to operate this service, it is estimated that this improvement would cost an estimated \$15,000 annually.

Introduce Weekend Shuttle Program

The weekend shuttle program is another way for Marin Transit to add service without increasing operating costs. Using hourly rates for similar shuttle operations contracted by the agency, shifting the weekend service to a shuttle operation might save approximately \$113,000 per year.

Currently, Route 51 does not operate on the weekend which means portions of Novato such as San Marin and Alameda del Prado do not have weekend service. Utilizing a shuttle service on the weekend would allow Marin Transit to expand service to those areas in a cost-effective manner. Assuming hourly rate costs for similar shuttle operations, the cost of providing weekend service along Route 51 is estimated to be \$214,500 per year.

We also propose shifting the weekend operation of Route 49 to a shuttle system. Currently, the weekend service for Route 49 costs \$328,000 annually. By shifting to a shuttle program concept, we estimate Marin Transit could reduce the cost to \$214,500, translating to an annual cost savings of approximately \$113,500 per year.

In total, we estimate the net cost of introducing a weekend shuttle program to be \$101,000 per year (\$214,500 from Route 51 plus the \$113,500 in projected annual cost savings from Route 49).

Marin Transit currently has a fleet of shuttle vehicles which are not in operation during weekend hours. Utilizing these vehicles for this service would save Marin Transit the capital expenses related to purchasing of new vehicles.

Close the Midday Service Gap for the Novato Dial-A-Ride

There is a four-hour gap in the middle of weekday Novato Dial-A-Ride service. Based on the current operating cost of this service, the annual operating cost will increase by \$59,109 if the four hour gap is eliminated. Following the initial year of operation, the operating cost for the Dial-A-Ride is assumed to increase by three percent per year.

Bus Stops Improvements – Phase 1

Along with improving bicycle and pedestrian infrastructure, Marin Transit should work with the City of Novato to improve bus stops. These improvements include adding shelters, benches, route-specific signage, route and transit network information, and trash/recycling where appropriate. Any physical improvements will require that the City address Americans with Disabilities Act path of travel. Passenger information is exempt from this requirement.

The project team recommends that Marin Transit consider adding bus shelters at current stops that have a high level of passenger activity. The estimated cost is \$2,310 to \$13,315 inclusive of installation. The price range varies on size, design, and installation costs. Current Novato shelters are maintained in the City of Novato's contract with an advertising agency.

Stops that do not qualify for shelters but still have significantly ridership activity should be improved with benches. The cost to add a bus bench is estimated to be about \$2,325 per bench. As with shelters, Marin Transit may be able to generate advertisement revenue from new benches that could help offset installation and maintenance costs. See Exhibit 3.3 for an inventory of stops requiring improvements.

For improved stop signage, we estimate the cost to be \$41.50 per sign though this cost is variable depending on size, amount of text, etc. Providing route and transit network information ranges from \$500 to \$1,000, including the cost of design, printing, and installation.

Marin Transit was recently awarded funds through the Federal Transit Administration's State of Good Repair grant program. These funds will be used throughout the County to improve bus stops and rider information. Marin Transit will install new bus stop blades and additional route information at all stops. Physical improvements to bus stops within Novato will require additional ADA path of travel funding.

Create a Ride Guide specific to Novato Transit Services

The cost of the new ride guide will be approximately \$2,500. This cost includes staff time for content, design, and printing costs.

Create a Novato-Specific Marketing Campaign

The consultant team recommends that Marin Transit invest a minimum of \$40,000 over two to three years, or approximately \$20,000 annually, for a comprehensive marketing campaign.

Create MarinTransit.org Mobile Device-Compatible Website

Given the prevalence of smart phone application developers, the cost of developing a “transit app” is negligible. In some cases, Marin Transit could encourage development through a contest and offer a cash prize or other compensation. In research regarding “transit apps,” there are many instances of students or application developers unilaterally developing “transit apps” for free that rely on advertising revenue.

Phase 2 Improvements

The phase 2 improvements represent significant changes to the transit network operating in Novato as well as more costly capital projects. These recommendations are for actions in a three- to five-year timeframe.

Support Improved Bicycle and Pedestrian Infrastructure

Adding and improving bicycle and pedestrian infrastructure is one of the most cost-effective approaches to improving access to transit as well as encouraging the use of alternative modes of transportation such as public transit, bicycling, and walking.

Bicycle infrastructure includes such amenities as bike lanes, signage, bike racks, and bike lockers. The cost of adding bike lanes is approximately \$5,000 to \$10,000 per mile. The low-end estimate is the cost of restriping a street to include a bicycle lane. The high-end estimate includes restriping, creating dedicated lanes, improved signage, and other traffic calming measures.

The project team recommends Marin Transit and the City of Novato consider adding bike racks and bike lockers at selected bus stops. The cost of purchasing and installing bike racks is estimated at between \$200 and \$600 per rack, and bike lockers cost between \$1,000 and \$4,000 per locker. To offset some of these costs, some cities and transit agencies rent the lockers for a nominal fee. For example, San Francisco rents lockers for \$25 for three months; Caltrain for \$5 per month; and Portland for \$10 per month.

For pedestrian infrastructure, the project team recommends the City of Novato add sidewalks along arterials and feeder streets that connect to existing transit services. A large number of customers access transit via walking (see Customer Survey results in Appendix E). Adding sidewalks will improve safety, bring the City more into compliance with American with Disabilities Act (ADA) requirements, and increase the appeal of walking for the general public. The cost of adding a new sidewalk is estimated to be \$102,285 per mile.

In total these improvements should cost approximately \$400,000. Based on the bicycle lanes identified in Exhibit 3.4, we estimated a potential need for approximately 13 miles of bicycle lane and signage improvements. We estimate the proposed bicycle lanes and signage would cost \$100,000. Adding 12 bike racks and lockers would cost

approximately \$13,000. We also identified the need for an additional three miles of sidewalk improvements which should cost approximately \$287,000.

The City of Novato would be the appropriate responsible entity for implementation of all the sidewalk and bicycle improvements.

Phase 2 Bus Stop Improvements: Real-Time Information Signs and Amenities for Stops

Marin Transit is designing and implementing a Bus Stop Improvement Program for two transfer locations in south Novato that will result in significantly improved bus stop amenities at the Rowland Interchange and Ignacio/Bel Marin Keys bus pads. Proposed improvements include adding sidewalks, improving traffic flows, adding security systems, moving stops to more convenient locations, and new signal controls. The total cost of these improvements is estimated to be \$750,000.

Improvements to the Downtown Novato Redwood Boulevard and Grant Street Transit Hub will address the operations and safety issues. Marin Transit has identified this as a high priority project in the Regional Transportation Plan, with a cost identified at \$4.0 million.

Implementing real-time information infrastructure on a transit system includes Global Positioning System (GPS) equipment installed on transit vehicles, real time information signs, and on-going maintenance costs.

Based on the experience with implementing real-time bus information signs, the cost of installing on-board GPS equipment is approximately \$5,000 per vehicle. Real-time arrival signage should cost between \$5,000 and \$8,000 per sign. Annual maintenance and warranty costs are approximately \$1,200 per vehicle and \$800 per sign.

Extend Novato Dial-A-Ride Service Hours

During this phase, the project team recommends the Novato Dial-A-Ride have expanded operating hours. The project team recommends adding 3.5 hours each day during the week that should cost approximately \$51,720 per year.

Community Circulator Option

In this scenario, all existing fixed-route services with the exception of Route 71 would be replaced with Community Circulators. Based on current contractor rates escalated to future year of implementation, it would cost approximately \$4.2 million per year to shift to a circulator shuttle operation concept. This represents a four-percent decrease in Operating Costs over the existing level of service for the routes serving Novato (i.e., Routes 49, 51, 52, and 71) with a net savings of \$152,000 for the first year of implementation.

Fixed-Route with Transfers Option

(Alternative Considered but not Recommended)

This option is essentially the existing transit network with more frequent service. If this option is implemented, the cost is estimated to be \$5.1 million per year. This represents an 18-percent increase in Operating Costs over the existing level of service or an additional \$782,000 for the first year of implementation.

Fixed-Route without Transfers Option

(Alternative Considered but not Recommended)

This option has three routes serving each region of Novato that would provide direct service to and from the San Rafael Transit Center. If this option were implemented, the cost is estimated at \$4,526,901 per year. This represents a four-percent increase in Operating Cost over the current level of service or an additional \$162,000 for the first year of implementation.

Funding

Funding for the recommendations can be obtained through a variety of sources, depending on the nature of the desired improvement. As state and local budget issues have placed some funding sources in jeopardy, transit agencies have developed innovative approaches to secure funding maintain service. Traditional funding sources include the following:

- Transportation Development Act (TDA) and State Transit Assistance (STA) funds.
- Federal Transit Administration (FTA) Section 5307 Operating and Section 5309 Capital funds.
- Marin County Measure A half-cent sales tax funds.
- Prop 1B Public Transportation Modernization, Improvement, and Service Enhancement Account Program (PTMISEA) bond funding, specifically for capital projects.

Pending reauthorization of the Federal transportation law, some new sources of funding for the programs in this Plan include:

- **FTA Section 5316:** The FTA’s Job Access and Reverse Commute (JARC) program provides money to assist in developing new or expanded transportation services that connect welfare recipients, other low income persons, and others to jobs and employment related services. Job Access projects are targeted at developing or expanding transportation services (i.e. shuttles, vanpools, new bus routes, connector services to mass transit, and guaranteed ride home programs for welfare recipients and low income persons). The eligibility threshold of the “Job Access” portion of JARC is 150% of the federal poverty level or lower. Reverse Commute projects have no such income-limiting provision and provide transportation services to suburban employment centers from urban, rural, and other suburban locations for all populations (i.e., irrespective of income level). These funds would especially critical as Novato has a large employer base but is considered a “reverse commute” community.

- **FTA Section 5317:** The purpose of this program is to support services and facility improvements that address the transportation needs of persons with disabilities above and beyond those required by the Americans with Disabilities Act (ADA). Funding supports capital and operating costs. The foundation of the New Freedom program is larger fixed-route urban systems that are required to have parallel or complementary paratransit systems. Eligible programs include extended hours or days, expansion of service area, or other operating parameters not available under previous funding mechanisms or other grant programs.
- **Sonoma Marin Rail Transit (SMART):** The ballot measure authorizing and funding SMART included funding for a shuttle bus system serving the SMART stations. Additional transit service is expected to be provided by the SMART agency for services that connect to the station(s) in Novato.
- **Homeowners Associations:** The Hamilton Field of Marin Association is obligated to fund a local, community-based transit service as part of the community’s development agreement. The Hamilton Shuttle is currently under-used when compared to services operated by Marin Transit and the two entities would benefit from improved coordination. This may include having the Hamilton Field of Marin Association directly contribute to Marin Transit to fund enhanced transit service in Hamilton in lieu of funding the Hamilton Shuttle.
- **Employers:** Marin Transit should work with employers to promote transit as a viable alternative to the personal automobile. Marin Transit could also work with employers to offer subsidized bus passes and/or secure funding from groups of employers for enhanced service during peak hours serving those businesses.
- **Transportation Demand Management (TDM) Program Participants:** Marin Transit should coordinate with the City of Novato to maximize the impact the City’s TDM programs on reducing congestion and auto use.
- **College of Marin (Indian Valley Campus):** Students are a critical part of Marin Transit’s customer base. There are successful examples of agencies working with local colleges to offer special subsidized transit passes in exchange for dedicated funding on a per-student basis. Many colleges have agreements in place with local transit operators to allow students to ride the bus for free or at heavily-reduced cost simply by swiping a student ID card.
- **Development Agreements:** Marin Transit should work with the City of Novato to add transit considerations to future development agreements and ensure transit-related elements are considered when approving new developments. Stipulations can range from requiring developers to install sidewalks, bike infrastructure, and bus stop amenities to securing dedicated operating funding streams such as the agreement with the homeowners association in the Hamilton neighborhood.

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Exhibit 4.2 Cost Estimate Matrix

Timeline	Recommendation	Estimated Costs					Responsible Entity	Potential Funding Source
		FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17		
Phase 1 Improvements (Within 2 Years)	Improve Reliability of Current Transit Service							
	Enforce "No Early Departure Policy"	\$500	\$500	-	-	-	Marin Transit	N/A
	Readjust Schedule for Late Arrivals	\$0.00	\$0.00	-	-	-	Marin Transit	N/A
	Consolidate Routes 51 and 52							
	Elimination of Route 52	(\$973,788)	(\$1,022,477)	(\$1,073,601)	(\$1,127,281)	(\$1,183,645)	Marin Transit	N/A
	Route 51 Enhancements							
	Increase frequency on Marin Transit Route 51 During Peak Hours	\$350,921	\$368,467	-	-	-	Marin Transit	Measure A
	Increase Span of Service on Local Service (New Route 51)	\$233,947	\$245,645	-	-	-	Marin Transit	
	Route 49 Enhancements							
	Adjust Route 49 alignment	\$219,326	\$230,292	-	-	-	Marin Transit	Measure A
	Introduce Weekend Shuttle Program (Routes 49 and new 51)							
	Introduce Weekend Shuttle Program (new Route 51)	\$214,500	\$225,225	-	-	-	Marin Transit	Measure A
	Phase 1 Bus Stop Improvements: Signage and Amenities							
	Bus Bench	\$4,650	\$4,650	-	-	-	Marin Transit	Development agreements, 5309
	Signage	\$3,486	\$3,486	-	-	-	Marin Transit	
	Information	\$750	\$750	-	-	-	Marin Transit	
	Bus Shelters	-	\$15,625	-	-	-	City of Novato/Marin Transit	
	Fill-in the Mid-day Service Gap for Novato Dial-A-Ride							
	Operate Between 11:00 a.m. to 3:00 p.m.	\$59,109	\$60,882	-	-	-	Marin Transit	Section 5316, Section 5317
	Create a single Ride Guide Specific to Novato Transit Services							
	Ride Guide	\$2,500	\$2,500	-	-	-	Marin Transit	Measure A
	Increase Marketing of Current Services							
	Marketing Plan and Materials	\$20,000	\$20,000	-	-	-	Marin Transit	Measure A
Create Mobile Device-compatible Website for MarinTransit.org								
Mobile App Creation	Varies	Varies	-	-	-	Marin Transit	Measure A	
PHASE 1 SUBTOTAL		\$135,901	\$155,544					
Phase 2 Improvements (within 5 years)	Novato Dial-A-Ride Enhancements							
	Expand Morning and Evening Service Hours for Novato Dial-A-Ride	-	-	\$51,720	\$54,306	\$57,022	Marin Transit	Section 5316, Section 5317
	Implement Community Circulator Transit System							
	Elimination of Existing Fixed Route Services (49, new 51)	-	-	(\$3,051,792)	(\$3,204,382)	(\$3,364,601)	Marin Transit	N/A
	Community Circulator	-	-	\$4,213,224	\$4,339,621	\$4,469,809	Marin Transit	Section 5316, Measure A, Section 5307
	Support Improved Bicycle and Pedestrian Infrastructure							
	Bike Lanes & Signage	-	-	\$48,375	\$48,375	-	City of Novato	Development agreements, general fund
	Bike Racks	-	-	\$1,400	\$1,400	-	Marin Transit	
	Bike Lockers	-	-	\$7,500	\$2,500	-	Marin Transit	
	Sidewalk	-	-	\$143,199	\$143,199	-	City of Novato	
	Add real-time information signs and amenities to bus stops							
	South Novato Bus Stop Improvements	-	-	\$750,000	-	-	Marin Transit	5309, PTMISEA, STIP, Measure A
	Downtown Novato Transit Hub Improvements	-	-	-	\$4,000,000	-	Marin Transit	
AVL Equipment - Vehicle Installation	-	-	\$30,000	-	-	Marin Transit		
Real-time arrival signs	-	-	\$22,500	-	-	Marin Transit		
On-going Maintenance Real Time Project	-	-	\$12,000	\$12,000	\$12,000	Marin Transit		
PHASE 2 SUBTOTAL				\$1,154,525	\$4,269,738	(\$9,415)		
YEAR TOTAL*		\$135,901	\$155,544	\$1,154,525	\$4,269,738	(\$9,415)		

